

THE MODERATING EFFECT OF ORGANIZATIONAL  
CULTURE ON THE RELATIONSHIP BETWEEN  
TOTAL QUALITY MANAGEMENT,  
ENTREPRENEURIAL ORIENTATION  
AND THE PERFORMANCE OF  
BANKS IN YEMEN

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AND THE PERFORMANCE OF  
BANKS IN YEMEN

By

ABDULLAH KAID AL-SWIDI

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## ABSTRAK

Kajian ini bertujuan meneliti kesan penyederhanaan budaya organisasi (OC) terhadap hubungan antara Pengurusan Kualiti Total (TQM), Orientasi Keusahawanan (EO) dan amalan dengan prestasi organisasi (OP). Namun begitu, kajian ini lebih banyak didorong oleh dapatan-dapatan yang tidak tekal dalam sorotan karya yang membincangkan hubungan antara TQM, EO dengan prestasi organisasi. Dapatan yang tidak tekal ini mencetuskan satu aliran penyelidikan baru yang menyarankan satu kajian dilakukan bagi meneliti kesan pemboleh ubah ketiga yang boleh menerangkan sifat hubungan- hubungan ini dengan lebih baik lagi. Dalam sorotan karya yang berkaitan, kebanyakan teori yang dikupas menekankan bahawa faktor utama kejayaan bertitik tolak dari peri pentingnya kesesuaian antara organisasi-organisasi dengan strategi yang dirancang diperincikan awal-awal lagi. Oleh kerana kepentingan OC diakui sebagai pembolehubah kritikal bagi pelaksanaan strategi, kajian ini diintegrasikan dengan banyak teori seperti teori kontingensi (*contingency theory*) dan teori perubahan organisasi (*organizational change theory*) dan dicetuskan oleh model kebersamaan (*congruence model*) untuk mengkaji kesan budaya organisasi (OC) terhadap strategi pelaksanaan yang berjaya. Memandangkan jumlah populasi kajian yang agak kecil, kajian ini mensasarkan kesemua populasi cawangan bank yang ada untuk mendapatkan sampel rawak yang boleh menggambarkan konteks kajian ini dengan lebih jitu. Daripada 287 soal selidik yang diagihkan, dengan menggunakan mekanisme tadbir sendiri, 201 daripadanya yang menggambarkan kadar respon sebanyak 70% telah dikembalikan dan digunakan untuk analisis lanjut. Malah, kajian ini dibuat melalui satu proses yang rapi dan teliti untuk membina kesahihan ukuran dengan menggunakan EFA serta CFA yang dikendalikan menerusi dua pakej perisian statistik iaitu SPSS dan Amos. Hasil dapatan analisis yang dibuat menunjukkan bahawa pakej TQM dan EO merupakan peramal prestasi organisasi yang signifikan. Walau bagaimanapun, kajian ini menyokong premis yang diutarakan oleh teori luar jangkaan, teori perubahan organisasi dan model keserbasamaan serta membuktikan kepentingan sokongan OC terhadap sebarang pelaksanaan strategi yang berjaya. Oleh itu, kajian ini sepenuhnya menyarankan agar sokongan OC perlu dibangunkan terlebih dahulu untuk sebarang perancangan strategi pelaksanaan.

**Kata kunci:** Pengurusan Kualiti Total, Orientasi Keusahawanan, Budaya Organisasi, Prestasi Organisasi, negara Yaman

## ABSTRACT

The main purpose of this study was to investigate the moderating effect of organizational culture (OC) on the relationships between Total Quality Management (TQM), Entrepreneurial Orientation (EO) and the organizational performance (OP). However, this study was greatly motivated by the inconsistent findings in the contemporary literature regarding the relationships between TQM, EO and the organizational performance. Due to these inconsistencies, a new research stream emerged which suggests investigating the effect of third variable that may better explain the nature of these links. In the relevant literature, many theories have emphasized the necessity to establish the fit between organizations and intended strategies as the first and key success factor. Due to the acknowledged importance of OC as a critical variable for strategy implementation, this study integrated many theories such as the contingency theory and organizational change theory and get inspired by the congruence model to study the effect of organizational culture (OC) on successful strategy implementation. Due to the relative small population, this study targeted the entire population of branches to get the number of respondents that best represent the context of the study. Of 287 questionnaires distributed, using the self-administered mechanism, 201 questionnaires representing a response rate of 70% were returned and further analyzed. In fact, this study followed a rigorous process to establish the construct validity of the measure by employing EFA as well as CFA using both SPSS and AMOS statistical software packages. The findings of this study revealed that TQM and EO were significant predictors of organizational performance. This study, however, supported the premises of contingency theory, organizational change theory and the congruence model confirming the importance of supportive OC for any successful strategy implementation. These findings, therefore, strongly suggested that supportive OC should be developed in prior to any strategy implementation planning.

**Keywords:** Total Quality Management, Entrepreneurial Orientation, Organizational Culture, Organizational performance, Yemen

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## **LIST OF ABBREVIATIONS**

AMOS	Analysis of Moment Structure
BP	Bank Organizational Performance (OP)
CBY	Central Bank of Yemen
CF	Customer Focus
CI	Continuous Improvement
ESDB	Excellent Service Design and Benchmarking
EntOC	Entrepreneurial orientation Organizational Culture
EO	Entrepreneurial orientation
EQA	European Quality Award
HRM	Human Resource Management
IAS	Information and Analysis System
KMO	Kaiser-Meyer-Olkin
MBNQA	Malcolm Baldrige National Quality Award
ML	Management Leadership
OC	Organizational Culture
PI	Proactive Innovativeness
R	Risk-taking
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Science
TQM	Total Quality Management
GOC	Group Organizational Culture

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

The current global business environment has been more complex, hyper-competitive and ever-changing due to the wave of globalization and the fast-paced technological advancements (Edward, 2007; Ho, 2008; James, 2008). In such business environment, the classical methods of management are no longer effective to lead organizations to create and sustain the desired competitive advantage for growth and survival (Ho, 2008).

Under the pressure of globalization, liberalization, technological advances and knowledgeable and sophisticated customers, all types of organizations are forced, in order for them to grow and survive, to develop their innovative and competitive strategies (Moreno, Morales, & Montes, 2005). Therefore, organizations have to have the ability to strategically adapt to the changing environment and critical customers' demands.

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, Baker, & Lemak, 2007; Escrig-Tena, 2004; Kaynak, 2003; Reed, Lemak, & Mero, 2000; Sila & Ebrahimpour, 2002; Zahra, 1991; Zahra, Kuratko, & Jennings, 1999). Due to their strategic importance, TQM and EO have been attracting a great deal of attention by both academics and practitioners during the last few decades.

Empirically, there have been a proliferation of research conducted by many researchers about TQM (such as Arawati, 2005; Li, Andersen & Harrison, 2003; Yasin,

Alavi, Kunt, & Zimmerer, 2004) and EO (Barrett & Weinstein, 1998; Covin & Miles, 1999; Covin & Slevin, 1991; Keh *et al.*, 2007; Lumpkin & Dess, 1996; Zahra, Nielsen, & Bonger, 1999; Zahra & Covin, 1995) supporting their impacts on the organizational performance. Unfortunately, some other studies argued that not all TQM initiatives were successful (Samson & Terziovski, 1999; Sanchez-Rodriguez & Martinez-Lorente, 2004; Sohal & Terziovski, 2000) while others questioned the appropriateness of entrepreneurial orientation (EO) strategy for organizational effectiveness (Li, Huang, & Tsai, 2009; Wiklund & Shepherd, 2005).

The experience of unsuccessful organizational strategy implementation worldwide was not surprising as reported by Kaplan and Norton (2000) that 70 to 90% of organizations experienced failure organizational strategic implementation worldwide. In an attempt to explain this phenomenon, the contingency theory and organizational change theory literature proposed that the misfit or mismatch between the implemented strategy and the organizational culture is to be one of the main reasons behind the failure. Therefore, it has been 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 the effect of some influential organizational variables on these relationships should be investigated. For example, Ehigie and McAndrew (2005) and Douglas and Judge (2001) suggested that some other organizational variables should be given more attention to better explain the relationship between TQM and organizational performance. Similarly, Wiklund and Shepherd (2005) suggested that other variables should be incorporated in the EO and organizational performance relationship to resolve the inconclusive results.



It was argued that organizational culture variable is one of the main factors to explain the organizational outcomes (Prajogo & McDermott, 2005). Therefore, it has been attracting an increasing scholar attention to explain the organizational strategy outcomes in the light of contingency 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 & 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.

In the current global economy, the service sector has been attracting the attention as one of the main contributors to the growth of the overall economy. More specifically, Gupta, McDaniel, and Herath (2005) reported that the service sector has been contributing more than 50 % of the GDP for many industrialized economies. This increasing role of the service sector has been enhanced by the Internet and Communication Technology (ICT) revolution.

As the main component of the service sector, the banking industry has been facing a rapidly changing markets and challenging business environment reflected in many frequent financial crisis (Al-Marri, Ahmed, & Zairi, 2007). Moreover, due to the proliferation of the financial products and services providers, the banking industry has been facing fiercer competition. This competition has been made stiffer by some other organizations, like post offices and insurance companies, that offer many financial products and services (Hull, 2002; Kaynak & Kucukemiroglu, 1992). Consequently, banks, in order to be able to survive and create a sustainable competitive advantage, should offer high quality and innovative products and services at competitively cheap prices (Khalid & Irshad, 2010). Banks, however, have to develop their distinct products and services that are based on their unique, rare and inimitable

resources. Further, they should also pay an increasing attention to the talents, skills and capabilities of the human resources that could be a unique source of their competitive advantage (Chang, Chan, & Leck, 1997).

The role of the banking system to the overall economic growth has been academically and practically confirmed. Moreover, the banking system for any country is the backbone of the whole economic structure since it is one of the main drivers of any development programs and due to its significant contribution to the prosperity of the economic overall growth (Al-Marri, Ahmed, & Zairi, 2007; Al-Swidi & Mahmood, 2011a). Banks, also, contribute significantly to the growth of the economy through facilitating the financial resources for SMEs and large organizations to operate and achieve their short as well as long-term objectives (Cohen, Gan, Yong, & Chong, 2007). Thus, the stronger and more effective the banking industry and financial institutions in a country, the stronger and more significant role played by them in the development of the economy through providing efficient products and services (Al-Hajri, 2008; FuB, Gmeiner, Schiereck, & Strahringer, 2007). In other words, banks, as a knowledge intensive sector (Mavridis, 2004; Firer, 2003) play a pivotal role in stimulating the economic growth by providing funds and financial resources to other sectors to sustain their growth. Within the ever-changing and competitive business environment, banks should enhance their performance in continuous bases to gain sustainable competitive advantage. Towards this end, banks have to offer differentiated products and value-added services (Goh, 2005) as a result of the fruitful adoption of effective and innovative strategies. Therefore, the competitive performance of banks is always the main focus of managers who wants to secure a prominent strategic position in the marketplace.

Like other economies, the service sector in Yemen has been reported to contribute significantly to the overall GDP. In the year 2009, the contribution of the service sector to the

overall GDP was reported to be around 62.8% compared with 37.2% contributed by the manufacturing sector (CBY Annual Report, 2009). As with other countries, the banking system is in the heart of the Yemeni service sector and the main player in the financial system. Therefore, the banking system has been very important component of the overall economy and one of the main drivers of the development processes. By the year 2000, the banking system in Yemen had total assets of US\$1.5 billion. This, however, constituted 22% of the Gross Domestic Product (GDP) of the country. Moreover, based on more recent reports, the total assets of the Yemeni banking system increased from 24% of the GDP in 2006 to 29% in 2010 (MOPIC, 2006). This in fact reflects the importance of the banking system and its significant contribution to the overall economic development (Zolait, Sulaiman, & Alwi, 2008).

Basically, one of the main drivers of this study was the desire to explore the effect of some influential variables such as TQM, EO and OC on organizational performance particularly in the uncertain, turbulent, fast changing and challenging business environment with fast-paced technological advancements. In such environment, meeting the customers' needs and expectations regarding the quality and innovation of products and services, have become a big challenge (Al-Swidi & Mahmood, 2011a). To be able to survive and grow in such an environment, different organizations realized the necessity to adopt innovative strategies to produce high quality and innovative products and service at competitive prices. Banks, as a financial products and service providers are heavily dependent on the customers as business partners. Therefore, they have to offer high standard and updated products and services that satisfy customers and go beyond their expectations (Goh, 2005).

To establish the regional and global economic integration and promote the country as an attractive investment destination, Yemeni government has been recently involved in a

sequence of negotiation meetings with WTO with hope to get the accession to the WTO (World Bank, 2010). These efforts, if successful, will open up the Yemeni economy for many international investors to explore the Yemeni investment opportunities. However, it is anticipated that many leading banks will enter the Yemeni market introducing superior financial products and high quality and innovative services. However, this study was motivated by the desire to provide the Yemeni banks and other business operators with good insights into the nature and structure of the future Yemeni business environment especially after the full access to World Trade Organization (WTO).

## **1.2 Problem Statement**

Anderson and Trap (2003) stated that a sophisticated banking system has a significant role in the prosperity of the overall economic growth of any country. Put simply, the efficient banking system enables business owners to easily raise and manage the required funds resulting in a rapid overall economic growth (Fase & Abma, 2003).

According to many reports and official statements, the Yemeni banking system has been suffering from a lot of operational as well as marketing-related problems. The poor performance of the Yemeni banking system was the reason behind the call made by the former Yemeni Prime Minister for restructuring the banking sector (Ramat, 2004). According to the Yemen Country Profile Report (2008), the Yemeni banking system has been facing a lot of problems impeding in its inefficient operations. These problems include, low capitalization, a large volume of non-performing loans; and weak enforcement of regulations. As a result, some Yemeni banks were technically insolvent because many debtors fail to repay on time, the bankruptcy of the National Bank in 2006 is an example of that.

More seriously, the Yemeni banking system has not been effective to gain the trust of the Yemeni savers to deal their business transactions through banks. This can be reflected, according to SIRIM Berhad report (2010) and MOPIC (2004), by the fact that only 2.7- 4 % of the total Yemeni population has bank accounts and only around 600,000 checks have been circulated annually. Since 70 % of the Yemeni population are rural area residents, the bulk of the economic transactions are cash-based and the Yemeni banking system holds only 60 % of the money supply (Al-Kamaly, 2004; Zolait *et al.* 2008).

Notwithstanding the importance significant role of the small and medium sized enterprises (SMEs) to the growth of the Yemeni overall economy, the Yemeni banking system has not been efficient player as a source of financial requirements (Rahman, 2001). To highlight this issue, SMEs in Yemen, constitute of about 99.6 % of all business organizations and more than 7.2 % to the GDP of the country employing more than 485,000 workers (Ministry of Planning and International Cooperation MOPIC, 2004). According to the survey conducted by the Ministry of Planning and International Cooperation in 2004, less than 12.2 % of SMEs working in Yemen have an access to the required financial resources. Furthermore, according to IFC (2009) Yemeni banks do not market affectively their services to SMEs rather they serve only big companies and well-known families in the country. In relation to that, SIRIM Berhad Report (2010) about the Yemeni business environment confirmed that less than 18 % of the private sector organizations can have an access to financial resources. In general, the Yemeni banking system is weak and underdeveloped to back up the desired development processes (Yemen Country Profile, 2009). Therefore, these facts about the Yemeni banking system could affect the start-ups of businesses by either local or foreign entrepreneurs resulting in overall poor economic performance (Anderson & Trap,

2003; Fase & Abma, 2003). Also, the privatization process and market-oriented policies requires banks to provide an increasing access to financial resources (MOPIC, 2005).

Overall, the Yemeni banking system has also very weak image in the Arabic region as well as internationally. According to Financial Business Group, the Banker (2004, 2005), Siddiqi and Ford (2006) and The Middle East (2006), the Yemeni banking system has failed to be listed among the 1000 top world banks and 100 top Middle Eastern banks respectively.

It was argued that the failure of the Yemeni banking system to attract the Yemeni savers and its weak contribution of the banking system to the overall growth of the economy through supporting the SMEs can be fully or partially attributed to the lack of customer-oriented practices and strategies (Al-Swidi & Mahmood, 2011d). That is, the lack of customer and market-focus strategies implemented by the Yemeni banks resulted in a poor banking culture among the Yemeni people who prefer to save their money at home instead of dealing with banks (Saeed, 2011). Moreover, the Yemeni banking system lacks the entrepreneurial capabilities to foresee the potential business opportunities to be explored and exploited. This poor banking culture among customers coupled with poor quality of the products and services provided by Yemeni banks.

As among the most popular strategies, TQM strategy (Douglas & Judge, 2001) and entrepreneurial orientation (EO) (Wiklund, 1999; Wiklund, & Shepherd, 2005) have been confirmed by researchers to be very important strategies that help organizations to create and sustain their competitive advantage. Given this importance, there has been an extensive research work examining the impact of TQM practices and entrepreneurial orientation (EO) on the organizational performance. In relation to that, there has been an increasing number of leading organizations, globally, adopting innovative strategies such as TQM and EO as their foundation to create a competitive advantage (Lumpkin & Dess, 1996; Reed, Lemak, & Mero,

2000) and also to improve business performance (Hendricks & Singhal, 2001; Li, Huang, & Tsai, 2009; Samson & Terziovski, 1999a; Wiklund & Shepherd, 2005).

Theoretically, the literature of organizational performance showed that the research conducted in exploring the effects of TQM practices and entrepreneurial orientation (EO) on organizational performance even extensive yet confusing. Therefore, a comprehensive review of the current relevant literature showed that there have been many theoretical gaps that could be addressed by the study.

First, the quality management literature showed that the findings regarding the TQM and organizational performance relationship turned out to be inconclusive calling for an extensive research work to be conducted in this area(Nair, 2006). While some studies empirically support the existence of direct as well as indirect relationship between TQM practices and organizational performance (Hendrick & Singhal, 2001; Kaynak, 2003), other studies (Fuchsberg, 1993; Mathews, 1992; Naj, 1993; Schaffter & Thomson, 1992) questioned the TQM strategy effectiveness.

Second, despite the growing extensive research work related to EO and organizational performance relationship, the overall findings regarding this relationship appeared to be inconsistent. Therefore, many academics and practitioners questioned the appropriateness of entrepreneurial orientation (EO) strategy for organizational effectiveness(Li, Huang, & Tsai, 2009; Wiklund & Shepherd, 2005).

Third, despite the fact that most of the studies on TQM practices have dealt with developed countries, a little is known about the practices of TQM and EO in the developing countries, including Middle Eastern countries. Therefore, some researchers such as Al-Marri *et al.* (2007) in their study on TQM practices in the UAE suggested that there is an urgent need to study the effect of TQM practices on the performance of the service organizations, in

particularly banks in the context of developing countries, to examine their success factors and drivers of effective performance.

Fourth, as Reed et al. (2000) reviewed the seminal work related to TQM by its pioneers like Crosby (1979), Deming (1986), Feigenbaum (1986), Ishikawa (1985) and Juran(1974; 1988; 1995) concluded that there is an agreement among them that TQM strategy requires a supportive organizational culture (OC). Despite the importance of culture as a crucial organizational factor to establish the fit between strategy and environment, it has been widely neglected especially in TQM and EO literature. Therefore, this study will respond to the call to further examine the impact of TQM practices and EO in the international settings (Parast, 2006).

Finally, in the literature related to TQM and EO, there has been unresolved debate regarding the relationship between TQM, EO and organizational performance. This situation drove some researchers to suggest that the effect of some other organizational variables should be considered. However, in this regard, Ehigie and McAndrew (2005) and Douglas and Judge (2001) suggested that more attention should be paid to some organizational variables to better examine TQM and organizational performance relationship. Similarly, Wiklund and Shepherd (2005) suggested that the effect of some other variables on the relationship between EO and organizational performance to resolve the inconclusive results. Therefore, this study tried to examine the effect of one of the main organizational variable, organizational culture (OC), in establishing the fit for these strategies and hence better organizational performance.

Thus, the major purpose of this study is to bridge these gaps in the literature by examining the effect of interaction between TQM, EO and OC on the organizational performance. Moreover, investigating these relationships is more interesting in a context of



unique cultural background and opening up business environment. This emphasis made by this study on the effect of OC was in line with the premises of the contingency theory and organizational change theory and guided by the congruence model that highlight the fit between strategy and organizational environment as the key success factor.

### **1.3 Research Questions**

In line with the background of the study and the problem statement discussed in the preceding section, this study was mainly designed to address the following core questions:

1. What is the state of TQM practices and Entrepreneurial orientation (EO) in the banking industry in Yemen?
2. What is the effect of TQM practices on organizational performance of banks in Yemen?
3. What are the effects of entrepreneurial orientation (EO) on organizational performance of banks in Yemen?
4. Does organizational culture (OC) moderate the relationship between TQM practices and organizational performance of banks in Yemen?
5. Does organizational culture (OC) moderate the relationship between the dimensions of entrepreneurial orientation (EO) and organizational performance of banks in Yemen?

### **1.4 Research Objectives**

Based on the aforementioned research questions, the study was devoted to achieve the following major research objectives:

1. To study the state of TQM practices and entrepreneurial orientation (EO) in the banking industry in Yemen.
2. To examine the effect of TQM practices on the organizational performance of banks in Yemen.
3. To examine the effect of the dimensions of entrepreneurial orientation (EO) on organizational performance of banks in Yemen.
4. To study the moderating effect of organizational culture (OC) on the relationship between TQM practices and organizational performance of banks in Yemen.
5. To study the moderating effect of organizational culture (OC) on the relationship between the dimensions of entrepreneurial orientation (EO) and organizational performance of banks in Yemen.

### **1.5 Scope of the Study**

The research questions and objectives of this study were examined based on the data collected from the Yemeni banking industry. Therefore, the study was limited to the data gathered from many public and private working banks in Yemen. In general, the Yemeni banking system consists of the Central Bank of Yemen and 17 commercial banks (nine private domestic banks, four of which are Islamic banks; five private foreign banks; and two state-owned banks), 287 bank branches. Even though this study was carried out in the Yemeni context, its implications are significant and of potential value for any other context since it investigates the business process and human interaction factors.

In addition to that, this study has employed the quantitative cross-sectional research design in which the questionnaire was the main tool for data collection. The

data were collected through self-administration approach considering the bank branch as the unit of analysis.

The model of this study was developed in consistent with the relevant literature and aimed to examine the moderating effect of OC on the TQM, EO and organizational performance relationship. Moreover, Chapter 3 and 4 detailed the research framework and the hypotheses development processes.

## **1.6 Significance of the Study**

The value of this comes from expanding the existing literature related to the contingency theory and organizational change theory by examining the relationship among TQM, EO and the organizational performance in the presence of organizational culture (OC). Therefore, the value of this study is for researchers, scholars, practitioners, and organizations (leaders and employees). In general, this interdisciplinary study is able to contribute significantly to the existing boundary of the knowledge related to the effect of TQM, EO and OC on the organizational performance. The originality, theoretical and practical value of this study is discussed in the succeeding paragraphs.

Despite the extensive research work that has been conducted in the literature of TQM and EO in the light of the contingency theory and organizational change, the performance implications of these strategies were not always positive. In other words, these results call for further investigations to resolve this inconsistency. Moreover, in the view of absence of empirical studies investigating the performance implications of the interaction between TQM practices and EO, this study represented an attempt to fill this theoretical gap in the literature. In order to resolve the inconsistent findings in the

literature regarding the performance implications of TQM and EO, this study aimed to examine the effect of organizational culture to confirm the premises of the contingency theory and the cultural assumptions for successful organization as emphasized by the organizational change theory.

Apart from examining the effect of organizational culture as the foundation of any successful organizational strategy implementation strategy, this study tried to examine the postulated relationship in the context of services organizations, especially in banks. Moreover, it has been emphasized that the most studies conducted in TQM were in the developed countries and there has been a scanty studies conducted in the developing countries, including the Middle East (Rao *et al.*, 2001). Moreover, Sila and Ebrahimpour (2002) in their review of the literature revealed that only 1.7 % of the studies reviewed were conducted in the including Saudi Arabia, UAE, and Qatar. Thus, this study provided basic data for future research on how TQM practices and entrepreneurial orientation (EO) stimulates the organizational performance in the developing countries' setting.

This study is also significant to the practitioners as it emphasizes the role of TQM, EO towards higher organizational performance. By exploring the significant role of organizational culture, this study is able to scientifically convince the Yemeni business managers, especially bank managers, that introducing TQM and EO is essential but not sufficient step to gain the desired level of performance unless supported by the appropriate and supportive organizational culture. Therefore, managers of the banks should establish the quality culture and also encourage the entrepreneurial culture within their banks, in prior to intend to implement TQM and EO. Meaning that the organizational culture should match the intended strategy and all

the employees should be trained and educated to adopt and show the commitment to this culture.

This study, moreover, is of a significant value to the policy-makers due its clear emphasis on the crucial role of organizational culture in successful TQM and EO implementation. Being aware on the importance of organizational culture for TQM and EO initiatives, policy-makers can enhance the knowledge of all the tertiary graduates by institutionalization of TQM and EO principles and their necessity for the future business excellence. In addition to that, policy-makers can help organizations to achieve high level of performance by offering the required consultation and training. In other words, as the involvement of all employees in such strategies requires a good level of TQM and EO-related knowledge. Therefore, policy-makers should consider these requirements to be incorporated in the curriculum of the tertiary education. This is very important so as to provide the market with knowledgeable graduates that understand the quality principles and have the capabilities to create innovative ideas to achieve high performance levels.

## **1.7 Definition of Terms**

### **Organizational performance**

The literature of management shows how the organizational performance has been defined differently by many researchers. For the purpose of this study, it was found appropriate to follow the definition provided by Antony and Bhattacharyya (2010). They defined the organizational performance as the measure that is used to evaluate

and assess the success of an organization to create and deliver the value to its external and internal customers.

### **Total Quality Management**

In the literature of quality management, there are many and various definitions for TQM (see for example, Dale, 2003; Flynn *et al.*, 1994; Anderson, Rungtusanatham, & Schroeder, 1994; Yusof & Aspinwall, 2000). Recently, Kumar, Choisine, Grosbois, and Kumar (2009) defined TQM as the holistic management approach integrates all the organizational activities to satisfy customers' needs and meet their expectations towards achieving overall organizational objectives.

Moreover, it is defined by the American Society of Quality (ASQ) to denote the abilities of the organization to introduce products and services that satisfy customers' needs and meet their expectations. Thus, for the purpose of this study, the definition provided by Kumar *et al.* (2009) was considered.

### **Entrepreneurship**

It is defined by Dess *et al.* (1999:94) to be "the content of strategy, which is defined as the new entry, that is, the act of undertaking a new venture."

### **Entrepreneurial Orientation (EO)**

Entrepreneurial orientation (EO) concept is defined by Dess *et al.* (1999) to be the attributes and characteristics that can be described as entrepreneurial. Similarly, it is defined by Lumpkin and Dess (1996) to be the processes and any other decision-making related activities that lead to new entry.

## **Organizational Culture (OC)**

It has been defined by Denison (1990) to be the system of norms and values that is common among an organization's employees and determine their attitudes and approaches toward confronting their different problems in the organization.

### **1.8 Organization of the Thesis**

The content of this thesis is divided into six chapters as follows.

Chapter 1 elaborates on the background of the study, problem statement, questions and objectives of the research, significance of the research, scope of the research, and organization of the thesis.

Chapter 2 investigates the issues related to the Yemeni banking sector. Moreover, this Chapter tries to identify the reasons behind the poor organizational performance of Yemeni banks based on local and international reports.

Chapter 3 reviews the literature related to the organizational performance variable, TQM and EO strategies, and organizational culture. Additionally, this Chapter gives a significant attention to the relationship between TQM, EO and the organizational performance and how the organizational culture can enhance this relationship in line with the premises of the contingency theory. Thus, this Chapter reveals the gaps in the literature and provides suggestions for this study. In addition to that, Chapter 3 reports the framework of the study and the rationality and the reasoning based on which the hypotheses were developed.

Chapter 4 presents the methodology of the research. This Chapter also provides detailed descriptions on the questionnaire design, instrument used in this

study, population of the study, responses collecting, unit of analysis, data collection method, pilot study, reliability and validity tests. Moreover, this Chapter provides explanations on the statistical techniques used for preparing data for the multivariate analysis and hypotheses testing.

The findings of this study are reported in Chapter 5. In addition to that, chapter 5 provides a detailed description of the steps followed to establish the goodness of the measure through construct validity and criterion validity. Construct validity of the instrument was tested following two approaches. The first one used exploratory factor analysis approach and internal consistency employing Cronbach's Alpha Coefficient using SPSS software. The second, however, employed the confirmatory factor analysis (CFA) using AMOS statistical package. Due to the relative small number of observations of the study, compared to the parameters to be estimated, regression analysis was more suitable to test for the predictive power of the variables of the study as well as for testing the moderating effect of OC, than SEM approach.

Chapter 6 of this thesis concludes the study by discussing the significant findings and presenting the contributions of this study and the limitations. This Chapter also provides suggestions for future research work.



## **CHAPTER TWO**

### **THE YEMENI BANKING SYSTEM**

#### **2.1 Introduction**

This chapter provides a description of the Yemeni economy based on the latest available data. Moreover, it provides a description of the components of the Yemeni banking system. In addition to that, it discusses the role of the Central Bank of Yemen in controlling the monetary policies. As it is the purpose of this chapter to highlight the strategic issues related to the performance of the Yemeni banks, many issues have been elaborated. Finally, in this chapter, it has been concluded that the poor organizational performance of the Yemeni banks can be mainly attributed to the lack of customer focus and entrepreneurial capabilities of the banks preventing them from gaining customer satisfaction and exploring future business opportunities. This chapter starts by providing a short description of Yemen and its economic situation.

#### **2.2 Overview of Yemen**

Yemen (or Republic of Yemen) is located in the Middle East at the southern end of the Arabian Peninsula. It is surrounded by three seas namely The Arabian Sea; the Gulf of Aden; and the Red Sea from south and west. Yemen has very important islands like the island of Socotra in the Indian Ocean, and the Kamaran group in the Red Sea. Its total area is around 527,970 square kilometers (203,849 square miles) while it has a coastline of 1,906 kilometers (1,184 miles). The capital city, Sana'a, is located in the west. Other major cities include Aden in the south and al-Hudiedah on the Red Sea coast (Yemen Country Profile, 2009).

Moreover, Yemen has a very important strategic location at the southern part of the Arabian Peninsula. It has borders with Saudi Arabia and Oman and controls the strategic straits at the Southern entrance to the Red Sea (Bab al Mandab). The country has three well-defined areas: a coastal strip along the Red Sea, the highlands inland and a desert area to the east, many mountains and deserts. Moreover, the Yemeni population is poor and rural in general, but there has been large-scale urbanization in the last decade resulting in the movement of almost half of the population to live in towns (Yemen Country Profile, 2009).

Historically, the current Republic of Yemen was formed from former two countries. The first one was the Yemen Arab Republic (YAR), which was also known as North Yemen-came into being on 26 September 1962 following a military coup which ousted the Imam of the Mutawakkilite. The second one was the People's Republic of South Yemen (later known as the People's Democratic Republic of Yemen) was formed on 30 November 1967 from the territory of the former Federation of South Arabia and the Aden Protectorate. On 22 May 1990, the two countries united to form a one nation which is The Republic of Yemen (ROY) (Yemen Country Profile, 2009).

In May 1994 the country witnessed a large scale fighting broke out between military forces supporting the south and those supporting the north following a breakdown in political co-operation. It had been lasted for around three months. Since then the Government has attempted to promote reconciliation between the north and the south and started to push the process of development and economic reforms. However a conflict between the Government of Yemen and a minority religious (Shi'a) group headed by Al-Huthi is still going on (at the time of writing this report) in Sa'dah Governorate, Northern

Yemen, which has been continuously resumed and there have been some problems in the south of Yemen (Yemen Country Profile, 2009).

## 2.2 Overview of the Yemeni Economy

Based on the Yemen Country Profile Report (2010), Yemen remains one of the poorest countries in the world with moderate economic growth that does not match the fast population growth rates. Moreover, the Yemeni economy has been heavily dependent on the declining oil reserves that constitute more than 30 % of the GDP. In addition to that, the same report revealed that the income from oil accounts for 85 % of the exports. Oil reserves are also expected, according to the same report, to be exhausted in the next ten years. However, the Table 2.1 and the following graphs summarized some of the main economic indicators of Yemen during the period 2004-2009 as follows.

Table 2.1

*Some Yemeni Economic indicators*

<b>Country/Year</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Growth of GDP %	4.0	5.6	3.2	3.3	3.6	3.9	8.0
Inflation( % Change)	12.5	11.8	10.8	7.9	19.0	3.7	11.2
Exports (Growth %)	-	36.0	15.0	-2.0	29.0	-7.0	36.0
Imports(Growth %)	-	22.0	9.0	11.0	58.0	0.0	6.0

Source: Yemen Country Profile (2010)

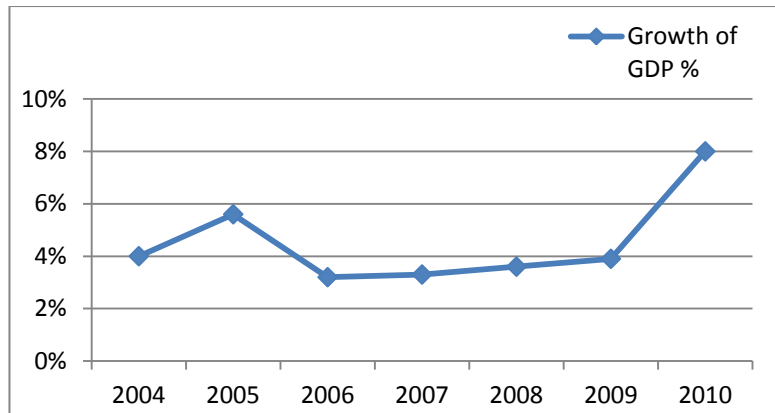


Figure 2.1

*Yemeni GDP Growth(%)*

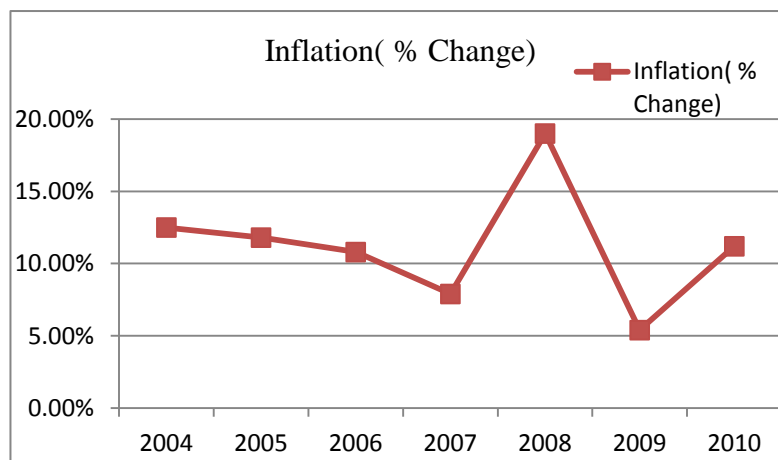


Figure 2.2

*Yemeni Inflation Change (%)*



Figure 2.3

*Yemeni Export Growth (%)*

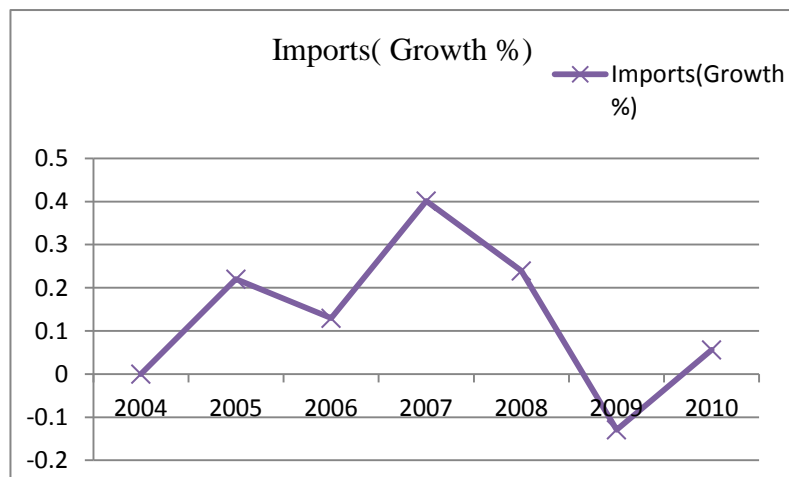


Figure 2.4

*Yemeni Imports Growth (%)*

Besides that, the declining oil reserves pose long-term challenges for Yemen. More importantly, unstable political situation, high reported corruption, and high cost of business start-ups are some of the major hindering factors that drive away foreign investors from Yemen (Yemen Country Profile, 2010).

## **2.3 The Banking Industry in Yemen**

Before 1894, there was no proper bank in Yemen. Rather than that there were some money exchange agencies to meet the financial demand of the foreign companies operating in the region. However, in the 1894, the National Bank of India set up a branch in Aden that was the financial market dominant till 1950 (Zolait *et al.*, 2008). Later in 1962, the Yemen Bank for Reconstruction and Development (YBRD) was set up as a public company owned by the government and the private sector with 51: 49 percent of its paid-up capital. Historically, Yemen has a rich trading history as a result of its strategic location in the corner of the Arab Peninsular between Asia and Africa. Therefore, the financial bank in Yemen should be further expanded to meet the demand of the regional development and economic process. In addition to the banking system in Yemen, postal offices and exchange agencies are offering some financial products to the Yemeni customers (Zolait *et al.*, 2008).

### **2.3.1 Components of the Yemeni banking system**

Currently, the Yemeni banking system consists of, in addition to the CBY, 17 banks with 236 branches. These banks are classified into commercial, Islamic, and specialized banks (Central Bank of Yemen, 2010). These banks include nine private domestic banks; four of which are Islamic banks; five private foreign banks; and two state-owned banks; and two specialized state-owned development banks. The Yemeni banking system serves the demand of the development processes in the country by providing the major financial services to the customers (Zolait *et al.*, 2008).

Table 2.1 shows the summary of the Yemeni banks comprising the Yemeni banking system at the time of this study.

Table 2.2

*Summary of the Yemeni banks in the Yemeni Banking System*

<i>Name</i>	<i>Head office Location</i>	<i>Date of establishment</i>	<i>Shareholders</i>	<i>%</i>	<i>Number of Branches</i>
<b>Central Bank of Yemen</b>	Sana'a	1971	Government	100	21
<b>Commercial Banks</b>					
The Yemen Bank for Reconstruction And Development	Sana'a	1962	Government Yemeni Private	51 49	39
National Bank Of Yemen	Aden	1969	Government	100	32
International Bank Of Yemen	Sana'a	1979	Yemeni Private Saudi Arabian Banks	80 20	18
Yemen Kuwait Bank For Trade & Investment	Sana'a	1979	Yemeni Private	100	8
Yemen Commercial Bank	Sana'a	1993	Yemeni Private Government	90 10	8
Yemen Gulf Bank	Sana'a	2001	Yemeni Private Foreign Private Pension fund	77 22 1	2
Arab Bank	Sana'a	1972	Arab bank (Jordan)	100	10
Caylon Corporate and investment Bank	Sana'a	1975	Caylon( France)	100	5
United Bank LTD	Sana'a	1972	United bank (Pakistan)		2
Qatar National Bank ( QNB )	Sana'a				1
Rafidan Bank	Sana'a	1982	Rafidain bank(Iraq)		1
Shamil Bank Of Yemen & Bahrain	Sana'a	2002	Yemeni Private Foreign Private	75 25	4
<b>Islamic Banks</b>					
Islamic Bank Of Yemen for Finance and Investment	Sana'a	1995	Yemeni Private Government Foreign Private	73.5 4.5 22	6
Tadhamon International Islamic Bank	Sana'a	1995	Yemeni Private Foreign Private	96.7 3.3	22
Saba Islamic Bank	Sana'a	1997	Yemeni Private Foreign Private	85 15	14
<b>Specialized Banks</b>					
Cooperative & Agricultural Credit Bank	Sana'a	1982	Government Yemeni Corporates	87 13	39
Housing Bank	Sana'a	1977	Government Yemeni Private	97 3	2

Source: CBY (2010)

In 2000 the Central Bank of Yemen has been given the authority to put high restricting lending policies, later in mid-2005 the Central Bank spread several new capital requirements for commercial banks aimed at stabilizing the financial system and protecting deposits (Central Bank of Yemen, 2009; Yemen Country Profile, 2009).

### **2.3.2 The role of Central Bank of Yemen (CBY)**

The main function of the Central Bank of Yemen (CBY) is to control the monetary policy of the country beside supervising the banking sector and serving for the banking needs of the government. Moreover, the CBY has to handle all the currency issues and manage the official reserves (Central Bank of Yemen, 2010). Moreover, the banking system in Yemen has been offering its customers with a wide range of financial services such as current accounts; saving accounts; call accounts; inward and outward transfers; SWIFT transfers; travelers' checks, bankers' draft; and currency exchange. It also offers various commercial services such as letters of credits; letters of guarantees; and bills of collection. Besides that, some credit facilities services such as loans; syndicated loans, and project finance have been provided by the Yemeni banking system. Recently, some Yemeni banks have started their online banking services such as ATM, IB, and SMS banking (Zolait *et al.*, 2008).

To achieve the stability in the foreign exchange market, the CBY and the Ministry of Finance have been exerting huge efforts in adopting the floating exchange rate policy. In addition to that, the CBY has been developing its resources of foreign currency and improving its reserve management. This can be done



through the investment mentality out the limits of the liquidity and security standards (Embassy of Yemen in Washington DC ECO, 2010).

Responding to the need that the Yemeni banking sector to be restructured and reformed, CBY has taken many measures to improve the performance the banking system to be able to cope with global financial changes and serve domestic and regional development processes. For example, it has become a must for banks to operate in Yemen to raise their capital to YR 6 billion. This was done by the CBY to upgrade the banking system to the level of international banking requirements (Yemen Observer Newspaper, 2005).

According to a report issued by the Report of the Economic and Commerce office, Yemeni Embassy Washington DC office (ECO, 2010), the Yemeni banking system witnessed a significant progress by introducing the consolidated balance sheets of commercial and Islamic banks. For example, by the end of 2004, the balance witnessed an annual growth of about 22.4%. Moreover, the local banks contribution rose to about 68.1% of all the banking activities with an annual growth of about 25.4% while Arab and foreign banks contribution was 31.9% with an annual growth of about 16.4% .

The improvement and increased efficiency in the Yemeni monetary policies have been evaluated by the international monetary agencies and therefore the Yemen's credit rating increased accordingly from (C-) to (B+). Many other measures were taken by the government towards securing the banking system. In accordance with the law issued in April 2003, the government formed a special committee to combat money-laundering activities. Moreover, the CBY has been also

monitoring all the financial operations to decrease the chances of illegitimate fund earnings (Embassy of Yemen in Washington DC ECO Report, 2010).

Responding to the changing customers' needs and the challenges of the global economic situation, the Yemeni government has been trying many steps to improve its banking system. Great efforts have been exerted to achieve the regional economic integration with the Gulf countries through working hard to join the Uniform Banking Network as a crucial step to achieve a regional integration. This step, if happened, will facilitate the inter-banking cooperation regionally and enhance the Yemeni economic development. The Yemeni government has also been working on the establishment of a stock exchange in the country as the government has been implementing the privatization program (Embassy of Yemen, Washington DC ECO Report, 2010).

Moreover, the current business environment has been influenced by globalization, liberalization, and technological advancements. In addition to that, in the current global economic scenario, there has been a stiff competition among all the countries to attract FDI inflows. To attract FDI inflows, many countries tried to establish an encouraging business environment through providing safe and stable business environment with sophisticated infrastructure. Many other investment incentives including easy entry policies and tax exemptions are offered to attract FDI inflows. To establish an attracting business environment, the Yemeni government, according to the CBY report (2009), tried to strengthen its financial system. This explains the amendment of the Yemeni banking law in 2007 to facilitate the entry procedures of the foreign banks to the financial system. This law also aims to

strengthen the presence and participation of Islamic banks. In March 2008, Yemen's parliament approved legislation establishing an independent deposit insurance agency to protect depositors with assets of US\$10,000 or less (Central Bank of Yemen, 2009).

According to the new regulations, many foreign banks enter the Yemeni market to play its role. Since these banks are far better than the local banks in terms of managerial and technological systems, the business environment for the banking industry became completely different and the competition become even harder (Stiglitz, 1993). This, in turn, urged both academics and practitioners to identify the determinants of the sought-for effective performance.

## **2.4 Critical Issues related to the Yemeni Banking System**

In general, there has been always a relation between the weak economy and the absence of a strong financial system that mediates between savers and investors (Al-Hajri, 2008). Hence, for a better future economic performance, Yemen has to improve the financial services to back up the economic development process (Yemen country Profile Report, 2009).

The Yemeni banking system consists of the Central Bank of Yemen, 17 commercial banks (nine private domestic banks, four of which are Islamic banks; five private foreign banks; and two state-owned banks). The Central Bank of Yemen controls monetary policy and oversees the transfer of currencies abroad (Central Bank of Yemen, 2010). In the following sections, many issues related to the Yemeni banking system will be reported and discussed.

#### **2.4.1 Issues related to the weak performance**

The Yemeni banking system like other banking systems in the developing economies has been reported to have many problems. This fact was the frequent calls by many people to improving the performance of the financial service system. Among which is the statement made by the former Yemeni Prime Minister where he confirmed that there has been an urgent need for restructuring the country's banking system (Ramat, 2004).

Generally, many local as well as foreign reports assessed the Yemeni banking performance and reported the following.

First, some reports stated that the Yemeni banking and finance system is not efficient to back up the required development processes. According to the report (Country Profile: Yemen, August 2008) issued by Library of Congress – Federal Research Division, Aug 2008, there are many issues related to the Yemeni financial system such as;

- 1) The financial service system in Yemen is not well-developed and being dominated by the banking system;
- 2) The banking system has low exposure to investments and financing through global credit markets and;
- 3) There is no public stock market in Yemen.

#### **2.4.2 Regional and international image of the Yemeni banking system**

The Yemeni banking system has been reported to have a weak image in the regional as well as in the international market. This can be reflected by the regional as well as international ranking conducted by various specialized agencies. For

example, in an annual study conducted by The Banker Magazine's, Yemeni banks failed to be listed among the 1000 largest banks in a rank conducted by the Banker Magazine (2005). However, 73 other Arab banks were listed in that list. Table 2.3 and Figure 2.5 illustrate the number of banks listed from different Arab countries.

Table 2.3

*The number of Arab banks listed among the top 1000 largest banks (by country listed by the Banker magazine)*

<i>Country</i>	<i>No. of Banks</i>
United Arab	
Emirates	14
Saudi Arabia	10
Bahrain	8
Kuwait	7
Egypt	6
Lebanon	6
Tunisia	4
Qatar	4
Oman	3
Morocco	3
Jordan	2
Libya	2
Syria	1
Total	70

Sources: Financial Business Group, the Banker, July 2004, 2005.

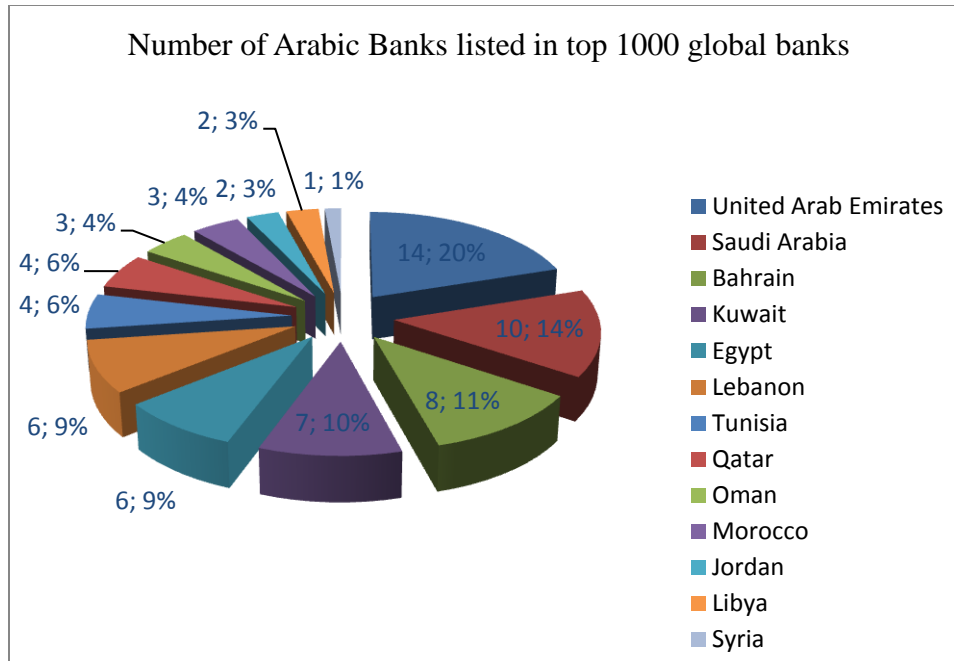


Figure 2.5

*The number of Arab banks in the Top 1000 largest banks( by country) listed by the Banker Magazine*

Moreover, the Yemeni banks also failed to be listed among the top 100 Middle Eastern banks in a ranking prepared by the Banker Magazine (2006). Table 2.4 and Figure 2.6 show the number of banks by country and this also indicates the low image of the Yemeni banks among other Arab banks in the region.

Table 2.4

*The number of banks in the Top 100 Middle Eastern banks (by country listed by the Banker magazine)*

<i>Country</i>	<i>No. of Banks</i>
United Arab	
Emirates	17
Egypt	12
Saudi Arabia	10
Iran	10
Kuwait	8

Bahrain	8
Tunisia	7
Lebanon	6
Morocco	5
Qatar	5
Oman	4
Libya	4
Jordan	2
Algeria	1
Syria	1
<b>Total</b>	<b>100</b>

Sources: Siddiqi and Ford. The Middle East, 2006

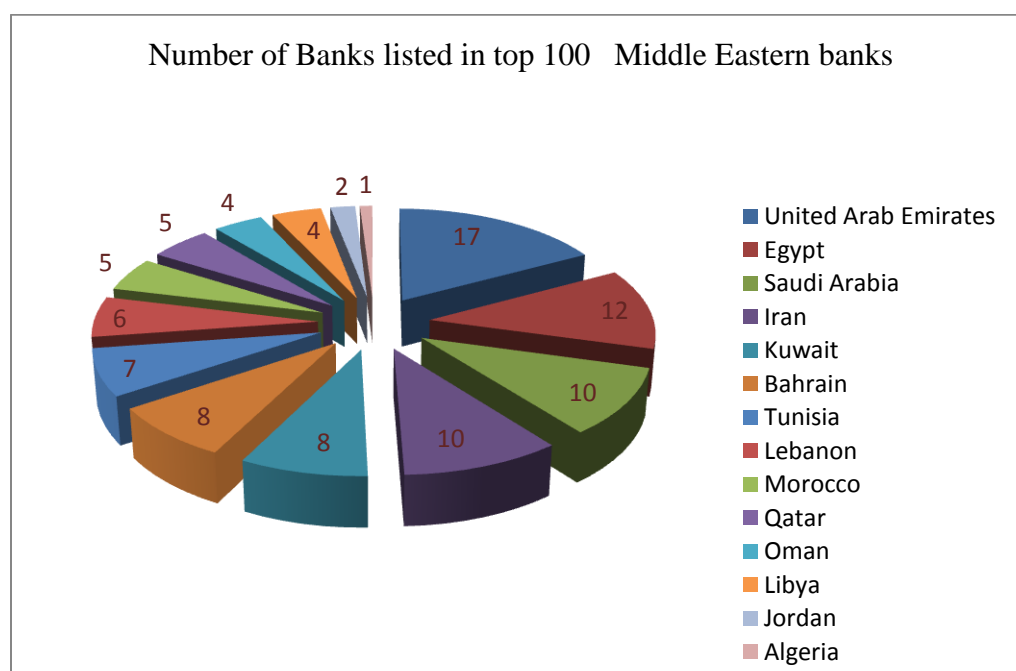


Figure 2.6  
*The number of banks (by country) among the Top 100 Middle Eastern banks.*

### **2.4.3 Yemeni banking system and the customers**

In addition to that, the Yemeni banking system has many problems related to operations. For example, according to the Yemen Country Profile report (2009), the Yemeni banking system is described to be very weak to support the development process of the country since it has been suffering from many problems. The major problems hurdle the efficient operations of the Yemeni banking system include: a large volume of non-performing loans; low capitalization; and weak enforcement of regulatory standards. Many Yemeni banks are technically insolvent because many debtors fail to repay on time.

Furthermore, Yemen's banks do not serve equally different sectors of the economy since they limit their lending activities to selected groups of consumers and businesses.

More importantly, the Yemeni banking system has not been able to gain the trust of the Yemeni customers. Moreover, according to the Mayor of the Central Bank of Yemen, the Yemeni people prefer to save their money at homes rather than dealing with banks. He also confirmed that there are only 600 thousand bank accounts, this represents only 2.7 % of the population, and no more than 500-600 thousand checks annually circulated. These facts have been corroborated by a recent study conducted by the Malaysian company SIRIM Berhad (2010) in the effort to establish a strategic plan for industrial development in Yemen. In this study, it has been reported that only 4 % of the entire Yemeni population have banking accounts (Al-Swidi and Mahmood, 2011d; Saeed, 2011). These figures reflect that there has been a weak relationship between banks and the Yemeni savers. This situation



requires that the Yemeni banks should exert huge efforts to attract an increasing number of Yemeni savers who refrain to deal with the current operating banks.

As it was widely reported that 70 % of the Yemenis live in the rural areas and they have no awareness- and in many cases have no trust in the operating banking system, the Yemeni banking system holds only 60 % of the money supply and the bulk of the economy operates with cash (Al-Kamaly, 2004; Zolait *et al.* 2008).

#### **2.4.4 Getting credits from the Yemeni banking system**

In relation to what has been mentioned before, investors, in the Yemeni business environment, have been constantly facing many problems in getting credits from the banking system in order for them to operate and develop their businesses. As a result of that, investors rate the low access to credit in Yemen as one of the major barriers, beside investors' protection, to their plans to do businesses in Yemen (Doing Business in Yemen, 2010). In other words, getting access the financial resources from the Yemeni banking system and other financial service providers has been deemed as a major problem faced by both local and foreigner investors and hence one of the reasons behind the low FDI inflow to Yemen (World Bank, 2010).

To compare the rank of Yemen with some other selected countries in terms of getting credits, Table 2.5 and Figure 2.7 illustrate the ranking for some selected countries.

Table 2.5

*Rank of getting credit for some selected countries*

Country	Rank
Malaysia	1
Saudi Arabia	61
Iran, Islamic Rep.	113
Jordan	127
Oman	127
Yemen Republic	150
Iraq	167

Source: Doing business in Yemen, 2010

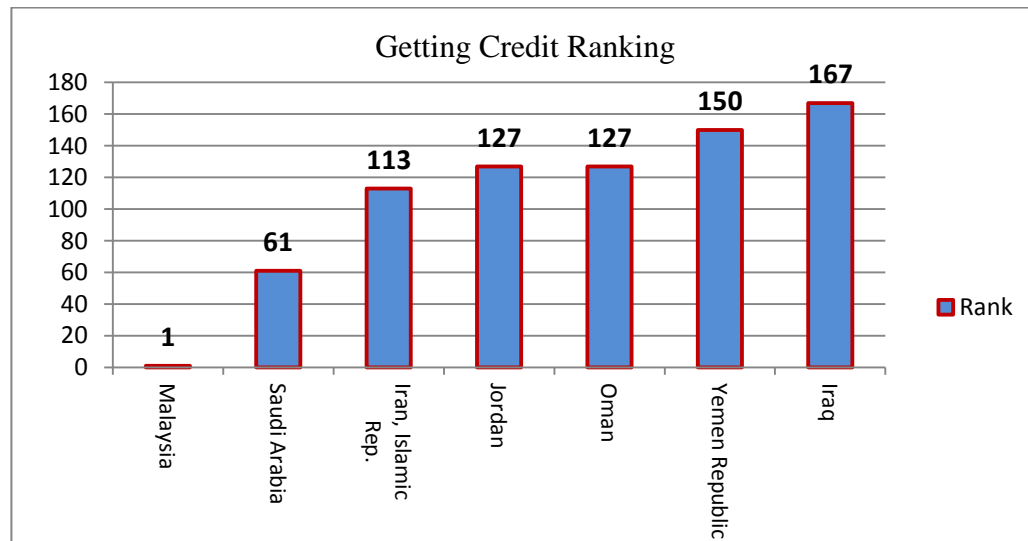


Figure 2.7

*Getting credit rank for some selected countries*

#### 2.4.5 Yemeni banking system and the overall economic development

Besides that, it has been argued that the microfinance services offered by the Yemeni banking system are not up to the level that helps in reducing unemployment

and poverty levels among Yemenis, especially youth and educated ones. That is why both local and foreign entrepreneurs consider having access to the financial resources or getting credits is the main obstacle that hinders the growth and survival of their businesses (World Bank, 2010). Consequently, the Yemeni banking system has very weak contribution to the development of the SMEs and the poverty eradication through supporting microfinance programs.

According to the UNCDF report (2005), Yemen is one of the poorest Arab countries and one of the least developed countries in the world with more than 42 % of its population live under the Yemeni poverty line with an average of USD 45 per month (CGAP Report: Microfinance in Yemen, 2005). It has a high and an increasing unemployment rate that reached 35 % by 2008 (Kirchhoff & Mutchler, 2009; Yemen Country Profile, 2008). Moreover, it has been ranked as 149 among 171 in terms of Human Resource Development.

#### **2.4.6 Yemeni banking system and SMEs' financing**

In the current global economy, small and medium sized enterprises (SMEs) have been considered as the pillar of economic growth of all countries. SMEs play a significant role in the economy in all countries by providing job opportunities and act as suppliers for large organizations (Rahman, 2001).

To further highlight the issue related to SMEs in Yemen, it is of use to shed some light on the situation of the SMEs in Yemen. Based on the data of the year 2000, the SMEs in Yemen are seen as one of the suggested solutions for many economic problems related to the increasing unemployment rate and the increasing poverty level. SMEs in Yemen, however, constitutes of about 99.6% of all business

organizations and more than 7.2% to the GDP of the country employing more than 485,000 workers (Ministry of Planning and International Cooperation MOPIC, 2004).

Essentially, the major challenge that faces the SMEs operating in Yemen in their striving for survival and growth is the difficulty to get an access to the financial resources required for the operational needs. In support for this argument, a survey conducted by the Ministry of Planning and International Cooperation in 2004 showed that less than 12.2% of SMEs working in Yemen can get an access to the required financial resources. This potential role of SMEs, has been attracting all countries, including Yemen, to adopt prudential strategies to attract local as well as foreign investors to take the advantage of various tax exemptions' incentive schemes to establish their SMEs. The more SMEs established to take the advantage of the incentives offered by the Yemeni government, the more created new job opportunities that will help in meeting the demand of the increasing number of Yemeni workers and university graduates (Ministry of Planning and International Cooperation MOPIC, 2004).

To enhance the role of the Yemeni banking system in the growth and prosperity of the overall economy, the CBY has been pushing all the efforts to establish microfinance companies as well as encouraging the existing banks to offer microfinance services to ensure the growth and survival of SMEs projects (Duscha, 2008).

## **2.5 Banks' Resources and Organizational Performance**

According to the resource based view of the firm, it is confirmed that the competitiveness and enhanced performance of a firm is dependent on its valuable, rare, imperfectly imitable, and non-substitutable resources (Barney, 1986, 1991; Teece *et al.* 1997). Traditionally, the firm's resources can be categorized into tangible and intangible. While tangible resources are the physical objects such as capital, locations, building, warehouses, and other facilities, intangibles resources comprises of knowledge, skills, efficient practices, processes, capabilities, and intellectual capital like entrepreneurial orientation (EO) and other assets that cannot placed in the balance sheet (Abu Bakar & Ahmed, 2010; Mathews, 2006).

Moreover, intangible resources might be considered, from a strategic point of view, more important than the tangible resources for the firm's success and effectiveness. The importance of the intangible resources comes from that they are valuable, rare, and inimitable and thus differentiate an organization from its competitors (Abu Bakar & Ahmed, 2010). More importantly, these resources are the main component of the firm desirable sustainable competitive advantage. However, many factors can cause their flow out of the firm to the competitors (Apintalisayon, 2008; Barney, 1991).

## **2.6 Why the Yemeni Banking System should Improve its Performance?**

In the current global business environment, banks have been facing many challenges that affect their organizational performance. First, there has been an increasing number of banks operating in the same environment and serving the same market segments. This results in creating an aggressive competitive business

environment in the banking industry. The aggressive competition in the banking industry becomes fiercer since all the banks operating in the same environment, basically, introduce almost the same financial products and services. Second, there have been rapid changes in the customers' needs and expectations. The new generations have been critical of the quality of products and services and demanding for innovative new products and services that are reliable and responsive. Moreover, beside the dramatic changes of culture and technology in the new era, customers have become more educated, knowledgeable, aware of their rights, and willing to report their opinions to the public in case they are dissatisfied (Li, Zhao, & Lee, 2001). In addition to that, the nature of business in banks can be considered as a challenging where the errors are very costly and the product complexity is constantly increasing. With the growth of the industry it is challenging to increase the capacity of the bank and mitigate the risks.

In other words, the current dynamic business environment and the critical and knowledgeable customers have been forcing banks, among other organizations, to achieve better and excellent performance. Therefore, to achieve a better strategic position in the marketplace, banks are to adopt both quality and innovation strategies (Feng, Prajogo, Tan, & Sohal, 2006). These strategies are expected to help banks to sustain their competitive advantage through being customer-centric and raise their capabilities to be able to face effectively the current major changing. In other words, banks have to adopt creative strategies, based on their resources, to differentiate themselves from others and to create their own sustainable competitive advantage (Naeem, Saif, & Qasim, 2008). More specifically, banks have to be innovative in introducing new products and services, proactive to prevent complaints from their

customers, risk takers to ensure being in the edge of competition and to lead the trend. In short, banks have to adopt entrepreneurial orientation (EO) strategies to survive and achieve the desired growth in the current competitive market place. Moreover, banks should adopt total quality management practices to align all their activities with the customers' needs and expectation to have satisfied and consequently loyal customers in the current volatile market environment (Krishnaveni & Divya, 2004; Li *et al.*, 2001).

## **2.7 Summary**

This chapter has discussed (the Yemeni banking system) and the issues and challenges faced related to marketing and operations by the banking system.

There have been many issues raised about the Yemeni banking system related to marketing as well as operational policies. Apparently, the major issue related to the Yemeni banking system is its failure to attract the Yemeni customers to deal their transactions through the banks network. Moreover, Yemeni banks have no significant contribution to the development of the overall economy through business financing policies, especially SMEs. These issues have been attributed, fully or partially, to the lack of customer focus strategies adopted by the Yemeni banks. Besides that, many banks have not been able to explore the business opportunities related to business financing, in general, and SMEs' financing, in particular. This lack of customer and market-focus strategies will be in favor of the competitors that are expected to enter the business environment with the planned opening up of the economy as a result of joining WTO.

## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.1 Introduction**

This chapter provides a review of the past literature in the fields of organizational performance, TQM practices, and entrepreneurial orientation (EO). It also provides an investigation of the states of the TQM practices and the entrepreneurial orientation (EO) in the Yemeni banking sector. Beside that it will also introduce organizational culture (OC) as moderating variables on the relationship between TQM practices, entrepreneurial orientation (EO) and the organizational performance. In addition to that, this chapter discusses the underpinning theory covering the variables of the study. At the end of this chapter, the theoretical framework of the study was reported and. Moreover, this chapter provided reasonable reasoning of the hypotheses developed based on a comprehensive review of the previous relevant literature.

#### **3.2 Organizational Performance**

In the literature of organizational studies, a great deal of attention has been paid to examine the determinants of the organizational performance. That is because of the importance of the subject in reflecting the path of development for any organization, and because of the implications of these studies on organizational effectiveness and competitiveness.

In the global context, the competition has been significantly increasing in quantity and quality. However, the new generation of customer has become very



critical about the quality of products and services. This new environment in which the customers and their changing demands have become the center of attention, forced the organizations to adopt innovative strategies and maintain high level of quality standards to ensure their presence in the global market place. Due to what has been mentioned earlier, the adoption of TQM practices and being an entrepreneurial organization has become the center of many scholars in the organizational studies field.

Essentially, it has been well known in the management literature that the organizational performance is considered to one of the most important constructs in the field of strategic management and organizational studies (Combs, Crook, & Shook, 2005). Therefore, over the last few decades, both academics and practitioners conducted considerable amount of research work on organizational performance seeking to understand the antecedents, processes, and other factors that can enhance the organizational outcomes (Jing & Avery, 2008). Additionally, this bulk of research was driven by the practical importance of the organizational performance concept that comes from top managers who they are always concerning about the long term success and competitiveness of their organizations (Finkelstein & Hambrick, 1996).

The main objective of organizations in the service sector is to provide customers with products and services that meet their needs and satisfy their desires (Al-Marri *et al.*, 2007). Therefore, many researchers have extended their works to explore the determinants of effective performance in the service sector.

### **3.2.1 Bank performance and the overall economic development**

As it has been widely argued that a poor performance of a banking system of any country can be one of the main reasons behind its poor overall economic growth. In other words, sophisticated and well-performing banking system has a significant role in the country's overall economic growth (Anderson & Trap, 2003). This leads to the conclusion that the efficient banking system enables business entities to raise and manage their funds more effectively resulting in rapid economic development (Fase & Abma, 2003).

Banks, among other service-oriented organizations, should always review their policies and grow innovative ideas to achieve a competitive and innovative performance. In the literature of organizational performance, an extensive research has been conducted to investigate the antecedents of organizational performance not only in manufacturing organizations but also in service organizations, including banks. Essentially, financial institutions, banks in particular, are in the heart of the economy of any country catering for the needs of other sectors. Therefore, a great deal of attention has been paid by practitioners and academics to examine the factors that might affect organizational performance and enhance the strategic competitive positions (Al-Marri *et al.*, 2007).

### **3.2.2 Organizational Performance Definition**

In today's changing and competitive business environment, it has been widely emphasized that measuring organizational performance is very important to evaluate the success of organizational strategy direction (Neely, 1999). Moreover, it is impossible to improve a business entity without measuring its current situation.

However, although there has been an extensive research work conducted in the literature regarding organizational performance, there is no universal agreement among scholars on how organizational performance should be defined (Ford & Schellenberg, 1982; Johannessen, Olaisen, & Olsen, 1999). Responding to the need to explain the term, Antony and Bhattacharyya (2010) defined the organizational performance as the measure that is used to evaluate and assess the success of an organization to create and deliver the value to its external as well as internal customers.

### **3.2.3 TQM, EO, OC, and the Organizational Performance**

Both practitioners and academics argue that all external factors which might affect the organizational performance of the banks are not predictable. Therefore, for any bank to survive and gain a growing market share it should come up with innovative products and services- Based on their internal resources- that differ from those of their competitors and should, also, adopt a high quality standards for all its activities and processes(FuB *et al.*, 2007).

Many researchers argue that TQM strategy is one of the most important development in management field and is found to be a competitive advantage around the world (Prajogo & Sohal, 2001). Over the past few decades, more attention has been given to the TQM practices and their effects, if implemented, on the performance of any business entity. Therefore, many organizations in different sectors of the economy such as manufacturing, service, health care; education, and government have been implementing TQM practices to improve their performance and effectiveness. This increasing attention given to TQM strategy is due to its

perceived role as a source of competitive advantage (Douglas & Judge, 2001). Moreover, TQM practices implementation considered to be a good form of fundamental change of the organization and an essential components of the effective management system with which the organization cope with a new and more challenging market environment and achieve competitive survival (Chong & Rundus, 2004; Kotter, 1995; Nair, 2006).

Moreover, the TQM practices and organizational performance link has been extensively investigated by many researchers. For example, Chong and Rundus (2004) concluded that there is a strong positive association between TQM practices and organizational performance. Recently, researchers have been studying the TQM practices as an approach towards creating competitive advantage and an enhanced organizational performance (Kaynak, 2003; Samson & Terziovski, 1999b; Sila & Ebrahimpour, 2005).

Besides that, there is anecdotal evidence that the majority of studies in the literature investigating the TQM practices - organizational performance relationship have focused on the role of TQM in the improvement of the production point in manufacturing organizations ( e. g. Ahire & Dreyfus, 2000; Ahire & O'Shaughness, 1998; Choi & Eboch, 1998; Cua, McKone, & Schroeder, 2001; Curkovic, Melnyk, Calantone, & Handfield, 2000; Das, Handfield, Calantone, & Ghosh, 2000; Dow, Samson, & Ford, 1999; Forza & Flippini, 1998; Ho, Duffy, & Shih, 2001; Kaynak, 2003; Kontoghiorghes & Gudgel, 2004; Lai, 2003; Lau, Zhao, & Xiao, 2004; Martinez-Lorente, Dewhursts, & Gallego-Rodriguez, 2000; Prajogo & Sohal, 2003; Rungtusanatham, Forza, Filippini, & Anderson, 1998; Samson & Terziovski, 1999b; Sanchez-Rodriguez & Martinez-Lorente, 2004; Sun, 2000; Tan, 2001)

Furthermore, Prajogo and Sohal (2001) studied the literature covering the TQM- innovation relationship and they found two opposite arguments. The first one states that the TQM establishes innovation-oriented environment and then has a positive relationship with innovation and the subsequently performance (Dean & Bowen, 1994; Kanji, 1996; Mahesh, 1993; Roffe, 1999; Tang, 1998). Whereas others (Harari, 1993; Samaha, 1996) argue that the implementation of TQM principals may hinder the organizational innovation.

Similarly, there has been significant attention given by many researchers to study the growing influence of entrepreneurial orientation (EO) on organizational performance. Some studies have considered that the entrepreneurial orientation (EO) has been an influential antecedent of effective organizational performance (Wiklund, 1999; Wiklund & Shepherd, 2005). On the other hand, other studies do not support this relationship (Smart & Conant, 1994). From the resource-advantage theory point of view the entrepreneurial orientation (EO) is a crucial factor that enables the firm to create a competitive position in the marketplace and enhance its competitive advantage over its competitors (Ireland, Hitt, & Sirmon, 2003; Wiklund & Shepherd, 2005; Zahra & Garvis, 2000). In today's entrepreneurial business environment, the pace of change has been rapidly increasing and the innovation in all business levels has been gaining more importance than it has ever had. Hence, managers and business leaders should foster and create innovative environment (Zahra, 1999).

Despite the numerous attempts to demonstrate the positive direct relationship between TQM practices and the organizational performance, the findings of these studies were inconclusive and two opposite findings have been identified (Prajogo & Sohal, 2001; Easton & Jarrel, 1998). Similarly, according to Davis (2007), the

findings in the literature regarding the relationship between entrepreneurial orientation (EO) and organizational performance have been consistent whereas findings regarding the moderating variables on the EO- organizational performance relationship have been mixed. This lack of consistency calls scholars and researchers to extend the future research to explore the potential moderating or mediating variables to be able to produce conclusive empirical results (Macaes, Farhangmehr, & Pinho, 2007).

Therefore, to create a sustainable competitive advantage for an organization, both leaders and employees should set up a culture within an organization that encourage constant changes and create never-ending innovative and creative business environment that results in high and satisfactory products and services (Kuratko & Welsch, 2004).

Furthermore, there has been a significant research work in the literature of organizational sciences that extensively studied organizational culture (OC) as the critical factor for organizational effective and competitive performance (Schein, 1983, 1984, 1985, 1992). Traditionally, organizational culture (OC) is defined to be the set of ideologies and core values shared within an organization, it is also the context in which strategies are formulated and implemented (Kuratko & Welsch, 2004). Hence, the culture in which the organization operates will affect the organizational performance. Many researchers such as (Deal & Kennedy, 1982; Deshpande & Farley, 2004) confirmed that there is a strong impact of the organizational culture (OC) on organizational performance and sustainable competitive advantage processes. They also argued that the strong is the culture in

which organization operates, the more effective and successful the organizational performance.

The literature also indicates that with the lack of communication, trust, innovation, and appropriate organizational culture (OC) it would become impossible and the organization will not be able to create a sustained competitive advantage (Castelfranchi, 2004; Davenport & Prusak, 2000; McDermott & O'Dell, 2001; Sharkie, 2005). This, in fact, may drive researchers to think about the interaction between TQM practices, entrepreneurial orientation (EO), and organizational culture (OC) and their effects on the organizational performance.

#### **3.2.4 Organizational Performance Measures**

As it has been mentioned earlier, due to the concern shown regarding the survival of organizations in today's ever-changing market place, both academics and practitioners have conducted huge research studies investigating the organizational performance term and its determinants (Johannessen, Olaisen, & Olsen, 1999). However, the question regarding what is the most appropriate measure of organizational performance has been the issue of growing importance among researchers and practitioners alike (Jusoh, Ibrahim, & Zainuddin, 2008). To say the same in different way, there has been a lack in consensus among researchers about the meaning of the organizational performance term that, despite the extensive research work, remains a debatable issue (Johannessen, Olaisen, & Olsen, 1999). Murphy, Trailer, and Hill (1996) in their review on the measurements of performance, they identified 71 different measures using both financial as well as non-financial indicators to measure the organizational performance.

### **3.2.4.1 Measuring Organizational Performance**

Based on the review of the organizational performance relevant literature, there has been unanswered question challenging both academics and practitioners on what is the most appropriate measure of organizational performance. Traditionally, organizations have been using cost and accounting-based measures to measure its performance (Demirbag, Tatoglu, Tekinus, & Zaim, 2006). With the growing complexity of the business environment, the competitive market in which the organizations operate imply that there must be a proper measurement system that measures the overall organizational performance rather than financial measures. Related to that, Johnson (1983) and Kaplan (1984) emphasized that the financial performance system has proven not to be efficient in measuring the business performance in a competitive and turbulent business environment. Moreover, it was argued that financial measure of organizational performance fails to anticipate the changes in the competitive business scenario.

To justify the common use of the financial performance in measuring the organizational performance, some researchers such as Johannessen *et al.* (1999) argued that the financial indicators are the most standard since they quantify the organizational performance and facilitate the comparison. Therefore, many financial measures have been used to measure the organizational performance such as return on investment (ROI), return on assets (ROA), and earnings per share (EPS). Nonetheless the profit is the main driver of business, it cannot reflect the organization's ability to maintain the profitability in the future (Bruns, 1998).



#### **3.2.4.1.1 Financial and Non-financial Organizational Performance Measures**

Organizational performance has been measured in the literature using both financial and non-financial measures have been used in the literature to measure the organizational performance. As it has been mentioned earlier, the changing business environment and the complex marketplace have forced the organizations to go beyond the traditional measurement system that has one dimension and narrow focus to be able to measure all the operational aspects and the market factors as well (Kaplan & Norton, 1992). Therefore, many researchers have been evaluating the existing measures besides designing new ones. In relation to that, Johannessen *et al.* (1999) reviewed the literature related to the evaluation the efficiency of financial measures in measuring the organizational performance. Based on that, many limitations have been identified. First, financial measures of organizational performance are susceptible to the method of variance and might be misleading since they might be affected by the industry-related factors. Second, due to the possibility of manipulation of financial measures, they are not always representative of the actual organizational performance. Third, financial measures, as argued by Kaplan and Norton (1996), can reflect only the effect of past activities on the organizational performance and might be misleading when used to predict the future performance. Fourth, financial measures seem to be stable and do not reflect new goals. In other words, they cannot identify the current issues related to the organizational performance in the modern business environment (Hanson & Mowen, 2003). Fifth, financial measures lack the strategic focus and rather emphasizes on short-term financial measures resulting in a wide and increasing gap between

developed strategies and their implementation (Kaplan & Norton, 1996; Neely, 1999).

### **3.2.5 Organizational Performance Measurement System in Banks**

Notwithstanding the extensive research work regarding the performance measurement system, there has been no consensus on which is the most appropriate measurement system. Furthermore, it was argued that measuring the performance of service organizations is more critical than that of the manufacturing due to the intangibility of the services (Bharadwaj, Varadarajan, & Fahy, 1993). This is so since the business growth and effectiveness of service organizations is mainly dependent on the customer relationships and service quality in the long run. Many studies have been conducted to measure the performance of banks. Banks have been traditionally using the financial measures such as return on assets (ROA), return of investment (ROI), return on equity (ROE), equity to assets (ETA), internal growth of equity (IGOE), and many other ratios (Ramanathan, 2007). However, these ratios have been still used in studying the performance of banks. Despite the crucial importance of these ratios in evaluating the performance of banks, they neglect other aspects of the overall organizational performance. Therefore, many other non-financial indicators should be used to measure the performance taking into consideration non-financial dimensions that result in increased productivity and attractive added value to the customers (Ramanathan, 2007).

Apparently, a comprehensive review of the literature of performance measurement system revealed that the accounting-based measure was the dominant in measuring organizational performance (Atkinson & Brown, 2001). Additionally,

as it has been emphasized earlier, the financial measurement system of the organizational performance has been criticized by both academics and practitioners since they have the short-term focus and can be easily manipulated. Besides that, they tend to measure the past performance and have no reliability in measuring the future performance (Jusoh, Ibrahim, & Zainuddin, 2008).

In response to the global competition and challenging business environment, especially in the banking industry, banks should seek an appropriate performance measurement system that could measure both financial as well as non-financial dimensions of their various activities (Atkinson & Brown, 2001). In other words, in the banking industry the performance measurement system should pay more attention to non-financial activities that has a long-term focus through value-creation activities, such as the service quality and customer satisfaction.

Over the past years, the traditional measurement system has been criticized for its reliance on financial data to measure the organizational performance (Jusoh, Ibrahim, & Zainuddin, 2008). It has been argued that the traditional measurement system is no longer in fit to the current changing and highly competitive business environment. Therefore, an appropriate measurement system should be able to assess human-based activities and processes' effectiveness as well. That is, an effective measurement system should capture all the activities that affect the value creation processes within an organization. Therefore, in the literature of performance measurement there have been many attempts to develop strategic performance measurement systems that consider both financial and non-financial indicators (Chenhall, 2005). For example, Fitzgerald, Johnston, Brignall, Silvestro, and Voss (1991) have suggested a framework that considers both financial and non-financial

measures that is Results and Determinants Model to be used in service organization. While “Results” in their model refer to the competitiveness, service quality and financial performance, “Determinants” refer to the flexibility, resource utilization and innovation.

Contributing to the same stream of research, Heskett, Jones, Sasser, and EarlSchlesinger (1994) designed a model called (Service Profit Chain) which measures both financial and non-financial performance of the service industry organizations. Based on this model, it was claimed that the non-financial measures such as, employees satisfaction, and loyalty, productivity, internal quality, organizational values, and customer satisfaction and loyalty would result in growth and profitability of an organization.

Similarly, the most popular model in measuring organizational performance was introduced by Kaplan and Norton (1992) which was named as the Balanced ScoreCard (BSC) Model (Bourne, Neely, Platts, & Mills, 2002). However, it was introduced as the strategic model that balances all aspects of organizational performance based on which organizations can suit their strategies to achieve their overall goals and objectives. Specifically, BSC system considers the assessment of the performance from various perspectives namely, financial perspective, internal business perspective, customer perspective and innovation and learning perspectives.

Many studies in the literature of performance measurements have been conducted to link the implementation of BSC and improved organizational performance. For example, Hoque and James (2000) and Malina and Selto (2001) have extended an extensive research to examine the effect of BSC implementation on organizational performance. Their findings indicated that the successful

implementation of BSC in organizations lead to superior performance. Similarly, in their attempt to study the implications of BSC implementation on financial performance, Malina and Selto (2001) supported the existence of an indirect relationship between BSC implementation and financial performance.

It can be argued, accordingly, that the implementation of BSC in banks can enhance the overall performance as it can be used communicate the vision through the bank's structure, enhance the business planning activities and establish a quality customer relationship (Kaplan & Norton, 1996) .

#### **3.2.5.1 The Performance Measurement used in this Study**

While the financial performance of an organization has a primary importance in measuring the success of profit-based organizations, non-financial performance has a growing importance in measuring public and service organizations (Kaplan & Norton, 2000). However, an extensive review of the literature of performance measurements shows that the financial measurement system has been receiving many critics by practitioners and academics since this system neglect some aspects of organizational performance (Arnand, 2003). On the other hand, non-financial measures have been gaining the credits as good measures as they deal with causes rather than effect (Arnand, 2003), capable to reflect the current management situations ( Banker *et al.* , 2000), more importantly focus on service quality and customer (Banker *et al.*, 2000).

Furthermore, the relationship between non-financial and financial performance has been studied and investigated by many researchers. For example, York and Miree (2004) and Rust, Zahorik, and Keiningham (1995) argued that non-

financial performance such as customer satisfaction, improved quality and innovativeness can increase the market share and create great customer loyalty that, in turn, increase the financial performance. However, in measuring financial and non-financial performance objective as well as subjective measures can be used. While the objective measures are based on the real figures from the organization, the subjective measures use the perceptual responses of the participants to assess the performance (Johannessen *et al.*, 1999).

This study, therefore, chose to use non-financial performance or perceptual measures to measure the organizational performance due to the following applicable assumptions. One assumption is that, the perceptual measures are consistent and do not vary significantly from the objective measures and, hence, can measure the same level of performance. Besides, the respondents might question the confidentiality of the data collected when asked about financial indicators (Ackelsberg & Arlow, 1985), especially in a tightly much closed business environment like Yemen. More importantly, the subjective measures help in overseeing the potential opportunities for organizational effectiveness in the long-term (Pizam & Ellis, 1999). Therefore, in this study, the perceptual measure of organizational performance of banks in Yemen will be used to collect the data related to the overall organizational performance.

Having determined the organizational performance that is most suitable to this study, the following sections were devoted to provide detailed discussion regarding the TQM practices.

### **3.3 Total Quality Management (TQM) Practices**

The TQM past research done by its founders such as Deming (1986), Juran (1986), and Crosby (1979) changed the philosophy of business worldwide (James, 2008). The growing and intensive literature in the management field reveals that TQM practices have become crucial factor for organizations to achieve a sustainable competitive advantage (Harrington & Williams, 2004).

#### **3.3.1 TQM as a Management Philosophy**

Total Quality Management (TQM) is a management philosophy of management of growing interest in the literature of management in today's global competitive environment. As a strategy, TQM has been gaining an increasing attention by many researchers (Ehigie & McAndrew, 2005). TQM strategy, moreover, has been considered as a critical determinant of the success and survival of manufacturing and service organizations as it is a source of competitive advantage (Douglas & Judge, 2001), driver of innovation (Sigh & Smith, 2004), and a determining factor for successful changes and cultural development (Irani *et al.*, 2004).

A comprehensive review of the literature shows the importance of TQM strategy in manufacturing organizations (Arawati, 2005; Das, Paul, & Swierczek, 2008; Sohal & Terziovski, 2000); service organizations (Saravanan & Rao, 2006; Yasin *et al.*, 2004); small and medium sized enterprises (Demirbag *et al.*, 2007; Mohd Nizam & Tannock, 2005, Sohail & Hoong, 2003); higher education institutions (Cruickshank, 2003; Dahar, Faize, & Niwaz, 2010) and in public

service organizations (Nor Hazilah, 2004). According to Prybutok and Ramasesh (2005), quality management had many phase in development started from quality by inspection (QBI), Statistical Quality Control (SQC), Quality Assurance (QA), and currently Total Quality Management (TQM).

The increase of importance and consequent implementation of TQM strategy has been the natural response to the demand of consumers' awareness and global stiff competition (Juran, 1995). TQM strategy, however, has been gaining an increasing interest among practitioners as one of the main factor in the creation of sustainable competitive advantage (Williams, Wiele, Iwaardeen, & Visser, 2004).

### **3.3.2 The Quality Prescriptions by the Quality Management Gurus**

Over the last three decades, the concept of quality management has witnessed a significant evolution impacted by the contributions of the leading pioneers like Crosby (1979), Deming (1986), Juran (1988), Feigenbaum (1986), Taguchi (1986), Ishikawa (1985), Groocock (1986), just to name few. However, the discipline of TQM has been developed and established based on their prescriptions and models. In recent days, organizations tend to customize the approach of their quality adoption to fit their activities and desired goals rather than being reliant on one specific model (Llorens Motes & Verdu Jover, 2004; Yasin *et al.*, 2004).

Crosby (1979) introduced the concept of Zero defect. In other words, the emphasis, according to Crosby, is on the prevention rather than inspection. Therefore, clear understanding of the quality standards should be effectively and continuously inculcated among managers to result in high commitment. Further,



Crosby (1979) emphasized on the role of management in leading successful quality management initiatives, the employees' awareness and involvement. He also considered the quality as a continuous improvement process.

Deming (1986) is one of the most recognized contributors to the discipline of quality management. However, he emphasized the use of statistical techniques such as the Statistical Quality Control (SQC) to maintain the quality of processes up to the specific standards in the production activities. Besides, he emphasized the importance of top management in supporting the quality initiatives and creating an effective environment in which all the quality standards are clear and supported. In addition to that, he confirmed the importance of employees' involvement as a pivotal factor for successful quality initiative.

In a similar way, Juran (1986; 1988) emphasized the importance of top management in quality management initiatives and argued that it overweigh the role of employees. Therefore, according to Juran (1988), quality management training should be provided to managers to improve communication cross departments. Furthermore, he emphasized the importance of group in designing and successfully implementing quality management initiatives.

On the other hand, customer satisfaction, as emphasized by Feigenbaum (1986), is the main objective of all the quality management initiatives. Based on that consideration, all the activities of engineering, production, and marketing should be directed toward achieving the quality objectives to enhance customer satisfaction. He also emphasized the importance of quality training in the four stages of quality control processes namely, standards settings, standards

conformation, correcting actions, and improvement planning. The quality training, according to Feigenbaum (1986), should be mainly directed to equip the practitioners with quality attitudes, knowledge, and skills.

In the meantime, Groocock (1986) emphasized the role of quality to meet customers' expectations and subsequently achieve organizational goals. He also stated that customers' satisfaction can be met by the so called 'Chain of Performance' covering the processes from product design till it reaches the customer. Like other quality scholars he emphasized the role of top management, employees' participation and quality training to successfully implement quality initiatives.

Meanwhile, Taguchi (1986) argued that the zero-defect suggested by Crosby (1986) is not practical. He also emphasized the importance role played by the quality department in determining the quality of the products through the adoption of statistical quality control mechanisms.

In his contribution to the same field, Ishikawa (1985) emphasized the importance of the quality training through establishing and disseminating the quality-related knowledge. He promoted the use of cause-and-effect to be able to improve the quality performance. He was one of the leading persons to stress the importance of employees' involvement and the necessity to train them on how to monitor the process through statistical-related analysis methods.

Based on the previous discussions, one can see the similarities and differences among the quality prescriptions provided by the leading scholars about the quality management. Although the quality approaches vary from one scholar to another, there has been some sort of agreement about some key success factors. For

example, there is almost consensus among scholars regarding the importance of top management commitment, quality training, and employees' participation for successful quality initiatives.

As each approach of quality management has its own strengths and shortcomings, organizations should be flexible in choosing the approach of quality management to be applied (Ghobadian *et al.*, 1994). In other words, many factors could affect the implementation of TQM initiatives such as organizational structure, culture, and environment (Yasin *et al.*, 2004).

Nevertheless the universal applicability of critical TQM factors, the quality prescriptions provided by leading quality scholars have not been formulated based on empirical studies (Saraph *et al.*, 1989). However, many researchers have tried to empirically validate some approaches of quality management by developing instruments to measure critical factors of TQM strategy (e.g. Black & Porter, 1996; Das *et al.*, 2008; Kaynak, 2003; Saraph *et al.*, 1989; Tamimi & Gershon, 1995).

### **3.3.3 Definition of Quality and TQM**

Prior to discussing the various existing TQM strategy definitions in the literature, some definitions of the product quality and service quality would be discussed based on the quality management literature. Although TQM strategy has been receiving an increasing attention from scholars as a research discipline, there is no consistent definition for quality that is globally acceptable (Reeves & Bednar, 1994). Rather, it was found that there are various definitions for quality as meeting customer satisfaction, excellence, and conformance to product or service

specifications.

While Crosby (1979) defined the quality, from internal perspective, to be the conformance to the organizational set-up quality requirements, Deming (1986), Juran (1988), and Feigenbaum (1986) defined the quality based on customer-centric basis to be the product performance that satisfies customers' needs and meets their expectations. However, they emphasize that the quality is the 'fitness for use' and this, in turn, enhances its in different types of organizations, manufacturing, service, and even non-profit organizations.

### **3.3.3.1 Product Quality**

The quality of product, according to Garvin (1987), encompasses the following dimensions:

- Performance that refers to the operating characteristics of the product;
- Features that refers to the additional characteristics that supplement the product's basic function;
- Reliability that refers to what extent a product will serve the customer effectively and efficiently;
- Conformance that refers to what extent a product meets the predetermined standards;
- Durability refers to the frequent use of the product before it deteriorates.
- Serviceability refers to the speed, courtesy, and ease of repair
- Aesthetics refers to the product's appearance and impression.

- Perceived quality refers to the reputation of the provider.

### **3.3.3.2 Service Quality**

As it has been mentioned earlier, although TQM strategy originated in manufacturing, it has been gaining a growing attention to be applied in service organizations as well (Sila & Ebrahimpour, 2005). As a result, many service organizations have been taking the initiatives to modify the TQM strategy designed for manufacturing organizations to suit the service environment.

According to Lakhe and Mohanty (1995), service organizations have many characteristics. Apparently, service organizations produce intangible as well as tangible services directly delivered to the customers. Due to that, service organizations establish direct contact with their customers. That is why service organizations should be ready to deliver the service on time to keep their customers satisfied. Finally, services are not storable or transportable.

In addition to that, the service quality literature revealed that there are two schools of thought (Camison, 1998). The first school focuses on the content of services by differentiating technical from function. This school is led by Gronroos (1988) and Gummesson (1988). The second school, from the other hand, focuses on the service delivery from customers' perspective. This school, however, is led by Parasuraman, Zeithaml, and Berry (1985; 1988).

While technical dimension refers to effective production of the core service, the functional dimension refers to the delivery of the service produced (Gummesson, 1988). Regarding the other perspective, Parasuraman *et al.*'s (1988) research identified five behavioral dimensions; namely, tangible, reliability, responsiveness, assurance, and empathy. Initially, Parasuraman *et al.*'s (1985) work produced list of ten dimensions that was shortened to the current five dimensions model after several stages. However, based on continuous work, a measure of 22-item instrument called SERVQUAL was produced and it is one of the most widely known tool in measuring the service quality in various contexts (Parasuraman *et al.*, 1988).

#### **3.3.3.3 Definition of TQM**

Despite the extensive work conducted in the literature regarding the TQM practices, there has been lack of agreement or consensus on the definition of TQM. Furthermore, TQM was defined differently in accordance with the approach taken towards quality (Reed *et al.*, 1996). However, in the tremendously growing literature of TQM, there is an evidence of convergent and discriminant validity of the TQM constructs (Hackman & Wageman, 1995).

However, in the literature of quality management, there are many and various definitions for TQM. For example, Dale (2003)

defines TQM as the management approach that ensures the cooperation and participation of all individuals in an organization to produce products and services that satisfy customers' needs and exceed their expectations. Similarly, Flynn *et al.* (1994) defined TQM as the integrated approach that results in high quality outcomes, through maintaining and sustaining continuous improvement processes, to meet the customers' needs.

Other definitions for TQM in the literature were based on TQM principles. For example, Anderson, Rungtusanatham, and Schroeder (1994) defined the TQM strategy as a holistic approach to the organizational overall quality through major principles such as leadership, continuous improvement, effective process management, product/ service design, customer satisfaction and involvement, and employees' involvement and training.

In line with this view, and from change management perspective, Yusof and Aspinwall (2000) defined TQM as the management philosophy and the way of thinking that can transform the organization through successful change initiatives to achieve the world-class status. Moreover, it has been described by the same authors as the system that helps an organization to achieve excellence.

Similarly, Kumar, Choisine, Grosbois, and Kumar (2009) defined TQM as the holistic management approach integrates all the organizational activities to satisfy customers' needs and go beyond

their expectations towards achieving overall organizational objectives.

In relation to that, Dean and Bowen (1994) suggested that TQM strategy can be looked at in terms of principles, practices, and techniques. Principles include customer focus, continuous improvement, and teamwork. Each principle has a set of determined practices such as customer relationships, quality and process control, and group training and skills. To ensure their effective implementations, these practices have to have certain techniques such as quality functions deployment, control charts, and team building techniques.

Based on their review of the literature to define TQM, Mehra, , Hoffman, and Sirias (2001) identified human resources focus; management structure; quality tools; supplier support; and customer orientation as the major critical factors based on which TQM should be defined. On the other hand, despite the differences among researchers in defining TQM (e.g. Dean & Bowen, 1994; Black & Porter, 1996 ; Rao *et al.* ,1999; Flynn & Saladin, 2001), they consider MBNQA as the model based on which TQM should be defined.

As widely reported in the literature of quality management, TQM can be measured based on some critical factors (Arawati, 2005; Li *et al.*, 2003; Saraph *et al.*, 1989; Sila & Ebrahimpour, 2002). Strategy was defined by Swamidass and Newell (1987) as the series of actions practiced to achieve organizational goals. Based on that,



TQM can be defined as the management system consisting of several interrelated critical factors that help the organization to develop an effective set of actions resulting in achieving pre-specified organizational goals.

### **3.3.4 Some Popular National Quality Awards**

Alongside the quality prescriptions extant in both theoretical and empirical studies, there are many model found in the literature commonly used as guidelines in TQM implementation. More specifically, the literature of quality management has been rich in cases where many organizations developed their TQM strategy based on key national quality awards that also been used as the framework for many studies (Tari, 2005; Sila & Ebrahimpour, 2002). Chuan and Soon (2000) in their review of the quality management literature, found that there are 17 National Quality Awards (NQAs). Moreover, most of the national quality awards are modeled based on the three influential quality awards namely: Deming Prize, MBNQA and EQA. In the same vein, Sila and Ebrahimpour (2002) stated that although the differences among the national quality awards they are built on similar criteria of quality measurements.

Therefore, the following sections discuss briefly some of the most influential quality awards namely; the Malcolm Baldrige National Quality Award (MBNQA) in the United States, the European Quality Award (EQA) in Europe, and the Prime Minister Quality Award (PMQA) in Malaysia.

#### **3.3.4.1 Malcolm Baldrige National Quality Award (MBNQA)**

To help the companies to achieve a long-term effectiveness, the Congress passed the Malcolm Baldrige National Quality Award in 1987 in the United States. However, MBNQA was initiated by the United States Department of Commerce and currently administered by the National Institute for Standards and Technology (NIST) (Peschel, 2008). Moreover, MBNQA as a quality criterion considered the major factors of TQM strategy (Karthi, 2004). Therefore, it has been used as the framework to model the national awards for many countries such as Hong Kong, New Zealand, Singapore, and Sri Lanka (Chuan & Soon, 2000).

According to Davis, Marcos, and Stadning (2005) and Peschel (2008), MBNQA consists of seven categories and several items. The seven categories are:

- 1) Leadership: examines the practices of the top management in directing the organization.
- 2) Strategic Planning: examines how the organization sets strategic plans.
- 3) Customer and Market Focus: examines the organizational policies in determining its customers' needs and expectations.
- 4) Information and Analysis: examines the effective use of information to enhance its planning capabilities.
- 5) Human Resource Management Focus: examines the organizational strategies to fully develop and then use the potential workforce capabilities.

- 6) Process Management: examines how the processes are designed, managed, and improved.
- 7) Business Results: examines the overall organizational performance in relative to that of other competitors.

#### **3.3.4.2 European Quality Award (EQA)**

In 1991, the European Organization for Quality and the European Commission supported the establishment of the European Quality Award (EQA). EQA consists of the European Quality Prize (EQP) and the European Quality Award (Conti, 2007). The European Quality Award (EQA) has nine criteria and focuses on resource management, employee satisfaction, and how operations, products and services impact the society (Chuan & Soon, 2000). However, the nine criteria of the European Framework Quality Management excellence model are listed in the following:

- 1) Leadership: To examine the roles of leaders in developing and facilitating the organizational goals' achievement
- 2) Policy and Strategy: To examine how organizational strategies can be implemented through procedures and programs.
- 3) People: To examine the plans and policies designed and implemented by the organization to develop and release the full potentials of its employees.
- 4) Partnerships and Resources: To examine the plans designed by organizations to manage and support its effective operations.

- 5) Processes: To examine how the organizations design and manage their processes to generate increasing values for customers.
- 6) Customers Results: To examine the performance of the organization in relation to customers.
- 7) People Results: To examine the performance of an organization in relation to its people.
- 8) Society Results: To examine the organizational performance in relation to its society.
- 9) Key Performance Result: To examine the excellence of the organizational performance in relation to the set-up plans.

#### **3.3.4.3 Quality Awards in Malaysia (PMQA)**

To enhance the quality and efficiency of the performance of the public sector organizations, the Malaysian government established many awards for management, innovation, and efficient implementation of information and communication technologies (The Malaysia Government Official Portal, 2010). Some of the established awards are listed below:

- 1) Prime Minister's Quality Award (1990)
- 2) Public Service Innovation Award (1991)
- 3) Innovation Award for Joint-Research Between the Public and Private Sector
- 4) Quality Control Circles Award (1984)
- 5) District Office Quality Award (1992)
- 6) Premier Information Technology Award

#### 7) Financial Management Quality Award (2001)

However, The Prime Minister Award has been known to be the most popular one where it has seven criteria for the evaluation of the performance excellence: 1) Leadership in quality management; 2) The use of information and data in quality management; 3) Process of strategic planning; 4) The use of human resources; 5) Quality assurance output; 6) Quality innovation improvement project; and 7) Customer satisfaction

### **3.4 Total Quality Management and Organizational Performance**

In the literature of quality management, there has been a plethora of research work conducted in relation to TQM strategy. Regarding the performance implications of TQM strategy, the majority of the research work confirmed that the adoption of TQM philosophy will eventually benefit all types of organization in which it is applied (Sila & Ebrahimpour, 2002). To explore how TQM strategy had been studied, analyzed, operationally defined, measured, and its implementation evaluated, many researchers such as Ahire, Landeros, and Golhar (1995); Fynes (1998/99); Thiagarajan and Zairi (1997a; b; c); and Sila and Ebrahimpour (2002), have conducted comprehensive literature review about the previous research work.

In studying TQM strategy, Ahire *et al.* (1995) and Thiagarajan and Zairi (1997a; b; c) used MBNQA and EQA criteria as the framework. While Ahire *et al.* (1995) reviewed 226 research works such as conceptual as well as empirical articles and case studies related to the quality management literature between 1970 and 1993, Thiagarajan and Zairi (1997a; b; c) focused only on case studies papers.

However, Ahire *et al.* (1995) found that the majority of the literature was conceptual and the published empirical work was inadequate. Based on that, his suggestion was to intensify the empirical work in relation to TQM strategy. Similarly, based on their review of the literature, Thiagarajan and Zairi (1997a; 1997b; 1997c) categorized the TQM factors into hard and soft quality factors. While hard quality factors are those factors that can be measured and related to the system, tools, and techniques, soft quality factors are those intangible factors that are difficult to directly been measured such as top management commitment, customer focus, teamwork, training and empowerment, and effective communication.

From different perspective, Fynes (1998;1999) reviewed the TQM literature that was focused on validating the TQM construct and defining its critical factors. He, therefore, examined 20 empirical studies using the critical factors of TQM strategy that was previously identified by Flynn, Schroeder and Sakakibara (1994) as the framework for judgement. In other words, as the critical factors of TQM strategy, he used the following seven factors: 1) top management commitment; 2) quality information; 3) process management; 4) product design; 5) work management; 6) supplier involvement, and finally 7) customer involvement.

As an attempt to review the TQM literature related to the relationship between TQM strategy and organizational performance, Yong and Wilkinson (1999) reviewed 15 articles that showed positive and negative relationships between TQM strategy and organizational performance. In this study, it was found that the reviewed articles were related to studies conducted in different countries investigating the TQM strategy and organizational performance relationship.

Although, some of these studies reported positive relationship, others reported negative relationship. The study also concluded that the unsuccessfulness TQM initiatives can be attributed to the partial implementation of TQM strategy and claimed that for organization to enhance its performance towards achieving a competitive advantage, TQM strategy should be implemented fully and to be an integral part of the organizational operations.

In the same vein, Sila and Ebrahimpour (2002) conducted a comprehensive review of the literature related to the quality management. They reviewed 347 articles published in several journals between 1989 and 2000. Throughout their work, they identified 25 factors as the critical factor for TQM that constitute their study framework. According to this study, the review of the literature revealed that customer focus and satisfaction was the most frequently discussed factor followed by employee training and leadership and top management commitment. Next to that was the teamwork followed by employee involvement, continuous improvement, and innovation. Finally, the quality information and performance measurement was the last major element of TQM discussed in literature investigated by this study. In addition to that, they stated that the quality management in the service sector may seem to be more difficult because of the intangibility of services. Therefore, they suggested that a comprehensive questionnaire and framework that include all the major elements of TQM should be expanded and tested to suit the context of service organizations. Further, they suggested that future research on TQM to pay more focus on certain TQM factors that received limited attention such as strategic planning, product and service design, communication, social responsibility, and employee appraisal, rewards and recognition. Interestingly, out of 347 research

papers reviewed in this study, only six studies were conducted in the Middle East including Saudi Arabia, UAE, and Qatar constituted about 1.7 %.

In his meta-analysis for studies about TQM during the period 1987-2002 Baker (2003) stated that the effect of TQM practices on organizational performance has been empirically supported. As previously mentioned, manufacturing organizations were the first to design and implement TQM practices whereas services-based organizations were far behind. Further, TQM adoption in the service sector has been growing rapidly in the global competitive business arena.

More recently, Tari (2005) identified nine critical factors of TQM based on reviewing the TQM literature. These nine factors are: customer-based approach, process management which are the most important; management commitment and leadership; quality planning; management based on facts; continuous improvement; human resource management including training, work team and communication; cooperation with supplier; and finally organizational social and environmental issues-related awareness. He also pointed out that the literature has revealed that TQM and HRM are highly correlated and the latter found to be the basis of the success of the former.

In relation to that, Prajogo and Sohal (2001) tried to study the relationship between TQM implementation and innovation performance. He argued that the implementation of TQM will be influenced by the environment in which the organization operates and the strategy adopted by the organization. He studied the literature of the relationship between the TQM and innovation and then performance he distinguish between two claims. The first one states that the TQM establishes innovation-oriented environment and then has a positive relationship with



innovation and the subsequently performance (Dean & Bowen, 1994; Kanji, 1996; Mahesh, 1993; Roffe, 1999; Tang, 1998). Whereas others (such as Harari, 1993; Samaha, 1996) argued that the implementation of TQM principals may hinder the organizational innovation.

The mediating role of TQM has been studied by many researchers. For example, (Fuentes-Fuentes, Albacete-Saez, & Liorens-Montes, 2004; Prajogo & Sohal, 2006) studied the relationship between environmental characteristics, organization strategy and performance. (Fuentes-Fuentes *et al.*, 2004) collected the data from 273 Spanish firms from quality managers' level. They used casual model and structural equation modeling to test the model. They found that the environmental characteristics influence the implementation of TQM and this in turn influence the financial, operational, and human-aspects of organizational performance.

Similarly, Prajogo and Sohal (2006) investigated the mediating role of TQM on the relationship between organization strategy and organizational performance. they used the data collected from middle and senior managers from Australian firms. The structural equation modeling techniques were used to test the casual model. Their finding supported the partial mediating role of TQM between business strategy and performance.

In the same stream of research, Molina-Azorin, Tari, Claver-Cortes, and Lopez-Gamero (2009) argued that the development of quality management theory was mainly based on three sources namely, the prescription of the quality gurus, the National quality awards, and measurements studies. They also found that the bulk

of the reviewed research work has revealed that the successful implementation can improve organizational performance.

### **3.4.1 TQM and Performance of Manufacturing Organizations**

Total Quality Management (TQM) has been attracting the researchers' attention as one of the most researchable topics in Operation Management (OM) literature over the last few decades (Jiménez- Jiménez & Martínez-Costa, 2009). However, as it has been widely known that TQM philosophy had its origin in production to improve the quality of finished products, its applicability growing to become a source of competitive advantage for both manufacturing and service organizations (Kaynak, 2003; Sila and Ebrahimpour, 2002). In general, TQM strategy has been studied as a factor for competitive advantage (e.g. El Shenawy, Baker, & Lemak, 2007; Escrig-Tena, 2004).

In the literature of TQM, there has been various trends identified by both academics and practitioners. First, the focus, initially, was directed to define the concept and identify its critical success factors (e.g. Ahire *et al.*, 1996; Black & Porter, 1996; Flynn *et al.*, 1994; Saraph *et al.*, 1989). Later, researchers paid more attention to conduct empirical studies to examine the effect of TQM factors on organizational performance (Feng, 2006; Cheng & Lai, 2005; Kaynak, 2003; Sila & Ebrahimpour, 2005) and sustainable competitive advantage (Nair, 2006; Reed *et al.*, 2000).

Apparently, the empirical research related to TQM and organizational performance relationship generated varying and opposite results. While some studies attributed the superior performance of some organizations to the adoption of TQM strategy (Flynn *et al.*, 1995; Douglas & Judge, 2001; Kaynak, 2003; Sila & Ebrahimpour, 2005), other studies highlighted the failure of TQM practices to deliver the desired performance (Dooyoung, Kalinowski, & El-Enein, 1998). Due to the mixed findings regarding the TQM and organizational performance relationship, many researchers carried out a literature review to examine the previous research work. Alongside with that many other empirical research works have been conducted to further the examination of the TQM-performance relationship.

For example, Nair (2006) conducted a meta-analysis study based on the research published between 1995 and 2004. In his meta-analysis he tried to investigate which TQM factors were positively correlated with organizational performance. In addition, he attempted to examine the existence of moderating variables that may influence the TQM practices and organizational performance relationship. The findings of the study confirmed the impact of TQM on organizational performance. The findings of this study, however, emphasized the effects of some TQM critical factors such as leadership, people management, process management, and customer focus on the overall organizational performance. This study also supported the existence of moderating variables in the TQM practices-performance relationship such as organizational structure, as in Douglas and Judge's (2001) study. He, therefore, suggested that many other contextual variables

may be considered in future research to tailor the TQM implementation programs to specific organizations in specific context.

In this connection, Sila and Ebrahimpour (2005) tried to review the previous literature and then empirically investigate the relationship between TQM critical factors and business results based on a survey data collected from 226 US manufacturing companies. Based on an extensive review of the relevant TQM literature, they extracted the following seven factors: leadership; strategic planning; customer focus; information and analysis; human resource management; process management; supplier management; and business results. Their findings showed that the number of articles empirically supported the existence of positive relationship was much more than the number of articles reported negative or no relationship. On the other hand, their empirical results showed that TQM factors are holistic in that they must be implemented in whole and not on piecemeal basis to achieve the desired performance results. They also found that while leadership and information and analysis have strong performance implications, leadership and process management are the only TQM factors that have direct relationship with business results.

In the same line of research, Kaynak (2003) proposed a research model based on the previous studies to examine the relationship between TQM practices and organizational performance. However, his proposed model encompassed management leadership, training, employee relations, quality data and reporting, supplier quality management, product and service design, process management, and firm performance. The empirical results,

based on the data collected from 383 business units operating in 48 States, supported the existence of positive relationship between TQM implementation and firms' performance. In relation to that, in their attempt to explore the relationship between TQM practices and firms' performance of 250 high tech manufacturing firms, Kaynak and Hartley (2005) used the cluster analysis to compare the performance of 250 high tech manufacturing firms based on their extent of TQM implementation. They found that high performing firms were extensively implementing TQM compared with low performing firms. According to that, they suggested that TQM implementation can be considered as a source of competitive advantage.

In their empirical study, Samson and Terziovski (1999a, b) examined the relationship between TQM implementation and organizational performance based on 1200 Australian and New Zealand manufacturing companies. However, their findings showed that almost all the TQM practices found to be significant predictors of performance. It was also found that the TQM behavioral factors, or soft TQM factors, such as leadership, people management, and customer focus were stronger determinant of performance than hard TQM factors. In the same vein, Rahman and Bullock's (2005) study conducted on 261 Australian manufacturing companies showed that there is a positive relationship between soft and hard elements of TQM. In addition to the direct relationship found between soft TQM factors and organizational performance, they found that soft TQM factors affect indirectly the organizational performance through hard TQM factors.

Similarly, in an earlier study aimed to empirically examine the relationship between TQM practices and organizational performance, Lemak, Reed, and Satish (1997) found that, based on 60 companies, showed that TQM strategy was associated with superior performance. In other words, their study showed that TQM strategy improved the financial performance of the studied firms. This was later supported by the empirical results obtained by Agus and Abdullah's (2000) study in the Malaysian manufacturing companies where they found that customer satisfaction resulted from the implementation of TQM strategy was positively related with the financial performance.

In a comparative study, Feng *et al.* (2006) tried to examine the relationship between TQM strategy and quality performance and innovation by comparing the performance of companies in Australia and Singapore. The findings of this study was based on the data collected using a survey questionnaire returned from 194 Australian and 58 Singaporean companies. The results showed that leadership and people management are related to innovative performance while customer focus and process management are related to quality performance.

In connection to this vein of research, Brah, Tee, and Rao (2002) conducted a study to examine the relationship between TQM and the performance of 185 companies in the Singaporean context. Their findings supported the causal relationship between TQM practices and organizational performance. Furthermore, the study also emphasized the importance of the behavioral factors of TQM strategy, such as top management leadership,

customer satisfaction, human resource focus, quality focus. In addition to that, this study emphasized the importance of intangible TQM techniques such as strategic planning and information and analysis, to the organizational success and effectiveness. This study also suggested that there should be longitudinal studies and in-depth case studies as future streams of research in exploring the TQM practices and organizational performance relationship.

Since the area of the TQM-performance relation remained under researched, many other recent studies exerted huge efforts in exploring the relationship between TQM practices and organizational performance in both developed and developing countries. However, the results of many studies suggested that TQM strategy has been gaining a universal importance as a main driver of business excellence. This can be justified by the consistent results obtained by researchers. For example, Lakhal, Pasin, and Limam (2005) examined the impact of TQM on performance of 133 Tunisian plastic transformation sectors. Their empirical results were corroborating the findings of many previous researches by supporting the positive impact of TQM on organizational performance. Following the same research stream, Kumar, Choisine, Grosbois, and Kumar (2009) studied the TQM-performance relationship based on the data collected from 15 Canadian firms. The findings of this study supported the positive effect of TQM strategy implementation on organizational performance.

It has been clear from the previous review of the quality management literature that the vast majority of research work related to TQM reveals that TQM strategy can positively impact the organizational performance (Molina-

Azorin, Tari, Claver-Cortes, & Lopez-Gamero, (2009). On the other hand, many other researchers reported the failure of TQM in organizational effectiveness (Dooyoung, Kalinowski, & El-Enein, 1998). However, many researchers such as (Brah & Lim, 2005) have attributed the failure of TQM performance implications to many reasons. First, the lack of strategic focus of an organization creates the wishful thinking that TQM implementation can fix short-term problems and will have immediate results. Second, the lack of the top management commitment towards products and service in an organization affects the quality performance. Finally, the lack of supportive organizational culture (OC) affects the successful implementation of TQM strategy as a change strategy towards improving the overall organizational performance.

### **3.4.2 Total Quality Management and Performance of SMEs**

Small and Medium Sized Enterprises (SMEs) have been considered to be the life blood of current global economy where they have a dominant role in most developed and developing countries (Ghobadian & Gallear, 1996). Therefore, there has been a growing research work related to the TQM in SMEs (e.g. Fening *et al.*, 2008; Bayati & Taghavi, 2007; Lewis *et al.*, 2006a, b, 2005; Temtime & Solomon, 2002, Rahman, 2001a, b). It has been emphasized by many researchers (e.g. Temtime & Solomon, 2002; Ahire & Golhar, 1996) that TQM practices can help small and medium sized enterprises, if implemented, to be more market-focused and to be more efficient. In addition to that, TQM implement in SMEs can help them to get



the full advantage of their human resources capabilities , and to improve their competitiveness and consequently to achieve better strategic position in the turbulent marketplace.

A thorough review of the current literature on TQM practices indicates that the focus of the relevant literature was on the implementation of TQM in large manufacturing companies and little attention has been paid to their implementation in SMEs (Rahman, 2001). In other words, there has been a dearth of literature investigating the effect of TQM practices on performance of SMEs (Demirbag *et al.*, 2006). Moreover, many studies regarding the implementation of TQM in SMEs were based on case studies scattered in different countries such as the study conducted by Abdullah (2010) in Malaysia; Ghobadian and Galleary (1996) in the UK; and Tannock, Krasachol, and Ruangpermpool (2002) in Thailand. In either case study the purpose was to investigate the status of TQM implementation, to examine what are the barriers and key success factors in TQM adoption, and to report the differences in performance between SMEs based on their commitment to TQM practices.

The bulk of the literature conducted regarding TQM in SMEs is conducted to examine the critical factors of TQM. In a study to examine the relationship between TQM perceptions, behavior planning and firm size of SMEs, Temtime and Solomon (2002) used a descriptive statistics to analyze the data collected from 52 SMEs in Ethiopia. Based on their review of the previous studies they tried to focus their attention on some influential critical factors of the TQM construct. As a result , they identified eight critical TQM

factors namely; Managerial leadership and commitment; customer satisfaction; continuous improvement; employees empowerment and involvement; supplier partnership; quality culture and philosophy; and measurement and feedback. Their findings were supportive of previous studies regarding the main obstacles to TQM implementations. More specifically, SMEs' focus on short-term profitability, lack of resources, and the lack of business planning practices and unclear vision are the main obstacles in TQM adoption by SMEs. Moreover, their findings also confirmed that the more growing and long-term oriented the SME, the serious need it has to implement and adopt TQM strategy.

In their attempt to investigate the relationship between TQM practices and performance of SMEs in Ghana, Fening, Pesakovic, and Amaria (2008) used the MBNQA variables as the variables used for their study that was based on the data collected from a sample of 116 SMEs covering all sectors in Ghana. Based on their analysis and hypotheses testing procedures, they concluded that there are positive significant relationships between the seven management practices used in the study namely, leadership; strategic planning; information and analysis; human resource management; customer and market focus; quality process management; and business results and the SMEs' performance. More importantly, the study also found that the most positive significant relationship was between the human resource management and business performance of SMEs.

In other context, the empirical findings of Salaheldin's (2009) study of 139 Qatari SMEs categorized the TQM critical factors into strategic,

Tactical, and operational factors. While strategic factors include factors related to the top management practices and support, tactical factors those factors related to the employees and suppliers. Similarly, operational factors include factors related to products, resources, and customers. However, the findings of the study revealed that there is a significant effect of TQM factors on operational and the organizational performance of SMEs. Moreover, the study emphasized the crucial role of the strategic factors in the successful implementation of TQM strategy in SMEs.

In their contribution to the literature of TQM in SMEs, Demirbag *et al.* (2006) carried out an empirical study on 163 SMEs in Turkey to identify the TQM critical factors and examine their relationships with organizational performance. Based on Exploratory Factor Analysis, they identified seven critical factors namely, quality data and reporting, role of top management, employees' relations, supplier quality management, training, quality policy, and process management. While their findings supported the existence of strong positive relationship between TQM critical factors and non-financial performance of SMEs, they showed that TQM-financial performance relationship is weak. However, they also showed that non-financial performance can play a mediating role between TQM practices and financial performance of SMEs.

Despite the growing attention given to examine the effect of TQM factors on organizational performance in SMEs, examining this relationship in SMEs' setting is still in its infancy. However, in an early attempts to investigate the relationship between TQM practices and organizational

performance of SMEs, Anderson and Sohal (1999) used the data collected from 62 Australian SMEs. Where they used the Australian Quality Award as the framework. They tried to test the differences caused by TQM factors on many performance indicators namely, quality of products and services, timeliness of delivery, cost of production, and flexibility of delivery. Their findings showed that strategy, policy and planning practices; information analysis practices; and people management practices did not differ across the various outcomes. On the other hand, the results showed that leadership practices were greater on quality of products and services than that the flexibility of delivery.

Categorizing the TQM factors into hard and soft factors has been a trend in the literature when studying TQM and performance relationship. In this line of research, Gadenne and Sharma (2009) tried to investigate the relationship between hard and soft quality management factors and organizational performance of SMEs in the Australian context. They identified six critical factors based on the data collected from the top management of 119 returned questionnaire. Moreover, they found that the six factors in their study were benchmarking and quality measurement; continuous improvement; top management philosophy; employee and customer involvement; employee training; and efficiency improvement. More generally, their findings confirmed that for TQM strategy to have effective implications on organizational performance there should be a combination of hard and soft TQM factors to be implemented to positively affect the overall organizational performance.

In line with the previous studies, the results generated by Pinho's (2008) analysis confirmed that TQM practices are the major contributors to SMEs' organizational performance. His study used the data collected from 135 Portuguese SMEs to examine the direct relationship between TQM practices and organizational performance and the indirect relationship through customer orientation and innovation. This study, moreover, showed that measuring results, quality assurance system, and top-management training and leadership initiatives factor are among the most influential factors on SMEs' performance. Moreover, while it was found that innovation and customer orientation significantly impacted the SMEs' performance and innovation respectively, the impact of TQM and Customer orientation on innovation and SMEs' performance was not supported by the results.

Since the global economy has been very much dependent on the promising SMEs' business activity, TQM implementation has been attracting the attention in some of the emergent economies. For example, Lee (2004) carried out an empirical research to investigate how the TQM implementation can affect the performance of Chinese SMEs. Based on the data collected from 112 SMEs he identified many difficulties in TQM implementation such as the lack of resources, the lack of knowledge, and the ineffective quality training and poor employee involvement. Despite of the various difficulties in implementing TQM in SMEs, there has been a consensus among SMEs' owners about the importance of TQM for business excellence. In addition, the results showed that there is a positive relationship between TQM implementation and organizational performance of SMEs.

In relation to that, there are two opposite views regarding the difference in the organizational performance of ISO 9000 certified and non-certified SMEs. On the other hand, the results generated by Sohail and Hoong's (2003) study on 101 Malaysian SMEs shows that there is a significant difference. On the other hand, Rahman's (2001) results based on the data collected from 250 Australian SMEs confirmed that there is no significance difference.

Moreover, in their study conducted in the Turkish SMEs, Demirbag, Koh, Tatoglu, and Zaim (2006) tried to examine the effect of market orientation and TQM implementation on the organizational performance. They used the Structural Equation Modeling techniques to analyze the data collected from 141 SMEs in the Textile industry. Their findings while supported the positive significant effect of TQM on SMEs' performance, showed that the TQM is the vehicle through which market orientation factor can affect the SMEs' organizational performance.

### **3.4.3 Total Quality Management and the Performance of Service Organizations**

The demand on high quality service increases as the society becomes higher in income, more knowledgeable, and matured culturally (Al-Mansour, 2007). Since its starting in the early 1980s, TQM has added new dimensions to the management practices worldwide. Moreover, the effect of TQM on organizational performance has been empirically supported by an increasing number of studies. Besides, it has been widely argued that TQM

principles, in support to the contingency model of TQM application, are equally applicable to different environments. Moreover, when applying TQM in the service environment, a modified model with compatible practices should be designed to reap the utmost potential benefits (Al-Mansour, 2007). In addition to that, many researchers (such as Al-Mansour, 2007, Huq & Stolen, 1998; Prajogo, 2005) emphasized that behavioral and human-focused TQM factors such as leadership, customer focus, empowerment, and involvement are crucial factors in service-oriented organizations.

#### **3.4.3.1 TQM Practices between Manufacturing and Service Organizations**

As an emerging management philosophy has the ability to solve many problems, TQM strategy has spread out from its origin in manufacturing to cover all types of organizations, including service organizations. The equal applicability and importance of TQM factors in all types of organizations has been confirmed by many researchers (such as Kaynak, 2003; Sila & Ebrahimpour, 2002). Although the service sector has been the dominant component of country-wise as well as global economies, the concept of service quality has not well-studied and developed like that of the product quality (Gupta *et al.*, 2005). Originally, the concept of quality emanated from engineering-based activities and gained more attention and applicability to encompass all organizational activities. Basically, TQM has been developed based on the ideas of quality gurus like Deming, Juran, Crosby, Feigenbaum, and Ishikawa. TQM philosophy has the goal of satisfying customer through continuous improvement processes.

Many differences have been provided to differentiate manufacturing firms from service firms. These differences would, significantly, affect the applicable TQM factors. Apparently the most notable and clear difference, according to Al-Mansour (2007), lies in the tangibility of products of the manufacturing organizations as compared to intangible services produced by service-oriented organizations. Because of that, measuring the quality of products against preset-up specifications is much easier than measuring the quality of intangible products that are less homogenous and difficult to measure.

In the literature of TQM, many studies tried to investigate the applicability of TQM strategy to the service industries by comparing the results obtained from both manufacturing and service firms. In an empirical study conducted by Beaumont, Sohal, and Terziovski (1997) on 261 manufacturing firms and 85 service firms, they results revealed that service firms used fewer management quality tools. This was supported by another study conducted later by Woon (2000) on a sample of 240 Singaporean companies. The findings of the study showed that service firms have lower level of TQM implementation especially in the hard TQM factors such as information and analysis and process management. This study, however, showed that soft TQM factors were equally applicable in both sectors with no significant differences. The previous two studies supported the argument that soft TQM factors are more applicable in service organizations than are the hard TQM factors.

Consistent with this argument are the results provided by Huq and



Stolen (1998) where they examined the differences in TQM implementation between manufacturing and service organizations. This study was based on the data collected from 18 manufacturing and 18 service organizations. They concluded that while manufacturing organizations apply the full range of TQM dimensions, service organizations are more selective and have the tendency towards soft TQM elements.

Similarly, in his study of the TQM on manufacturing and service organizations in Australia, Prajogo (2005) used almost the same number of organizations, 194, to study the differences in terms of many TQM variables namely, leadership, strategic planning, customer focus, information and analysis, people management, process management, and product quality. The findings of this study revealed that there were no significant differences among manufacturing and service organizations in terms of all TQM variables except that service organizations. The results, moreover, showed a significantly higher score in human resource management practices. Apart from that, the study confirmed the equal applicability of TQM practices among manufacturing and service-oriented organizations.

#### **3.4.3.2 TQM practices in service organizations**

Contributing to the literature of TQM in service organizations, some researchers such as Brah, Wong, and Rao (2000), tried to gain insights into the impact of TQM implementation on the business performance of the Singaporean service sector. They identified, based on the review of the literature, eleven TQM critical factors that have been examined based on the data collected from 176 service organizations. The study found that the

improvement in performance can be attributed to customer focus and quality improvement rewards. Moreover, it was found that the behavioral TQM factors such as top management support and employees' involvement, empowerment, and training are among the key success factor of TQM implementation.

In relation to that, while Brah, Tee, and Rao (2002) found that intangible TQM factors have strong effect on performance more than that of tangible factors, or equally importance. Similarly, Brah and Lim (2005) found that the actual improvement in organizational performance was mainly attributed to the tangible factor of TQM. These results were obtained from analyzing the data collected from 81 Singaporean logistics companies to explore the effects of Technology, TQM practices on performance. However, the results of the study also supported the positive relationship between TQM factors and organizational performance confirming the applicability of TQM in service industries.

To examine the effect of TQM on the organizational performance, Hasan and Kerr (2003) carried out an empirical study to examine the effect of TQM practices on service organizational performance. They used the data collected from a sample of 400 service organizations to show how performance is affected by different TQM factors. The findings confirmed that top management support and commitment and customer focus are among the most important factors for an effective organizational performance.

Gupta *et al.* (2005) carried out a study on quality management in service firms to investigate how organizations can sustain structure for total quality. By integrating SERVQUAL and Deming management model they could propose a conceptual model to understand the relationship between sustaining structures and total quality service and customer satisfaction. However, the proposed model linked leadership, organizational culture (OC), and employee commitment with total quality service. Moreover, the study provided a framework using which the customer satisfaction-sustaining structures relationship can be evaluated.

To examine the relationship between TQM practices, service quality, and market orientation, Samat and Saad (2006) carried out a study on 175 service organizations in the northern region of Malaysia. The results revealed that employee empowerment, information and communication, customer focus, and continuous improvement had an effect on service quality. Similarly, the study found that customer focus and employee empowerment had a significant effect on market orientation.

In a study conducted by Sit, Ooi, Lin, and Chong (2009), they investigated the relationship between TQM practices and customer satisfaction in Malaysian service organizations. The empirical results generated from the data collected from 140 service organizations revealed that leadership, customer focus, human resource focus, and information and analysis were positively related to customer satisfaction.

In line with that, Yang (2003) tried to study the states of the quality management in the health care industry in Taiwan to gain insights into the

extent to which TQM practices can help in solving many operations-related problems. He confirmed that many hospitals have utilized TQM system and obtained substantial and desirable results. He also developed a practical guide to be applied by health care institutes.

In an evaluation of the quality management system in on hospital in Yemen, Øvretveit and Al Serouri (2006) conducted a case study on one of the public hospitals. He concluded that even the quality management system was not implemented, the results revealed a good compliance of predetermined standards and an improvement in patient satisfaction.

Similarly, Macinati (2008) tried to identify the TQM factors that best predict the performance of public health care organizations in Italy. As for the effect of the TQM on the health care organizational performance, the findings showed that TQM factors are positively related to the performance. On the other hand, the study showed that there was a lack of the positive relationship between TQM factors and financial performance.

#### **3.4.4 Critical Factors of TQM**

Initially, the categorization of TQM practices has been a subject of debate among the researchers (Samson & 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, Melnyck, Calantone, & Handfield, 2000; Lee, Rho, & Lee, 2003). Based on reviewing the literature of quality management in the service sector organizations some TQM factors have been commonly studied and

investigated. Table 3.1 shows the TQM critical factors that are commonly used by researchers to study the effect of TQM strategy on organizational performance.

Table 3.1

*Critical Factors of TQM strategy*

Critical Factors of TQM strategy	Studies
Management Leadership	Arawati (2005); Brah <i>et al.</i> (2000); Kaynak (2003); Khairul Anuar <i>et al.</i> (2001); Li <i>et al.</i> (2003); Sila and Ebrahimpour (2005); Sureshchander <i>et al.</i> (2001)
Customer Focus	Arawati (2005); Brah <i>et al.</i> (2000); Flynn <i>et al.</i> (1994); Khairul Anuar <i>et al.</i> (2001); Li <i>et al.</i> (2003); Sila and Ebrahimpour (2005); Samson and Terziovski (1999).
Strategic Planning	Black & Porter (1996); Li <i>et al.</i> (2003); Samson and Terziovski (1999); Sila and Ebrahimpour (2005);Wu <i>et al.</i> (1997)
Human Resource Management	Ahire <i>et al.</i> (1996); Anderson <i>et al.</i> (1994); Black & Porter (1996); Brah <i>et al.</i> (2000); Deming (1986); Sanchez-Rodriguez & Martinez- Lorente (2004); Saraph <i>et al.</i> (1989); Sila and Ebrahimpour (2005); Silvestro (1998)
Service Design	Anderson <i>et al.</i> (1994); Brah <i>et al.</i> (2000); Kaynak (2003); Li <i>et al.</i> (2003); Powell (1995); Sureshchander <i>et al.</i> (2001)

Information and Analysis System	Ahire <i>et al.</i> (1996); Anderson and Sohal (1999); Black & Porter (1996); Flynn <i>et al.</i> (1994); Kaynak (2003); Khairul Anuar <i>et al.</i> (2001); Powell (1995); Saraph <i>et al.</i> (1989); Sanchez-Rodriguez & Martinez-Lorente (2004); Sila and Ebrahimpour (2005); Sureshchander <i>et al.</i> (2001); Wu <i>et al.</i> (1997)
Continuous Improvement	Ahire <i>et al.</i> (1996); Anderson <i>et al.</i> (1994); Arawati (2005); Khairul Anuar <i>et al.</i> (2001); Flynn <i>et al.</i> (1994); Li <i>et al.</i> (2003); Rao (2006); Saraph <i>et al.</i> (1989); Sureshchander <i>et al.</i> (2001)
Benchmarking	Ahire <i>et al.</i> (1996); Arawati (2005); Behara and Gundersen (2001); Black & Porter (1996); Brah <i>et al.</i> (2000); Powell (1995); Sureshchander <i>et al.</i> (2001)

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### **3.4.5 Total Quality Management (TQM) in banks**

#### **3.4.5.1 Why do banks need TQM Strategy?**

In today's business environment, banks have been prompted to adopt TQM and other innovative strategies for many reasons. Some of these reasons are: The need for continuous improvement, the need for efficient use of available resources, the need for improving operational efficiency, the need for improving the decision making process, the need for better understanding of customer needs and requirements, the need for implementing cultural change, and finally the need for utilizing scientific methods for data analysis and problem solving (Peschel, 2008).

The turbulent and uncertain business environment urged banks and financial service industry to pay great attention to enhance their capabilities to be able to integrate innovative strategies. The adopted innovative strategies should help banks and financial service providers to produce high quality products and services that are differentiated from those offered by their rivals. Towards this end, banks have to determine which business processes should be improved to offer improved service where and when needed.

Currently, banks and other financial service providers have been facing stiff competition threatening their growth and even survival. Therefore, they are now, like never before, more required to adopt innovative strategy such as TQM to grow or even remain in business especially in the current competitive market (Al-Mansour, 2007).

Customers of the banks are more important than the salesmen in promoting products and services. This major service marketing role played by the customers is due to their credibility to attract new customers and recommend services to their acquaintances. However, banks' customers are very sensitive to the service quality and service delivery of services offered and they may easily shift to try others' offered services. This requires the bank to create loyal customers through life-long strategy that is based on delighting and continuously surprising customers by offering innovative and of high quality products and services different from those of competitors.

The essence of TQM strategy is to satisfy customers through continuous improvements (Kumar *et al.*, 2009). Therefore, it can help banks

to increase their customer satisfaction and loyalty (Al-Mansour, 2007). In fact, sophisticated service quality offered by banks should be mainly based on comprehensive knowledge about the customers' needs, requirements, and expectations. To gain such knowledge, banks should develop an environment in which all the employees, including top and middle managers are involved in effective communication with customers. In other words, the success of banks is based on their ability to satisfy internal as well as external customers. This implies that banks besides conducting marketing researches to identify customers' needs and expectations should ensure the involvement of customers in designing and evaluating the services they need based on their emerging situations (Al-Mansour, 2007).

In banks, there are some processes and activities that need to be improved in quality such as products and services' processing time, loans; ATM; credit cards; and new account, waiting times, Customer complaints, efficiency and friendliness, accuracy and timeliness of financial records, responding to customers' inquiries, and guiding lost customers.

In the current business environment, the quality management in the banking industry is taking place at a revolutionary pace (Rana, 2004). Therefore, banks should design TQM models for branches' various operations to satisfy their internal as well as external customers. The TQM model for the banks' branches should guide branches' managers to make bank-wide improvement in the service quality. Furthermore, TQM model of



commercial branch banking operations should highlight how TQM factors can establish the overall integration of all the activities within a bank to ensure the achievement of all organizational objectives. To ensure a successful TQM initiative, experts in banks should focus on training to provide the employees with the knowledge required for effective TQM implementation. Moreover, TQM implementation processes might be guided by any guidelines, ISO for example, and all the processes should be closely monitored and evaluated (Al-Mansour, 2007).

#### **3.4.5.2 TQM practices and banks' performance**

Due to the significant role of banks in any economy and the hyper-competitive business environment (Naeem *et al.*, 2008), there has been a growing trend in the literature of TQM paying great attention to the applicability and feasibility of TQM in financial institutions, in general, and banks, in particular. This growing trend is driven by the significance of TQM in banking competitive marketplace to satisfy the aware and quality-conscious customers in the fast-paced innovative business environment.

However, in the literature of TQM, only limited research work has been conducted to investigate the level of TQM implementation and its impact on organizational performance of banks (e.g. Al-Marri *et al.*, 2007; Al-Mansour, 2007; Bilich & Neto, 2000; Naeem *et al.*, 2008; Olabode, 2003; Peschel, 2008).

Naeem *et al.* (2008) tried to examine the level of TQM implementation in Pakistan's commercial banks and accordingly to propose

a practical model. The results of the study revealed that the majority of the banks in Pakistan were at their starting phase in implementing TQM. However, based on the review of the literature conducted, they concluded that TQM implementation is usually associated with higher level of service quality. They emphasized that for successful TQM initiatives, banks should develop an organizational culture (OC) enhanced by the top management support and the employees' involvement to be able to satisfy internal as well as external customers.

In the same research line, Olabode (2003) carried out a study to examine the extent to which the Nigerian banks implemented TQM practices. Based on the age of banks, he classified them into three generations and studied one bank each from each classification. He used the data collected from 75 bank staff, 12 managers, and 300 customers to test for the differences among the three generations according to some TQM factors namely, quality personnel, computerization, attitudes of employees to work, awareness of organizational objectives, level of motivation, and participation in the decision-making processes. The study concluded that TQM strategy has positive relation with the performance of banks. In addition, this study highlighted the importance of top management support for the success of TQM initiatives. Besides, the study highlighted the significant role of employees in developing the TQM culture as the mean to achieve organizational goals.

In their attempt to identify the TQM critical success factors, Al-Marri

*et al.* (2007) carried out an empirical study to use the data collected from 250 banks in the United Arab Emirates (UAE). In their study, sixteen TQM success factors have been identified namely, top management support, strategy, continuous improvement, benchmarking, customer focus, quality department, quality system, human resource management, recognition and rewards, problem analysis, quality technology, service design, employee, servicescapes, service culture, and finally social responsibility. The results showed that all these factors are positively related to the TQM success and consequently performance. They, also, concluded that TQM strategy is essential to the banking industry and other service-oriented organizations to create and sustain their competitive advantage.

In the same vein, Peschel (2008) tried to investigate the benefits obtained by organizations from their TQM adoption. Specifically, he closely studied the case of Los Alamos National Bank that won the Baldrige Award. He confirmed that the bank, as a result of their quality efforts, had 80 % satisfied customers above the national average 55 %. Moreover, the bank had 90 % very satisfied employees who received quality training as compared with 8 % nationally.

In summary, a comprehensive review of the available research work revealed that despite the extensive research work conducted to examine the effect of TQM practices on the organizational performance, very little has known about this relationship in the banking industry. Aside from little conceptual work examining the extent to which these practices are being

implemented in the banking sector, one can strongly claim that the effect of TQM practices on the organizational performance of banks is greatly neglected. Therefore, the purpose of this study is to contribute to the extant knowledge by examining the effect of TQM practices on the organizational performance employing the data pertaining to the Yemeni banking industry.

#### **3.4.6 Total Quality Management in the Middle East and the Arab region**

A thorough review of the recent literature of quality management showed that most of the TQM studies were conducted in developed countries, there is a dearth and scanty of studies conducted regarding the quality management in the developing countries in general (Rao *et al.*, 1997) and the Middle East in particular (Dale *et al.*, 2001). That is, very little attention has been paid by researchers to carry out empirical research in quality management in developing countries, including Arab and Middle Eastern countries (Al-Khalifa & Aspinwall, 2000). As discussed earlier, Sila and Ebrahimpour (2002) revealed that there is a lack of knowledge related to TQM implementation in the Middle East including Saudi Arabia, UAE, and Qatar which were about 1.7 % of the studies included in their articles reviewed.

Started in the early 1990s, some researchers such as Aly (1996) and Zairi (1996) tried to investigate the challenges faced by organizations in the Middle East in their endeavors to implement TQM strategy. Since then, more attention has been paid by researchers to the TQM implementation as a response to the stiff competition resulted from the global business expansion

to the Middle Eastern countries (Al-Khalifa & Aspinwall, 2000; Al-Zamany *et al.*, 2002). At the mean time, TQM strategy has been attracting attention in Africa (Beugre & Offodile, 2001; Temtime & Solomon, 2002; Temtime, 2003).

Although there has been an increasing awareness about the quality management in the Middle Eastern countries (Dedhia, 2001), the speed of TQM implementation and adoption was very slow compared to that of the developed countries (Al-Khalifa & Aspinwall, 2000; Chapman & Al-Khawaldeh, 2002; Al-Zamany *et al.*, 2002). Practically, in the Middle Eastern countries there were very poor knowledge regarding the productivity, efficiency, and organizational competitiveness implications of TQM strategy implications. However, the adoption of TQM strategies in the Middle Eastern region was driven by the globalization, open global economies, fluctuated oil pieces, stiff competition from Multi-national organizations offering high quality products and services (Al-Khalifa & Aspinwall, 2000).

One of the first studies related to TQM practices in the Middle East was conducted by Al-Khalifa and Aspinwall (2000) in Qatar. In their study they tried to reflect the level of TQM implementation in Qatari organizations. However, they found that TQM implementation has been facing major challenges such as the lack of information, top management commitment, and more seriously the lack of quality related education and training.

Contributing to the TQM implementation in the Middle Eastern countries, other studies were conducted by Chapman and Al-Khawaldeh (2002) in Jordan, Al-Zamany *et al.* (2002) in Yemen, and Curry and

Kadasah (2002) in Saudi Arabia. While Chapman and Al-Khawaldeh (2002) tried to examine the relationship between TQM implementation and labor productivity in Jordanian manufacturing companies, Al-Zamany *et al.* (2002) and Curry and Kadasah (2002) tried to explore the problems facing TQM implementation and key TQM factors in Yemen and Saudi Arabia respectively.

Based on the previous studies, the findings of Chapman and Al-Khawaldeh's (2002) study revealed that the labor productivity in companies with high TQM implementation was found to be very high compared to that of low TQM implementation companies. On the other hand, the result of the Al-Zamany *et al.*'s (2002) case study confirmed that lack of TQM understanding, government support, and the lack of supporting organizational culture (OC) found to be the major challenges of TQM implementation in Yemen. Similarly, in Saudi Arabia, Curry and Kadasah (2002) found that a clear and thorough understanding of TQM concept and philosophy is critical for successful implementation of TQM.

In the same research direction, Salaheldin (2003) tried to investigate the TQM implementation challenging and supporting factors based on the data collected from 84 Egyptian manufacturing firms. The findings of this study revealed that TQM implementation in Egypt has been facing the same challenges as in other developing countries. The main challenges are the lack of top management commitment support, training, resources, and the resistance to change.

The aim of all the TQM studies conducted in different parts of the world is to reach a global model for TQM implementation in both manufacturing and service organizations. Despite the growing attention paid by researchers to TQM strategy, the available relevant literature in developing countries has been scattered, scarce, and mainly conceptual or case study-based. Unlike the detailed and empirical literature regarding TQM strategy in Japan, US, and European countries (Djerdjour & Patel, 2000; Krasachol & Tannock, 1999). Therefore, the studies conducted in other developing and newly industrialized counties can provide an avenue for TQM implementation research.

#### **3.4.7 Deficiencies in the above studies**

In fact, TQM concept is relatively new to the Arab world. Therefore, there has been a lack of knowledge regarding the key components and the implementation processes of TQM practices and how they should be managed. Moreover, most of the studies conducted in the Arab region related to TQM practices were conceptual and descriptive in nature reflecting the lack of empirical studies examining the TQM implications on organizational performance.

Furthermore, the national culture theory confirmed the relevance between the TQM practices and national culture that shape and influence the organizational culture (OC) (Katz *et al.*, 1998; Flynn & Saladin, 2001), this study tried to examine the cultural effects on TQM practices and its performance implications. In other words, this study contributes to the TQM

literature by understanding TQM practices and their performance implications in the Arab countries which are believed to have different cultural, social, and economic environments.

Additionally, most of the previous research work conducting to examine the TQM implementation in the banking industry is lacking, theoretical, conceptual in nature. However, the literature of TQM in the banking industry lacks the systematic empirical evidences exploring the TQM strategy and banks' performance relationship.

Thus, this study is one of the first attempts to understand TQM practices in the Middle East region; moreover, it is believed to be the first that empirically examine the TQM practices and banks' organizational performance relationship. However, this study is expected to help to enrich the global theory of quality management through the organizational culture effect on TQM strategy implementation in the view of the contingency theory, organizational change theory, and congruence model.

To shed more lights on the past literature related to the entrepreneurial orientation variable, the following sections were devoted.

### **3.5 Entrepreneurship Orientation**

#### **3.5.1 Introduction to Entrepreneurship**

Entrepreneurship field has been among the fastest growing fields in the management literature for the last three decades or so (Davis, 2007). Miller (1983) defines three elements that affect the existence of entrepreneurship in the organization. The first element is the personality traits of the leader. While the



second is the process of the decision making, the third is the organizational structure of the company.

In the past literature a great deal of scholar attention has been given to the field of entrepreneurship to extend the knowledge through many academic journals, bulk of literature, and the emergence of Entrepreneurship departments in schools of management(Davis, 2007). Furthermore, there has been a growing and deep discussion about the concept of entrepreneurship among academics based on their different theoretical grounds(Hisrich & Peters, 2002). Therefore, many researchers suggested different definitions for entrepreneurship based on how they perceive the role of an entrepreneur (Vesper, 1980). That is, there is no agreed upon definition of the term entrepreneurship in the literature(Davidsson, 2003; Davis, 2007).

Moreover, there is a well-established criterion to classify the entrepreneurship definitions provided by Kaufmann and Dant (1998) which is based on entrepreneurs' qualities, entrepreneurs' roles, and their behavior. In seeking a comprehensive definition for entrepreneurship concept, some researchers emphasized the new venture creation role (Vesper, 1980) while others emphasized the role of opportunity recognition(Eckhardt & Shane, 2003; Shane & Venkataraman, 2000).

### **3.5.2 Entrepreneurship definition**

As mentioned earlier, there have been many definitions for the entrepreneurship concept. For example, Hitt, Ireland, Camp, and Sexton (2001:480) defined the entrepreneurship as “the identification and exploitation of previously unexploited opportunities.” Similarly, George and Zahra (2002:5) defined the

entrepreneurship as “the act and process by which societies, regions, organizations, or individuals identify and pursue business opportunities to create wealth.” In the same vein, Eckhardt and Shane (2003:336) defined entrepreneurship as “the discovery, evaluation, and exploitation of the future goods and services.” However, it can be noticed that each one of the above mentioned definitions of the entrepreneurship construct considers the opportunity recognition as the core element of the entrepreneurship construct. Similarly, it was defined by Churchill (1992) as the process of creating values by developing and uncovering opportunities through taking the advantage of opportunities without regard to human and capital resources.

Further, some researchers introduced the distinction between the entrepreneurship as the content and entrepreneurial orientation as the process as follows:

- Entrepreneurship is defined by Dess, Lumpkin, and McGee (1999:94) as “the content of strategy, which we define as the new entry, that is the act of undertaking a new venture.”
- Entrepreneurial orientation (EO) is defined by Lumpkin and Dess (1996:136) as “The processes, practices, and decision-making activities that lead to new entry.”

Based on the above mentioned differentiation between the entrepreneurship and entrepreneurial orientation (EO), it is clear that the entrepreneurship concept is the action of creation new business whereas the entrepreneurial orientation (EO) is the organizational strategic practices to recognize and establish new ventures (Certo, Moss, & Short, 2009).

### **3.5.3 The Degree of Entrepreneurship**

In the ever-changing business environment today, organizations and individuals tend to differentiate themselves from others through their engagement in the Entrepreneurial processes(Certo *et al.*, 2009). In differentiating organizations based on their involvement in entrepreneurship, Cooper and Dunkelberg (1986) evaluated the organizational involvement in entrepreneurship by using the term of degree of entrepreneurship.

Moreover, different researchers identified different factors influencing the degree of entrepreneurship of an organization. Verheul, Uhlaner, and Thurik (2005) assumed that some factors can enhance the degree of entrepreneurship of an organization. These factors such as risk taking(Begley, 1995; Stewart & Roth, 2001), proactiveness, opportunity recognition, creativity and innovation(Covin & Miles, 1999; Jennings & Young, 1990; Torrance, 1962), and autonomy(Lumpkin & Dess, 1996).

### **3.5.4 Entrepreneurial Orientation (EO)**

There has been a growing bulk of research in the field of entrepreneurship about the entrepreneurial orientation (EO) concept. While there is a substantial agreement about the benefits of EO, there are many schools of thought in defining the concept(Davis, 2007). Clearly, in the literature of entrepreneurship many different definitions for the EO construct have been proposed by researchers. Even though they differ significantly in their definitions, they show a common view to the use of the EO concept either from strategy-making practices, organizational strategic orientation, or from the process of decision making point of views (Davis, 2007).

In relation to that, Lumpkin and Dess (1996) defined the EO concept to be the organizational set of practices that show the entrepreneurial approach of the company through its processes and decision making criteria. Similarly, it was defined by Covin *et al.* (2006) to be the theoretical construct that represents the entrepreneurial abilities of the company.

Furthermore, in their contribution to the development of the concept of entrepreneurial orientation (EO), many researchers tried to identify some characteristics of entrepreneurial organizations. For example, Miller and Friesen (1982) identified some of these characteristics such as, differentiation of organization over its rivals (Miller & Friesen, 1978, 1982), increasing rate of growth (Miller & Friesen, 1982), and the level of knowledge about the organizational strategies (Miller & Friesen, 1982; Mintzberg, 1979). Based on these characteristics, Miller and Friesen (1982) differentiated and compared between entrepreneurial organizations and the conservative ones.

### **3.5.5 Entrepreneurial Orientation (EO) Approaches**

The literature shows that there are three disciplines that provided the major contribution to the development of the entrepreneurial orientation (EO) concept and served as the grounding theory for the EO construct. These disciplines are economics, social psychology, and strategic management (Mitchell *et al.*, 2002).

While the economic approach was focused on the economical outcomes of the entrepreneurial action (Low & MacMillan, 1988), the social psychology approach was focused on the personal characteristics of the entrepreneur not on the organization. The strategic management approach was utilized by venture capitalist

to perceive the risk taking nature and the competitive aggressiveness of the entrepreneur in relation to other outcomes (Littunen, 2000).

### **3.5.6 Dimensions of Entrepreneurial Orientation (EO)**

It has been emphasized earlier that, entrepreneurial orientation (EO) refers to the practices, processes, and decision-making activities that lead to the establishment of new business venture (Lumpkin & Dess, 1996). This concept emerged basically from the work of Child (1972) about the strategic choice. Later it was growing as very important construct in the field of entrepreneurship as this area has attracted a substantial amount of research work (Zahra, Jennings, & Kuratko, 1999).

However, numerous studies have been focusing on the development of the EO construct through five dimensions namely innovativeness, proactiveness, risk taking, autonomy, and competitive aggressiveness. These dimensions are thought to work independently by some researchers and in combination by others. However, the unique way of combination of these factor can contribute to the entrepreneurial status of the company (Morris & Sexton, 1996).

A review of the past literature revealed that entrepreneurial orientation (EO) had three streams of research that can be identified. The first stream was to investigate the factors that reflect the presence of high level of EO in the firm (Lumpkin & Dess, 1996; Zahra, 1991). The second was reflected by the attention paid by researchers to the influence of EO on the organizational performance (Wiklund, 1999; Zahra & Garvis, 2000). Finally, the third stream of research has been trying to explore the variables that may influence the EO and organizational performance relationship. That is being done through studying the

moderation effect of some influencing variables such as organizational culture (OC) and other environmental and organizational variables (Covin, Green, & Slevin, 2006; Davis, 2007).

In the seminal research conducted in the literature of entrepreneurship, there has been a debate about the dimensionality nature of the EO construct (Davis, 2007). While the debate continues about which and how many dimensions for the EO construct, there is a common consensus among scholars about the point of view proposed by Covin and Slevin (1991). This point of view stated that innovativeness, proactiveness, and risk taking are the main dimensions of the EO construct (Barrett & Weinstein, 1998; Zahra, 1983). Covin and Slevin (1989) proposed the most common used measure for the EO construct. This measure was also employed by this study to examine the effect of EO construct on the Yemeni banks' performance.

Apart from that, competitive aggressiveness and autonomy as EO dimensions were emphasized by some other researchers. Competitive aggressiveness refers to the organizational responses to the changing trends in the marketplace (Lumpkin & Dess, 2001). Moreover, autonomy refers to the independence of the actions made by individuals or organization in the process of transformation of their ideas into actions through completion (Lumpkin & Dess, 1996).

Despite the fact that there are many supportive empirical studies for the inclusion of these two dimensions to the EO construct, very few researchers included them in measuring EO (Davis, 2007). In the same way, our study here has opted not to include competitive aggressiveness and autonomy while studying the effect of EO construct. The following discussion provided definitions and

background of the innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy as dimensions of the EO construct.

#### **3.5.6.1 Innovativeness**

Innovativeness refers to the tendency of the company to engage in developing new ideas, introduction of creative processes which lead to novel products, services, and technological advancements (Lumpkin & Dess, 1996).

Initially, research on the innovativeness concept focused on the ability of an organization to introduce new and unavailable products and services (Kimberly, 1981). Later, the definition on innovativeness has been expanded by Knight (1997) to cover all the activities performed by an organization to pursue creative solutions to its challenge such as the development of new products and services. In addition, innovativeness covers also all the managerial and administrative activities and the technological processes to perform organizational functions.

As argued by Certo *et al.* (2009), innovation may be incremental or radical; either to build on existing features to introduce an improvement to the products or services offered; or to develop new products, services that meet the changing demand of the customers in the marketplace.

To differentiate between innovativeness and inventiveness, Hitt, Hoskisson, and Nixon (1993) stated that the inventiveness is included in the innovativeness as the first part as innovativeness as defined earlier to be the propensity of the company to introduce and support new ideas, products, and services through creative processes and fruitful experimentations. Moreover, inventiveness without possible opportunities for the fruitfully introduction or effective application of it will be of no

use for the company. Therefore, the firm should be involved in and supportive for inventiveness activities for which the perceived chances of applications or commercialization will create new values for customers as well as it will improve the strategic posture of the company in the marketplace.

Furthermore, innovativeness is seen by many scholars as the key and essential variable for successful entrepreneurial organization (Bruderl & Preisendorfer, 2000; Drucker, 1985). The literature, however, provide two models for innovation (conservative model and entrepreneurial model) were developed by Miller and Friesen (1982) which are practiced by different type of organization. The conservative model is being practiced by an organization to defend its original position in the marketplace in very competitive and uncertain environment. On the other hand, the entrepreneurial model is the model adopted by an organization regardless the degree of competition or uncertainty in the marketplace as a component of its process in creation its competitive advantage over its rivals.

Additionally, many researchers tried to distinguish between different types of innovation relating to the field of innovation activities such as product and market-related innovation comprising product design and marketing activities, and technological innovation. Nonetheless, due to the close relations among different types of innovation, it has been found to be very difficult to make such kind of differentiation (Lumpkin & Dess, 1996).

#### **3.5.6.2 Proactiveness**

It refers to the intensity of an organization to anticipate the future market needs and opportunities which may or may not be in line with its current operations-



to introduce new products and services to satisfy the customers' changing needs(Venkatraman, 1989). The proactive organizations are those that always be the first in entering new markets or, alternatively, to be the first followers to develop and improve the products and services of the first movers (Davis, 2007).

There have been enormous studies in the literature emphasizing the importance of speed of the organizational responses to the availability of market business opportunities. Moreover, the importance of the ability of the company to capture the opportunities related to new products and services has been greatly emphasized (Miller & Friesen, 1982). Moreover, the first-mover advantages have been emphasized by many researchers as the key elements in proactiveness(Davis, 2007; Miller, 1983).

In the earlier definitions of the proactiveness construct, it was somewhat confusing to differentiate between proactiveness and competitive aggressiveness. Clearly, while competitive aggressiveness is how the company reacts to the new demand trends and customers' changing needs (Lumpkin & Dess, 1996), proactiveness is defined to explain how the company is related to the new business opportunities.

#### **3.5.6.3 Risk-taking**

The propensity of the entrepreneur to accept risk is very important factor for the entrepreneurial orientation (EO) construct(Davis, 2007). It was also stated that the attitude and behavior of entrepreneurs toward risk taking is the main factor in differentiating them from other individuals in an organization. Risk taking has been

defined, however, to be the degree of willingness of managers to take resource commitments (Miller & Friesen, 1978).

Moreover, Baird and Thomas (1985) identified three types of risks: the risk of debt taken to undertake the business, excessive commitment of resources into a specific investment, and the venturing into unknown areas of business

### **3.5.7 Entrepreneurial Orientation (EO) in the Yemeni Banking Industry**

A thorough review of the literature indicates that the dimensions of entrepreneurial orientation (EO) namely; innovativeness of the banks; its proactiveness nature; and its readiness to accept risks are very important factors for their organizational competitiveness. This is so because these factors are the ground of the bank flexibility to get along with uncertain and ever-changing business environment, which are the key success factors affecting banks' organizational performance (Barrett & Weinstein, 1998; Covin & Miles, 1999; Covin & Slevin, 1991; Lumpkin & Dess, 1996; Zahra, Nielsen, & Bonger, 1999; Zahra & Covin, 1995).

Furthermore, the current marketplace has been characterized to be increasing competitive and dramatically changing with critical and uncertain customers' needs and expectations particularly in the face of technology revolution. Given this circumstances, banks to survive and grow, they will want to create a competitive advantage through enhancing their capabilities and keep technologically updated (Lumpkin & Dess, 1996). Besides that, by adopting new and innovative technology, banks will have their distinctive processes excellence that will speed up the process, help in producing new products, and this in turn will attract new customers. In

Yemen, even though many bank's managers had their education in Western countries, the entrepreneurial innovativeness, proactiveness, and risk-taking practices are limited in practice due to their risk-averse attitude. Moreover, the Yemeni business environment does not tolerate the failure as a tool for learning rather the failure is shameful and very difficult to recover (Hofstede, 1997). This study is considered to be one of the limited studies conducted to examine the effect of entrepreneurial orientation (EO) on Banks performance in the developing countries.

### **3.5.8 The relationship between entrepreneurial orientation (EO) and organizational performance**

The relationship between entrepreneurial orientation (EO) and organizational performance has been extensively studied by researchers. Many researchers focused on three main dimensions of the EO construct namely innovativeness, proactiveness, and risk-taking. On the other hand, it was argued by Lumpkin and Dess (1996; 2001) that entrepreneurial orientation (EO) is best explained by five dimensions adding the competitive aggressiveness and autonomy to the three previous-mentioned dimensions.

To study the relationship between entrepreneurial orientation (EO) and organizational performance at the embryonic stage Hughes and Morgan (2007) studied this relationship in young high-technology firms. A random sample consisted of 1000 emerging young high-tech firms from the UK was employed. They used the framework suggested by Lumpkin and Dess (1996) with its five dimensions for entrepreneurial orientation (EO). The results showed that only

proactiveness and innovativeness are positively related to business performance at this stage while risk-taking has a negative relationship with business performance. Moreover, competitive aggressiveness and autonomy had no relationship with business performance at least at this stage.

Since innovation is the pillar in the field of entrepreneurship (Avlonitis & Salavou, 2007), there has been an extensive research in the literature investigating its effect on organizational performance. Moreover, an increasing attention has been paid by researchers to explore its antecedents. From another perspective, Garcia-Morales, Liorens-Montes and Verdu-Jover (2007) studied the relationship between the personal mastery and organizational performance through the organizational learning and innovation. Their data were collected from 410 Spanish firms. Using confirmatory factor analysis they found that: there is positive direct as well as indirect relationship between personal mastery and organizational performance through organizational learning and innovation. There was a appositive relationship between organizational innovation and organizational performance. It was concluded based on the results of this study that organizational learning positively affect both directly and indirectly the organizational performance through organizational innovation.

To better understand the nature of the relationship between entrepreneurial orientation (EO), market orientation, and organizational performance, Todorovic and Ma (2008) examined the role of culture on this relationship. Besides, they investigated the nature of correlation between entrepreneurial orientation (EO) and market orientation and its effect on organizational performance. They analyzed the literature about OE and MO utilizing the study carried out by Hofstede (2001). For

that purpose, five countries with the highest GDP and five with the lowest were plotted. They found that entrepreneurial organizations in collectivist societies face lean resource environments. Further, they concluded that the effect of EO or MO on organizational performance was not uniform.

Similarly, Li *et al.* (2009) examined the relationship between entrepreneurial orientation (EO) and organizational performance using the data collected from 165 Taiwanese entrepreneurs in securities and future institutes. In that study, they tried to test the mediating role of knowledge creation process. Based on the results obtained, the positive relationship between EO and organizational performance was substantiated. In addition, knowledge creation process was revealed to be a significant mediator between entrepreneurial orientation (EO) and organizational performance.

In the same vein of research, Avlonitis and Salavou (2007) tried to identify EO profiles of SMEs in Greece to suggest the dimensions of product innovativeness for different performance potentials. They used the data obtained from 149 manufacturing companies and identified two opposite groups namely the active and passive entrepreneurs. They found that the two groups consisted of new products innovators. Moreover, they found that the entrepreneurial attitudes instilled in the active entrepreneurs group mirrored in new products.

Confirming the importance of EO, Antoncic and Prodan (2008) stated that corporate entrepreneurship is very important for organizational performance. In their study, they tried to develop a model for alliance-driven corporate technological entrepreneurial and test its impact on organizational performance. They used the data collected from a sample 226 manufacturing firms in Slovenia. They found that

strategic alliances involvement is very effective on corporate technology entrepreneurship and then on organizational performance.

As an attempt to explore the effects of entrepreneurial orientation (EO) on SMEs' performance, Keh, Nguyen, and Ng (2007) tried to examine the effects of entrepreneurial orientation (EO) and marketing information on SMEs in Singapore. They found that the entrepreneurial orientation (EO) has an influential role on information acquisition and utilization of marketing information and consequently on organizational performance. Moreover, they found that the utilization of marketing information affects firm performance and also partially mediates the entrepreneurial orientation (EO) and organizational performance relationship.

Despite the extensive research work reported in the literature of entrepreneurship, many empirical researches pointed out that the results regarding the relationship between EO and organizational performance turned up to be inconsistent. However, both academics and practitioners question the appropriateness of entrepreneurial orientation (EO) strategy for organizational effectiveness (Li, Huang, & Tsai, 2009; Wiklund & Shepherd, 2005). On the other hand, Wiklund and Shepherd (2005) argued that there might be other factors that could affect the entrepreneurial orientation (EO) and organizational performance relationship that should be studied and further investigated.

Nonetheless the nature of business in the banking industry and its full dependent on innovation and risk tolerance, it is surprising to know that the effect of EO on banks performance has been greatly neglected. That is, until recently, there has been a paucity of research examining the relationship between entrepreneurial

orientation (EO) and organizational performance of banks especially in the developing countries that have their own and unique cultural practices.

### **3.5.9 The Integration between TQM and Entrepreneurial Orientation (EO)**

It was argued by Day (1994) that TQM practices implementation in banks enhances its customer-orientation capabilities as the core of TQM strategy is to satisfy the customers through continuous improvement of the entire organizational activities. The current global business environment has been characterized by rapid globalization, liberalized market, fast-paced technologies, and changing customers' demands.

Based on the past management literature, many challenges have been facing banks in the current global environment. The first challenge is the aggressive competition in the banking sector caused by the increasing number of banks operating in the same environment and targeting the same customer segments. This aggressive competition even made stiffer since all banks produce almost the same products and services (Li *et al.*, 2001).

Another challenge facing banks in the current business environment is the quick changing customers' demands driven by the quick technological advancements. That is to say, the new generations of customers have been knowledgeable, aware of their rights, and have the ability to express their minds if not satisfied with offered products and services. Therefore, customers, nowadays, are demanding for innovative and high quality products and services that are updated with the latest technological features (Li *et al.*, 2001).

Besides, it has been noted by many researchers that there have been quick and fast changes in societies worldwide. In addition, it has been emphasized that in the knowledge-based societies, the quality alone is not sufficient to attract customers. More specifically, the basis for sustainable competitive advantage, in the era of technology, has shifted from quality to innovation to go beyond the customers' expectations and gain their loyalty (Hoang, Igel, & Laosirihongthong, 2006). Thus, it is suggested that the adoption of TQM and entrepreneurial orientation can be the base of competitive advantage required for banks to survive and prosper.

These challenges have been forcing banks, among other organizations, to adopt innovation and quality strategies to achieve a better strategic position (Feng, Prajogo, Tan, & Sohal, 2006). In the view of the resource-based view of the firm (RBV), TQM practices and entrepreneurial orientation (EO) can be looked at as organizational intangible resources and capabilities that are difficult to be, perfectly, imitated by the competitors.

In other words, as TQM and EO can be looked at as intangible resources and capabilities due to their role in changing the culture within an organization and deemed rare and difficult to be imitated by competitors. Therefore, banks are forced by the economic and technological factors to adopt and efficiently implement such strategic orientation to create their desirable competitive advantage. In addition to that, Choi and Valikangas (2001) argued that total quality management (TQM) strategy even an important strategy yet cannot create a sustainable competitive advantage for an organization without been coupled with other innovative strategies.



Although there have been many studies investigating the effect of TQM practices, entrepreneurial orientation (EO) on the organizational performance, these studies neglected the performance implications of the integrated effect of TQM and EO. That is, there has been no concrete empirical research examining the integrated effect of TQM and entrepreneurial orientation (EO) on the organizational performance. Moreover, banks, to be able to create values for customers, they have to establish a close co-ordination between TQM practices and entrepreneurial orientation (EO) behaviors (Slater & Narver, 1995; Lai, 2003). This study, however, tried to bridge this gap in the literature by investigating how the integrated effect of TQM and EO can better explain the variance in the organizational performance variable.

Due to the importance of organizational culture (OC) in any organizational strategy implementation, the following sections were devoted to review the literature relevant to the OC and its impact on organizational performance.

### **3.6 Organizational Culture (OC)**

The cultural uniqueness of an organization constitutes an inimitable organizational capability to create its competitive advantage over its rivals (Barney, 1986; Hall, 1993; Peteraf, 1993; Wernerfelt, 1984). Therefore, in the current turbulent and constantly changing global business environment, the preeminent leaders know how to shape the organizational culture (OC) of their organizations to achieve short as well as long-term objectives (Kuratko & Welsch, 2004). Moreover, in the effective cultures, leaders understand that the competitive advantage does not

last forever. They therefore, have to constantly encourage changes and establish innovative business environment (Kuratko & Welsch, 2004).

### **3.6.1 Organizational Culture (OC) Definition**

It has been widely known from the literature of organizational behaviors that there have been many definitions of the organizational culture (OC) construct. That is, there have been various definitions of OC proposed by many researchers indicating the non-existence of universal agreed upon definition of the construct (Lewis, 2002). For example, Uttal (1983) defined it as the system of shared values and beliefs that interact with the people, structures, and control system of an organization producing norms of the behaviors. Similarly, Kilmann *et al.* (1985) defined the corporate culture as the philosophies, assumptions, beliefs, attitudes, and norms that bind the organization together.

Looking at its outcomes, Deal (1986) defined organizational culture (OC) as the human-created philosophy that enhances the solidarity among individuals and inspire them to enhance their productivity through high commitment. Moreover, Deshpande and Webster (1989) and Schein (1990) defined organizational culture (OC) as the pattern of shared values and beliefs that helps individuals to understand the functions of an organization through providing a set of norms to determine the behaviors.

Related to that is the definition provided by Simircich (1983) for the organizational culture (OC) as a set of values, assumptions, and norms that is common among senior employees in an organization and to be taught to junior ones.

However, he also argued that organizational culture (OC) is the key organizational factor that can be used by managers to direct their organizations.

It can be noticed that although the concept of organizational culture (OC) has been defined in various ways in the literature and there is no consensus about one definition (Barney, 1986). However, there are many researchers who have defined the organizational culture (OC) as a system of shared values, norms, beliefs, way of thinking and attitudes among all the members of an organization (Mckinnon *et al.*, 2003; O'Reilly & Chatman, 1996). Put simply, organizational culture (OC) is manifested as the basic assumptions, values, attitudes, and behaviors among all the members of an organization (Yilmaz & Ergun, 2008).

### **3.6.2 Overview of Organizational Culture (OC)**

Culture in organization has been much related to “something to do with the people and unique quality and style of organization” (Kilmann, Saxton, & Serpa, 1985), “the way we do things around here” (Deal & Kennedy, 1982), and “the pattern of arrangement, material or behaviour which has been adopted by a society (corporation, group, or team) as an accepted way of solving problems” (Ahmad, Loh, & Zairi, 1999). From an anthropological viewpoint, culture generally refers to the values and beliefs shared by all the members of a society and includes patterns of behaving, feeling and reacting, and the premises underlying behaviour (Rao & Swaminathan, 1995)

People are usually nurtured from different environments and settings, and this created personalities through different experiences. When these people are pooled together in an organization's setting thousands of practices, opinions and

directions could be created and commonly called the culture. Over the time, a dominant set of norms will emerge, guiding the way in which the work is accomplished within an organization. This phenomenon gives rise to concept of corporate culture (Sadri & Lees, 2001).

As argued by Wilson (2001), there are four factors that are expected to influence organizational culture (OC). These factors are: the business environment, leadership, management practices or the formal socialization process, and the informal socialization process. These factors were originally developed by Schein(1991) and further developed by Wilson (2001).

The business environment in which an organization operates helps to determine the culture (Wilson, 2001). These environmental and societal aspects can influence the development of organizational culture (OC). Leadership is also been regarded as an important factor influencing the corporate culture. Leaders externalize their vision, beliefs and values, embedding them in their organizations. Management practices and the formal socialization processes are defined as the policies and procedures to manage an organization. Goal systems, decision making systems, quality systems, technology, budgeting and financial management, and continuous improvement are the areas where an organizational culture can affect the activities and perceptions of the people within an organization.

The fourth factor that can influence the organizational culture (OC) is the informal socialization processes. Individuals working in organization go through an informal socialization with primary goals and needs. Schein (1969; 1991) identified three primary needs of individuals in an organization. The first need is to feel part of the group whereas the second is the need to feel powerful. The third need is to feel

accepted. Through interactions, individuals gradually adapt the norms and standards being practiced by the group members to achieve these three primary goals. As the norms go consistently, it then creates a dominant norms which are broadly called organizational culture (OC). A good example of that is the historical stories about organizations' Dos and Don'ts.

Plankett and Attner (1994) have also identified factors that shape corporate culture which were quite similar to the factors developed by Schein (1991). These factors are the key business processes, employees and other tangibles assets, formal arrangements, the dominant coalition, the social system, technology, and the external environment. Plankett and Attner (1994) added technology and external environment to the factors affecting cultures but the basic concepts is still intact. Technology impacts the way human react to their skills and productivity, the more organization being driven by technology the less skills being developed into workers. External environment on the other hand, included forces outside organization's setting such as competitors, regulators, suppliers and others.

### **3.6.3 The importance of Organizational Culture (OC)**

Organizational culture (OC) is one of the most critical organizational variables that have received an increasing attention in organizational behavior literature (Kilman, Saxton, & Serpa, 1985; Ouchi, 1981; Owens, 1987; Schein, 1990). This attention is because of the high impact of organizational culture (OC) on organizational performance.

Additionally, organizational culture (OC) is deemed by the theorists to shape organizational procedures (Deal & Kennedy, 1982; Jarnagin & Slocum, 2007),

provide solutions for many problems that face the organization (Schein, 1984), coordinate and direct various organizational capabilities and activities into a cohesive whole (Day, 1994). On the other hand, OC hinders or facilitates the achievement of the overall organizational goals and objectives (Denison, 1990). Since the organizational cultural driven capabilities are usually inimitable due to their social complexity, it is considered a valuable source of sustainable competitive advantage (Barney, 1986; Hall, 1993; Peteraf, 1993).

For the last few decades or so, organizational culture (OC) has been gaining an increasing attention by researchers as one of the factors affecting organizational performance through enhancing the productivity, commitment, self-confidence, team work spirit, and ethical behaviors (Deal & Kennedy, 1982; Ouchi & Wilkins, 1985). This in turn will be reflected significantly in the organizational financial performance (Holmes & Marsden, 1996).

However, it has been observed that the organizational culture (OC) of an organization affects its perception of the environment and consequently its interaction. Therefore, many researchers emphasized that for effective organizational performance there should be a good fit between the organizational culture (OC) and the business environment (Peters & waterman, 1982).

#### **3.6.4 Identification of the Organizational Culture (OC)**

For the purpose of identifying the organizational culture (OC) system, Allaire and Firsirotu (1984) argued that there are two interrelated sets of systems can be of great influence. In line with Schein's (1990) typology of culture, the first is the

sociocultural system. This system encompasses organizational structures, strategies, policies, and the management practices. However, this sub-system of organizational culture (OC) is in line with the classic theory of management that focuses on achieving organizational goals through task-oriented management (Mackenzie, 1986; Thompson, 1967). To highlight the role of leaders in developing the organizational culture (OC), Bolman and Deal (1984) and Owen (1987) emphasized the role of leaders in teaching organizational values and promoting missions. Essentially, leaders have the dominant role in forming work structures within organization. In other words, leaders usually manage the core technology within an organization through crystalizing goals, designing the procedures on how these goals can be achieved, and develop strategies that translate goals into outcomes (Bossert *et al.*, 1982; Mackenzie, 1986).

Furthermore, according to Allaire and Firsirotu (1984), the second system that influences the organizational culture (OC) is the belief system of the organization that includes values and ideologies. However, it has been scholarly suggested that the development of the cultural aspects is a powerful function of the top management. That is to say, it is the responsibility of leaders to set the organizational goals and purposes and communicate them clearly and effectively to all the stakeholders (Heck, Larsen, & Marcoulides 1990; Reynolds, 1986).

### **3.6.5 Matching Individuals with the Organizational Culture (OC)**

As it has been emphasized by Allaire and Firsirotu (1984), individuals in an organization are the pillars of the organizational culture (OC). In fact, there are two ways of interaction between individuals' beliefs, goals, attitudes, and the

organizational belief system. If the members of an organization get well with the overall belief system, attitudes, and the set of values, a strong organizational culture (OC) can be formulated. Moreover, the attitudes and values of employees as a collective are considered to be an important determinant of organizational performance. Due to the significant role of organizational culture (OC) as a determinant of organizational performance, a great deal of attention has been paid by researchers to examine its effects and potential limitations (Schein, 1990).

### **3.6.6 Organizational Culture (OC) and individual-level variables**

In the literature of organizational studies, it has been found that organizational culture (OC) has a great influence on many individual behaviors in an organization (Barney, 1986). In other words, it plays an important role in understanding organizational variables like job satisfaction, organizational commitment; individual's sense-making and self-efficacy, and collective efficacy (Maignan *et al.*, 2001; Lund, 2003; Walumbwa *et al.*, 2005). For example, Lund (2003) empirically investigated the influence of organizational culture (OC) on employees' behaviors in the workplace and subsequently their job satisfaction. The results confirmed the role of clan and adhocracy types of culture in enhancing the employees' job satisfaction.

Moreover, organizational culture (OC) besides defining the boundaries of an organization can also differentiate an organization from its rivals. Furthermore, while it establishes the sense of identity of an organization, it, however, strengthens the stability of the organizational social system and enhances the overall commitment to the organizational objectives. Put simply, organizational culture



(OC) is the glue with which all individuals, activities, behaviors can bring together through providing a set of standards that determine the acceptable sets of behaviors (Yiing & Ahmed, 2009).

In general, as an organization flattened its structure, encouraged teams, reduced formalization, and empowered employees, a strong organizational culture (OC) ensures that all the members of an organization are directed to the same direction.

### **3.6.7 Organizational Culture (OC) and organizational-level variables**

In examining the importance of organizational factors for the organizational performance, Hansen and Wernerfelt (1989) found that organizational factors can double the variance explained in the profit rates. In addition to that, many researchers have related some organizational factors such as leadership (Wallace, 1994; Jung & Avolio, 1999), TQM practices (Detert *et al.*, 2000; Lewis, 2002), and Ethics (Sinclair, 1993) to the organizational culture (OC). Moreover, it has been widely emphasized in the literature of quality management that organizational culture (OC) significantly affects understanding as well as implementation of TQM. That is so since that supportive organizational culture (OC) is the key success factor for any TQM initiative that required the development of a supportive organizational culture (OC). Without this culture any quality initiative eventually fails (Bright, 1993).

In relation to that, it was concluded by Detert *et al.* (2000) that organizational culture (OC) is the ground for TQM practices and any other change initiative. Moreover, Lewis (2002) emphasized the existence of the link between

organizational culture (OC) and many organizational factors and change processes such as TQM, business process reengineering (BPR), organizational learning, and knowledge management. Therefore, for any successful processes, the culture should be changed accordingly.

### **3.6.8 Uniformity of Organizational Culture (OC)**

The assumption that organizational culture (OC) means the existence of shared value system and beliefs does not mean that there is no subculture in an organization (Jermier, Slocum, Fry, & Gaines, 1991). However, the culture shared by the majority of the members of an organization is referred to as the dominant culture. In fact, when talking about organizational culture (OC) implicitly the dominant culture is meant. In large organizations, the subculture concept might be clear and different departments may have their different subcultures. However, if there is no dominant culture in an organization, there will be no uniform cultural-based interpretation or judgment on the appropriate and inappropriate behaviors.

The dynamic view of the organizational culture (OC) has been studied by many researchers. For example, Zheng, Yang, and Mclean (2010) argued that as the organization goes through different growth phases such as start-up, growth, maturity, and revival, the dominant organizational culture (OC) follows many phases such as inspiration, implantation, negotiation, and transformation. Recently an increasing attention has been paid by researchers to study the emergence and evolution of subcultures within an organization and to the various cultures that may appear among different departments.

In fact, it has been thought for a long period that the organizational culture (OC) is unitary (Schein, 1983). However, many other researchers challenge this assumption by the claim that the organizational culture (OC) is dynamic and has to evolve to suit the stage of the organization's growth (Barely, 1983).

### **3.6.9 Strong versus Weak Culture**

In the current literature of organizational studies, it has been argued that there is a clear differentiation between strong and weak organizational culture (OC) and their consequences related to organizational performance and employees behaviors (Sorensen, 2002; Rosenthal & Masarech, 2003). Moreover, it has been widely argued by academics and practitioners that the strong culture, the degree of the belief and acceptance of shared culture, is the dominant determinant of organizational performance (Deal & Kennedy, 1982; Peters & Waterman, 1982). According to that, many scholars attempted to explain the performance superiority of some giant organizations such as IBM, Hewlett-Packard, Proctor and Gamble, and Mc-Donald based on their organizational culture (OC) (Deal & Kennedy, 1982; Peters & Waterman, 1982). However, they concluded that the superior performance of these companies can be mainly attributed to their core value sets established and maintained by their leaders. These core values related to the human resource management practices, customers and suppliers' relationships. These management practices foster innovativeness of these organizations and hence lead to competitive advantage (Peters & Waterman, 1982). In addition to that, Peters and Waterman (1982) emphasized that these successful organizational cultures have been imitated by other organizations as a

way to improve the employees' morale and quality of work life that eventually lead to improved overall performance.

### **3.6.10 Attributes of strong Organizational Culture (OC)**

In the literature of organizational culture (OC), some researchers such as Barney (1986) stated that for organizational culture (OC) to be a source of sustained superior financial performance, it must have three characteristics. The first characteristic is that organizational culture (OC) must help in adding an economic value to the organization. This clearly means that organizational culture (OC) creates the harmony and consistency between the organizational behavior and its competitive situation. However, if the culture fails to do that, it could not be a source of competitive advantage.

Second, organizational culture (OC) must be rare and valuable. This, in turn, will help the organization to behave differently from other rivals. However, if all organizations operating in the same sectors have almost the same culture, they, will have approximately the same organizational behavior. Subsequently, none of these organizations will possess culture-based competitive advantage that leads to effective performance (Hirshleifer, 1980).

Finally, organizational culture (OC) of an organization must be inimitable and non transfereable to be a source of competitive advantage for that organization. Since the cultural-driven success of an organization will lead other organizations to benchmark that culture to achieve the desired performance. If the culture is imitable, this will dissipate the competitive advantage of the organization. In other words, an organization with unique, rare, and inimitable organizational culture (OC) can enjoy

the economic consequences of a sustainable competitive advantage (Peters & Waterman, 1982).

### **3.6.11 Is Organizational Culture (OC) Stable or Changing?**

It has been known that the formation of organizational culture (OC) is greatly influenced by the founder's philosophy (Schein, 1983). Moreover, the top management of an organization identifies the set of the acceptable behaviors so that all the members of the organization can easily differentiate between acceptable and unacceptable behaviors. Organizational culture (OC) is represented by the artifacts, dress, ceremonies, frequently recited company stories, organizational behaviors in crisis, and other behaviors that are underpinned by the organization's values and beliefs (Beach, 2006; Rafaeli & Pratt, 2006; Smith & Shilbury, 2004).

When founders start their businesses, they often have their cultural theories which they develop based on their life experiences and cultural paradigm. These values and beliefs affect the desirable behaviors and the perceived success of their organizations (Schein, 1983). With the time, these values and beliefs become the determinant of behaviors and constitute the norms of the organization. These interpretations are in line with the definitions of organizational culture (OC) provided by O'Reilly and Chatman (1996) and Schein (1985) as the shared system of values, norms, and behaviors that influence the individual behaviors and determine the acceptance behaviors that to be taught to the new members of an organization. According to that, it can be reasonably argued that organizational culture (OC) can be viewed as the vehicle using which an organization can get the advantage of the interaction among behavioral organizational variables to achieve

behavioral outcomes that create the competitive advantage. Although organizational culture (OC) is invisible, the reflection of this culture becomes clear to stakeholders as well as customers.

Researchers in the field of organizational studies has been more attracted to examining the evolution of organizational culture (OC) in an organization (Schein, 1990) and the employees' understanding of the organizational culture (Denison, 1996). It has also been emphasized that organizational culture (OC) of an organization considers the internal as well as the external environment and respond accordingly to all the changes and developments.

Essentially, there has been a disagreement among researchers on whether organizational culture (OC) is a changeable (Ogbonna, 1993). Moreover, the rapid changes in local as well as the global environment such as the wave of globalization, workforce diversity, and technological advancements have implied that many organizational assumptions need to be modified accordingly (Hatch, 1993). Although changing organizational culture (OC) is possible, it is difficult (Bates, 1990). The difficulty of changing organizational culture (OC) comes, however, from the assumption that the deepest level of culture is unconscious. Besides that, the culture is ingrained and the norms and rewards for the behaviors are well trained (Thompson & Luthans, 1990).

In general, even though the assumption from the traditional definitions of organizational culture (OC) implies that it is relatively stable, it has been emphasized by other researchers that it is subject to change (Paker, 2002). This new assumption, according to Paker (2002), is because the organizational members do

not see the past of the organization and, moreover, they orient themselves to different future expectations. In addition to that, the social information-processing view (Salancik & Pfeffer, 1978) and cognitive view (Weick, 1969) argued that the people's past experiences and their definition of the current situation help in selecting the norms and values for judgments.

### **3.6.12 Organizational Culture (OC) Theory**

Most of the research on culture and organizational performance has focused on traits approach to examine the traits that influence organizational performance and effectiveness (Lee & Yu, 2004). During the last two decades or so, there has been a growing research concerning the impact of organizational culture on organizational performance (e.g. Denison, 1990, 2000; Denison, Cho, & Young, 2000; Denison & Mishra, 1995; Denison & Neale, 1996). Based on the work of Denison (1990; 2000), four cultural traits were identified that can have impact on positive performance namely adaptability, involvement, mission and consistency. The following sections further elaborated these four theories of organizational culture (OC).

#### **3.6.12.1 The Adaptability Theory**

The adaptation theory emphasizes that an organization must be ready to accept, interpret, and translate influence from the environment into internal norms that help to achieve overall organizational goals. Practically, many organizations acknowledged the importance of Quality Certifications such as ISO 9001:2008 as these types of quality assurance are needed by the customers and end-user. Thus

organizations must learn to adapt to these changes and implant such awareness into organization's practise or behaviour.

The three aspects of adaptability are likely to have an impact on an organization's effectiveness (Denison, 1989). The first aspect is the ability to perceive and respond to the external environment. The second aspect, however, is the ability to respond to internal customers. The third aspect is the reaction with either internal and external customers. The adaptation of an organization requires the capacity to restructure and re-institutionalize a set of behaviours and processes. Without these abilities to implement an adaptive response, an organization cannot be effective.

#### **3.6.12.2 The Involvement Theory**

This theory suggests that high level of involvement and participation increase a sense of ownership and responsibility (Denison, 1989). In line with this theory, employees have a high involvement in the decision-making processes and have a high degree of autonomy that lead to higher performance. However, regardless the persistent thinking of Denison (1990; 2000) to include involvement or participation as a factor to effective management, Locke and Schweiger (1979) concluded that there is only a modest relationship between participation and performance.

#### **3.6.12.3 The Mission Theory**

A mission provides purpose and meaning by defining a social role. As far as the organization's members understand the company's purpose and use it to guide behaviour, discussions and decisions. Through this process, behaviour is given intrinsic or even spiritual meaning that transcends functionally, thus contributes to



both short- and long-term commitment and leads to effective performance (Denison, 1989). A second major influence of mission on organizational performance is the direction and clarity. Success, according to Denison (1995), is more likely when organizations are goal-directed. That is to say, goals of organizations should be coordinated and aligned with the organizational structure and positive organizational behaviours.

#### **3.6.12.4 The Consistency Theory**

Positive culture such as a shared beliefs, values and symbols among the organizations members will allow them to coordinate their actions, but this must be done continually. The fundamental concept is that implicit control systems based on internalized values are a more effective means of achieving coordination than external controls systems which rely on explicit rules and regulations (Denison, 1995).

Effective organization seems to blend the consistency and involvement principles in continual cycles. Involvement is used to generate potential ideas and solutions. These ideas and solutions then refined into a more precise set of principles such as continues improvement in manufacturing systems. This, in turn, required the an effective involvement from all employees that results in higher standardization of production process (Denison, 1995).

#### **3.6.13 The Relationship between Organizational Culture (OC) and Performance**

Denison (1984) emphasized that organization of work and decision-making were significantly correlated with financial performance. He also found that the

strength of the culture was predictive of short term performance when all those performance were spelled out in more broad indicators such as return on assets (ROA), return on investments(ROI), and return on sales(ROS).

Gordon and DiTomaso (1992) also replicated the Denison's (1984) research and coincided with the evidence that a strong culture was predictive of a short term organizational performance. As discussed earlier, Denison (1984) used the traits approach i.e. involvement, consistency, adaptability and mission, integrating these four traits to transpire effectiveness. For that purpose, organizational performance was measured by a set of subjective performance measures namely new product development, sales growth, market share, cash flow, and profitability.

A thorough work by Lee, Jean, and Yu (2004) also revealed that cultural strength of organization was related to the organizational performance. They used the organizational culture profile (OCP) which was adapted from Chatman and Jehn (1994). The OCP contains 54 "value statement" such as being careful, risk taking, being competitive, secure employment, autonomy, fairness, team oriented and others, and this being interrelated to organization performance of criteria that are most critical to the industry such as sales turnover, return on assets, and net profitability. Lee *et al.* (2004) however expressed that the correlation between OC and organizational performance were much greater in manufacturing firms when compared with service firms.

The management practices fostering participation, autonomy, and creativity were closely correlated organizational performances (Denison & Mishra, 1995). The work of Denison and Mishra (1995) magnified the previous findings that stated that

the company with progressive human resource practices outperformed those with less progressive practices.

It has been argued by Ogbonna and Harris (2000) that although the most conclusions regarding the effect of organizational culture (OC) on organizational performance have been anecdotal, there has been an increasing attention paid by researchers to the empirical investigation of this relationship. However, the reason behind the increasing popularity of the organizational culture (OC) concept, as argued by Ogbonna and Harris (2000), lies in the assumption that it leads to enhanced financial performance. This significant role of organizational culture (OC) on the organizational performance was justified by Scholz (1987) as it is a main source of competitive advantage for an organization.

In studying how culture can justify the survival and sustainability of organizations, Denison (2000) tried to examine such phenomenon by studying the case of family and non-family businesses. His findings indicated that the sustainability of family businesses was rooted in deep factors strongly related to the positive culture.

In the same stream of research, Lee *et al.*(2004) studied the performance implications of organizational culture (OC) in Singaporean companies. They found that innovation and cultural strength were correlated with sum insured in insurance industry. On the other hand, team and task orientations were correlated with staff turnover. Similarly, supportiveness was correlated to the growth of the net profits in manufacturing industry.

Although a thorough review of the literature revealed that organizational culture (OC) is very important for the enhancement and excellence of the organizational performance, a little empirical research work was carried out to examine this relationship. Furthermore, the difference of the level of performance of different organizations working in the same context suggests that the effects of organizational culture (OC) on performance either directly or indirectly is significant. The current study attempted to bridge the gap in the literature by examining the moderating effect of the organizational culture (OC). In other words, this study contributed to the knowledge by examining how culture affects the interaction between TQM practices, EO and the organizational performance.

#### **3.6.14 The rationality of the expected moderating effect of Organizational Culture (OC) on the TQM practices, EO and organizational performance**

Based on their comprehensive review of the TQM literature, Sila and Ebrahimpour (2002) found that the conducted empirical studies exploring the TQM practices and organizational performance relationship revealed that the findings are inconsistent. To resolve this confusing situation and clarify the reasons behind the mixed results, some scholars such as Ehigie and McAndrew (2005) suggested that some variables, that might influence the success TQM implementation and organizational performance, should be deeply investigated and examined in the future research work. However, it has been widely reported in the literature that organizational culture (OC) is among the variables that can influence and better explain the relationship between organizational strategies and long-term organizational performance.

Moreover, it has been claimed by Reed *et al.* (2000) that there is almost an agreement among researchers in the operations management discipline that supportive organizational culture (OC) is the main factor towards successful TQM strategy implementation. Supportive organizational culture (OC) implies that all the employees are committed to TQM practices that result in producing high quality products and services. Besides, a supportive organizational culture (OC) enables all the employees to be fully engaged and positively participate in the implementation and evaluation of the TQM processes.

In relation to that, many researchers have confirmed the substantial role played by organizational culture (OC) in successful organizational change driven by TQM initiatives (Krasachol & Tannock, 1999). However, the lack of an accepted theoretical framework of TQM strategy opened the door for endless debates among different approaches. According to many researchers, it has been agreed that successful TQM initiatives in an organization can be mainly attributed to the fit between TQM practices and the organization's cultural environment (Llorens Motes & Verdu Jover, 2004; Yasin *et al.*, 2004). In other words, it has been widely argued by many researchers that successful implementation of TQM is mainly based on the creation of quality culture to achieve competitiveness through satisfying the quality-conscious customers (Kanji & Wallace, 2000). These view, however, are in line with the assumptions of contingency theory and organizational change theory that focus on the fit concept. That is, the more the fit between strategies such as TQM and EO and organizational culture, the more successful and effectiveness the strategy implementation.

On the other hand, Brah and Lim (2005) attributed the failure of TQM to enhance the organizational performance, as reported in the literature, mainly to three reasons. The first reason is the lack of organizational strategic focus among the top management. As a result, there is a wishful thinking that TQM implementation will result in immediate results in the short run. The second reason is related to the lack of top management commitment towards the quality of products and services in an organization that affects the quality performance. Finally, the lack of supportive organizational culture (OC) affects the successful implementation of TQM strategy as a change strategy towards improving the overall organizational performance.

Additionally, it has been widely acknowledged by the researchers that TQM implementation requires changing the organizational culture (OC) to support the suitable TQM model adopted by an organization. In other words, any organization should develop a suitable TQM implementation and performance measurement strategy by adopting a change model which is culturally feasible (Kekale & Kekale, 1995).

To successfully implement TQM strategy, Brah and Lim (2005) emphasized that organizations should establish strategic-focus-organizational culture (OC) rather than short-term focus. It was also argued that the blind imitation of TQM practices may cause the lack of the fit between TQM practices and organizational factors resulting in the failure to produce the desired organizational outcomes (Llorens Motes & Verdu Jover, 2004).

In summary, some researchers have questioned the existence of a universal agreement regarding the link between organizational culture (OC) and organizational performance (Ogbonna & Harris, 2000). However, there are many

recommendations to examine the effect of organizational culture (OC) on the relationship between TQM, EO and organizational performance. Therefore, this study has contributed to the available literature by studying the moderating effect of organizational culture (OC) on the aforementioned relationship.

To discuss the theoretical underpinning theories of this study, the following section elaborated some of the suitable theories and how they might suit the purpose of this research.

### **3.7 Underpinning theories**

The major purpose of this study was to examine the moderating effect of OC on the relationship between TQM, EO and organizational performance. Due to the nature of the variables used in this study, various underpinning theories can be suitable to theoretically underlie the framework of this study. The following subsections discussed these theories and provided supportive arguments. However, this study tried to integrate organizational change theory and the contingency theory as was reflected in the congruence model.

#### **3.7.1 Organizational Change Management Theory**

This theory emphasized the importance of the effective alignment and a good fit between people, organizational structures, and culture; and the required changes to establish a drastic move towards a desired future state with a better effectiveness (Jones, 2004).

The main goal of any organizational change initiative is to achieve a new position in which the organization can efficiently use its resources and get the full

advantages of its capabilities to increase the ability to create value and create its competitive advantage (Jones, 2004). Moreover, technology, economic factors, legal, and socio-political factors are of importance to drive the organizational change (Ivancevich & Matteson, 2002). In addition to that, there are many forces for organizational change such as competition, economic situations, political changes, and ethical requirements. Any change initiative may be faced by resistance to change from different levels of an organization.

As driven by the global competitive business environment, organizational change takes place in manufacturing, service, and public organizations (Diefenbach, 2007). Moreover, change according to Romanelli and Tushman (1994) can take place in five central domains that significantly affect the organizational activities such as strategy, structure, organizational culture (OC), control system, and power distributions.

Organizational changes are mainly related to human resource and process issues within an organization (McGuire & Hutchings 2006). Therefore, organizations nowadays are, to far extent, focused on human resource-oriented and process-oriented strategies to enable them to survive and grow in the global competitive business environment (Schuler, 2000). In fact, TQM and EO can be thought of as change initiatives aim to produce changes in human behaviors and processes within an organization. These strategies, therefore, depend heavily on organizational culture (Rad, 2006).

Based on the previous arguments, it is, however, reasonable to consider the



organizational change theory as a suitable underpinning theory underlying the variables of the study.

### **3.7.2 Organizational Development Theory**

The Organizational Development Theory (ODT) was originally based on the work of Bennis (1996). Essentially, this theory a series of techniques and methods taken by an organization management to increase its adaptability. In other words, OD refers to the educational strategies implemented by an organization to change its values, attitudes, and structure to better adapt to the competitive, IT-driven, and turbulent business environment.

It has been emphasized by Jones (2004) that the goal of organizational development theory is to improve the efficiency of an organization through utilizing all the potential skills of its members. This can benefit the organization by establishing a fruitful match between the goals of individuals and organization. In addition to that, there are many drivers of the OD such as leadership development, change management, and business process re-engineering. As emphasized by Cusick (2005), OD is a common approach of change management in which all the stakeholders will be educated on how to improve their functioning continuously.

The variables included in this study represent some of the major elements that develop and pave the way to human and process changes and development in an organization. Thus, the theory of organizational development can be used as the theoretical foundation of this study.

### **3.7.3 Operations Management Theory**

The concern of Operations Management Theory (OMT) is how the organizational activities can be managed so that the products produced and services delivered satisfy the customers' requirements. This theory focuses on the design, operations, and controlling and updating the system in organizations to achieve the efficient use of human resources, equipments, and facilities in producing products and delivering services (Radnor & Barnes, 2007).

Moreover, there are many indicators of business performance that help in modeling several processes. That is, there are many indicators that have been used frequently to represent several dimensions of the business processes to help organizations to design and then implement and evaluate its processes (Hauser & Katz, 1998). TQM and EO have been argued to be among the crucial determinations of effective organizational performance (Kaplan & Norton 1992).

In general, the variables used by this study are meant to enhance the organizations' activities and processes to coordinate and work on various dimensions to improve the overall organizational efficiency with which the customers' requirements and needs will be met and satisfied. Therefore, OMT can be used to underpin the variables of this study.

### **3.7.4 Resource-Based View of the Firm (RBV)**

The resource-based view of the firm (RBV) has been one of the most and fast growing research areas in the strategic management literature for the last few decades (Galbreath, 2005). It was firstly introduced to the literature by Wernerfelt (1984) and recognizes that the success of an organization is mainly determined by its

internal resources. These resources are either assets or capabilities. While the assets can be tangible or intangible (Collis, 1994), the capabilities are the intangible accumulated skills and knowledge (Teece *et al.*, 1997).

According to Barney (1991), the resources of a firm are the capital equipment, employees' knowledge and skills, brand names, and the firm's reputation. Moreover, RBV argues that the resources of the firm are main factors in determining the sustainable competitive advantage (Barney, 1991). In other words, rare, valuable, and inimitable resources of an organization are the main generators of sustainable competitive advantage and considered as the intangible strategic resources. Based on these distinctive resources, the firm can produce innovative products and deliver high quality services that lead to high market position far ahead from its rivals (Barney, 1991; Russo & Fouts, 1997).

Besides that, RBV stress on the match between the organizational capabilities and the available opportunities. This explains the failure outcomes of the blind imitation of strategies adopted by successful organizations where these strategies might not in good match with the available resources. Therefore, the mechanism of RBV is to consider the full use of the available resources to build the distinctive core competencies towards achieving the sustainable competitive advantage (Makadok, 2001).

It has been widely emphasized that there are many factors that can prevent competitors from being able to achieve the same competitive advantage level of an organization. These factors such as internal organizational strategies, human competencies, regulations, access to useful information sources (Barney, 1986;

1991; Russo & Fouts, 1997). Hence, an organization can develop its own competencies and establish the match between these internal capabilities and the external environment to achieve the desired competitive strategic position.

Regarding the implications of RBV on organization's competitive advantage, many points can be emphasized. First, since the RBV emphasizes on the importance of resources in creating and sustaining the competitive advantage of the firm, an organization should develop its mechanism to select its distinctive available resources with great potential value (Makadok, 2001).

Second, since the awareness of the internal as well as the external environment has been greatly emphasized, an organization should seek comprehensive and updated information related to markets, customers, and competitors to be able to design effective plans accordingly (Barney, 1986).

Finally, the third implication of RBV on performance is related to organizational capabilities. Organizational capabilities are the skilled, talented, experienced humans, information-driven and specific processes that can be fully utilized to produce high quality and innovative outcomes that exceed the customers' expectations (Amit & Schoemaker, 1993). Moreover, the organizational capabilities increase the value of the available resources and help in coordinating the effective use of these resources (Prahalad & Hamel, 1990; Wernerfelt, 1984).

It has been strongly emphasized that organizations should not only build their capabilities to create the competitive advantage, but also should ensure that the created competitive advantage is sustainable and redeveloped over the time. This

means that the process of creating a competitive advantage should be dynamic so that the organization can survive and grow in the dynamic and hyper-competitive business environment (Teece *et al.*, 1997). Therefore, the dynamic capability building strategies should be driven by the knowledge accumulation and continuous organizational learning activities (Teece *et al.*, 1997; Ulrich, 1997; Wernerfelt, 1984).

Essentially, the aim of this study is to examine the effect of the interaction between, TQM practices, EO, and OC on the organizational performance. However, a thorough review of the literature of management shows that the variables used in this study have been theoretically underpinned by the RBV. For example, it has been emphasized that TQM is one of the main sources of competitive advantage (El Shenawy *et al.*, 2007; Reed *et al.*, 2000; Tena, 2004). entrepreneurial orientation (EO), also, is considered to be one of the competitive advantage determinants (Weerawardena & Coote, 2001). Moreover, organizational culture (OC) has been looked at as a source of sustainable competitive advantage (Barney, 1986, 1991; Denison, 1990). Thus, previous arguments revealed that the variables of this study could be considered as sources of the organizational competitive advantage. This, in turn, justifies the choice of RBV as the underpinning theory to address the issue at hand.

### **3.7.5 The Contingency Theory**

The Contingency Theory states that for an organization there are various or multiple strategic choices that can be pursued. It also posits that an organization can choose among many available choices available that are dependent on,

contingent upon, the environment in which the organization operates (Schuler, 2000).

In fact, in the contingency theory the concept of “fit” has the crucial importance as it has been termed in many ways such as consistent with, contingent upon, and aligning (Venkataraman, 1989b). In other words, the concept of “fit” or “match” is the basic premise of the contingency theory (Lawrence & Lorsch, 1967). Therefore, research scholars of the contingency research and strategic management emphasized the necessity of the fit between the organizational strategy and some of the organizational variables as the key prerequisite for critical performance (Selto *et al.*, 1995; Van de Ven & Drazin, 1985).

Although it has been emphasized that the fit is the main issue in the Contingency theory, there has been a clear definition of the term (Van de Ven & Drazin, 1985). Specifically, the fit term was defined using three approaches namely, selection approach, interaction approach, and the system approach. While the selection approach refers to the fit as the correlation between the environmental variables and the organizational variables, the interaction approach examines the interaction between organizational variables and the environment. Moreover, the system approaches considers the effect of this interaction on the performance.

Furthermore, in the literature of contingency theory, it has been widely argued that organizational performance could be improved if there is an effective alignment of the key organizational variables (Naman & Slevin, 1993). According to the contingency theory, the relationship between two variables is contingent or depends on the level of a third variable. Therefore, it was highly suggested that introducing a moderator variable into the relationship between two variables may

permits more specific understanding and prevent misleading conclusions regarding the contingency relationships. To better understand the inconsistent findings regarding the relationships between organizational strategies and organizational performance, contingency theory had a primary contribution to the development of management sciences (Venkatraman, 1989b).

In an attempt to better explain and understand the relationship between TQM, EO and the organizational performance, the literature suggested some of the potential moderating variables (Lumpkin & Dess, 1996; Prajogo & McDermott, 2005; Sila & Ebrahimpour, 2002, 2005; Zahra & Covin, 1995; Zahra & Garvis, 2000). One of the most important organizational variables with potential moderating power between organizational strategies and organizational performance is the organizational culture (OC) (Prajogo & McDermott, 2005; Sila & Ebrahimpour, 2002, 2005; Zahra & Garvis, 2000).

As it has been discussed earlier, the major purpose of this study is to examine the role of organizational culture (OC) on the relationship between TQM, EO and the organizational performance. It can be argued, based on the literature, that OC could be one of the major factors that allows or inhibits the effective strategy implementation (Rad, 2006). Therefore, if an organization developed a quality and entrepreneurial organizational culture, the outcomes for TQM adoption and EO practices could be highly promising. In supportive quality and entrepreneurial organizational culture, the abilities of an organization to create successful change initiatives related to system, processes, and human aspects will be greatly increasing.

The importance of organizational culture (OC) is due to the good fit that can be established with the intended strategies and the cultural practices within the organization. That is to say, in the case of quality and entrepreneurial organizational culture, all the members of the organization are ready to accept TQM and EO since there is no conflict between their practices and the overall values and beliefs system (Schein, 1997).

Thus, this study can be underpinned by the contingency theory. Moreover, this study is line with the strategy implementation school following Venkatraman and Camillus's (1984) classification. Moreover, the contribution of this study to the literature is by examining the contingency theory through investigating the moderating role of organizational culture (OC) on the TQM, EO and organizational performance relationship.

### **3.7.6 The Congruence Model**

In addition the previous discussed theories, this study was also inspired by the congruence model that emphasizes the importance of the good fit between some organizational elements to produce the desired outcomes.

The congruence model emphasizes that to acquire good understanding of the organizational performance, one needs to understand the component of the organization as a system. Based on the work of Nadler and Tushman (1998) and Tushman and O'Reilly (2002), it is asserted that the congruence model is considered to be an open system with four interactive components. These four components are the inputs, strategy, the organization transformation, and the outputs. Inputs includes factors such as the environment, organizational resources, and the organizational



history. However, the strategy component includes the strategy employed by the organization to put its vision into action. That is, the strategy translates vision into decisions that help the organization to grow and achieve high performance level. In addition to that, outputs are the products and services to fulfill the organizational objectives.

At the heart of the congruence model is the transformation process part. In fact, the congruence model puts its great emphasis on the transformation process that views organization as made up of four elements that interact with each other. The four elements are people, work, formal organization, and informal organization.

As indicated earlier, every organization can be largely influenced by its environment, the social and economic forces, and the legal constraints. More specifically, the environment factor includes the market, suppliers, governmental bodies, technological advancements, economic and social conditions, competitors, and financial institutions. The resources, including the full range of assets, i.e. capital, employees, technology, and information are, also, considered as the major determinant of organizational performance. Another inputs that may affect the organizational effectiveness is its history.

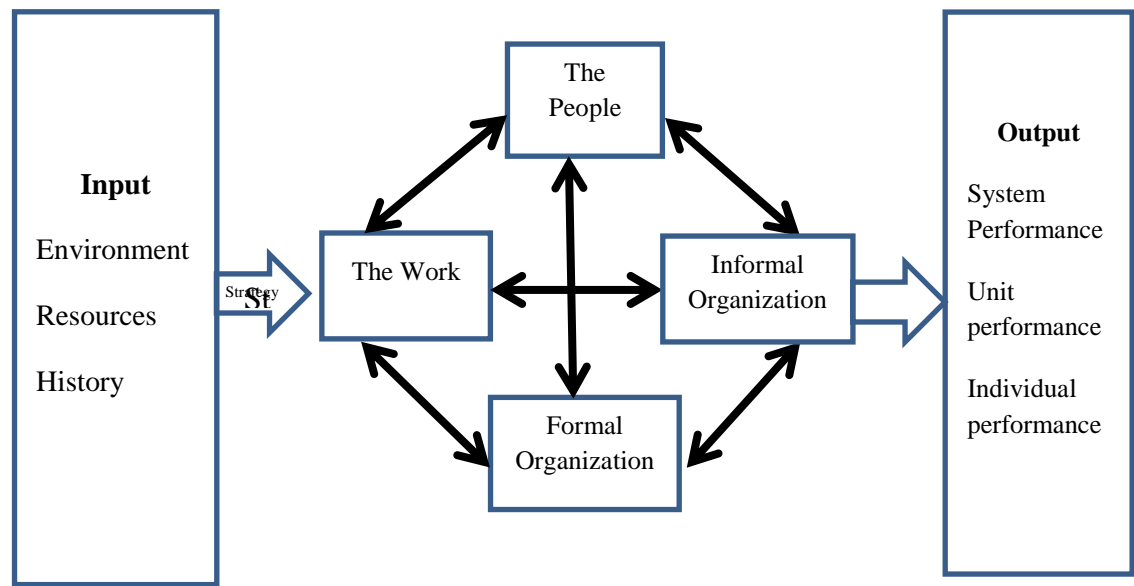


Figure 3.1

### *The Congruence Model*

So, to be able to predict the capacity of an organization in the future, one should be familiar with the strategic decisions, responses to crises, and the evolution of values and beliefs that shaped it over time.

For the strategy component, an organization has two levels namely corporate and business strategy. While corporate level strategy involve high level and overall organizational directions, business strategy consider the set of decisions to put the vision into action. This implies the consideration of all the resources, demands, and the environmental threats and opportunities.

Undoubtedly, the ultimate objective of any organization is to produce a satisfactory performance at the corporate, divisions, and individual levels. In general, in this model, the output of an organization describes broadly the

organizational performance and effectiveness. In other words, it refers to the organization's ability to generate products and services that acquire high level of customers' satisfaction and achieve a level of individual and group performance within the organization.

As stated earlier, the main component of the model is the transformation process. This component use the inputs and through the interaction of its part it produces the outputs. There are four key components that constitute the transformation process component. These are the work, the people who perform the work, the formal organizational arrangements that includes the structure and direction of the jobs, and the informal organization that refers to the operating environment, the culture, and the behavioral patterns.

The major focus of the congruence model is the concept of fit. The primary assumption of this model is that the organizational performance depends on the alignment of each of the components namely the work, people, structure, and culture with all of the others. These components can fit well together and function effectively, or have a poor fit and lead to below potential performance. In other words, the greater the fit among these components, the higher the performance. It is, however, stressed that from the congruence model standpoint, the interaction between each set of organizational components is more important than the components themselves. Put simply, the great emphasis of the congruence model is put on the degree to which the strategy, work, people, formal organization, and culture are well aligned and how this fit can determine the organizational ability to grow, compete, and succeed.

As stated earlier, the major purpose of this study was to examine the extent to which TQM strategy and EO were in a good fit with the organizational culture and how this transformation affected the overall organizational performance of Yemeni banks. From this point of view, this model, in conjunction with other discussed theories, prove its strengths to explain the relationships amongst the variables of the study.

### **3.8 Theoretical Framework of the Study**

As a result of a thorough literature review and the subsequent theoretical gaps identified, the research framework of the study was designed. That is, the study used the following framework to test the hypotheses postulated.

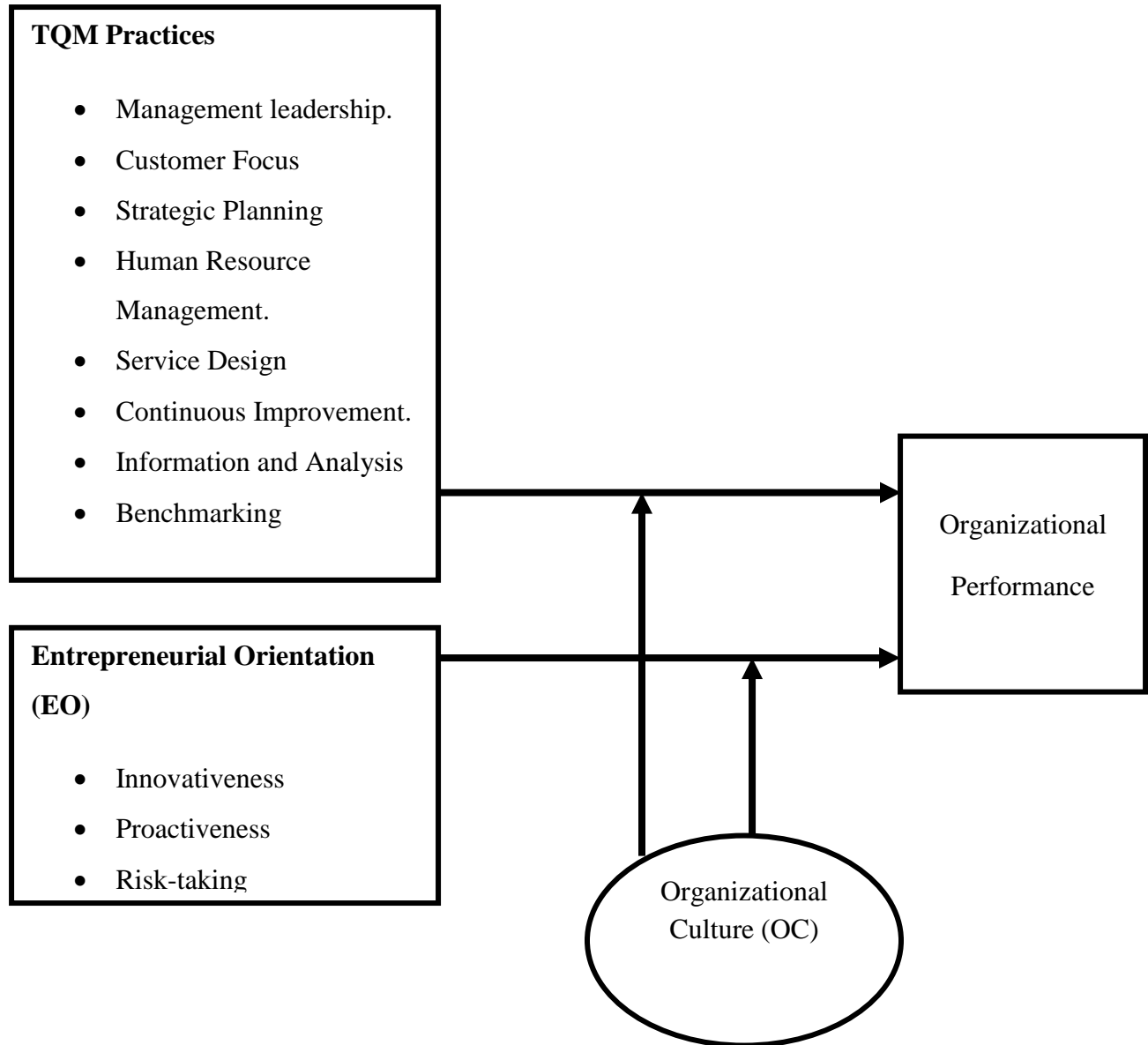


Figure 4.1

*Theoretical Framework of the Study*

### **3.9 Hypotheses Development**

Based on the past relevant literature, this section discusses on hypotheses development. Therefore, in line with the research questions and objectives of the study reported in the first chapter, the following sub-sections discuss the hypotheses that were tested in this study. However, all the statements of the hypotheses are in the alternative forms.

#### **3.9.1 TQM practices and Organizational Performance**

A review of the relevant TQM literature shows that researchers have different approaches in the conceptualization of TQM constructs (Nair, 2006). While some researchers (e.g. Das *et al.*, 2000; Kaynak, 2003; Samson & Terziovski, 1999b) considered TQM construct as a multidimensional construct, others (e.g. Arawati, 2005; Arawati & Ridzuan, 2001; Choi & Eboch, 1998; Douglas & Judge, 2001) used the one-dimensional operational definition for TQM construct. However, the use of TQM as a multi-dimensional construct was built on the strong interrelation assumption among TQM factors and implies that TQM strategy should be implemented as a package rather than separated practices. Related to that, studies used TQM as a single construct reported positive relationship between TQM strategy and organizational performance. Besides that, there are many empirical researches that measure firm's performance using the TQM criteria (Choi & Eboch, 1998; Flynn & Saladin, 2001; Montes, Jover, & Fernandez, 2003; Samson & Terziovski, 1999b).

In the literature of TQM, the majority of researches reported a positive relationship between TQM practices and organizational performance (Sila & Ebrahimpour, 2002). Moreover, it was found by many researchers that TQM practices affect both financial and non-financial performance since they enhance innovative (Singh & Smith, 2004); drive a change of organizational culture (OC)(Irani, Beskese, & Love, 2004); enhance market competitiveness (Chong & Rundus, 2004); increase market share growth( Kaynak, 2003); enhance productivity( Kaynak, 2003; Rahman & Bullock, 2005); enhance employees' morale (Rahman & Bullock, 2005) and enhance overall organizational performance (Powel, 1995).

The previous arguments and other supporting ones led to the following hypothesis to be proposed.

**Hypothesis 1 (H1): TQM has a significant effect on the organizational performance.**

#### **3.9.1.1 TQM-Management Leadership and Organizational Performance**

While some researchers emphasized that TQM can be studied as a single construct when studied the TQM-performance relationship (Terziovski & Samson, 1999), others such as Powell (1995) and Dow *et al.* (1999) reported that only some of the TQM practices showed positive relationship with organizational performance (Khairul Anuar, 2002; Llorens Montes & Verdu Jover, 2004; Powell, 1995; Yasin *et al.*, 2004). Therefore, these mixed findings suggested that many TQM elements have significant impact on organizational performance (Hendricks & Singhal, 2001; Samson & Terziovski, 1999b). Hence, the following paragraphs present the hypotheses development procedures.

It has been widely acknowledged that Management leadership component of TQM has been one of the dominant dimensions of TQM strategy (Harrington & Williams, 2004). The critical role of leaders in the context of TQM is not just having the power to control, it is more towards the employees' empowerment, training and performance enhancement (Harrington & Williams, 2004). Moreover, the strategic leadership success is determined by how leaders can utilize both social and human capital in the process of creating competitive advantage (Hitt & Ireland, 2002). The most significant issue in the field of strategic leadership, according to Hitt and Ireland (2002), is the question: Does the level of strategic leadership in an organization have anything to do with the noticed variation of their performance?

To say the same in different way, Management leadership is one of the most important factors of TQM that have been studied by researchers as the base of any TQM initiative. The literature of TQM emphasized the crucial role played by the top management and the necessity and importance of their full commitment to the success of any organizational initiatives (Chuan & Soon, 2000). The importance of top management is due to the role of top management in the development of supporting organizational culture (OC) that is based on effective communication, teamwork spirit, empowerment, participative decision making process and effective training (Koehler & Pankowski, 1996). Therefore, the literature of TQM empirically recognized the management leadership-organizational performance relationship (Arawati, 2005; Flynn *et al.*, 1995; Llorens Montes & Verdu Jover, 2004; Powell, 1995; Yasin *et al.*, 2004). Hence, the following hypothesis was proposed:



**Hypothesis 2 (H1a): TQM-Management leadership has a significant effect on the organizational performance.**

### **3.9.1.2 TQM-Customer Focus and Organizational Performance**

It has been widely reported in the literature that the ultimate goal of TQM strategy is to satisfy customers' need and meet their changing expectations. In fact, if the TQM strategy implementation does not add value to the customers, the TQM strategy redeemed failure (Thiagarajan & Zairi, 1997c). Towards achieving the customers' satisfaction, there should be a continuous and effective communication between organizations and customers resulting in high level of customers' involvement in products and service design (Hunt, 1995). To be able to get the full involvement of customers in all the marketing activities, there should be long-life relationship strategies through a direct interaction. Moreover, all organizations, especially banks, should develop reliable customer-related databases on customers' needs and expectations alongside continuous monitoring of their satisfaction levels.

In addition to that, the issue in the strategic positioning is where and how an organization competes. These are crucially important emerging concepts by TQM theory that aims to maintain a high level of customer satisfaction through high quality and innovative products and services (Hooley, Fahy, Greenley, & Beracs, 2003). At the same time that many researchers showed that customer satisfaction is a very important for the overall organizational performance, they also showed that the higher the level of customer satisfaction the lower will be the operating cost ( Lee & Hwan, 2005), the higher will be profit (Matzler, Hinterhuber, Daxer, & Huber,

2005), the more enhanced would be the organizational performance(Westland, Gustafsson, Lang, & Mattsoon, 2005).

Stressing the importance of customer-focus for successful TQM initiatives, Mehra *et al.* (2001) stated that TQM is customer-oriented strategy. However, based on the emphasis given by researchers to customers' satisfaction and loyalty as the core of business success, Mehra *et al.* (2001) claimed that the customer-focus element of TQM is going to gain the most importance in the TQM future literature.

In their way to generate profits and increase market share, organizations should develop a loyal customer base through meeting their customers' expectations. Therefore, customers' satisfaction has been gaining an increasing attention by scholars and practitioners as they realized that customers' satisfaction and then their loyalty are the main generators of high profits. In the same vein, Agus *et al.* (2000) argued that TQM strategy implementation improves the financial performance of an organization through its customer-focus practices. In relation to that, there are evidences reported in the literature regarding the positive effect of customer focus element of TQM strategy on organizational performance (Llorens Montes & Verdu Jover, 2004; Yasin *et al.*, 2004). Hence, these arguments and other supporting ones led to hypothesizing the following hypothesis:

**Hypothesis 3 (H1b): TQM-Customer-Focus has a significant effect on the organizational performance.**

### **3.9.1.3 TQM-Strategic Planning and Organizational Performance**

Essentially, strategic planning encompasses the activities through which an organization formulates, implements and evaluates all other strategies to achieve organizational goals (Srinidhi, 1998). Moreover, it is used to align TQM strategy

with all other organizational strategies. That is, TQM-strategic planning considers the organizational capabilities, such as adequate funds, skilled employees and adequate time to achieve the goals of executed strategies (Black & Porter, 1996).

To emphasize the importance of strategic planning, some researchers claimed that the organization ability to survive in uncertain business environment can be determined by its strategic planning policies (Chenhall, 2005). It has been also emphasized by Krumwiede and Charles (2006) that the top management in the TQM context is involved strategically through the strategic planning component of TQM. Ideally, strategic planning considers the process through which the organizational vision and mission are translated into short- and long-term plans to be put into action (Tari', 2005). Furthermore, strategic planning as an element of TQM strategy should establish a detailed guidelines on how the organization design its TQM practices to achieve its objectives in line with the customers' needs and expectations (Sila & Ebrahimpour, 2002).

A review of the literature of TQM revealed that many previous studies reported a significant relationship between strategic planning and organizational performance (Li *et al.*, 2003; Sila & Ebrahimpour, 2005; Sila & Ebrahimpour, 2002; Wu *et al.*, 1997). Therefore, the following hypothesis was proposed to be tested:

**Hypothesis 4 (H1c): TQM-Strategic Planning has a significant effect on the organizational performance.**

#### **3.9.1.4 TQM-HRM and Organizational Performance**

Ahire *et al.* (1996) defined HRM, as an element of TQM strategy, to be the employee involvement, employee training and employee empowerment. In

addition, Arawati (2005) argued that the human resources of an organization are the building block for competitive advantage. In relation to that, it has been widely acknowledged by the researchers that TQM implementation requires changing the organizational culture (OC) of an organization to support the suitable TQM model adopted. In other words, organizations should develop suitable TQM models including their specific HRM practices that help all the employees to accept and successfully implement any intended quality initiatives (Kekale & Kekale, 1995).

A review of literature of quality management confirmed the importance role of employees in successful organizational change initiatives performed by an organization to achieve sustainability and competitiveness (Ehigie & McAndrew, 2005; Ooi, Bakar, Arumugam, Vellapan, & Loke, 2007; Palo & Padhi, 2005; Sila, 2005). This argument was corroborated by Akdere (2006) where he stated that the TQM practices positively related to the organizational competitiveness through the employees' inputs.

As widely discussed in the literature, the TQM implementation requires changing organizational culture (OC) to support the suitable TQM model adopted. Moreover, a great deal of attention should be given to the HRM practices such as employees' empowerment, training and involvement to achieve the overall desired organizational objectives (Kekale & Kekale, 1995).

While employees' empowerment at all organizational levels in an organization play a vital role for TQM success, it can lead to TQM failure if it is not done in accordance with employees' skills and experience (Gatchalian, 1997). Additionally, it has been emphasized that for an organization, to benefit from TQM initiatives, there should be a well-planned and effectively implemented

quality training programs (Arawati, 2005).

As a consequence, if the individuals in an organization are empowered, receiving quality related training and fully involved in team work, it is highly expected that they can be the main success drivers for TQM implementation. This is because TQM successful initiatives require the fruitful participation of all members of an organization.

As it has been widely discussed in the TQM literature, many studies supported the positive relationship between human resource management and organizational performance (Arawati, 2005; Flynn *et al.*, 1995; Khairul Anuar *et al.*, 2001; Llorens Montes & Verdu Jover, 2004; Powell, 1995; Yasin *et al.*, 2004). Thus, based on the previous discussion, the following hypothesis was proposed to be empirically tested.

**Hypothesis 5 (H1d): TQM-HRM has a significant effect on the organizational performance.**

#### **3.9.1.5 TQM-Service Design and Organizational Performance**

It has been highly emphasized in the quality management literature that good service design contributes significantly to the performance of an organization through improving its reputation and consequently customers' satisfaction (Lakhe & Mohanty, 1995). From another standpoint, proper design of the service offered by an organization leads to better work processes, reduces the wasted time and increases customers' satisfaction level and business profitability.

However, the financial performance of an organization can benefit from the implementation of TQM in increasing the efficiency and subsequently reducing

the cost. In fact, this has been reported frequently in the literature of TQM (Arawati, 2005; Flynn *et al.*, 1995; Khairul Anuar *et al.*, 2001). In addition to that, it has been widely revealed in the literature of TQM that there is a strong relationship between service design and organizational performance (Anderson *et al.*, 1994; Flynn *et al.*, 1995; Llorens Montes & Verdu Jover, 2004). The previous discussion led to the introduction of the following hypothesis to be tested:

**Hypothesis 6 (H1e): TQM-Service Design has a significant effect on the organizational performance.**

#### **3.9.1.6 TQM-Information and Analysis System and Organizational Performance**

As it has been widely emphasized in the literature of quality management that effective information system is one of the most crucial factors that contribute significantly to successful TQM initiatives (Ahire *et al.*, 1996). The importance of information system as the combination of hardware, software, people and procedures drove most of the national quality awards, including MBNQA, to state the importance of information systems as one of the main criteria that must be effectively managed and utilized by organizations (Karthi, 2004).

Based on his work, Saraph *et al.* (1989) emphasized the importance of information and analysis system for effective performance especially in the era of information and communication technology (ICT). They also argued that only organizations that have proper and effective information systems can positively respond to the quick changes in the business environment due to their effective data collection, data presentation and data dissemination.

Furthermore, many researchers such as Flynn *et al.* (1995) revealed that there is a positive relationship between quality information systems and organizational performance. This relationship was, according to their arguments, due to the fact that a thorough knowledge and effective utilization of customer-related information can result in high level of customers' satisfaction and operations efficiency respectively.

Therefore, the following hypothesis was meant to be empirically tested.

**Hypothesis 7 (H1f): TQM-Information and Analysis System has a significant effect on organizational performance.**

#### **3.9.1.7 TQM-Continuous Improvement and Organizational Performance**

Basically, TQM strategy has been defined as the management philosophy that seeks to satisfy customers through continuous improvement efforts at all organizational levels (Benavent, Ros, & Moreno-Luzon, 2005). Therefore, organizations should expand their continuous improvement practices to cover all kind of processes including management activities and styles (Benavent *et al.*, 2005).

The vision of an organization and its actual operational situation can be very much deviated and not directing towards the same end, this deviation can be eliminated by effective processes management system (Landau, Drori, & Porras, 2006). In fact, the ultimate goal of an organization is produce outcomes that acquire high levels of customers' satisfaction and go beyond their customers' expectations. This implies that organizations should always question and evaluate their different managerial and technical processes to be assessed according to their contribution to achieve high level of customers' satisfaction (Baker, 2003).

Saying the same differently, in today's dynamic business environment, organizations should realize the need for the adoption of life-long continuous improvement strategies that involve all members of the organizations. The need for continuous improvement strategies have been driven by the critical innovation and quality-conscious customers (Dean & Bowen, 1994). To support the continuous improvement practices in an organization, there are many factors such as top management support, proper human resource management and efficient information systems to collect and analyze the available information to spot the practices that require improvement (Escrig-Tena, 2004).

Many previous studies concerning the quality management literature indicated that the continuous improvement practices can help organizations to achieve better performance (Anderson *et al.*, 1994; Flynn *et al.*, 1995; Li *et al.*, 2003; Llorens Montes & Verdu Jover, 2004; Powell, 1995). Thus, the following hypothesis was forwarded to be tested.

**Hypothesis 8 (H1g): TQM-Continuous Improvement has a significant effect on the organizational performance.**

### **3.9.1.8 TQM-Benchmarking and Organizational Performance**

Some organizations use a benchmarking strategy to be able to catch up in the market by comparing their performance to that of the leading and successful organizations. However, the essence of benchmarking practice is to analyze the products, services and techniques that are being used by other competitors in the same industry or other industries to gain competitive advantage (Ahire *et al.*, 1996). Therefore, cost savings, process efficiency, employees' satisfaction and customers' satisfaction are among several other criteria that can be benchmarked



by an organization.

The positive effect of benchmarking on the organizational performance has been greatly confirmed by many researchers (e.g. Ahire *et al.*, 1996; Arawati, 2005; Powell, 1995; Sanchez-Rodriguez & Martinez-Lorente, 2004). Based on the above discussion, the following hypothesis was proposed to be tested:

**Hypothesis 9 (H1h): TQM-Benchmarking has a significant effect on the organizational performance.**

### **3.9.2 Entrepreneurial orientation (EO) and Organizational Performance**

In fact, different researchers differed in measuring EO concept, some examined the overall construct and its relationship to performance, others examined the effect of its dimensions on the organizational performance (Davis, 2007). Employing the latter approach, the following discussions are meant to develop the hypotheses concerning the relationships between the dimensions of EO and organizational performance.

Traditionally, there has been an intensive research work conducted by many researchers to examine the entrepreneurial orientation (EO) and organizational performance relationship in the field of entrepreneurship (Davis, 2007). Many researchers supported the existence of the positive relationship between entrepreneurial orientation (EO) and firm performance (Covin & Slevin, 1986; Drucker, 1985). It has been argued, however, that while some theoretical studies support the EO and firm performance relationship, this linkage is still lacking the concrete empirical (Covin & Slevin, 1991; Zahra & Dess, 2001).

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 & Shepherd, 2005). More importantly, it has also been pointed out by some researchers (such as Keh *et al.*, 2007) that organizations with high level of entrepreneurial capabilities have the ability to explore and exploit the available business opportunities and more likely to create the competitive advantage compared with other organizations.

In addition to that, while the entrepreneurship literature theorized a positive relationship between EO and performance, empirical researches showed some exceptional cases. That is, a few researches showed insignificant relationship between EO and organizational performance (Brown, Davidsson, & Wiklund, 2001; Kaya & Syrek, 2005). For example, Ramachandran (2003) stated that entrepreneurial orientation (EO) adds value to organizations due its emphasis on identifying the customers' dissatisfaction causes to develop proper solutions that eliminate them. It was also claimed that the adoption of entrepreneurial orientation (EO) in developing countries including Yemen is still in its infancy stage. In his attempt to explain the variation in bank's performance in Jordan between (2001; 2002), Dwairi (2004) claimed that the superiority in performance for some banks over others is because of the high level of EO practices. In Yemen, different banks have different level of performance; therefore, it is expected that entrepreneurial orientation (EO) significantly affects the overall performance of the Yemeni banks.

Nonetheless the conflicting results regarding the effect of EO on organizational performance, different researchers there is a high level of agreement among researchers that the higher degree of entrepreneurial orientation (EO) of an

organization, the high level of performance, competitive advantage and profitability (Covin & Slevin, 1991; Wiklund, 1999; Zahra & Covin, 1995). Furthermore, it has been found by many scholars that there is paucity in the entrepreneurial literature related to developing countries and the role of entrepreneurs has been largely neglected (Lazer & Hardin, 1994). The previous discussion suggested that the following hypothesis to be tested.

**Hypothesis 10 (H2): Entrepreneurial orientation has a significant effect on the organizational performance.**

#### **3.9.2.1 Innovativeness and Organizational Performance**

Based on the multidimensional approach to study the EO construct, the relationship between each dimension and the organization performance should be assessed. Thus, each dimension of the EO constructs namely innovativeness, proactiveness and risk-taking should be assessed individually when examining its relationship with organizational performance (Davis, 2007). However, innovativeness is fundamental in the definition of entrepreneurship (Shane & Venkataraman, 2000). Kropp *et al.* (2006) stated that innovativeness is the key success factor for entrepreneurial organization. Consequently, the more dynamic and uncertain the business environment, the more required the innovativeness component for entrepreneurial processes (Miller, 1983). It was also argued that the innovative and creative organization performs far better than others that are not innovative and creative. It is, therefore, expected that innovativeness is a significant determinant of organizational performance. Hence the following hypothesis was proposed.

**Hypothesis 11 (H2a): Innovativeness has a significant effect on the organizational performance.**

### **3.9.2.2 Proactiveness and Organizational Performance**

Initial studies in the field of entrepreneurship emphasized the importance of proactiveness as a key attribute of the entrepreneurial organization (Miller, 1983). As discussed earlier, innovativeness is the ability of the organization to develop new products and services to exploit the available market and customers' needs. proactiveness, however, is the ability of the organization to harvest the future-focused perspective that enables the organization to react to the identified opportunities for new products and markets. Essentially, the proactiveness nature of the organization is the key element for the organization to capitalize in enhancing its innovative capabilities (Covin & Miles, 1999). In the literature of entrepreneurship, there have been many researchers supported the importance of proactiveness for an organization and confirmed the existence of positive correlation between the proactiveness and organizational performance (Bhuian, Menguc, & Bell, 2005; Lumpkin & Dess, 2001). According to that, the following statement can be reasonably hypothesized

**Hypothesis 12 (H2b): Proactiveness has a significant effect on the organizational performance.**

### **3.9.2.3 Risk-taking and Organizational Performance**

Risk-taking represents the willingness of an organization to commit resources, implement business activities that inherent high level of risks(Lumpkin & Dess, 1996). Entrepreneurial organization when deciding to incur risks thinks of two possibilities. The first is the possibility to fail while the second is missing the

potential opportunity (Dickson & Giglierano, 1986). Therefore, risk-taking element is very essential for a firm without which the firm will avoid taking exploitative actions to seize the available opportunities related to markets and customers (Hughes & Morgan, 2007). Moreover, firm that is risk-oriented blends opportunity-seeking with risk-taking activities to end up with effective opportunity exploitation attitude (Lumpkin & Dess, 1996). Miller and Friesen (1982) stated that if the firm is risk averted then there will be no new product development effective strategies and this will cause the deterioration of its competitive performance in today's increasing competitive environment. Consequently, many researchers suggested that successful firms should demonstrate their tendency towards tolerating risks to secure high level of competitive performance (Hughes & Morgan, 2007). Accordingly, the following hypothesis is proposed.

**Hypothesis 13 (H2c): Risk-taking has a significant effect on the organizational performance.**

### **3.9.3 Organizational Culture (OC) as a Moderating Variable**

Organizational culture (OC) has been examined as a crucial determinant of organizational performance (Lee *et al.*, 2004). Denison and Mishra (1995) and Kotter and Heskett (1992) have contributed to the literature by examining the effect of culture on performance. They revealed that the cultural strengths are associated with short-term financial performance. Further, Kotter and Heskett (1992) found that firm with adaptive values are strongly associated with superior performance over a long period of time rather than short period of time.

The inconsistent results related to the performance implications of TQM

(Sila & Ebrahimipour, 2002) led many researchers (e.g. Ehigie & McAndrew, 2005) to suggest that the effect of some other organizational variables on this relationship should be examined. Reed *et al.* (2000), however, argued that there is almost a consensus among researchers that supportive organizational culture (OC) is deemed as the key success factor for any TQM initiative. In addition to that, Krasachol and Tannock (1999) confirmed that organizational culture (OC) plays a significant role in a successful TQM organizational. Given the confirmed strategic role of organizational culture (OC) on strategy implementation, Kekale and Kekale (1995) acknowledged that a successful TQM implementation requires a cultural change so that all the members of the organization support and commit to TQM model adopted. Consistent with this was the argument provided by Brah and Lim (2005), in which they attributed the failure of some TQM initiatives, among other reasons, to the lack of supportive organizational culture (OC).

From another perspective, many other researchers (e.g. Kanji & Wallac, 2000; Llorens Motes & Verdu Jover, 2004; Yasin *et al.*, 2004) emphasized that successful TQM initiatives can be mainly attributed to the fit between TQM practices and organizational. Therefore, the blind imitation of TQM practices may cause the lack of the fit between TQM practices and organizational factors resulting in the failure to achieve the desired organizational objectives (Llorens Motes & Verdu Jover, 2004). Moreover, Brah, Wong, and Rao (2000) emphasized that successful TQM implementation requires that organizations should establish strategic-focus-organizational culture (OC) rather than short term focus. Hence, the strong believe that organizational culture (OC) of the organization will determine

how successful is the TQM practices implementation, led to the following hypotheses to be tested:

**Hypothesis 14 (H3): Organizational culture (OC) moderates the relationship between TQM and the organizational performance of the bank.**

**Hypothesis 15 (H3a): Organizational culture (OC) moderates the relationship between TQM-Management leadership and the organizational performance of the bank.**

**Hypothesis 16 (H3b): Organizational culture (OC) moderates the relationship between TQM-Customer focus and the organizational performance of the bank.**

**Hypothesis 17(H3c): Organizational culture (OC) moderates the relationship between TQM-Strategic planning and the organizational performance of the banks.**

**Hypothesis 18(H3d): Organizational culture (OC) moderates the relationship between TQM-HRM and the organizational performance of the banks.**

**Hypothesis 19(H3e): Organizational culture (OC) moderates the relationship between TQM-Service design and the organizational performance of the banks.**

**Hypothesis 20(H3f): Organizational culture (OC) moderates the relationship between TQM-Information and analysis and the organizational performance of the banks.**

**Hypothesis 21(H3g): Organizational culture (OC) moderates the relationship between TQM-Continuous improvement and the organizational performance of the banks.**

**Hypothesis 22(H3h): Organizational culture (OC) moderates the relationship between TQM-Benchmarking and the organizational performance of the banks.**

As it has been indicated earlier, the findings concerning the relationship between EO and organizational performance were found to be inconclusive (Li *et al.*, 2009; Wiklund & Shepherd, 2005). To explain these discrepancies in the findings other variables were suggested to be incorporated in this relationship. For example, Wiklund and Shepherd (2005) suggested that other variables should be incorporated in the EO and organizational performance relationship to resolve the inconclusive results.

On the other hand, successful EO practices require 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).

On the other hand, Higgins and McAllaster (2002) claimed that a certain type of culture is needed to affect the change in organization to encourage the entrepreneurial behavior. Therefore, the Organizational Culture (OC) construct can



be seen as an organizational variable that enhances the relationship between entrepreneurial orientation (EO) and organizational performance. Hence we can have the following hypotheses:

**Hypothesis 23(H4a): Organizational culture (OC) moderates the relationship between Entrepreneurial Orientation (EO) and the organizational performance of the banks**

**Hypothesis 24(H4a): Organizational culture (OC) moderates the relationship between Innovativeness and the organizational performance of the banks.**

**Hypothesis 25(H4b): Organizational culture (OC) moderates the relationship between Proactiveness and the organizational performance of the banks.**

**Hypothesis 26(H4c): Organizational culture (OC) moderates the relationship between Risk-taking and the organizational performance of the banks.**

### **3.10 Summary**

Even though there has been a growing body of the literature investigating the determinants of organizational performance, including banks' performance, this area of research still attracting increasing number of researchers to examine the determinants of organizational performance. Based on a comprehensive review of the literature of quality management, entrepreneurial orientation (EO), and organizational culture (OC), many conclusions can be drawn as in the following:

First, the bulk of research work conducted in the literature of quality management to examine the relationship between TQM practices and organizational performance besides being inconclusive yet was focused on the manufacturing settings in the developed countries like US and UK. As a matter of fact, the service sector started late to appreciate the importance of TQM practices in enhancing its effective organizational performance. Therefore, the paucity of research examining the TQM practices- banks' performance attracts many researchers to participate in this promising field of study. In other words, despite the extensive research and different theoretical frameworks for understanding the effect of TQM practices on organizational performance, little scholar attention has been paid to examine the effect of TQM practices on the organizational performance of banks.

Second, although there has been a growing body of the literature studying entrepreneurial orientation (EO) and its effect on organizational performance, there is still some ambiguity concerning this relationship especially in the banking industry. Moreover, little attention has been devoted to examine this relationship in countries with unique cultural practices such as the Middle Eastern countries. Therefore, it has become a very interesting topic for further investigation.

Third, organizational culture (OC) has increasingly gained its importance as a critical determinant of organizational performance. Furthermore, the moderating effect of organizational culture (OC) on the relationship between TQM practices, entrepreneurial orientation (EO) and organizational performance is still unclear. A thorough review of the literature revealed that this relationship might be very much affected by organizational culture (OC) in culture-driven countries like Yemen.

Therefore, this study contributed to the literature by examining the cultural effects on the relationship between TQM practices, EO and the organizational performance. Finally, based on the reviewed literature, the theoretical framework of the study was drawn and the hypotheses were developed to be tested in the next chapter.

## **CHAPTER FOUR**

### **METHODOLOGY**

#### **4.1 Introduction**

This chapter reports the research design used for the study. This chapter details the measures used by this study, the research design, and the questionnaire design. Moreover, this chapter reports the results of Pilot study related to examining the goodness of measure prior to real data collection processes and summarizes the data analysis procedures.

#### **4.2 Research Design**

It has been pointed out in the literature that research design is the master plan that is prepared by the researcher to direct his steps in the undertaking of the research project through the data collection and data analysis stages (Zikmund, 2003). From the research methodology point of view, there are different research designs that can be deployed in doing research. As pointed out by Zikmund (2003), that there are four research methods for descriptive and causal research. These methods are survey, experiment, secondary data study and observation.

##### **4.4.1 Survey Research Design**

This is a research technique that can be used to collect information related to the representative sample. This technique can deploy either a survey questionnaire or interview as the means with which the data could be collected. However, through this research design, researcher can contact his

respondents through the internet, mail, telephone, or in person through self-administered survey questionnaire.

#### **4.4.2 Experimental Research Design**

This research design is used when researcher plans to examine the effect of some variables on the studied phenomenon. That is when the effect of some variables is controlled or their effects are isolated. Moreover, experimental research design can be conducted either in field or in laboratory.

#### **4.4.3 Secondary Data Research Design**

This research design is used when the researcher uses the past or the historical data related to some variables. The analysis of secondary data requires greater sophistication than does exploratory research.

#### **4.4.4 Observational Research Design**

In this research design the researcher depends on his observations in collecting data and not on the perceptions of the respondents regarding many variables. Moreover, the data collected by this research design do not require direct participation from the subjects of the study.

Since there is no hard-and-fast rule in choosing the best research design, deciding which research design to be followed in doing research is fully dependent on the research purpose and the research context (Zikmund, 2003). While qualitative data collection method uses the words as the description of circumstances, people and situations, quantitative data collection method is the numerical description that is precisely

reported(Cooper & Schindler, 2006; Zikmund, 2003) . In other words, quantitative research is a way of precisely measuring variables through operational definitions(Cooper & Schindler, 2006).

From another standpoint, the literature of social science research has identified four major categories of research designs. These categories are descriptive, correlational, experimental and quasi experimental (Leary, 2004). A study that investigates the relationships between various variables can be categorized as a correlational study. When correlation studies are conducted in organizations, they are called field studies (Sekaran, 2003).

One of the main purposes of this study is to provide a valid and reliable framework for the interaction between TQM practices, EO, OC and Organizational performance of banks in Yemen. According to Hair, Money, Page, and Samouel (2007), survey research design is one of the best and most commonly used approach for business studies to gather a primary data. This study employed a survey questionnaire research design to collect the data concerning the hypothesized relationships and hence can be classified as a field study with a quantitative orientation’ or ‘correlational research design’ (Kerlinger & Lee, 2000). That is, to achieve the objectives of this study, a quantitative survey questionnaire research approach was employed through self-administered questionnaire to measure the variables under investigation.

#### **4.5 Population and Sampling Frame**

According to Zikmund (2003), when the sample units in the population are limited, the researcher may select to study the whole population rather than taking a sample for the study. Moreover, when planning the sampling procedures, the researcher should try to get the maximum information from the respondents by considering many other factors such as cost, resources and personnel (Cooper & Schindler, 2006). Due to relative small population (about 287 bank branches), this study distributed the questionnaire to the entire population. That is, this study was a census study that targeted the entire population. The response rate, which was 70% fulfilled all the statistical requirements and proved to be very useful for purpose of hypotheses testing (Al-Marri *et al.*, 2007).

#### **4.6 Unit of Analysis**

As this study aimed to examine the hypothesized relationships on the level of the business unit, the unit of analysis of the study was the bank branch represented by the branch manager. Hepworth (1998) reported that introducing new management initiatives provides benefits not only to the wide organizational level but also to all management levels. However, the vast majority of the previous studies relevant to TQM literature were conducted at the organizational level. Therefore, this study attempted to contribute to the scanty knowledge of TQM and entrepreneurial orientation (EO) strategies at bank branches level.

In studying the effect of innovative strategies such as TQM and entrepreneurial orientation (EO), banking branches have been gaining an increasing importance as the building blocks that contribute to strategy successful

implementation. The following paragraph provides some reasons to uncover the rationality behind choosing the unit of analysis to be a bank branch.

First, the bank branches are the key positions in the organization of any bank (Athanassopoulos, 1997) where the direct contact with customers is established and the competitive advantage is created through the value creation processes.

Second, since 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, Ray, & Nag, 2009). It was also argued by the same authors that bank branches play a significant role in the successful organizational performance of a bank. This is so since the bank branches mobilize the deposits and consequently generated funds for banks' investments. Practically, the success or failure of banks branches may cause the collapse of the whole bank. Given this importance, bank branches performance and efficiency have been gaining an increasing attention by practitioners and academicians as well.

Third, bank branches are considered as the business units within the central bank where the products and services are provided to customers through direct contact. The main role of the bank branches is to attract the savers to deposit their surplus money to be used by investors in various investment opportunities. Moreover, bank branches are the service providers through which the corporate bank shows its commitment to understand customers' needs and requirements and to align all its operations accordingly. In other words, banks branches provide their customers with financial products and services that are based on in-depth research and investigations to satisfy their needs and meet their expectations (Athanassopoulos, 1997).



Fourth, due to the competitive banking environment, corporate banks are currently required, as never ever before, to increase the efficiency of their branches performance. However, the branches' performance is not constrained within the cost reduction, rather, it is covering different aspects of operational and marketing factors. More importantly, where the loyal customers are the main source of effective performance, especially in the banking industry where almost all banks offer the same products, bank branches' role become more critical in attracting and retaining profitable and loyal customers. Athanassopoulos (1997), moreover, emphasized that the efficiency of the bank branches in its broader sense that covers issues related to customers' attraction, cost management, cash intermediation and finally quality of services, can contribute significantly to the overall performance of the corporate bank.

Finally, additionally, many researchers have been considering the business units when studying strategies such as TQM practices (Saraph *et al.*, 1989), Market orientation (Dwairi, Bhuian, & Jukus, 2007) and TQM strategy (Reed, Lemak, & Montggomery, 1996). Given the importance of bank branches for the overall corporate bank's performance, many studies have been studying the applicability of TQM and other innovative strategies in the bank branches' level. For example, Longo and Cox (2000) used the survey conducted on 160 bank branches' managers in England. These managers regarded the management styles of the manager and the effective communication as the two changes should be taken place prior to TQM strategy implementation. Saying the same differently, managers should establish supporting organizational culture (OC) through their management style and, at the

same time, should be able to communicate their future vision to all the organizations members.

Therefore, bank branches are considered as the strategic business units where the competitive advantage created and originated through the effective strategy implementation. Moreover, some researchers (e.g. Al-Swidi & 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.

#### **4.7 Measurement and Instrumentation**

In fact, Likert scale measure has been one of the most commonly used scales to examine the effect of TQM practices, EO on the organizational performance (Al-Marri *et al.*, 2007). Thus, multiple-item Likert scale was considered to be an appropriate interval scale to measure the behavior of variables included in this study (Al-Marri *et al.*, 2007).

Specifically, to achieve the objectives of this study, a five-point Likert scale ranging from “1” (strongly disagree) to “5” (strongly agree) for TQM practices, EO and OC constructs. Similarly, the scale ranging from “1” (far below the average) to “5” (far above the average) was used to measure the organizational performance construct. The choice of a five-point Likert scale was supported, according to Al-Marri *et al.* (2007), by the fact that it is commonly used in the previous studies related to TQM practices and EO. Additionally, Likert scale is easy for respondents to react and report their perceptions regarding attitudes, behaviors and assessments.

In the following sub-sections, this study discussed the measures used to measure organizational performance, TQM practices, EO and OC.

#### 4.7.1 Organizational Performance Scales

The measure of the organizational performance was derived from the relevant studies in the quality management literature. However, the deployed measure used in this study was adapted from the measures used by Narver and Slater (1990) and Jaworski and Kohli (1993). These measures were used to measure the performance and profitability in the SBU level of the organization. Based on the discussion in chapter three, the measure of organizational performance comprised of items measuring non-financial performance. In addition, some items were also adapted from the work of Chan (2004), Fuentes-Fuentes (2004) and Kaplan and Norton (1993).

Table 4.1 exhibited the items used to measure the organizational performance of bank branches and their sources from which they were adapted.

Table 4.1

##### *Organizational Performance Scale*

Code	Item	Source
<b>BP1.</b>	Overall performance of our bank (branch) last year was	Narver and Slater (1990) ; Jaworski and Kohli (1993)
<b>BP2</b>	Overall performance of our bank (branch) relative to competitors last year was	Narver and Slater (1990) ; Jaworski and Kohli (1993)
<b>BP3.</b>	Overall sales growth of our bank (branch) relative to major competitors last year was	Narver and Slater (1990) ; Jaworski and Kohli (1993)

<b>BP4.</b>	Through the last year, our unit cost of service delivered was	Chan (2004); Fuentes-Fuentes (2004); Kaplan & Norton (1996)
<b>BP5.</b>	Customer satisfaction level on services provided by our bank (branch) last year was	Chan (2004); Fuentes-Fuentes (2004); Kaplan & Norton (1996)
<b>BP6</b>	All the employees of our bank (branch) have a level of job satisfaction that last year was.	Chan (2004); Fuentes-Fuentes (2004); Kaplan & Norton (1996)

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#### **4.7.2 The TQM practices Measure**

The literature review reported in chapter three indicated that there have been inconsistent ways to measure TQM practices. For the purpose of this study and in order to comprehensively capture the critical factors of TQM strategy, this study uses the critical TQM factors that have been commonly used in service sector organizations. As depicted in the research framework of the study, there are eight factors which represent TQM strategy, namely Management Leadership, Customer focus, Strategic Planning, Human Resource Management, Service Design, Information and Analysis, Continuous Improvement and Benchmarking.

The items used to measure the TQM practices and the sources of the adapted items are shown in Table 4.2 as in the following:

Table 4.2

*Total Quality Management Practices Scale*

Code	Item	Source
<b>Management Leadership</b>		
ML1	In our bank, long-term plans focused on quality are developed.	Brah, Wong, and Rao (2000)
ML2	In our bank, there are clear quality goals identified by top-level managers.	Brah, Wong, and Rao (2000)
ML3	In our regular meeting, we always emphasize the importance of service quality delivered to our customers.	Brah, Wong, and Rao (2000)
ML4	In our banks, we view service quality as being more important than cost.	Brah, Wong, and Rao (2000)
ML5	In our bank, we depend heavily on quality performance to evaluate employees.	Brah, Wong, and Rao (2000)
<b>Customer Focus</b>		
CF1	In our bank, a summary of customer complaints is always given to floor and departments' managers.	Brah, Wong, and Rao (2000)
CF2	It is the policy in Our bank to use the customers' feedback to determine their needs and requirements.	Brah, Wong, and Rao (2000)
CF3	In our bank, customers' requirements and expectations are used as the basis for measuring quality.	Brah, Wong, and Rao (2000)
CF4	In our bank, floor and departments' managers are aware of the level of customer satisfaction.	Brah, Wong, and Rao (2000)

CF5	It is the policy of our bank to keep in close contact with our customers.	Brah, Wong, and Rao (2000)
CF6	It is the policy of our bank to regularly measure external customer satisfaction.	Samson and Terziovski (1999)

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### **Strategic Planning**

SP1	In our bank, we have a mission statement which has been effectively communicated to all the employees and gained their support.	Samson and Terziovski (1999)
SP2	In our bank, we have comprehensive planning process which sets and reviews short and long-term goals.	Samson and Terziovski (1999)
SP3	Our plans focus on the achievement of the best practice in the banking industry.	Samson and Terziovski (1999)
SP4	When we develop our plans, policies, and objectives, we always incorporate customer requirements and the needs of all stakeholders, including the community.	Samson and Terziovski (1999)
SP5	In our bank, we have a written statement of strategy covering all the operations which is clearly articulated and approved by our senior managers.	Samson and Terziovski (1999)
SP6	Our branch operations are effectively aligned with the central business mission.	Samson and Terziovski (1999)

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### **Human Resource Management**

HRI1	In our bank, all employees' suggestions are evaluated.	Brah, Wong, & Rao (2000)
HRI2	In our bank, most employees' suggestions are implemented.	Brah, Wong, & Rao (2000)
HRI3	In our bank, we often work in teams, with members from a variety of departments.	Brah, Wong, & Rao (2000)
HRI4	In our bank, we use the ability to work in teams as a criterion in employees' selection.	Brah, Wong, & Rao (2000)
HRT1	In our bank, employees' training is provided in quality principles.	Brah, Wong, & Rao (2000)

HRT2	In our bank, resources are available for employees training.	Brah, Wong, & Rao (2000)
HRT3	In our bank, there is always a kind of employees' training going on.	Brah, Wong, & Rao (2000)
HRT4	In our bank, the top management is often involved in quality training.	Brah, Wong, & Rao (2000)
HRE1	In our bank, employees are encouraged to take initiatives when dealing with customers' complaints.	Brah, Wong, & Rao (2000)
HRE2	In our bank, problem solving ability is a criterion for selecting employees.	Brah, Wong, & Rao (2000)
HRE3	In our bank, employees are given the resources necessary to deal with customers' complaints.	Brah, Wong, & Rao (2000)

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### **Service Design**

SD1	It is the policy in our bank to thoroughly review the new service designs before its marketing.	Brah, Wong, & Rao (2000)
SD2	In our bank, the quality of new service is more important than reducing the cost.	Brah, Wong, & Rao (2000)
SD3	When designing new service, employees from different departments often participate in the process.	Brah, Wong, & Rao (2000)

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### **Information and Analysis**

IA1	In our bank, we have a program to reduce the time between receiving an order and its satisfaction.	Anderson and Sohal (1999)
IA2	In our bank, performance data is collected and analyzed in regular basis.	Anderson and Sohal (1999)
IA3	In our bank, information allows us to control and improve core processes and services.	Anderson and Sohal (1999)
IA4	Customer and performance data allows us to track performance and the benchmarking data is used.	Anderson and Sohal (1999)

IA5	In our bank, everyone has easy access to the needed information.	Anderson and Sohal (1999)
IA6	In our bank, we receive timely information and the important data is presented and communicated to employees in regular basis.	Anderson and Sohal (1999)
IA7	In our bank, information systems are always evaluated and improved.	Anderson and Sohal (1999)

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### **Continuous Improvement**

CI1	In our bank, there is always an emphasis on the continuous improvement in all the activities at various levels.	Rao (2006)
CI2	In our bank, there is always an emphasis on the quality-awareness programs for employees.	Rao (2006)
CI3	In our bank, continuous improvement is emphasized in the training programs provided to employees.	Rao (2006)
CI4	In our bank's policies, improving the quality is more important than the quantity and short term goals.	Rao (2006)
CI5	In our bank, all branches believe that by implementing continuous improvement strategies, they can survive and serve better in the highly competitive environment.	Rao (2006)

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### **Benchmarking**

B1	In our bank, it is always emphasized that benchmarking is our strategy to achieve a better competitive position	Brah, Wong, & Rao (2000)
B2	We visit other banks, locally and internationally, to investigate their practices.	Brah, Wong, & Rao (2000)
B3	In our bank, we conduct research to find out the best practices of other local and international banks.	Brah, Wong, & Rao (2000)
B4	In our bank, we monitor competitors to find out the best banking industry practices.	Brah, Wong, & Rao (2000)

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### 4.7.3 Entrepreneurial Orientation (EO) Measure

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).

Following the vast majority of research conducted on EO that considered only the three dimensions namely innovativeness, proactiveness, and risk-taking, this study employed the measure used by Covin and Slevin (1989). Therefore, Table 4.3 presents the items adapted to measure the EO construct and their sources.

Table 4.3

#### *Entrepreneurial Orientation (EO) Scale*

Code	Item	Source
<b>Innovativeness</b>		
I1	It is the culture of our bank to emphasize innovation and research and development activities	Covin and Slevin (1989)
I2	Our bank introduces new products and service at a high scale	Covin and Slevin (1989)
I3	Our bank supports bold approaches to innovative product development	Covin and Slevin (1989)
<b>Proactiveness</b>		
P1	Employees in our bank are encouraged to take initiatives and proactive moves	Covin and Slevin (1989)

P2	Our bank is usually the first bank to introduce new technologies and products	Covin and Slevin (1989)
P3	Our bank has a strong competitive posture toward competitors	Covin and Slevin (1989)

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#### **Risk- Taking**

R1	Our bank has a strong proclivity for high return projects	Covin and Slevin (1989)
R2	The environment faced by our bank requires boldness to achieve objectives	Covin and Slevin (1989)
R3	Our bank usually adopts an aggressive, bold posture when faced with risk	Covin and Slevin (1989)

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#### **4.7.4 Organizational Culture (OC) Scale**

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, Cho, and Young, 2000; Denison & Mishra, 1995). In addition, this theory has focused on four cultural traits namely, involvement, consistency, adaptability, and mission. As premises of that theory, 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.

In fact, the original scale used by Denison (2000) to measure the organizational culture construct consists of 60 items covering 12 dimensions of the four cultural traits. For the purpose of examining the moderating power of organizational culture (OC) on the relationship between TQM practices, EO and organizational performance(BP), some suitable items were adapted. In other words,

the items adapted from Denison (2000) covered all the dimensions of the original measure. The items of the measure used in the study are displayed in Table 4.4 in the following.

Table 4.4

*Organizational Culture (OC) Scale:*

Code	Item	Source
<b>OC1</b>	In our bank (branch) most employees are highly involved in their work.	Denison (2000)
<b>OC2</b>	Information in our bank (branch) is widely shared so that everyone can get the information he or she needs when it is needed.	Denison (2000)
<b>OC3</b>	Teams are the primary building blocks in our bank (branch).	Denison (2000)
<b>OC4</b>	Work is organized so that each person can see the relationship between his/her job and the goal of our overall bank.	Denison (2000)
<b>OC5</b>	In our bank (branch) There is continuous investment in the skills of employees.	Denison (2000)
<b>OC6</b>	In our bank (branch) the capabilities of people are viewed as an important source of competitive advantage.	Denison (2000)
<b>OC7</b>	In our bank (branch) there is a clear and consistent set of values that governs the way we do business.	Denison (2000)
<b>OC8</b>	In our bank (branch) there is a clear agreement about the right way and the wrong way to do things.	Denison (2000)
<b>OC9</b>	In our bank (branch), there is a good alignment of goals across levels.	Denison (2000)
<b>OC10</b>	In our bank (branch), we respond well to competitors and other changes in the business environment.	Denison (2000)

<b>OC11</b>	Different parts of our bank (branch) often cooperate to create change.	Denison (2000)
<b>OC12</b>	In our bank (branch), customers' input directly influences our decisions.	Denison (2000)
<b>OC13</b>	In our bank (branch), we encourage direct contact with customers by our employees.	Denison (2000)
<b>OC14</b>	In our bank (branch), we view failure as an opportunity for learning and improvement.	Denison (2000)
<b>OC15</b>	In our bank (branch), innovation and risk taking are encouraged and rewarded.	Denison (2000)
<b>OC16</b>	In our bank (branch), there is a clear mission that gives meaning and direction to our work.	Denison (2000)
<b>OC17</b>	In our bank (branch), employees understand what needs to be done for us to succeed in the long run.	Denison (2000)
<b>OC18</b>	Our vision creates excitement and motivation for our employees.	Denison (2000)

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#### **4.8 Questionnaire Design**

The questionnaire of the study consisted of 80 questions distributed into five sections. In the first section there were 47 question to measure the TQM practices of each branch. In addition, there were 9 questions to measure the three dimensions of entrepreneurial orientation (EO) construct through the perceptions of branch managers. The third section, however, had 18 items that were adopted from Denison (2000) to measure the perceptions of branch managers related to organizational culture (OC) determining the various behaviors. While the fourth section consisted of six questions to measure the organizational performance of each branch, the fifth

section consisted of the inquiry about the demographic information of the respondents.

#### **4.9 Pilot Study**

The first draft of the questionnaire has gone through many phases of revisions to rectify the problems and clear the ambiguity arose. Following that, it was a crucial step to conduct the pilot test using the data collected from a sub-set of the participants to test for the validity and reliability of the measure (Sproull, 2004). While pretest evaluation of the questionnaire involved two academicians and professionals, the pilot test involved respondent from the same pool of respondents of the study from which the real data were collected (Bradburn *et al.*, 2004). However, the pilot test was conducted to refine the measure before being distributed to collect the real data of the study, to rephrase the ambiguous questions, to decide the time required responding to the questionnaire, and finally to measure the reliability and validity of the measure used. Following are the steps performed to conduct the pilot test and the source of the data collected.

To collect the data for the pilot study, the managers of 52 bank branches from Sana'a, Taiz, Ibb and Aden have been asked to respond to the questionnaire. Moreover, they were asked to comment on the questions asked whether or not they were easily understandable to reduce the possibility of misunderstanding. Accordingly, some of the questions were rephrased to eliminate the confusion and increase the quality of the data of the study. Based on the collected data the reliability and validity of the instrument were performed.

#### **4.10 Measuring the Reliability and Validity of the Measure**

Reliability is the assessment of the level of consistency among multiple measurements of a construct (Hair *et al.*, 2010). Therefore, to measure the consistency of items used to measure a construct, the reliability analysis of the instrument was conducted. The reliability of the instrument implies that the measure will produce the same results if used repetitively. According to Sekaran (2003), there are four methods that have been commonly used by researchers to ensure the reliability of their measuring instruments. These methods are: test-retest methods, alternative form methods, split half method and most commonly Cronbach's alpha coefficient method.

However, according to Davis (2000), the first three methods have been criticized to have practical weaknesses. More specifically, test retest reliability measure may produce lower scores due to the possible subject changes. Similarly, using the alternative form may incur more expenses since the researchers are required to develop two different but equivalent forms of the same measure. The split half method, however, may produce different reliability coefficients based on the way in which the items are divided.

On the other hand, Cronbach's alpha method to test for measure reliability can have its own strengths to overcome the aforementioned issues related to other methods. Due to its practicality, Cronbach's alpha method has been the dominant reliability testing method used, especially, among the social science researchers.

Following the mainstream of social science research, this study used the Cronbach's alpha method to evaluate the reliability of the measurements. The

Cronbach's alpha coefficient indicates the consistency of the items that measure the same construct. In other words, a high Cronbach's alpha coefficient indicates that the items of the construct show high consistency and share high tendency to measure the meant construct. In determining the acceptable and threshold cut point of the Cronbach's alpha coefficient, Nunnally (1978) suggested some minimum standards for Cronbach's alpha. For example, Cronbach's alphas 0.7, 0.8 and 0.9 for exploratory, basic and critical issue-based research respectively.

To measure the reliability of the measure, this study performed the inter item-construct correlation analysis following the procedures described by Nunnally and Beinstein (1994). As can be seen in the Table 4.5, this analysis was based on the correlation between the averaged scores of the total construct and the items used to measure their respective constructs. Hence the correlation between any construct and the items associated to it must be larger than the correlation between the same items and any other construct. For example, the correlation between the items used to measure Management Leadership construct namely, ML1 through ML5 have correlation coefficient ranging between 0.563 and 0.804 which are the highest when compared with the correlation with other constructs. However, if the item correlation with its associated construct is found to be lower than its correlation with any other construct, this item is not appropriately assigned to its intended construct and can be excluded. According to the results of analysis of item-construct correlation shown in Table 4.6, it can be claimed that most of the items have been correctly assigned to their intended constructs. On the other hand, the results showed that items such as CF3, OC2, OC4, OC7 and OC 15 are found not

to be achieving the best correlations with their intended construct and hence are candidate to be excluded.



Table 4.5

*Item-Construct Correlation of the Pilot Study*

Constructs	Items	ML	CF	SP	HRM	SD	IA	CI	B	I	P	R	OC	BP
Management Leadership	ML1	<b>0.804</b>	0.458	0.590	0.466	0.311	0.555	0.317	0.359	0.507	0.502	0.348	0.593	0.336
	ML2	<b>0.760</b>	0.471	0.608	0.604	0.507	0.620	0.477	0.491	0.460	0.509	0.459	0.643	0.298
	ML3	<b>0.776</b>	0.643	0.432	0.469	0.260	0.389	0.176	0.402	0.348	0.268	0.098	0.465	0.407
	ML4	<b>0.585</b>	0.304	0.285	0.043	0.306	0.035	-0.006	0.134	0.005	-0.011	-0.183	-0.020	0.344
	ML5	<b>0.563</b>	0.432	0.491	0.497	0.193	0.552	0.213	0.379	0.371	0.188	0.068	0.446	0.159
Customer Focus	CF1	0.596	<b>0.685</b>	0.522	0.384	0.430	0.415	0.046	0.254	0.204	0.140	0.109	0.308	0.339
	CF2	0.395	<b>0.720</b>	0.599	0.508	0.514	0.536	0.306	0.425	0.407	0.549	0.162	0.559	0.218
	CF3*	0.554	<b>0.619</b>	0.601	0.638	0.444	0.689	0.148	0.479	0.302	0.295	0.052	0.572	0.102
	CF4	0.454	<b>0.708</b>	0.408	0.471	0.452	0.349	0.282	0.334	0.355	0.287	0.048	0.428	0.222
	CF5	0.374	<b>0.697</b>	0.351	0.426	0.311	0.420	0.271	0.398	0.354	0.229	0.162	0.493	0.053
	CF6	0.399	<b>0.773</b>	0.435	0.266	0.390	0.255	0.232	0.315	0.285	0.202	-0.041	0.273	0.364
Strategic Planning	SP1	0.433	0.287	<b>0.717</b>	0.550	0.106	0.455	0.304	0.332	0.368	0.084	0.186	0.379	0.073
	SP2	0.492	0.553	<b>0.671</b>	0.520	0.408	0.465	0.186	0.386	0.180	0.164	-0.005	0.391	0.111
	SP3	0.618	0.635	<b>0.766</b>	0.681	0.420	0.681	0.484	0.671	0.719	0.501	0.063	0.650	0.268
	SP4	0.456	0.570	<b>0.639</b>	0.362	0.423	0.390	0.220	0.249	0.296	0.449	0.214	0.343	0.275
	SP5	0.416	0.474	<b>0.728</b>	0.536	0.413	0.624	0.186	0.349	0.476	0.489	0.141	0.506	0.156
	SP6	0.363	0.313	<b>0.654</b>	0.514	0.217	0.507	0.427	0.378	0.421	0.344	0.308	0.548	0.097
Human Resource Management	HRI1	0.363	0.383	0.532	<b>0.750</b>	0.449	0.719	0.393	0.658	0.556	0.560	0.268	0.744	0.025
	HRI2	0.444	0.578	0.624	<b>0.811</b>	0.621	0.732	0.352	0.645	0.416	0.278	0.160	0.659	-0.060
	HRI3	0.422	0.537	0.563	<b>0.740</b>	0.534	0.546	0.290	0.530	0.361	0.220	0.101	0.551	-0.074
	HRI4	0.433	0.492	0.614	<b>0.768</b>	0.226	0.642	0.412	0.516	0.602	0.460	0.486	0.747	-0.037
	HRT1	0.558	0.562	0.679	<b>0.726</b>	0.399	0.593	0.441	0.574	0.451	0.292	0.217	0.572	0.060
	HRT2	0.423	0.632	0.589	<b>0.802</b>	0.530	0.607	0.516	0.729	0.546	0.420	0.159	0.735	0.270
	HRT3	0.363	0.501	0.438	<b>0.581</b>	0.520	0.493	0.430	0.553	0.543	0.418	0.077	0.556	0.273
	HRT4	0.632	0.541	0.600	<b>0.728</b>	0.375	0.615	0.511	0.678	0.596	0.408	0.200	0.695	0.518
	HRE1	0.324	0.261	0.556	<b>0.723</b>	0.306	0.597	0.498	0.521	0.404	0.227	0.161	0.503	0.118
	HRE2	0.259	0.144	0.410	<b>0.616</b>	0.112	0.609	0.381	0.492	0.292	0.117	0.242	0.547	0.041
	HRE3	0.396	0.256	0.535	<b>0.824</b>	0.449	0.712	0.524	0.640	0.453	0.396	0.314	0.641	0.127
Service Design	SD1	0.278	0.453	0.407	0.339	<b>0.710</b>	0.342	0.273	0.300	0.075	0.170	0.257	0.299	0.156
	SD2	0.296	0.264	0.133	0.284	<b>0.716</b>	0.370	-0.153	0.344	0.148	0.083	-0.128	0.192	0.135
	SD3	0.442	0.603	0.494	0.622	<b>0.839</b>	0.581	0.408	0.519	0.404	0.215	0.125	0.465	-0.019
Information and Analysis	IA1	0.494	0.486	0.639	0.610	0.536	<b>0.772</b>	0.150	0.553	0.507	0.429	0.109	0.598	0.234
	IA2	0.417	0.439	0.668	0.661	0.461	<b>0.840</b>	0.498	0.559	0.530	0.406	0.241	0.644	0.181
	IA3	0.601	0.432	0.704	0.803	0.381	<b>0.832</b>	0.555	0.590	0.515	0.331	0.259	0.697	0.261
	IA4	0.408	0.373	0.588	0.815	0.397	<b>0.835</b>	0.497	0.709	0.548	0.314	0.266	0.771	-0.043
	IA5	0.274	0.343	0.309	0.408	0.259	<b>0.663</b>	0.065	0.323	0.185	0.053	0.236	0.464	-0.040
	IA6	0.483	0.545	0.441	0.617	0.560	<b>0.703</b>	0.341	0.547	0.388	0.363	0.091	0.647	0.293
	IA7	0.486	0.673	0.649	0.619	0.555	<b>0.676</b>	0.393	0.456	0.554	0.555	0.272	0.642	0.277
Continuous Improvement	CI1	0.249	0.332	0.399	0.489	0.301	0.534	<b>0.685</b>	0.401	0.472	0.413	0.352	0.454	0.081
	CI2	0.209	0.134	0.309	0.406	0.022	0.332	<b>0.819</b>	0.396	0.377	0.374	0.481	0.427	0.244
	CI3	0.259	0.171	0.309	0.441	-0.049	0.325	<b>0.832</b>	0.471	0.454	0.524	0.442	0.438	0.227
	CI4	0.226	0.357	0.289	0.436	0.422	0.239	<b>0.612</b>	0.514	0.337	0.259	0.145	0.385	0.102
	CI5	0.230	0.122	0.293	0.374	0.227	0.266	<b>0.693</b>	0.475	0.570	0.520	0.352	0.407	0.279
Benchmarking	B1	0.338	0.252	0.365	0.575	0.292	0.645	0.384	<b>0.727</b>	0.497	0.483	0.194	0.636	0.172
	B2	0.448	0.410	0.457	0.686	0.487	0.520	0.555	<b>0.893</b>	0.458	0.333	-0.029	0.628	0.368
	B3	0.430	0.638	0.456	0.605	0.509	0.460	0.436	<b>0.822</b>	0.474	0.506	-0.029	0.590	0.232
	B4	0.366	0.363	0.593	0.773	0.392	0.692	0.630	<b>0.820</b>	0.653	0.403	0.289	0.741	0.149

Table 4.5

*Item-Construct Correlation of the Pilot Study (Cont.)*

Constructs	Items	ML	CF	SP	HRM	SD	IA	CI	B	I	P	R	OC	BP
Innovativeness I	I1	0.376	0.352	0.549	0.700	0.263	0.647	0.688	0.710	<b>0.890</b>	0.580	0.299	0.738	0.224
	I2	0.418	0.467	0.479	0.565	0.259	0.468	0.445	0.512	<b>0.877</b>	0.590	0.267	0.614	0.227
	I3	0.457	0.370	0.504	0.402	0.223	0.412	0.388	0.381	<b>0.842</b>	0.803	0.396	0.590	0.318
Proactiveness P	P1	0.248	0.298	0.361	0.395	0.199	0.367	0.440	0.380	0.660	<b>0.781</b>	0.422	0.625	0.386
	P2	0.354	0.290	0.386	0.371	0.075	0.330	0.439	0.423	0.571	<b>0.850</b>	0.282	0.480	0.328
	P3	0.417	0.414	0.454	0.456	0.296	0.450	0.595	0.520	0.699	<b>0.910</b>	0.514	0.644	0.325
Risk Taking R	R1	0.190	0.130	0.147	0.283	0.119	0.215	0.452	0.188	0.371	0.442	<b>0.856</b>	0.352	0.142
	R2	-0.008	-0.130	-0.013	-0.005	0.004	0.024	0.318	-0.084	0.094	0.160	<b>0.735</b>	0.116	0.010
	R3	0.329	0.264	0.356	0.427	0.157	0.418	0.385	0.192	0.410	0.496	<b>0.779</b>	0.510	-0.108
Organizational Culture OC	OC1	0.507	0.576	0.544	0.638	0.216	0.641	0.508	0.629	0.562	0.555	0.314	<b>0.785</b>	0.204
	OC2*	0.540	0.524	0.609	0.617	0.502	0.759	0.357	0.622	0.567	0.566	0.200	<b>0.727</b>	0.414
	OC3	0.561	0.643	0.528	0.709	0.362	0.618	0.469	0.669	0.630	0.552	0.063	<b>0.768</b>	0.271
	OC4*	0.438	0.598	0.541	0.594	0.486	0.706	0.293	0.613	0.534	0.538	0.089	<b>0.671</b>	0.382
	OC5	0.477	0.516	0.521	0.747	0.231	0.637	0.540	0.662	0.714	0.646	0.329	<b>0.844</b>	0.302
	OC6	0.519	0.526	0.541	0.732	0.433	0.774	0.420	0.775	0.581	0.488	0.246	<b>0.835</b>	0.295
	OC7*	0.363	0.442	0.424	0.508	0.336	0.561	0.351	0.346	0.609	0.382	0.238	<b>0.537</b>	0.168
	OC8	0.311	0.353	0.303	0.516	0.225	0.463	0.433	0.360	0.463	0.447	0.389	<b>0.609</b>	0.066
	OC9	0.506	0.538	0.687	0.691	0.562	0.728	0.449	0.612	0.529	0.537	0.370	<b>0.750</b>	0.162
	OC10	0.308	0.399	0.462	0.463	0.395	0.596	0.390	0.437	0.510	0.507	0.518	<b>0.698</b>	0.192
	OC11	0.463	0.464	0.573	0.625	0.271	0.661	0.497	0.534	0.671	0.631	0.475	<b>0.733</b>	0.234
	OC12	0.422	0.435	0.468	0.640	0.178	0.574	0.360	0.691	0.560	0.402	0.261	<b>0.740</b>	0.150
	OC13	0.285	0.401	0.392	0.583	0.208	0.548	0.311	0.475	0.523	0.453	0.393	<b>0.778</b>	-0.012
	OC14	0.440	0.314	0.298	0.467	0.234	0.403	0.124	0.484	0.249	0.319	0.145	<b>0.609</b>	0.217
	OC15*	0.431	0.400	0.688	0.862	0.427	0.743	0.669	0.788	0.676	0.593	0.430	<b>0.840</b>	0.249
	OC16	0.363	0.327	0.463	0.562	0.332	0.516	0.508	0.482	0.396	0.482	0.409	<b>0.701</b>	0.170
	OC17	0.368	0.177	0.327	0.621	0.119	0.540	0.399	0.537	0.579	0.307	0.278	<b>0.655</b>	0.003
	OC18	0.484	0.399	0.542	0.761	0.251	0.627	0.551	0.605	0.681	0.574	0.319	<b>0.831</b>	0.223
Organizational Performance BP	BP1	0.367	0.258	0.131	0.061	0.069	0.108	0.258	0.092	0.200	0.323	-0.010	0.143	<b>0.789</b>
BP	BP2	0.496	0.272	0.136	0.047	0.128	0.094	0.199	0.238	0.141	0.309	-0.031	0.171	<b>0.851</b>
	BP3	0.331	0.258	0.098	0.051	0.077	0.070	0.151	0.104	0.099	0.234	-0.061	0.111	<b>0.838</b>
	BP4	0.178	0.044	0.296	0.246	0.034	0.354	0.375	0.318	0.391	0.356	0.169	0.286	<b>0.668</b>
	BP5	0.496	0.371	0.333	0.223	0.063	0.194	0.298	0.325	0.403	0.413	0.059	0.347	<b>0.905</b>
	BP6	0.276	0.278	0.072	0.087	0.168	0.108	-0.098	0.266	0.118	0.265	-0.065	0.210	<b>0.617</b>

(\*) Items that have lower correlations with the-intended-to-measure constructs as compared to other constructs.

To check the reliability of the intended measure, this study performed the Cronbach's alpha analysis. The reliability analysis has been performed for each construct separately. However, to increase the reliability coefficient of a construct, some items have been suggested to be deleted by the system. To decide which the items for deletion are item-construct analysis can help to determine the ones with

the least contribution to be removed.

Given the problematic items identified in the inter-construct correlation analysis namely CF3, OC2, OC4, OC7 and OC15, more examination have been conducted to check to what extent these items can affect the reliability. As presented in Table 4.6, it can be seen that the Cronbach's alpha coefficients for all the constructs under study were at the acceptable level of internal consistency. Clearly, most of the tabulated values of the coefficient alpha exceeded the agreed upon lower level for alpha (that is 0.7) (Nunnally & Beinstein, 1994). Actually, it was argued by Hair *et al.* (2010) that 0.6 is the minimum acceptable level of Cronbach's alpha for any construct to possess an acceptable reliability. Therefore, although the coefficient alpha for Service Design and Risk taking constructs are lower than 0.7, they still acceptable by researchers for exploratory research (Hair *et al.*, 2010). It can also be noticed that there were no items deleted to improve the internal consistency of the constructs. In general, all the items included in the study have proven to show a good level of internal consistency when measuring their respective intended measures.

Table 4.6

*Reliability Analysis of Pilot Study*

Constructs	No. of original items	Cronbach's Alpha	Item deleted*	Cronbach's Alpha if item deleted
Management Leadership	5	0.728	Nil	0.728
Customer Focus	6	0.789	Nil	0.789
Strategic Planning	6	0.785	Nil	0.785
Human Resource Management	11	0.912	Nil	0.912
Service Design	3	0.627	Nil	0.627
Information and Analysis	7	0.875	Nil	0.875

Continuous Improvement	5	0.780	Nil	0.780
Benchmarking	4	0.834	Nil	0.834
Innovativeness	3	0.818	Nil	0.818
Proactiveness	3	0.787	Nil	0.787
Risk Taking	3	0.695	Nil	0.695
Organizational Culture	18	0.947	Nil	0.947
Organizational Performance	6	0.873	Nil	0.873

\* Number of item as sequenced in questionnaire

Since the measurement can be of a good level of reliability but lacks the validity, the reliability can be a pre-requisite of good measurement but does not imply the goodness of the measurement (Churchill, 1979; Sekaran, 2003). However, this study tried to test for the validity of the measure before proceeding to the data collection stage. As defined by Nunnally and Bernstein (1994), validity refers to the extent to which the measurement measures what it is intended to measure. In the literature of research methodology, there have been many types of validity measures. Specifically, the literature of research methodology, particularly in the behavioral science, revealed that content and construct validity are the most commonly used validity measures (Kerlinger & Lee, 2000; Leary, 2004; Nunnally & Bernstein, 1994).

In general, content validity is the measure that shows to which extent the measure appears to measure what it is supposed to measure. Therefore, the content validity is mainly based on the judgmental evaluation by experts to ensure that the measurement items comprised the construct measure all the aspects of the construct. To ensure the content validity of the measurements, the development of items encompasses the measurements of this study was based on a comprehensive

review of the literature. In addition, thorough discussions with several academicians and practitioners were conducted to construct the items of construct. Further, the questionnaire was distributed to some of the potential respondents to be reviewed, assessed for understandability and criticized.

To measure the construct validity, factor analysis has been performed with using the Principle Component Method and Varimax rotation. By using factor analysis, the items explaining the same construct could be identified. Since the sample size used for factor analysis, in the Pilot study, was small ( $n=52$ ), the factor analysis on each construct was examined separately following many researchers in TQM literature such as (Ahire *et al.*, 1996; Black & Porter, 1996; Saraph *et al.*, 1996).

The first step was to check the applicability and appropriateness of factorability of factor analysis through checking the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity. According to Kaiser (1974), the KMO is the index used to compare the magnitude of the observed correlation coefficient to that of the partial correlation coefficient. The smaller the sum of the partial correlation between all pairs of variables, the closer will be KMO to one (1.0) and hence the more appropriate factor analysis will be. Moreover, Kaiser (1974) described the KMO measure based on their closeness to one as Marvelous if it is around 0.90; Meritorious if it is around 0.80; Middling if it is around 0.70; Mediocre if it is around 0.60; Miserable if it is around 0.50; and unacceptable if it is below 0.50. The pilot study results showed that, as presented in Table 4.7, the KMO measure ranged between 0.577 and 0.873 and hence the appropriateness of factor analysis.

In relation to that, the factor loadings of the items were examined and compared to the minimum benchmark of 0.50 described by Hair *et al.* (2010) for practically significant item loading. Based on that, items with loadings less than 0.50 were deemed meaningless and eliminated from their respective constructs.

Table 4.7

*Factor Analysis and Reliability of the Final Instrument (Pilot Study)*

Constructs	No of Items	Factor loading for items in first factor*	KMO	Eigen-value	% of Variance	Cronbach's Alpha	Items Deleted
<b>TQM</b>							
Management Leadership	4	.857 .819 .770 .556	0.69	2.387	59.668	0.766	Nil
Customer Focus	5	.828 .713 .713 .686 .681	0.716	2.636	52.723	0.762	CF5
Strategic planning	5	.809 .777 .683 .667 .661	0.685	2.605	52.108	0.761	SP2
HRM	9	.825 .811 .787 .775 .772 .770 .766 .741 .631	0.873	5.346	59.403	0.912	HRT3, HRE2
Service Design	3	.848 .732 .682	0.577	1.721	57.38	0.627	Nil
Information and Analysis	7	.861 .841 .818 .776 .715 .697 .622	0.826	4.095	58.507	0.875	Nil
Continuous Improvement	4	.878 .858 .757 .634	0.691	2.481	62.035	0.791	CI4
Benchmarking	4	.890 .829 .814 .730	0.734	2.674	66.861	0.834	Nil
Innovativeness	3	.906 .855 .854	0.706	2.283	76.096	0.818	Nil
Proactiveness	3	.931 .810 .805	0.591	2.171	72.362	0.787	Nil
Risk Taking	3	.881 .777 .709	0.584	1.883	62.761	0.695	Nil
Organizational Culture	15	.846 .843 .842 .815 .813 .771 .766 .752 .748 .747 .739 .704 .692 .692 .639	0.885	8.733	58.22	0.947	OC7, OC8, OC14
Organizational Performance (BP)	6	.903 .861 .849 .797 .658 .596	0.823	3.7	61.659	0.873	Nil

\*Item are as ordered in the in questionnaire set

As shown in Table 4.7, some items have been reported to have low factor

loading, namely Customer Focus (CF5), Strategic Planning (SP2), HRM (HRT3 and HRE2), Continuous Improvement (CI4) and finally organizational culture (OC7, OC8, OC 14). These items have been subsequently deleted from the questionnaire meant for the data collection purpose. However, the factors of all constructs have eigenvalues greater than 1.000.

#### **4.11 Data Collection Procedures**

Dilman (1978) argued that the effective administration of the survey significantly influences the level of satisfactory responses of the data generated. Therefore, this study employed the self-administered questionnaire as the mean to collect the data. Thus, the quantitative research approach was very much helpful in translating the information collected using the survey questionnaire or measurement instruments into significant results that were useful for the research development (Cooper & Schindler, 2006). As indicated earlier, the questionnaire of the study consisted of 80 questions (using 5-points Likert scale) and followed the self-administration approach by individuals in all the cities where the bank branches are located to ensure a high response rate. Also this method enabled the respondents to clarify their doubts and enabled the data collectors to refer back to the respondents to rectify all the missing data. For some banks, the headquarters helped in collecting the data from other branches like the case of the Tadhamon Islamic International Bank where a high level of cooperation was provided.

Regarding the language of the questionnaire, the original version of the questionnaire was in English. Since the targeted respondents of this study were the branch managers of the banks in Yemen, the questionnaire was translated to the

Arabic language. This was done in following the recommendations of Brislin (1970, 1986). In order to do that, the questionnaire was translated and then back translated to measure its validity and reliability. More specifically, the questionnaire was first translated into Arabic language by two bilingual individuals without telling them the objective of the study. Next, other two individuals were 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.

#### **4.12 Non-Response Bias Test**

In order to assess the non-response bias, the T-test was carried out to compare the responses of the early and late respondents. In fact, the data of this study collected during the period from April 6, 2011 to June 5, 2011. Moreover, although the questionnaires had been administered in all the cities concurrently, there were many respondents responded only after many reminders and repeated visits. Following the suggestions of Armstrong and Overton (1977) and Kannan *et al.* (1999), if differences between late and early respondent were found to be significant, they may indicate the underlying differences between respondents and non-respondents.

This study carried out T-test to test the differences between the first 35 early and the late 35 questionnaires. The test took into account all the variables included in the study. However, the results in Table 4.8 showed that there were no significant differences between late and early respondents across all the variables except Information and Analysis and Innovativeness.



Table 4.8  
*T-test results for Non-Response Bias*

Variable	T-Value	Significance
Management. Leadership	-1.513	0.135
Customer Focus	-2.119	0.037
Strategic planning	-2.475	0.016
HRM	-2.148	0.035
Service Design	-2.059	0.043
Information and Analysis	-2.854	0.006**
Continous Improvement	-1.236	0.220
Benchmarking	-1.910	0.060
Innovativeness	-3.502	0.001**
Proactiveness	-0.592	0.556
Risk Taking	-2.077	0.041
Organizational Culture	-1.848	0.069
Organizational Performance	0.350	0.727

\*\* P< 0.01

Since there were only two variables in this study showed differences between late and early respondents, non-response bias was not a major concern in this study.

#### 4.13 Methods of Statistical Data Analysis

The data for this study were analyzed by using the Statistical Package of Social Sciences (SPSS) version 16.0 and Analysis of Moment Structure (AMOS) version 16.0. However, the data were statistically analyzed through the following three steps. First, that data were summarized and initially analyzed through descriptive statistics. Second, Data were screened and prepared for multivariate analysis through testing the multiple regression assumptions. Finally, the hypotheses were tested through Pearson correlation and hierarchical multiple regression analysis.

To elaborate more in this regard, the following sub-sections provided the details of the procedures followed.

#### **4.13.1 Descriptive Analysis**

For the purpose of the descriptive analysis, various statistical techniques were employed to initially quantitatively summarize the data. That is, the descriptive statistics involves analyzing the mean, median, standard deviation and the graphical data description.

#### **4.13.2 Preparing Data for Multivariate Analysis**

At this stage, the data were prepared for the multivariate data analysis through ensuring the fulfillment of the multivariate analysis assumptions. This study however, employed various procedures to test the crucial assumptions of multivariate analysis. Some of the followed procedures are:

- i. Normality testing through Skewness, Kurtosis, Kolmogorov-Smirnov test and normal probability plots.
- ii. Outlier Detection through examining Mahalanobis distances.
- iii. Homoscedasticity and linearity check through Scatterplots.
- iii. Detecting and tackling Multicollinearity employing Variance Inflation Factor (VIF).
- iv. Using AMOS to test the measurement model and to prove convergent and discriminant validity of the measure used.

#### **4.13.3 Hypotheses Testing using Multiple Regression Analysis**

To test the hypotheses of the study, Multiple Regression Analysis was used.

Multiple regression analysis was used to test for the significance of the relationship between one or more independent variables and one dependent variable (Allison, 1999; Hair *et al.*, 2010). There are four main assumptions that must be met prior to conducting the regression analysis. These assumptions are: linearity; homoscedasticity, normality and no serious multicollinearity problem and finally independence of residuals (Coakes & Steed, 2003; Hair *et al.*, 2010). According to Hair *et al.* (2010), sample size has a direct impact on the power of the multiple regressions. Therefore, there has been no hard rule to determine the observation independent variable ratio. To ensure valid and reliable results, some researchers claim that ideally there should be 15 to 20 observations for each independent variable. More practically, some other researchers such as Hair *et al.* (2010) reported that the minimum sample size requirements for regression analysis is 5 to 1, that is there should be at least five observations for each independent variable. This study has employed the coefficient of determination to measure the goodness of fit of the model and the significance of the moderating effects. The coefficient of determination,  $R^2$ , is the measure of the goodness of the model where it indicates the variance of the dependent variable that was accounted for by the independent variables (Hair *et al.*, 2010).

#### **4.14 Summary**

Throughout this chapter, the methodology of the study has been discussed. As stated in this chapter, this study is a correlational study employed the suitable statistical techniques to test the causality relationship among the variable and also

the postulated moderation effects.

Moreover, this chapter provided some elaborations on the population, sampling frame and the justification of the choice of the unit of analysis as being the bank branch managers. In addition to the hypotheses development, this chapter explained the instruments used based on the relevant literature review.

Additionally, this chapter used the data collected from 52 bank branches to conduct the Pilot study analysis. Pilot study analysis was mainly conducted to ensure the validity and reliability of the measures and to ensure high quality data during the real data collection phase. Therefore, based on the Pilot study analysis, some items were proven to be less meaningful in explaining the intended constructs and later excluded from the measurement instruments to produce a theoretically and statistically valid and reliable instrument of the study. This chapter, moreover, described the data collection procedures and the statistical techniques used in the study.

## **CHAPTER FIVE**

### **RESEARCH FINDINGS**

#### **5.1 Introduction**

This chapter reports and discusses the findings of the study. Specifically, this chapter is divided into four major sections. Section 5.2 presents the distribution of the respondent according to many demographic factors such as job title, gender, education level and major, age of the branch, number of employees and customers and the type of bank business (Islamic or conventional). Section 5.3 reports the goodness of the measure through construct validity. Construct validity, however, included face validity, convergent validity and discriminant validity. Section 5.4 discusses the descriptive analysis of the variables included in the study. Section 5.5 reports the hypotheses testing procedures using Correlation Analysis and Hierarchical Regression Analysis. Finally, section 5.6 summarizes the results and section 5.7 concludes the chapter.

#### **5.2 Demographic Distribution of the Respondents**

Table 5.1 depicts the distribution of respondents according to the governorates where the bank branches were located. As can be clearly seen, the majority of the branches are located in Sana'a, Aden, Taiz, Hodiedah and Hadramout. The overall response rate received for this study was 70%. The main reason behind this high response rate achieved for this study is due to the mechanism of the self-administration method followed by friends who are mainly from the capital of each governorate. They paid many visits to all the branches in

each city and met the branch managers asking for their responses. Moreover, they clarified some of their questions if any.

Table 5.1

*Distribution of Respondent by Local Governorates (n=201)*

Governorate	Distributed Questionnaires	Returned and Usable	Percentage
Sana'a	79	41	52%
Taiz	25	21	84%
Aden	37	35	95%
Ibb	21	18	86%
Hodiedah	25	14	56%
Dhamar	9	9	100%
Hadramot	27	21	78%
Hajjah	6	4	67%
Amran	8	5	63%
Sadaa	3	2	67%
Aljawf	2	1	50%
Mareb	4	3	75%
Abyan	5	4	80%
Lahj	5	2	40%
Shabwah	6	3	50%
Aldalea	6	4	67%
Almahrah	6	4	67%
Suqatrah	2	1	50%
Albayda	7	6	86%
Almahweet	3	2	67%
Raymah	1	1	100%
Total	287	201	70%

The next step was to classify the respondents according to the demographic variables such as job title, gender, education, education major, length of service, number of employees, number of customers, ownership nature and bank type (conventional or Islamic).

As stated earlier, the data were collected from branch managers or their deputies. Table 5.2 and the graph in Figure 5.1 exhibited that of the 63.7 % of the respondents were branch managers while 36.3% of other members of the managing team. However, all the respondents were able to reflect the key information related to the investigated practices.

Table 5.2  
*Distribution of the Respondents by Demographic Variables (n=201)*

	Frequency	Percent
<b>JobTitle</b>		
Branch Manager	128.0	63.7
Other	73.0	36.3
<b>Gender</b>		
Male	178.0	88.6
Female	23.0	11.4
<b>Educational Level</b>		
High School	31.0	15.4
College Degree	151.0	75.1
Graduate Studies (Master/Doctorate)	15.0	7.5
Other	4.0	2.0

<b>Educational Major</b>		
	167.0	83.1
Business		
	34.0	16.9
Non Business		
<b>Length of Service</b>		
	49.0	24.4
Less than 5 Years		
	87.0	43.3
6-10		
	48.0	23.9
11-15		
	17.0	8.5
More than 16 Years		
<b>Branch Age</b>		
	56.0	27.9
Less than 10 Years		
	92.0	45.8
11-20		
	19.0	9.5
21-30		
	34.0	16.9
More than 31 Years		
<b>Number of Employees</b>		
	63.0	31.3
Less than 20		
	82.0	40.8
21-30		
	29.0	14.4
31-40		
	27.0	13.4
More than 41 Employees		
<b>Number of Customers</b>		
	147.0	73.1
Less than 5000 customers		
	28.0	13.9
5001-10000		
	16.0	8.0
10001-20000		
	3.0	1.5
20001-30000		
	7.0	3.5
More than 30000		
<b>Bank Ownership</b>		
	63.0	31.3
Private		



Public	109.0	54.2
Joint venture	10.0	5.0
Foreign	19.0	9.5
<b>Bank Type</b>		
Traditional	157.0	78.1
Islamic	44.0	21.9

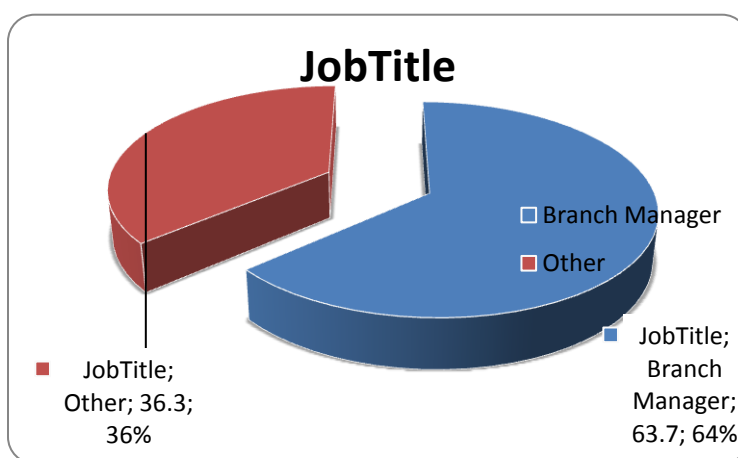


Figure 5.1

Distribution of respondents according to the job title.

The collected demographic information confirmed the dominance of males in the managerial positions in the Yemeni banking industry. More specifically, descriptive results exhibited that 88.6 % of the respondents were males compared to only 11.4 % females as depicted in Figure 5.2 below.

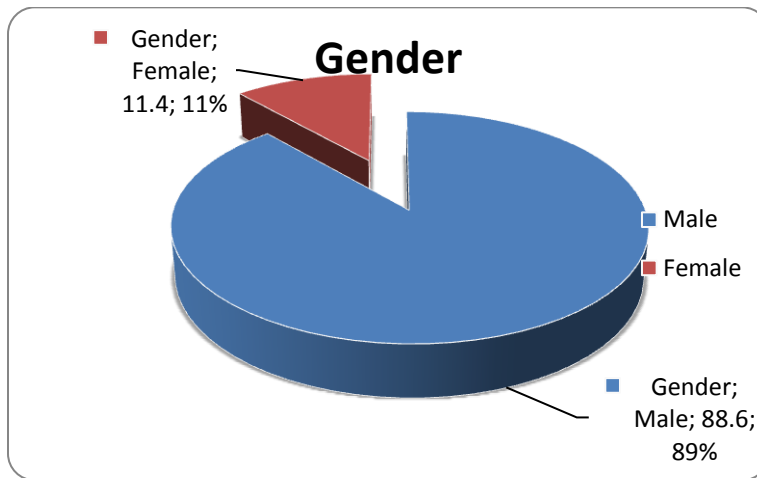


Figure 5.2

*Distribution of respondents according to the gender.*

In addition to that, the descriptive results in Table 5.2 and Figure 5.3 showed that the majority of managers in the Yemeni banking industry were bachelor degree holders with 75.1 %. However, among the remaining only 7.5 % who acquired higher degrees (master or doctorate). Also, Table 5.2 and the graph in Figure 5.4 showed, as expected, that of the respondents, 83.1% had a business major and were more likely to have knowledge in quality and strategy implementation.

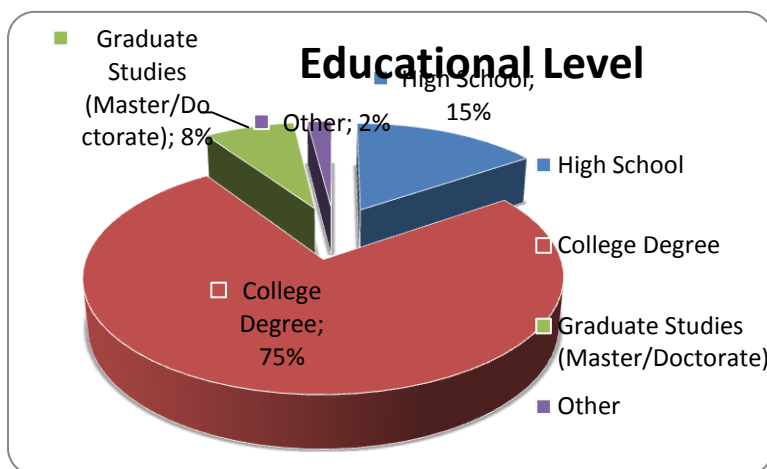


Figure 5.3

*Distribution of respondents by educational levels*

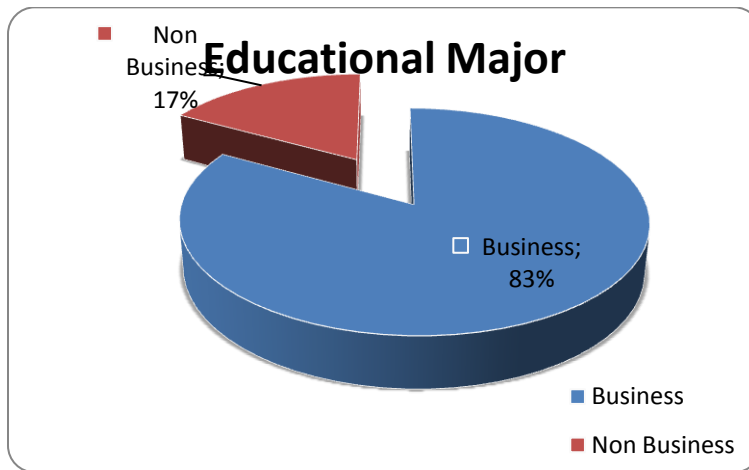


Figure 5.4

*Educational major of respondents*

Furthermore, concerning the respondents' experience, Table 5.2 and Figure 5.5 exhibited that while around two thirds of the respondents (67.7%) had experience less than 10 years, around one quarter of them had experience between 11 and 15 years. The data also showed that only 8.5% of the respondents had experience exceeding 16 years.

Table 5.2 and the graph in Figure 5.5 exhibited that around three thirds of the banks in Yemen (i.e. 73.7 %) were established in the last twenty years. However, slightly more than one quarter of them (26.3 %) had been in operation for more than twenty years. , these results showed the recent growing number of bank branches in the Yemeni system.

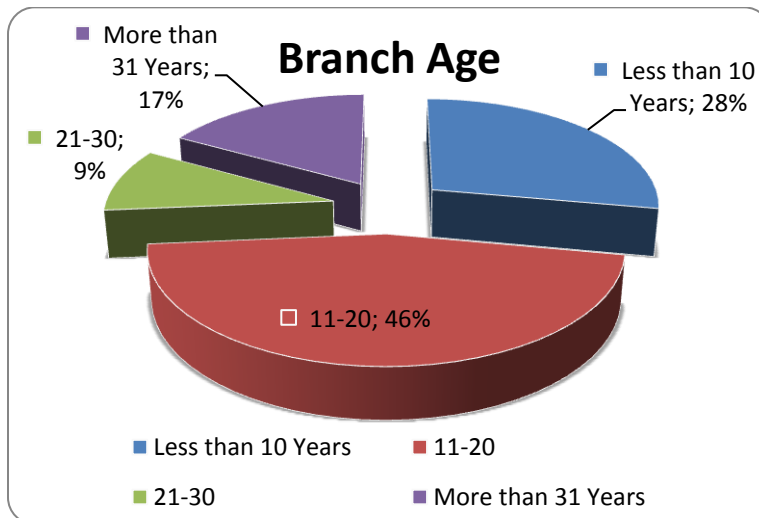


Figure 5.5

#### *Age distribution of the Respondents*

Regarding the number of employees, the majority of the bank branches in Yemen (exactly 72.1%) had less than 30 employees handling their businesses. In addition to that, the data showed that just slightly more than one quarter of the operating bank branches in Yemen (i.e. 27.8%) had more than 31 employees. Table 5.2 illustrated that of the bank branches surveyed, 87 % had less than 5000 customers. Moreover, only seven branches (3.5%) had more than 30000 customers. The above distribution of bank branches by the number of employees and customers was illustrated in Figure 5.6 and Figure 5.7.

In classifying the branches of the Yemeni banks according to the nature of ownership, data showed that while 54.2% of the surveyed branches were public, 31.3% were private owned enterprises. Moreover, only 9.5% of the operating bank branches operating in Yemen were foreign owned banks.

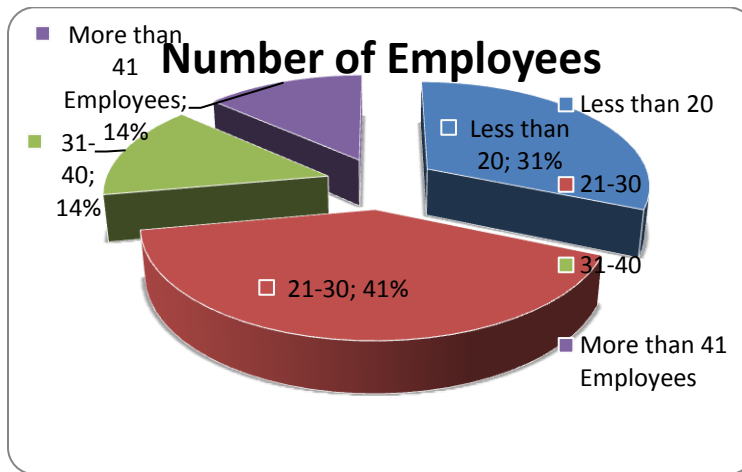


Figure 5.6

*Distribution of branches according to the no. of employees*

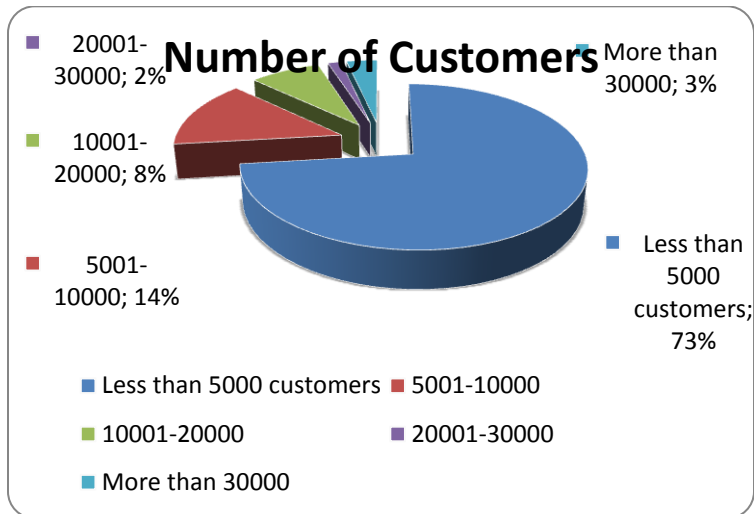


Figure 5.7

*Distribution of branches according to the no. of customers*

As reported in Table 5.2 and Figure 5.8, the data showed while 78.1 % of the respondents were conventional banks operating based on the mainstream banking principles, only 21.9 % were Islamic banks that were recently established to meet the customers' demands.

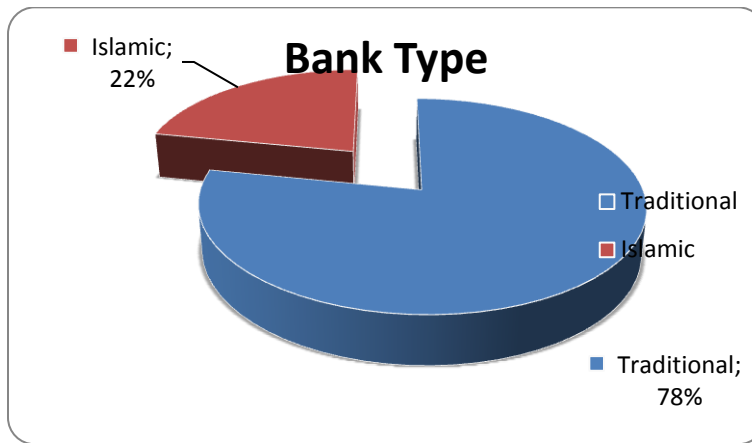


Figure 5.8

*The proportion of conventional and Islamic banks*

### 5.3 Testing the Goodness of the Measure

To ensure valid and reliable results and appropriate subsequent drawn conclusions, this study followed rigorous steps to test the goodness of the measure. Testing the goodness of the measure employed in this study was performed by employing the Exploratory Factor Analysis (EFA) using SPSS version 14.0 and the Confirmatory Factor Analysis techniques (CFA) using AMOS version 16.0. However, this study started by examining the goodness of fit of the measurement measure before proceeding to test the construct validity of the measure.

#### 5.3.1 Factor Analysis

In order to identify a set of parsimonious, distinct and non-overlapping variables underlying the items of each construct, an exploratory factor analysis (EFA) technique was employed. Hence, EFA was performed to extract the dimensions of TQM, EO, OC and organizational performance. In fact, EFA approach has been used in organizational studies and marketing especially when the

relationships between the observed variables and latent variables are not ascertained (Sureshchandar, Rajendran, & Ananthraraman, 2001).

Before undertaking the EFA of the data, this study checked the factorability of the dimensions. The factorability of the data can be determined through the measure of sampling adequacy, Kaiser-Meyer-Olkin (KMO) and the Bartlett's test of sphericity. Both measures measure the existence of correlation among items and test that the correlation matrix among items is significantly different from the identity matrix. Therefore, for the data to have an acceptable level of multicollinearity among items, KMO had to be more than 0.5 (Hair et al., 2010) and the Bartlett's test of sphericity had to be significant (sig. <0.05). In fact, many recommendations have been made on how to identify the acceptable KMO. For example, Field (2000) recommends 0.5 – 0.7 as mediocre, 0.7-0.8 as good and 0.8-0.9 as superb. Since the KMO for all the constructs of the study ranged between 0.881 and 0.944 as illustrated in Table 5.3 through Table 5.6, this study proceeded to the factor analysis as reported in the following.

#### **5.3.1.1 Factor Analysis of TQM Construct**

This study started to capture the dimensions of TQM through the use of Principle Component Analysis (PCA) with Varimax rotation. However, the 42 items, initially meant to measure eight dimensions of TQM, were loading on seven factors with eigenvalues greater than 1 and cumulative variance explained (CVE) of about 72 %, as illustrated in Table 5.3.

Table 5.3 depicts the seven factors underlying the TQM items. According to the factor loadings, the factors identified were labeled as, Information and Analysis System(IAS), Human Resource Management (HRM), Excellent Service Design and

Benchmarking (ESDB), Customer Focus (CF), Continuous Improvement (CI),  
Management Leadership(ML) and Excellent Service Orientation(ESO).

Table 5.3  
*Factor Analysis of TQM*

Old Code	New Code	Factors						
		IAS	HRM	ESDB	ML	CF	CI	ESO
IA3	IAS1	0.725						
IA4	IAS2	0.707						
IA2	IAS3	0.705						
IA6	IAS4	0.689						
IA7	IAS5	0.687						
HRE3	IAS6	0.684						
IA1	IAS7	0.681						
HRI4	IAS8	0.635						
SD1	IAS9	0.634						
CI1	IAS10	0.571						
HRE1	IAS11	0.542						
HRT2	IAS12	0.54						
HRI1	IAS13	0.53						
SP3	IAS14	0.509						
CF3	IAS15	0.509						
HRI3	HRM1		0.663					
HRT1	HRM2		0.655					
HRT4	HRM3		0.63					
ML5	HRM4		0.593					
SP1	HRM5		0.534					
CF1	HRM6		0.478					
B2	ESDB1			0.714				
B4	ESDB2			0.617				
B3	ESDB3			0.605				
IA5	ESDB4			0.562				
SD3	ESDB5			0.553				
HRI2	ESDB6			0.553				
SP5	ESDB7			0.515				
CF2	ESDB8			0.417				
ML1	ML1				0.784			
ML2	ML2				0.678			
ML3	ML3				0.48			
CF6	CF1					0.695		
CF4	CF2					0.68		



SP4	CF3	0.574	
SP6	CF4	0.439	
CI5	CI1	0.659	
B1	CI2	0.546	
CI2	CI3	0.501	
CI3	CI4	0.482	
ML4	ESO1		0.804
SD2	ESO2		0.532

Eigenvalue	21.62	2.168	1.679	1.393	1.224	1.129	1.033
VE %	51.49	5.163	3.997	3.317	2.915	2.689	2.46
Reliability	0.879	0.736	0.805	0.914	0.819	0.857	0.636
KMO	0.930						
Overall VE%	72.027						
Chi square	7845						
Significance	0.000						

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IAS	Information and Analysis System
HRM	Human Resource Management
ESDB	Excellent Service Design and Benchmarking
ML	Management Leadership
CF	Customer Focus
CI	Continuous Improvement
ESO	Excellent Service Orientation

It is worth noting that the seventh TQM factor namely Excellent Service Orientation (ESO) was eliminated in the process of Confirmatory Factor Analysis conducted to establish the construct validity of the measure. It was deleted since the item ESO1 had almost the same loadings on three other factors and the ESO2 had low factor loading on its respective factor. Hence this study proceeded to the analysis to hypotheses testing stage with only six dimensions of TQM construct as identified.

### 5.3.1.2 Factor Analysis of Entrepreneurial Orientation (EO) Construct

Similarly, EFA was undertaken to capture the dimensions underlying the EO construct. It was found that KMO was 0.914 highly exceeded the recommended

limit of 0.5 and Bartlett's test was significant indicating that the data were acceptable for EFA. The factor loadings of the items on the extracted factors revealed that two factors were extracted. These two factors explained 73.96 % of the overall variance in the EO construct. Therefore, the underlying factors of EO construct were found to be different from the measure adopted from the literature that encompasses three dimensions namely, Innovativeness, Proactiveness and Risk Taking. To name these factors, according to the common meaning of the items highly loaded on the first factor, it was labeled as Proactive Innovativeness (PI). However, the name of the second factor remained the same as Risk-Taking (R). To show the old and new order of items and factors' labels, Table 5.4 illustrated the results of factor analysis of the EO construct.

Table 5.4

*Factor Analysis of Entrepreneurial Orientation (EO)*

Old code	New Code	Factors	
		PI	R
I3	PI1	0.877	
I2	PI2	0.863	
P2	PI3	0.795	
P1	PI4	0.778	
P3	PI5	0.776	
I1	PI6	0.716	
R3	PI7	0.586	
R2	R1		0.920
R1	R2		0.773
Eigenvalue		5.554	1.102
VE %		61.716	12.243
Reliability		0.924	0.753
KMO		0.914	
Overall VE%		73.958	
Chi square		1215.9	
Significance		0.000	

PI: Proactive Innovativeness  
R: Risk Taking

### **5.3.1.3 Factor Analysis of Organizational Culture (OC) Construct**

The items representing OC construct were sent to the factor analysis to identify the underlying factors. The KMO was found to be 0.941 far above the recommended limit of 0.5 and the Bartlett's test was significant (Hair *et al.*, 2010). The results also revealed that there were two factors underlying the items of the organizational culture (OC) construct used in the measure of this study. As illustrated in Table 5.5, items OC1, OC2, OC3 and OC4 were highly loading on the second factor whereas all the remaining items were highly loading on the first factor. Based on the common content of the items grouped to each factor, the two factors were labeled (Hair *et al.*, 2010). However, the first factor was labeled, based on its core items, as the entrepreneurial organizational culture where most of the items were about taking risk and encouraging the failure as the way of work development. Similarly, all the items on the second factor were about the team spirit and knowledge sharing among the team members. Table 5.5 below showed that the two factors had high Cronbach's alpha reliabilities as 0.952 and 0.886 respectively indicating high internal consistency among their items.

Table 5.5

*Factor Analysis of OC*

Old Code	New Code	Factors	
		EntOC	GOC
OC10	EntOC1	0.818	
OC11	EntOC2	0.785	
OC9	EntOC3	0.779	
OC5	EntOC4	0.766	
OC18	EntOC5	0.735	
OC13	EntOC6	0.730	
OC15	EntOC7	0.730	
OC16	EntOC8	0.717	
OC17	EntOC9	0.694	
OC12	EntOC10	0.672	
OC6	EntOC11	0.616	
OC3	GOC1		0.838
OC1	GOC2		0.809
OC4	GOC3		0.800
OC2	GOC4		0.690
Eigenvalue		9.534	1.046
VE %		63.561	6.973
Reliability		0.952	0.886
KMO	0.941		
Chi square	2571.763		
Significance	0.000		

EntOC: Entrepreneurial organizational culture  
GOC: Group organizational culture

**5.3.1.3 Factor Analysis of Banks Organizational Performance (BP) Construct**

To conduct the factor analysis for the bank organizational performance construct, all the six items were analyzed to identify the factors underlying the construct. As expected all the items loaded only on one factor after passing KMO (0.881) and significant Bartlett's tests. Moreover, the items explained about 65 % of the variance in the construct and showed high internal reliability of 0.894.

Table 5.6

*Factor Analysis of BP*

<b>Old code</b>	<b>New Code</b>	<b>Factor BP</b>
BP1	BP1	0.841
BP2	BP2	0.866
BP3	BP3	0.855
BP4	BP4	0.702
BP5	BP5	0.849
BP6	BP6	0.703
Eigenvalue		3.895
VE %		64.918
Reliability		0.894
KMO		0.881
Chi square		659.364
Significance		0.000

BP: Bank Organizational Performance

After employing the factor analysis techniques to identify the factor underlying each construct, the next step was to test the overall measurement model to validate and test the reliability of the measure before undertaking the regression analysis to test the hypotheses of the study.

### 5.3.2 Testing the Measurement Model

Although the EFA approach has been commonly used in the organizational and marketing studies, it has certain limitations (Sureshchandar *et al.*, 2001). One of the main limitations of the EFA approach is that an item is to be assigned to the factors on which the loading is the highest regardless the fact this item may be also has a loading on other factors. However, this fact may affect the distinctiveness of factors due to the cross loadings. In addition to that, the items are assigned to factors in EFA based on statistical reasoning and not on theoretical justifications like the

case of CFA. Finally, the concept of unidimensionality concept has not been taken care of in EFA unlike the case of CFA (Ahire *et al.*, 1996).

Therefore, the measurement model was assessed before further analysis was made. Following the two steps approach suggested by Anderson and Gerbing (1988), this study, due to small number of the studied population, employed only the first step as to test the measurement model. That is, Confirmatory Factor Analysis (CFA) was employed to validate the measure through examining the association between items and their respective underlying constructs. AMOS for windows version 16.0 package was used to estimate the parameters utilizing Maximum Likelihood Estimation (MLE) method which is suitable for sample size exceeding 100 (Ding, Velicer & Harlow, 1995).

#### **5.3.2.1 The First Order and Second Order Constructs**

Before examining the theoretical and conceptual aspect of the second order constructs in the model, more explanation has been provided on the differences between the first and the second order measurement models as discussed in the following paragraphs.

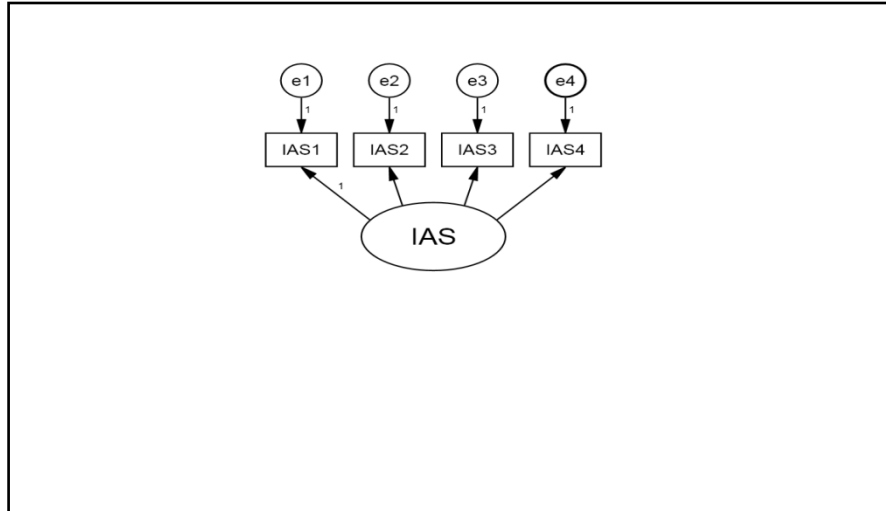


Figure 5.9

*Example of first order measurement model*

As illustrated in Figure 5.9, Information and Analysis System (IAS) as a latent variable was measured by a set of measured variables namely IAS1 through IAS4. Referring to the Figure 5.10, TQM construct was measured indirectly by many items through other layer of latent variables. That is why TQM was called a second order measurement model

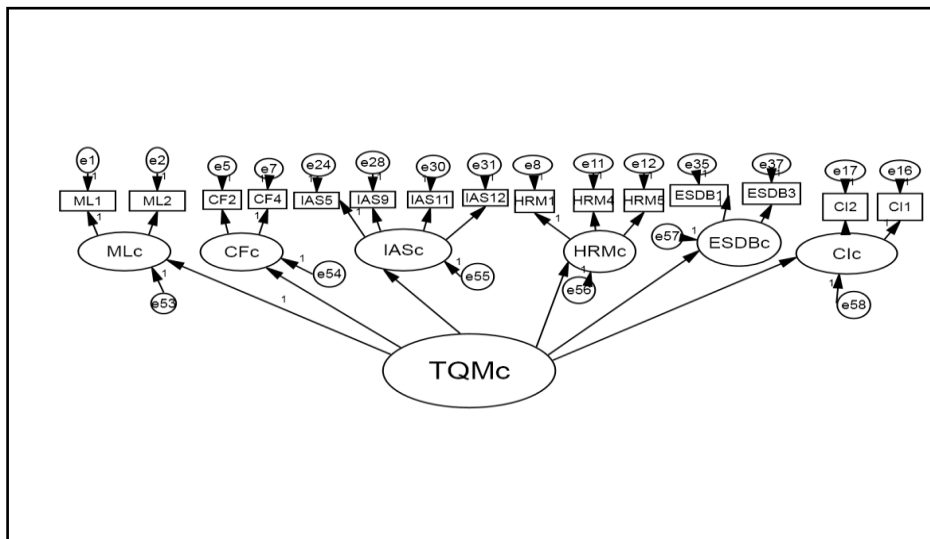


Figure 5.10

*Example of second order measurement model*

In other words, the second order factor structure has two layers of latent variables. As in this study, TQM, EO and OC are second order factor structure as they caused multiple first order latent factors (Hair *et al.*, 2010) structure latent variable may have many first order latent variables. However, the following sub-section was devoted to justify the use of TQM, EO and OC as second order factor models.

### **5.3.2.2 Correlation of the Second Order TQM, EO and OC**

#### **5.3.2.2.1 Second Order TQM**

The next step was to examine whether the six constructs of TQM extracted based on the EFA were qualified to be conceptually explained by the same factor as TQM. In order to prove that the perception of TQM was represented by the six mentioned factors, this study employed the correlation analysis among the six constructs of TQM. The results depicted in Table 5.7 revealed that the inter-correlation among the six factors were sufficiently large to justify the existence of a second order factor namely TQM (Byrne, 2010). More specifically, the results showed that all the covariances among the six factors were significant at the 0.001 level of significance ( $t$ -value  $>1.96$ ). Moreover, the results showed that these factors had high inter-correlations ranged from 0.512 to 0.892. These results, therefore, indicated that these six factors converged to a common underlying construct (Lages *et al.*, 2005; Li, 2006). As a result of that, these results suggested the existence of a second-order factor that can better explain the data (Bauer, Falk, & Hammerschmidt, 2006). Specifically, the findings of inter-correlation analysis confirmed that (Management leadership, Customer focus, HRM, Information and Analysis System, Continuous Improvement and Excellent Service Design and Benchmarking) were first order



factors that were better explained by one second order factor which could be named as TQM.

Table 5.7

*Correlations among first order constructs of Second order TQM*

Covariance			Estimate	S.E.	t-value	P	Correlation
ML	<-->	CF	0.241	0.042	5.731	***	0.608
ML	<-->	HRM	0.274	0.045	6.040	***	0.653
ML	<-->	CI	0.317	0.050	6.327	***	0.635
ML	<-->	IAS	0.377	0.060	6.340	***	0.690
ML	<-->	ESDB	0.310	0.051	6.097	***	0.650
CF	<-->	HRM	0.248	0.042	5.906	***	0.664
CF	<-->	CI	0.269	0.046	5.891	***	0.608
CF	<-->	IAS	0.353	0.055	6.371	***	0.728
CF	<-->	ESDB	0.291	0.048	6.081	***	0.688
HRM	<-->	CI	0.396	0.056	7.133	***	0.842
HRM	<-->	IAS	0.460	0.067	6.911	***	0.892
HRM	<-->	ESDB	0.392	0.057	6.900	***	0.870
CI	<-->	IAS	0.494	0.069	7.159	***	0.807
CI	<-->	ESDB	0.405	0.058	6.939	***	0.758
IAS	<-->	ESDB	0.483	0.070	6.879	***	0.825
ML	Management Leadership						
CF	Customer Focus						
HRM	Human Resource Management						
IAS	Information and Analysis System						
CI	Continuous Improvement						
ESDB	Excellent Service Design and Benchmarking						
***: p< 0.001							

#### 5.3.2.2.2 Second Order EO

Similarly, this study examined the covariance and correlations among the two EO dimensions to justify taking EO as a second order factor. Following the same reasoning as in the previous sub-section, the covariance between Proactive Innovativeness (PI) and Risk-Taking (R) was found to be significant at the 0.001 level of significance and the correlation was adequately high indicating the existence

of second order factor explaining the first order factors.

Table 5.8

*Correlations among first order constructs of second order EO*

	Covariance		Estimate	S.E.	t-value	P	Correlation
PI	<-->	R	0.248	0.041	5.984	***	0.672

\*\*\*: p< 0.001

Nonetheless, it was worth noting that this study adapted a measure of EO from the literature where there were three dimensions for the EO construct. After conducting a factor analysis for the items representing the EO construct, only two factors were found to ground these items.

#### **5.3.2.2.3 Second Order Organizational Culture (OC)**

Based on the results obtained from factor analysis, this study identified two factors underlying the items used to measure the organizational culture (OC) construct. However, to justify taking OC as a second order construct, the covariance and correlation between the two identified factors namely, group organizational culture (GOC) and Entrepreneurial organizational culture (EntOC) were examined. As illustrated in Table 5.9, the covariance between the two factors was reported to be significant at the 0.001 level of significance and the correlation was high indicating the existence of second order factor as named in the literature as organizational culture (OC).

Table 5.9

*Correlations among first order constructs of second order OC*

	Covariance		Estimate	S.E.	t-value	P	Correlation
GOC	<-->	EntOC	0.466	0.066	7.044	***	0.885

\*\*\*: p<0.001

### 5.3.2.3 Measurement Model Evaluation and Modification

The proposed measurement model of this study was comprised of fourteen latent variables with 72 observed variables. The goodness of fit of the measurement model was assessed through the process of CFA by using the model fit indices. In the literature of Structural Equation Modeling (SEM), there have been many fit indices that were widely known and commonly used to assess the model fit. Among these indices are the relative Chi square ( $\chi^2/\text{df}$ ), Compared Fit Index (CFI), Tucker Lewis Index (TLI) and Root Mean Square Error Approximation (RMSEA) (Hoyle & Panter, 1995; Hu & Bentler, 1999). The use of these indices to measure the goodness of fit can be as follows. First, the value of the relative chi-square ( $X^2/\text{df}$ ) should be less than 3 (Kline, 2011; Simon, & Paper, 2007). Second, the comparative fit index (CFI) should be equal to or greater than 0.90 (Bollen, 1989; Byrne, 2010). Third, the root mean square error of approximation (RMSEA) should be less than 0.08 (Byrne, 2010).

When the model fit indices are not up to the recommended value level, model modification becomes required. It has been recommended by the literature of Structural Equation Modeling (SEM) that low standardized factor loadings, high modification indices and high standardized residuals are the indicators of problematic items that cause the lack of the fit. However, problematic items should be deleted to achieve an acceptable model fit. More specifically, in assessing the model, the standardized item factor loading should be greater than 0.63 so that the factor could explain 40 % of its variance (Tabachnick & Fidell, 2007). Therefore, the items with factor loadings less than 0.63 should be eliminated (Hair *et al.*, 2010). Moreover, the modification process considered the items where the modification indices between

their errors were statistically significant. Since MIs are chi square distributed, some suggested that MI should be at least 3.84 and other suggested that MI should exceed 20 (Li, 2006). Besides that, the matrix of standardized residual covariance between pairs of residuals should be examined to identify items that have significant standardized residuals (i.e., t-value > 1.96 at  $p < .05$  or 2.58 at  $p < .01$ ). However, these items should be deleted (Joreskog & Sorbom, 1984; Schumacker & Lomax, 1996). Other researchers such as Joreskog and Sorbom (1984) suggested that all the entries of standardized residual matrix should be less than the absolute value of two to achieve a good fit model.

The process of the model modification was based on re-estimation of the model fit after removing some of the problematic observed variables. Table 5.10 summarized the overall goodness-of-fit indices of the CFA measurement model of this study.

Table 5.10

*Summary of Measurement Model Assessment and Modifications*

Model	Chi Square	Relative Chi Square	CFI	TLI	RMSEA
Proposed model	7235.33	2.94	0.692	0.680	0.098
First Model	6361.23	2.83	0.072	0.711	0.096
Second Model	2300.79	2.39	0.836	0.823	0.083
Third Model	1042.43	2.08	0.901	0.889	0.074
The final Model	932.38	2.00	0.910	0.899	0.071
Recommended value*	N/A	< 3.0	$\geq 0.9$	$\geq 0.9$	< 0.08

\*: According to Hair *et al.*, (2010), Kline (2011)

The proposed model was estimated using 72 observed variables. The results showed that the model had poor fit of the data according to the recommended threshold values. The modification indices started by eliminating the items with low standardized factor loadings below 0.5, as suggested by Kline (2004). Therefore, items CF1 (from customer focus), ESO1 (from Excellent Service Orientation) and HRM2 (from Human Resource Management) were eliminated. In addition to that by examining the modification indices, many error terms were found to have high Modification Indices (MIs). To improve the model fit, error terms with high MIs more than 20 (as suggested by Li (2006)) were set to be freely estimated. Some of these pairs of error terms were (GOC1, GOC3), (ESDB6, ESDB7), (ESDB6, ESDB8), (IAS12, IAS13), (IAS7, IAS8) and (CI1, CI4).

The First model was re-run after eliminating low factor loadings items and setting free the highly correlated errors. The results in Table 5.10 showed that all the values, except the relative chi square were still lower the recommended limits, indicating a poor model fit. Thus, more modifications were required. By examining the matrix of standardized residuals in the output resulted from the first model, items BP6, IAS3, OCA2 ESDB5, PI5, BP4, CI3 and IAS1 showed values more than absolute two and were eliminated to improve the model fit. The result of these procedures was the second model which still showed poor model fit indicating that further modifications were needed.

To continue the model modification process, the modification indices (MI) and the standardized residual matrix of the second model were examined to identify problematic items. That is, highly correlated error terms with high MIs or items with standardized residuals exceeding absolute two were the candidate to be eliminated.

Therefore, some items such as IAS15, ESDB6, EntOC4, CF3, ML3, PI1, HRM6 were eliminated to achieve a better model fit. It was worth noting that at this stage the factor Excellent Service Orientation (ESO) was dropped since it was having only one item ESO2 with low standardized factor loading less than 0.63. The result of this process was the third model that showed a better model fit where all the fit indices were satisfied except the TLI which was still less than the threshold value of 0.9.

To achieve the final modified model, some items in the organizational culture (OC) constructs were allowed to be freely correlated. Moreover, the item EntOC was eliminated since it showed high correlation with items in other construct. Table 5.10 illustrated the comparison among the models through the modification process.

In summary, out of the initial 72 observed variables of the model 33 variables were eliminated during the model assessment and modification processes. Furthermore, through the process of modifications of the model the two items measuring ESO construct were low loaded and had high cross loadings and eliminated along with their construct. The final measurement model, however, was illustrated in Figure 5.11.

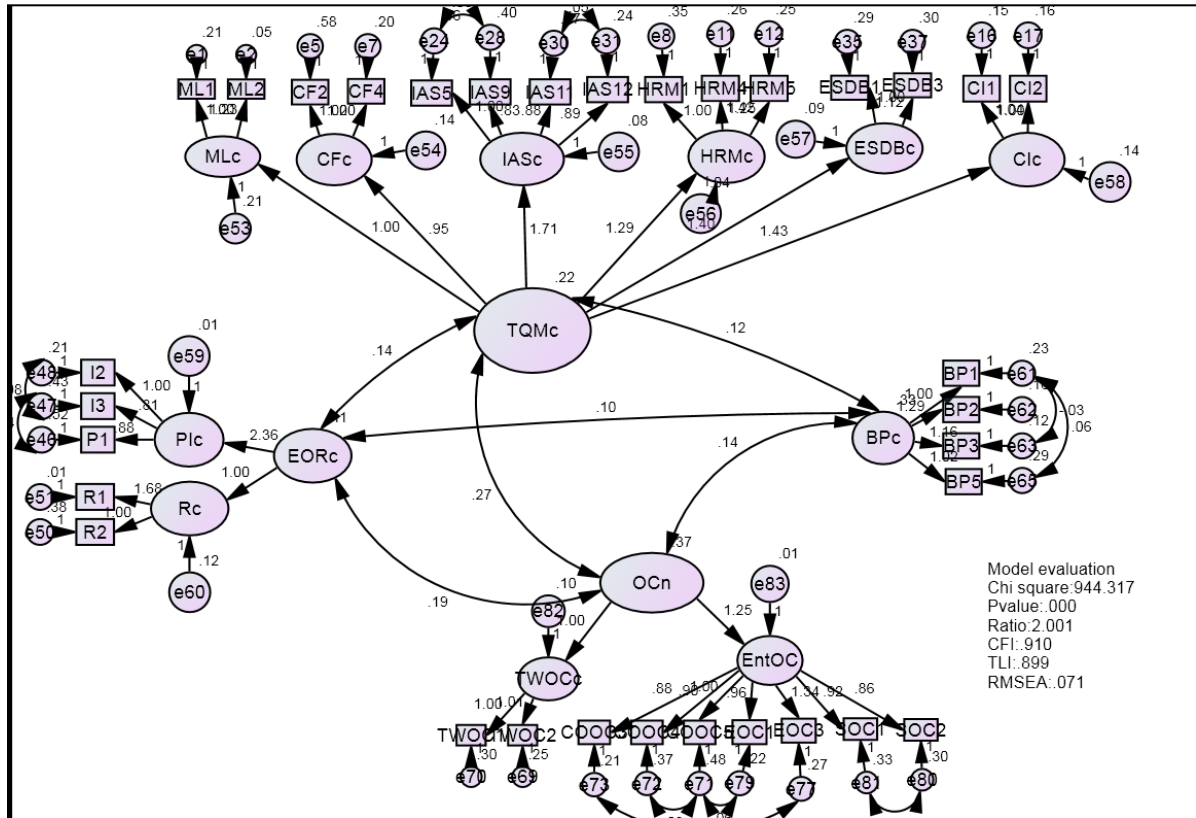


Figure 5.11

### The Final Measurement Model

#### 5.3.3 The Construct Validity and Reliability

The construct validity refers to the extent to which a combination of measured variables theoretically explains a latent variable they originally designed to measure (Hair *et al.*, 2010). Construct validity is made up of four components namely, convergent validity, discriminant validity, nomological validity and criterion or face validity. As it has been discussed in section 4.10, the content validity was ensured through deep discussions with academics and practitioners at the time of instruments development. Content validity ensured that the items used to measure the construct cover all the conceptual dimension of that construct (Hair *et al.*, 2010). Throughout

this section, this study examined and established the construct validity and reliability using the results of CFA using AMOS for Windows version 16.0. In the following, the results of the construct validity and reliability were discussed and presented.

### 5.3.3.1 Unidimensionality

Checking the unidimensionality was the first step to ensure the appropriateness of the measure of the study. Therefore, it was necessary to ensure that all the items designed to measure one construct must be consistent in measuring that construct. In other words, there should be only one factor underlying a set of measured variables. If this is satisfied, then the next step is to assess the reliability of the construct (Dunn, Seaker, & Waller, 1994).

Unidimensionality of a set of measured variables can be examined using various procedures such as Item-total correlation and Cronbach's alpha coefficient (Lin, 2007). It is calculated by the formula

$$\frac{K}{K-1} \left( 1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Where K is the number of items,  $\sigma_{Y_i}^2$  is the variance of item i for the current usable responses and  $\sigma_X^2$  is the variance of the summated scores of the factors.

To measure the internal consistency of items measuring their respective factors, the coefficient of alpha of all factors should be higher than 0.7 (Nunnally, 1978). Moreover, Hair *et al.* (2010) suggested that the minimum acceptable limit for internal consistency is Cronbach's alpha coefficient of 0.6. However, the data in Table 5.12 showed that Cronbach's alpha coefficient for all the factors ranged between 0.642 and 0.926 providing a substantial evidence of unidimensionality and



high internal consistency.

### **5.3.3.2 Convergent Validity**

Convergent validity is defined, according to Hair *et al.* (2010), to be the extent to which the items used to measure a construct share a high proportion of common variance. Moreover, it refers, according to Churchill (1979), to the extent to which different means of data collection produce the same results. There are several related methods to check the convergent validity among items of a construct such as testing factor loading of items on the respective construct, examining the Composite Reliability (CR) and finally the Average Variance Extracted (AVE) (Hair *et al.*, 2010).

This study employed factor analysis procedures to test the construct convergent validity. Table 5.12 and Table 5.13 elaborated the results of the confirmatory factor analysis (CFA). Various items have been deleted due to their low factor loadings on their respective constructs. More specifically, Table 5.11 showed the deleted items have been deleted throughout the process of improving the fit of the measurement model and through the modification indices. Overall, 39 variables were deleted from the data to achieve the desired construct validity and reliability.

Table 5.11

*Items deleted through CFA procedures*

Construct	Number of items deleted	Item Code
Management. Leadership	1	ML3
Customer Focus	2	CF1,CF3
HRM	3	HRM2, HRM3, HRM6
Information and Analysis System	11	IAS1, IAS2,IAS3, IAS4, IAS6, IAS7, IAS8, IAS10, IAS13, IAS14,IAS15
Continous Improvement	2	CI3, CI4
Excellent Service Design abd Benchmarking	6	ESDB2, ESDB4, ESDB5, ESDB6, ESDB7, ESDB8
Excellent Service Orientation	2	ESO1, ESO2 (Construct eliminated)
Proactive Innovativeness	4	PI1, PI5,PI6, PI7
Risk Taking	Nil	Nil
Group Organizational Culture	2	GOC3, GOC4
Entrepreneurial Organizational Culture	4	EntOC1, EntOC2, EntOC7, EntOC9
Organizational Performance (BP)	2	BP4, BP6

In the following, factor loadings, composite reliability and averaged variance extracted were reported to ensure the convergent validity of the measure

#### **5.3.3.2.1 Factor Loadings**

Prior to undertaking farther statistical procedures to test for the validity of the construct, it is imperative to ensure that items load highly on their respective constructs (Anderson & Gerbing, 1988; Ahire *et al.*, 1996; Churchill, 1979).

The magnitude of the factor loadings of items on their theoretically associated constructs is the main indicator of construct convergent validity (Hair *et al.*, 2010). As recommended by Anderson and Gerbing (1988), all the factor loadings of a construct should be statistically significant. More specifically, standardized loading estimates should be 0.5 or higher and ideally 0.7 or higher (Hair *et al.*, 2010). As presented in Table 5.12, the loading of all the items exceeded the recommended level. Thus, the high loading of the items on their respective factors indicating the power of these items in explaining the variance in intended constructs. Besides that, Table 5.12 reported the Cronbach's alpha coefficients for all the factors under study. The Cronbach's alpha coefficients ranged between 0.642 and 0.926 indicating an acceptable level of internal consistency among the items of each construct (Hair *et al.*, 2010).

Table 5.12

*Reliability and convergent validity of first-order constructs*

Construct	Items	Internal Reliability Cronbach's alpha	Convergent validity		
			loading	Composite Reliability	Average variance extracted
Management. Leadership	ML1		0.815		
ML	ML2	0.879	0.963	0.961	0.796
Customer Focus	CF2		0.617		
CF	CF4	0.642	0.796	0.802	0.507
Human Resource Management (HRM)	HRM1		0.730		
	HRM4		0.872		
	HRM5	0.851	0.847	0.973	0.670
Information and Analysis System (IAS)	IAS1		0.780		

	IAS2		0.744		
	IAS3		0.822		
	IAS5	0.868	0.840	0.986	0.636
Continuous Improvement	CI1		0.893		
	CI2	0.886	0.893	0.962	0.797
Excellent Service Design and Benchmarking (ESDB)	ESDB1		0.798		
	ESDB3	0.793	0.826	0.911	0.660
Proactive Innovativeness	PI1		0.862		
	PI2		0.693		
	PI3	0.835	0.691	0.951	0.567
Risk Taking	R1		0.996		
	R2	0.753	0.607	0.912	0.680
Group Organizational Culture	GOC1		0.785		
	GOC2	0.779	0.812	0.900	0.638
Entrepreneurial Organizational Culture	EntOC1		0.83		
	EntOC2		0.751		
	EntOC3		0.742		
	EntOC4		0.846		
	EntOC5		0.893		
	EntOC6		0.772		
	EntOC7	0.926	0.769	0.997	0.643
Organizational Performance	BP1		0.770		
	BP2		0.881		
	BP3		0.889		
	BP5	0.893	0.735	0.989	0.675

Similarly, Table 5.13 illustrated the factor loadings and reliability of the second order factors namely, TQM, EO and OC.

Table 5.13

*Reliability and convergent validity of the second-order constructs*

Construct	Items	Internal Reliability Cronbach's alpha	Convergent validity		
			loading	Composite Reliability	Average variance extracted
TQM	ML	0.904	0.715	0.998	0.743
	CF		0.761		
	HRM		0.944		
	IAS		0.941		
	CI		0.875		
EO	ESDB	0.660	0.909	0.939	0.736
	PI		0.996		
	R		0.693		
OC	GOC	0.856	0.883	0.982	0.886
	EntOC		0.996		

ML	Management Leadership;
CF	Customer Focus
HRM	Human Resource Management
IAS	Information and Analysis System
CI	Continuous Improvement
ESDB	Excellent Service Design and Benchmarking
EntOC	Entrepreneurial Organizational Culture
GOC	Group Organizational Culture
PI:	Proactive Innovativeness
R:	Risk Taking
TQM	Total Quality Management
EO	Entrepreneurial orientation
OC	Organizational Culture
BP	Organizational Performance

The results of second order factors showed high factor loadings indicating that the convergent validity of the measure was established.

### 5.3.3.2.2 Composite Reliability Analysis

The previous relevant statistical literature revealed that despite the importance of Cronbach's alpha in measuring the internal consistency among items, this index has been reported to have many limitations. The first limitation is that it tends to underestimate validating of the scale (Steenkamp & Van Trijip, 1991). Besides that, it assumes the equal reliabilities of all items but this assumption is rarely true (Bollen, 1989).

To overcome some of the limitations of using Cronbach's alpha, the Composite Reliability was suggested in the Structural Equation Modeling (SEM) literature (Anderson & Gerbing, 1988). However, Composite Reliability refers to the extent to which the items consistently represent the same latent construct (Hair *et al.*, 2010). Composite Reliability can be calculated using the formula, according to Hair *et al.*, (2010)

$$CR = \frac{(\sum_{i=1}^n \text{standardized loading})^2}{(\sum_{i=1}^n \text{standardized loading})^2 + (\sum_{i=1}^n \epsilon_i)}$$

Where  $\epsilon$  , is the error variance of each construct. The standardized loading can be obtained from the AMOS output and the error variance is the remaining from subtracting the squared standardized loadings from one.

However, as suggested by many researchers (e.g. Hair *et al.*, 2010; Shook *et al.*, 2004), the acceptable threshold for composite reliability is 0.70. Moreover, it has been also suggested that composite reliability between 0.60 and 0.70 may be accepted provided that all other conditions of construct validity are satisfied. Since the AMOS output could produce the reliability for all the items through the squared multiple

correlation, it is suggested, however, that the reliability for each item should be at least 0.50 (Fornell & Larcker, 1981).

The results in Table 5.12 and Table 5.13 revealed that the composite reliability of all the first-order as well second-order constructs were higher than the recommended level of 0.70. More specifically, the composite reliability of all the constructs ranged between 0.802 and 0.998 indicating high level of consistency among the items of each latent construct.

#### **5.3.3.2.3 The Average Variance Extracted (AVE)**

Average Variance Extracted (AVE) refers to the average percentage of the variance extracted commonly among the observed variables of a construct. However, AVE is an indicator of convergent validity (Fornell & Larcker, 1981).

Generally, it is calculated, as suggested by Hair *et al.* (2010), according to the following formula

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

Where  $\lambda_i$  is the standardized factor loading of the  $i^{th}$  item and  $n$  is the number of items measuring the respective construct. According to Hair *et al.* (2010), AVE of 0.5 or higher can suggest a good convergence. However, if the AVE is less than 0.5, this indicates on average that the construct explains less variance in the items than that remains (in error) unexplained.

As can be seen in Table 5.12 and Table 5.13, the AVE of the first as well as the second- order constructs of the study ranged between 0.507 and 0.886. Therefore, the

resulted AVE of all constructs of the study exceeded the recommended level of 0.5 indicating a good level of convergent validity of the measure.

To sum up, the results in Table 5.12 and Table 5.13 implied the convergent validity of the measure used in the study. Thus, it can be confidently concluded that the measure used in this study possessed the convergent validity that was established based on high items' factor loadings, high composite reliability of constructs and AVE that exceeded the recommended levels suggested in the relevant multivariate analysis literature. Moreover, in the following sub-section, the discriminant validity has been established and deeply justified.

#### **5.3.4 Discriminant Validity Analysis**

Discriminant validity is the third aspect of assessing the construct validity. However, it refers to the degree to which a set of items estimate only one construct and how this construct is distinctly estimated (Davis, 2000). In other words, high discriminant validity indicates that a construct is unique in measuring a phenomenon in such a way that cannot be captured by other constructs (Hair *et al.*, 2010). Moreover, the discriminant validity, in addition to ensuring distinctiveness, indicates that there are no cross loading issues related to the measured items. Following the suggestion of Venkatraman (1989), this study examined the discriminant validity by running the CFA on each pair of the constructs of the study. In the following sub-sections, further discussion was provided to establish the discriminant validity of TQM, EO and OC first-order factors as well as the second-order factors in the model.



#### **5.3.4.1 Discriminant Validity of first-order constructs of second-order TQM**

All the six constructs comprising TQM constructs were examined to exhibit their construct discriminant validity. That is to verify that there were separate factors, the chi-square differences were employed. In order to achieve this objective, a series of chi-square values were generated for the constraint model by constraining the correlation parameter between all pairs of constructs to one. In other words, the chi-square tests compared the constrained models assumed that the pair of constructs were identical with the unconstrained model in which the correlation among all pairs were not constrained.

Based on these tests, the discriminant validity between any pair of constructs is achieved if the chi-square difference (with one df) between the unconstrained and constrained models was significant. If the difference was significant, it can be concluded that the two constructs were correlated, yet distinct (Anderson & Gerbing, 1988). The results in Table 5.14 revealed that the chi-square differences ranged from 25.335 through 77.095 and all these values were significant since they all exceeded  $\chi^2(1) = 10.828$  at the 0.001 level of significance. Thus, the discriminant validity among TQM factors was supported.

Table 5.14

*Chi-Square difference test for assessing Discriminant Validity of TQM factors*

		<b>Unconstrained model</b> <b><math>\chi^2(75)=177.465</math></b>	
<b>Construct Pair</b>		<b>Constrained Model</b> <b><math>\chi^2(76)</math></b>	<b>Chi-Square</b> <b>Difference</b> <b><math>\Delta\chi^2</math></b>
ML ↔ CF		254.560	77.095***
ML ↔ HRM		244.520	67.055***
ML ↔ IAS		217.736	40.271***
ML ↔ CI		235.993	58.528***
ML ↔ ESDB		234.439	56.974***
CF ↔ HRM		254.380	76.915***
CF ↔ IAS		224.059	46.594***
CF ↔ CI		247.261	69.796***
CF ↔ ESDB		241.100	63.635***
HRM ↔ IAS		206.232	28.767***
HRM ↔ CI		220.112	42.647***
HRM ↔ ESDB		219.506	42.041***
IAS ↔ CI		202.803	25.338***
IAS ↔ ESDB		202.820	25.355***
CI ↔ ESDB		217.213	39.748***
ML	Management Leadership		
CF	Customer Focus		
HRM	Human Resource Management		
IAS	Information and Analysis System		
CI	Continuous Improvement		
ESDB	Excellent Service Design and Benchmarking		
***: $p < 0.001$			

### 5.3.4.2 Discriminant Validity of First-Order Constructs of EO

Similarly, in order to assess the discriminant validity among the constructs of EO, a chi-square test was generated. It was clear from the results illustrated in Table 5.15 that the chi-square difference between Proactive Innovativeness and Risk-Taking was significant at the 0.001 level of significance.

Table 5.15

*Chi-Square difference test for assessing Discriminant Validity of EO factors*

Construct Pair	Unconstrained model $\chi^2(5)=20.234$	
	Constrained Model $\chi^2(6)$	Chi-Square Difference $\Delta\chi^2$
PI ↔ R	94.194	73.960***

PI: Proactive Innovativeness

R: Risk-Taking

\*\*\*:  $p < 0.001$

### 5.3.4.3 Discriminant Validity of First-Order Constructs of OC

Following the same criteria as in the case of TQM and EO, this study conducted the  $\chi^2$  difference test to examine the discriminant validity among the two constructs of OC. Two models were generated one in which the covariance between GOC and EntOC was set to be free estimated while this covariance was set to be one in the other. The results of the comparison between the two models revealed that perfect correlation between the two dimensions significantly worsened the model fit at the 0.001 level of significance. This results, however, indicating that the two dimensions of OC even correlated yet distinct and passed the discriminant validity test. Table 5.16 showed the results obtained.

Table 5.16

*Chi-Square difference test for assessing Discriminant Validity of OC factors*

Construct Pair	Unconstrained model $\chi^2(26)=85.672$	
	Constrained Model $\chi^2(27)$	Chi-Square Difference $\Delta\chi^2$
GOC ↔ EntOC	114.639	28.967***

GOC: Group Organizational Culture

EntOC: Entrepreneurial Organizational Culture

\*\*\*:  $p < 0.001$ .

After the exhibition of discriminant validity for second-order constructs namely TQM, EO and OC, the next step was to exhibit the discriminant validity of main latent variables of the study. Therefore, the following sub-section examined the discriminant validity among Total Quality Management (TQM), Entrepreneurial Orientation (EO), Organizational Culture (OC) and Organizational Performance (BP).

#### 5.3.4.3 Discriminant Validity of First-Order Constructs for the Entire Model

To exhibit the discriminant validity of the main latent variables of the entire model namely, TQM, EO, OC and Organizational Performance (BP), chi-square difference test series were generated. However, the results in Table 5.17 depicted the chi-square difference between the constrained and unconstrained models. All the chi-square differences were found to be significant,  $\chi^2(1) = 10.828$  at the 0.001 level of significance, indicating the establishment of discriminant validity among the constructs of the study.

Table 5.17

*Summary of Discriminant Validity for the entire model*

Construct Pair	Unconstrained model $\chi^2(501)=1061.46$	
	Constrained Model $\chi^2(502)$	Chi-Square Difference $\Delta\chi^2$
TQM ↔ EO	1066.230	121.913***
TQM ↔ OC	1014.142	69.825***
TQM ↔ BP	1069.069	124.752***
EO ↔ OC	1040.158	95.841***
EO ↔ BP	1091.497	147.180***
OC ↔ BP	1054.543	110.226***

\*\*\*:  $p < 0.001$

Having established the discriminant validity of the measure, this study proceeded further to exhibit the Criterion validity of the measure as reported in the following.

### 5.3.5 The Criterion-Related Validity

In general, Criterion-related validity refers to the significant relationship between the independent variables and the criterion they are used to measure. That is the extent to which independent variables are related to the dependent variable of the undertaken study (Badri, Davis & Davis, 1995; Flynn *et al.*, 1994). Following the common methodology in examining the criterion validity (e.g. Ahire *et al.*, 1996; Hair *et al.*, 2010; Sarap *et al.*, 1989), this study examined the criterion-related validity by testing the correlation between each construct and the organizational performance. This was justified by the fact that the ultimate goal of

implementing any strategy is to enhance the overall organizational performance. Based on the results reported in Table 5.18, all the constructs undertaken in this study were highly correlated with the criterion variable supporting the criterion-related validity. In other words, all the constructs used in the model were significantly correlated with the organizational performance at the 0.01 level of significance. These results, however, supported the existence of criterion-related validity of the measure.

Table 5.18

*Test of Criterion-Related Validity*

Construct	Correlation with Bank performance
Management. Leadership (ML)	0.379**
Customer Focus (CF)	0.433**
HRM	0.398**
Information and Analysis System (IAS)	0.279**
Continuous Improvement (CI)	0.405**
Excellent Service Design and Benchmarking	0.355**
Proactive Innovativeness (PI)	0.416**
Risk Taking	0.290**
Group Organizational Culture	0.310**
Entrepreneurial Organizational Culture	0.356**

\*\* :  $p < 0.01$  (2-tailed).

Throughout the processes of model refinement and construct validity establishment, it was noticed that the TQM dimensions became six instead of the eight initially

adapted from the past literature. Moreover, the EO construct was found to have only two factors underlying its items instead of three adapted from the past EO literature. In a similar fashion, the OC construct's items were highly loaded on two factors in contrast to our expectation. This new dimensional structure of the understudy constructs implied the restatement of the hypotheses to be in line with the results obtained. In the following sub-section, the hypotheses of the study were restated according to the results of EFA and CFA.

### 5.3.6 Hypotheses Restatement

According to the results obtained from factor analysis using SPSS and confirmatory factor analysis using AMOS, there were changes in the number and names of the dimensions comprising TQM, EO and OC constructs. More specifically, Table 5.19 illustrated the number and names of TQM and EO constructs.

Table 5.19

*The old and new dimensional structures of TQM, EO and OC*

Construct	Old Dimensions	New Dimensions
TQM	Management leadership	Management leadership
	Customer Focus	Customer Focus
	HRM	HRM
	Information and Analysis System	Information and Analysis System
	Continuous Improvement	Continuous Improvement
	Service Design	Excellent Service Design and Benchmarking
	Benchmarking	

## Strategic Planning

EO	Innovativeness	Proactive Innovativeness
	Proactiveness	
	Risk-Taking	Risk-Taking
OC	Organizational Culture	Group Organizational Culture
		Entrepreneurial Organizational Culture

Following the above structure, the hypotheses of this study were restated as in the following:

**Hypothesis 1 (H1): TQM has a significant effect on the organizational performance.**

**Hypothesis 2 (H1a): TQM- Management leadership (ML) has a significant effect on the organizational performance.**

**Hypothesis 3 (H1b): TQM-Customer focus (CF) has a significant effect on the organizational performance.**

**Hypothesis 4 (H1c): TQM-HRM has a significant effect on the organizational performance.**

**Hypothesis 5 (H1d): TQM-Information and Analysis System (IAS) has a significant effect on the organizational performance.**

**Hypothesis 6 (H1e): TQM-Continuous Improvement (CI) has a significant effect on the organizational performance.**



**Hypothesis 7 (H1f): TQM-Excellent Service Design and Benchmarking (ESDB) has a significant effect on the organizational performance.**

**Hypothesis 8 (H2): EO has a significant effect on the organizational performance.**

**Hypothesis 9 (H2a): Proactive Innovativeness (PI) has a significant effect on the organizational performance.**

**Hypothesis 10 (H2b): Risk-Taking (R) has a significant effect on the organizational performance.**

**Hypothesis 11 (H3): Group organizational culture (OC) moderates the relationship between TQM and the organizational performance.**

**Hypothesis 12 (H3a): Group organizational culture (OC) moderates the relationship between TQM-Management leadership (ML) and the organizational performance.**

**Hypothesis 13 (H3b): Group organizational culture (GOC) moderates the relationship between TQM-Customer Focus (CF) and the organizational performance.**

**Hypothesis 14(H3c): Group organizational culture (GOC) moderates the relationship between TQM-HRM and the organizational performance.**

**Hypothesis 15(H3d): Group organizational culture (GOC) moderates the relationship between TQM-IAS and the organizational performance.**

**Hypothesis 16(H3e): Group organizational culture (GOC) moderates the relationship between TQM-CI and the organizational performance.**

**Hypothesis 17(H3f): Group organizational culture (GOC) moderates the relationship between TQM- ESDB and the organizational performance.**

**Hypothesis 18(H3g): Group organizational culture (GOC) moderates the relationship between entrepreneurial orientation (EO) and the organizational performance.**

**Hypothesis 19(H3h): Group organizational culture (GOC) moderates the relationship between Proactive Innovativeness (PI) and the organizational performance.**

**Hypothesis 20(H3i): Group organizational culture (GOC) moderates the relationship between Risk-Taking (R) and the organizational performance.**

**Hypothesis 21 (H4): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM and the organizational performance.**

**Hypothesis 22 (H4a): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-Management leadership (ML) and the organizational performance.**

**Hypothesis 23 (H4b): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-Customer Focus (CF) and the organizational performance.**

**Hypothesis 24(H4c): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-HRM and the organizational performance.**

**Hypothesis 25(H4d): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-IAS and the organizational performance.**

**Hypothesis 26(H4e): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM- CI and the organizational performance.**

**Hypothesis 27(H4f): Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM- ESDB and the organizational performance.**

**Hypothesis 28(H4g): Entrepreneurial organizational culture (EntOC) moderates the relationship between Entrepreneurial Orientation (EO) and the organizational performance.**

**Hypothesis 29(H4h): Entrepreneurial organizational culture (EntOC) moderates the relationship between Proactive Innovativeness (PI) and the organizational performance.**

**Hypothesis 30(H4i): Entrepreneurial organizational culture (EntOC) moderates the relationship between Risk-Taking (R) and the organizational performance.**

Before undertaking the hypotheses testing procedures, this study performed the descriptive statistics analysis to have an initial summary of the level of TQM, EO and OC practices in the Yemeni banking industry.

#### **5.4 Descriptive Analysis of the Constructs**

To get an initial summary of the data, a descriptive analysis was conducted to describe the general situation of TQM practices, entrepreneurial orientation (EO), organizational culture (OC) in the Yemeni bank branches. As can be seen in Table 5.20, the mean, standard deviation, maximum and minimum of the constructs were reported. These results reflected the level of implementation of each TQM factors, entrepreneurial orientation (EO) strategy and organizational culture (OC). Moreover, these results showed the perceived level of organizational performance of banks in the Yemeni context.

As tabulated in Table 5.20, the minimum value of most of the constructs was 1.00 and the maximum value of most of the constructs was 5.00 which are the minimum and maximum levels in the Likert scale used in this study. In addition to that, the same data revealed that Management Leadership had the maximum mean value among other TQM factors with the second lowest standard deviation. These results indicated that branch managers highly emphasized the importance of leadership practices in achieving better overall performance. The standard deviation value showed that the branch managers were not significantly different in their opinions regarding the importance of Management leadership to the overall organizational performance.

Came next in importance, from branch managers' perspective, are Information and Analysis System (IAS) and the Continuous Improvement (CI) practices. The means of these practices were 3.98 and 3.97 with standard deviations as 0.82 and 0.82 respectively. In general, the results in Table 5.20 indicated the emphasis put by branch managers on leadership practices that lead to enhancing the

overall quality through proper information system utilization to improve the process in their branches in a continuous basis. This, moreover, indicated that the importance of Management Leadership (ML), Information and Analysis System (IAS) and Continuous Improvement (CI) practices are highly perceived by the Yemeni bank branch managers.

Table 5.20  
*Descriptive Statistics of the Constructs (n=201)*

	Mean	Standard Deviation	Min	Max
Construct				
TQM	3.88	0.67	1.25	4.83
Management. Leadership (ML)	4.08	0.77	1.00	5.00
Customer Focus (CF)	3.78	0.74	1.50	5.00
HRM	3.82	0.84	1.00	5.00
Information and Analysis System (IAS)	3.98	0.82	1.00	5.00
Continous Improvement (CI)	3.97	0.83	1.00	5.00
Excellent Service Design and Benchmarking (ESDB)	3.63	0.85	1.00	5.00
EO	4.04	0.66	1.00	5.00
Proactive Innovativeness (PI)	3.89	0.81	1.00	5.00
Risk Taking (R )	4.19	0.71	1.00	5.00
OC	3.96	0.74	1.00	5.00
Group Organizational Culture (GOC)	4.06	0.79	1.00	5.00
Entrepreneurial Organizational Culture (EntOC)	3.85	0.79	1.00	5.00
Organizational Performance (BP)	3.43	0.69	1.00	5.00

On the other hand, the results in Table 5.20 revealed that Excellent Service Design and Benchmarking (ESDB) had the lowest mean value as 3.63 with standard deviation of 0.85. Moreover, Customer Focus (CF) construct was reported to have

the second lowest mean value among TQM factors as 3.78 with the lowest standard deviation. These results, however, indicated the lack of customer and market focus being practiced by the Yemeni bank branches and how this led to poor practices related to excellent service design and benchmarking. In other words, these results provided evidence that more efforts should be exerted to increase the market and customer focus to be the culture of doing business in the banking industry.

Similarly, the data in Table 5.20 revealed that among the entrepreneurial orientation (EO) dimensions, risk taking was reported to have the highest mean value as 4.19 with the lowest standard deviation as 0.71 indicating the propensity of bank branches to take the risk to advance their banking operations. In addition to that, the mean value of Proactive Innovativeness (PI) as 3.89 with a standard deviation of 0.81 indicated that Yemeni banks lack the proper planning and innovativeness with which they can take the advantage of available business opportunities.

Regarding the organizational culture(OC) construct, the results in Table 5.20 showed that the Yemeni bank branches' managers had a common agreement that while group organizational culture (GOC) was perceived high with mean value of 4.06, the entrepreneurial organizational culture (EntOC) was not. In other words, these moderate mean values with the same standard deviation reflected that the role of organizational culture (OC) in advancing the TQM strategy and entrepreneurial practices has not been fully appreciated by the Yemeni bankers.

As expected, the results in Table 5.20 revealed that the organizational performance of Yemeni banks was assessed to be even above the average but not very high as normally obtained from self-assessment performance measuring experience. As it is always the case that self-assessment, the respondents tend to

right high their performance. Numerically, the mean value of organizational performance was 3.64 with 0.69. These results generally reflected the common low perception the Yemeni bank branches' managers had regarding the organizational performance. Moreover, the small standard deviation indicates that this is the common perception of managers of most of the branch managers.

Throughout the preceding sections of this study, various aspects of the construct validity of the measure used in this study have been established. More specifically, the measure of this study was reported to possess the convergent and discriminant validity. In addition to that, the Criterion-related validity also was proved. As discussed in section 4.10, the face or content validity of the measure has been taken care of through the process of measure development. However, in the following sections, the focus was on testing the hypotheses of the study through the analysis carried out using Pearson correlation and Multiple Linear Regression Analysis.

## **5.5 Hypotheses Testing Procedures**

In its procedures to test the hypotheses in order to achieve the research objectives, this study started with Pearson Correlation analysis before, undertaking the Hierarchical Regression Analysis techniques. Pearson correlation analysis was used to get an initial picture of the association relationships between the dimensions of TQM, EO and OC and the organizational performance. To test the hypotheses regarding the direct hypotheses of this study, the multiple regression analysis techniques were employed. In order to examine the moderating effect of group and entrepreneurial organizational cultures on the relationships between the dimensions of TQM, EO and

the organizational performance of banks, hierarchical regression analysis was employed. In other words, the use of hierarchical linear regression helped in the examination of the moderating effect of GOC and EntOC on the relationships between TQM , EO and their dimensions and the organizational performance of banks in Yemen. It is worth mentioning that all the subsequent analysis in this study used the variables resulted from the refined model through the measurement model fit processes as detailed in section 5.5.2. In the following, the results of Pearson correlation and regression analysis were reported.

### **5.5.1 Pearson Correlation Analysis**

To illustrate the relationships between TQM, EO and OC and their dimensions and the organizational performance, the Pearson correlation analysis was used. More specifically, the purpose of using Pearson Correlation Analysis was to examine the relationships between TQM factors, entrepreneurial orientation (EO) dimensions, organizational culture (OC) dimensions and the organizational performance of banks in Yemen. As illustrated in Table 5.21, all the relationships between the dimensions of TQM, EO, OC and the organizational performance of Yemeni banks were found to be statistically significant at the 0.01 level of significance.

In determining the strength of the relationships between each independent and the dependent variable, Hair *et al.* (2010), suggested that while the correlation of 0 indicates that there is no relationship, the correlation of  $\pm 1.0$  indicates the existence of perfect relationship. In interpreting the correlation between 0 and 1.0, Cohen's (1988) criterion was followed. When the correlation ( $r$ ) is between  $\pm 0.1$  and  $\pm 0.29$ , the relationship is said to be small, when  $r$  is between  $\pm 0.30$  and  $\pm 0.49$ , the relationship is



described as medium. Finally, the relationship is said to be strong when the correlation is above  $\pm 0.50$ .

Table 5.21

*Pearson correlation Analysis*

Construct	Correlation with Organizational Performance
Total Quality Management (TQM)	0.454**
Management. Leadership (ML)	0.379**
Customer Focus (CF)	0.433**
Human Resource Management (HRM)	0.398**
Information and Analysis System (IAS)	0.279**
Continous Improvement (CI)	0.405**
Excellent Service Design and Benchmarking (ESDB)	0.355**
Entrepreneurial Orientation (EO)	0.413**
Proactive Innovativeness (PI)	0.416**
Risk-Taking (R )	0.290**
Group organizational culture (GOC)	0.310**
Entrepreneurial organizational culture (EntOC)	0.356**

\*\* :  $p < 0.01$  (2-tailed).

Based on the results in Table 5.21, all the Pearson correlation coefficients were found to be significant at the 0.01 level of significance. In other words, this data of this study supported the existence of significant relationships between TQM construct and its factors and organizational performance of banks in Yemen. Similarly, the results,

also, supported the existence of significant relationships between the dimensions of EO and the organizational performance of Yemeni banks. Table 5.22 in the following provided the summary of the obtained results.

Table 5.22

*Summary of the correlation analysis*

<b>Relationship</b>	<b>Correlation Coefficient (r )</b>	<b>Decision</b>
There is a significant relationship between Management Leadership and the organizational performance of banks.	0.454**	Significant
There is a significant relationship between Management Leadership and the organizational performance of banks.	0.379**	Significant
There is a significant relationship between Customer Focus and the organizational performance of banks.	0.433**	Significant
There is a significant relationship between HRM and the organizational performance of banks.	0.398**	Significant
There is a significant relationship between Information and Analysis System and the organizational performance of banks.	0.279**	Significant
There is a significant relationship between Continuous Improvement and the organizational performance of banks.	0.405**	Significant

There is a significant relationship between Excellent Service design and Benchmarking and the organizational performance of banks. 0.355\*\* Significant

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There is a significant relationship between Proactive Innovativeness (PI) and the organizational performance of banks. 0.413\*\* Significant

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There is a significant relationship between Proactive Innovativeness (PI) and the organizational performance of banks. 0.416\*\* Significant

There is a significant relationship between Risk-Taking (R) and the organizational performance of banks. 0.290\*\* Significant

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There is a significant relationship between group organizational culture (GOC) and the organizational performance of banks. 0.310\*\* Significant

There is a significant relationship between entrepreneurial organizational culture (EntOC) and the organizational performance of banks. 0.356\*\* Significant

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\*\* :  $p < 0.01$  (2-tailed).

### 5.5.2 Why SEM analysis was not used to test the moderating effect of GOC and EntOC?

Since this study employed the AMOS package to establish the goodness-of-fit of the measurement model and establish the construct validity of the measure used. It was, however, reasonable to explain why this study chose to use Hierarchical Multiple Regression (HMR) to test the hypotheses postulated in this study. The rationale

behind choosing multiple regression analysis instead on SEM techniques can be provided as in the following paragraphs.

First, it has been widely known in the SEM literature that the sample size to be used with SEM analysis has been the main issue. Moreover, SEM has been known in the multivariate analysis techniques to be a large-sample technique (Kline, 2011). In addition to that, Jackson (2003) emphasized that researchers should ensure that the ratio between the sample size they have to the number of parameters to be ideally at 20:1 or minimum at 10:1. In the case of this study, the overall number of responses collected were 201. In order to be able to test the moderating effect of GOC and EntOC on the hypothesized model, the data should be split according to high and low cultural categorizations. The sample size for one group fall under hundred with which the model was not recommended to be run (Kline, 2011). Furthermore, it has been stated by Kline (2011) that as the sample size-parameters ratio decreases below 10:1, the results of the study lacks the reliability required. In general, this study chose not to use SEM techniques since the trustworthiness of the results generated could have been questionable.

Second, the purpose of this study was twofold. First, this study intended to examine the predictive power of TQM, EO and their dimensions on the organizational performance. Second, this study, also, intended to examine the moderating effect of GOC and EntOC on the relationships between TQM, EO and their dimensions and the organizational performance. The achievement of the objectives of this study was more reliable through conducting the regressions analysis as the mean to test the hypotheses. However, the refined model obtained through the EFA and CFA processes was used to perform the hierarchical regression analyses. Testing the regression assumptions and the results concerning the regression analysis were reported in the following.

### **5.5.3 Regression Analysis**

Regression analysis is one of the most widely used statistical techniques in varieties of applications most of the science disciplines (Hair *et al.*, 2010). Multiple regression analysis is a multivariate statistical technique that can be used to examine the relationship between a set of independent variables and a single dependent variable.

Before undertaking the multiple regression analysis, the data of this study were examined to fulfill various multivariate assumptions to ensure the reliability of the conclusion drawn subsequently. The main assumptions that were tested in prior to conducting the regression analysis are linearity, normality, homoscedasticity and independence of the error terms. Before testing for these assumptions, this study had undertaken the investigation to detect outliers and check the multicollinearity.

Based on the discussion provided in the following sub-section, it was concluded that all the statistical assumptions required for multivariate statistical techniques were satisfied. Satisfaction of these assumptions ensures that the obtained results were valid and reliable. Moreover, these assumptions' tests and subsequent results of regression analysis were reported in the following sub-sections.

#### **5.5.3.1 Preparing data for Multiple Linear Regression Analysis**

The ratio between the number of observations to the number of variables included in the study should be at least 5:1 and ideally 20:1, as suggested by Hair *et al.* (2010). However, this study had 11 variables and the number of responses collected was 201. Moreover, Green (1991) in determining the minimum data size he considered the power level desired, level of significance and number of predictors. Consequently he suggested the following formula to calculate the size required (N

$\geq 50 + 8m$ , where  $m$ = number of independent variables). Based on this formula, the minimum required number of observations is 130 lower than the number of observations this study managed to collect. Thus, this study had the acceptable number of observation to conduct the multiple linear regression analysis.

Before proceeding to carry out the multiple regression analysis, this presence of multicollinearity and outlier was examined. However, it was found that the data has no serious issues related to outliers and multicollinearity. In addition to that, the performed investigations revealed that all the necessary conditions to conduct the regression analysis were satisfied. The procedures used by this study are reported in the following sub-sections.

#### **5.5.3.1.1 Detecting Outliers**

Outliers are defined to be the observations that have unique characteristics and differ distinctly from others (Hair *et al.*, 2010). Moreover, outliers can be detected using univariate, bivariate and multivariate techniques based on the number of variables. Among the commonly used method to detect outliers is Mahalanobis distance measure. This method, according to Hair *et al.* (2010), measures the distance of each observation from the mean center of all observations in multidimensional space. In detecting the outlier observations, Mahalanobis distance values were examined and compared to the critical values in Chi-square distribution table. The results of this study showed that Mahalanobis distances of all the observations ranged between 0.601 and 36.802. Referring to the Chi-Square distribution table, the critical value at 0.001 level of significance and 9 degrees of freedom was found to be 27.877. However, these results indicated the existence of outlier observations.

In order to identify the outlier observations, a further examination of the

SPSS package results saved in the data as Mahalanobis distance was compared to the value of 27.877. As a result of this comparison, only five observations with Mahalanobis distances ranged between 28.056 and 36.802 were considered as outliers. Among 201 observations, only five observations were considered as outliers representing a small ratio. Following the suggestion of Coakes and Steed (2003), the outlier observations should be eliminated from the data if their number is big and expected to affect the reliability of the results obtained, this study opted to retain the detected outliers for further analysis. In the following sub-section, this study examined the existence of multicollinearity among the variables of the study.

#### **5.5.3.1.2 Checking the Multicollinearity**

Multicollinearity is defined as the extent to which the effect of any variable can be accounted for by other variables (Hair *et al.*, 2010). The increase of multicollinearity raises the difficulty of interpretation of different variables' effects. This study used the tolerance value and Variance Inflation Factor (VIF) to examine the presence of multicollinearity issue among the variables of the study. The tolerance is defined, according to Hair *et al.* (2010), as the variability in a variable that is not accounted for by other variables. Moreover, the VIF indicator is the reciprocal of the tolerance variable.

However, Table 5.23 showed that the tolerance values of all variables ranged between 0.178 and 0.614. Moreover, the values of VIF for all the variables were found to be ranged between 1.628 and 5.605. These results indicated that the tolerance values of all the variables of this study were more than 0.1 and consequently the VIF were below the threshold value of 10 suggested by Hair *et al.* (2010). In other words, the tolerance and VIF values of the variables included in this

study were within the recommended threshold values, it was concluded that the issue of multicollinearity issue was not present in this study.

Table 5.23

*Multicollinearity Test*

Variables	Tolerance value	VIF
Management. Leadership (ML)	0.551	1.815
Customer Focus (CF)	0.614	1.628
HRM	0.265	3.768
Information and Analysis System (IAS)	0.243	4.117
Continuous Improvement (CI)	0.326	3.072
Excellent Service Design and Benchmarking (ESDB)	0.369	2.712
Proactive Innovativeness(PI)	0.333	3.006
Risk Taking	0.570	1.755
Group OC	0.384	2.605
Entrepreneurial OC	0.178	5.605

In general, it can be confidently concluded that this study had no serious outlier observations and the multicollinearity was not a concern.

Prior to conducting the regression analysis, this study devoted the following sub-sections to examine the assumptions of multiple linear regression through the residual analysis (Hair *et al.*, 2010). More specifically, the proceeding sections discussed the assumptions of normality, linearity, homoscedasticity and finally the independence of error terms.



### 5.5.3.1.3 Normality Testing

The normality assumption was examined through the normal probability plots of the residuals. The histogram and the normal probability plot (P-P Plots) of the regression standardized residual was the tool based on which the normality was confirmed. As can be seen in Figures 5.12 and 5.13, the data showed that the behavior of the data distribution did not deviate substantially from the normal curve associated. Thus, it can be concluded that the data approximately followed normal distribution.

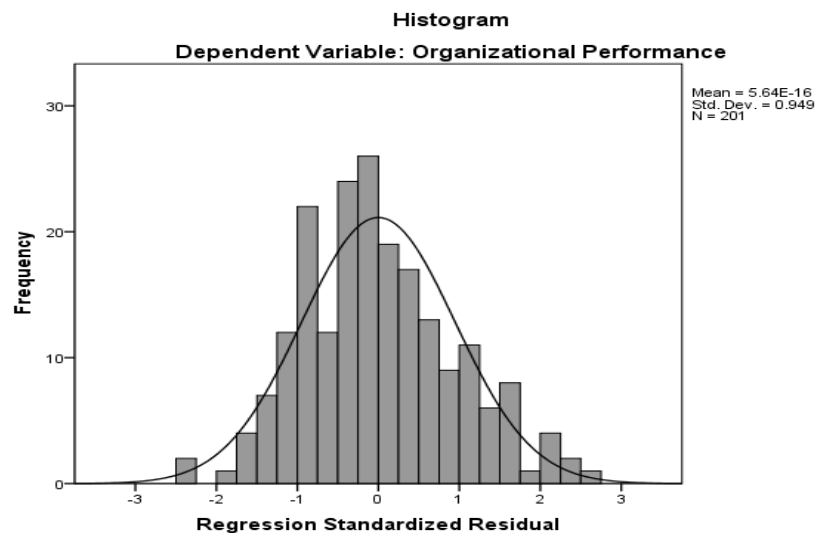


Figure 5.12

*Histogram of the regression residuals*

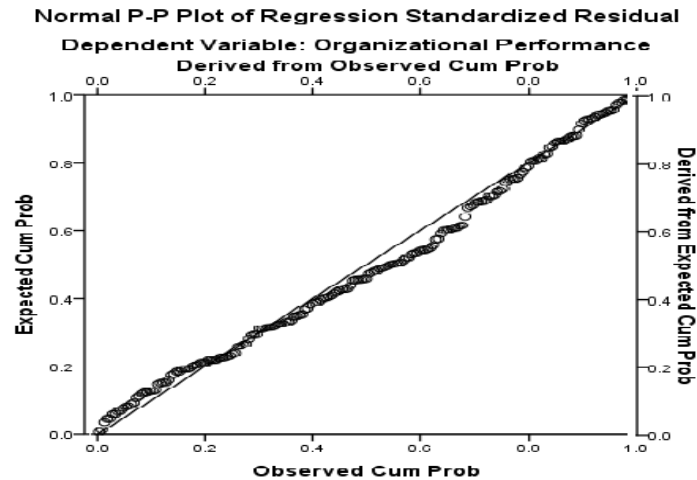


Figure 5.13

*Testing Normality using Normal Probability Plot*

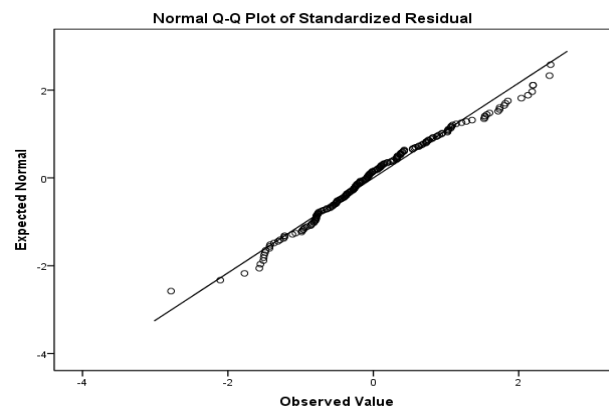


Figure 5.14

*Testing Normality using Q-Q Plot*

The assumption of normality was also confirmed by examining both P-P Plot and Q-Q plot. The two plots showed that the data lie on the straight lines in both graphs indicating that the data were approximately normally distributed. As a confirmation, the normality of the data was examined by testing the normality of the residuals. The results of residual analysis, however, showed that no major deviation from the normality assumption. Referring to the resulted residual variable in the SPSS output

the skewness and kurtosis of the residuals, these statistics located within three times the standard error indicating no serious deviation from normality. More specifically, the skewness and kurtosis values were reported to be 0.353 and 0.235 with standard errors 0.172 and 0.341 respectively. However, these results showed that both skewness and kurtosis fell in the range -1.0 and 1.0 indicating an approximate normality of the residuals( Hair *et al.*, 2010).

Additionally, the assumption of normality was, aslo, confirmed by employing the Kolmogrov-Smirnov test. However, the results depicted in Table 5.24 showed that the assumption of normality was not rejected at the 0.01 level of significance.

Table 5.24

*Normality test of the Residuals*

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	0.068	201	0.024	0.983	201	0.015

Based on the previous discussion, it can be concluded that the normality of the error terms was confirmed. Having confirmed the assumption of normality of the error terms, the process should follow to test the linearity, homoscedasticity and independence of the error terms as discussed in the following sub-section.

#### **5.5.3.1.4 Testing the Linearity, Homoscedasticity and the Independence of Errors**

This study examined the Linearity, homoscedasticity and the independence of the error terms through examining the scatterplot of the residuals.

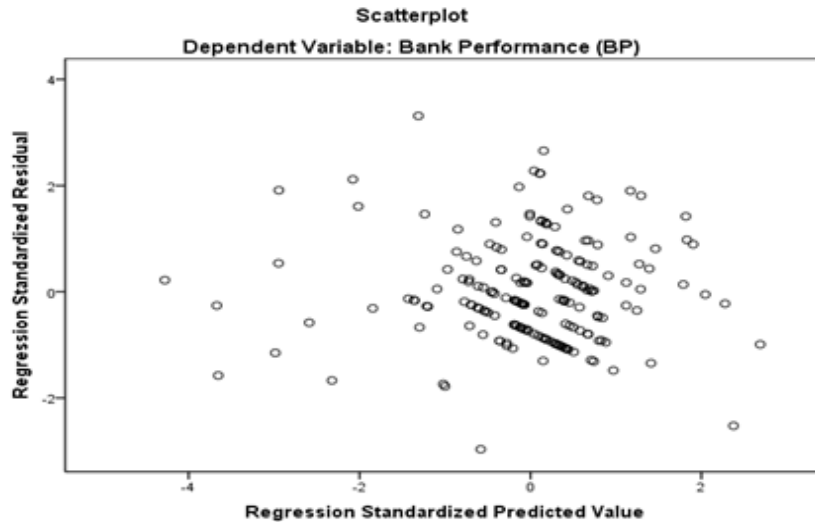


Figure 5.15  
*Scatterplot of the residuals*

The scatterplot in Figure 5.15 showed that there was no clear relationship between the residual and the predicted value. Following the suggestion of Hair *et al.* (2010), since the scatterplot showed no clear relationship between residuals and predicted values, it proves the linearity, homoscedasticity and the independence of residuals.

Moreover, the linearity assumption was also examined through the scatterplots of each independent variable with the dependent variable or partial correlation plots between each independent variables and the dependent variable. Since all these plots, as can be seen in Figure 5.16, showed no nonlinear pattern, they substantiated the assumption of linearity (Hair *et al.*, 2010).

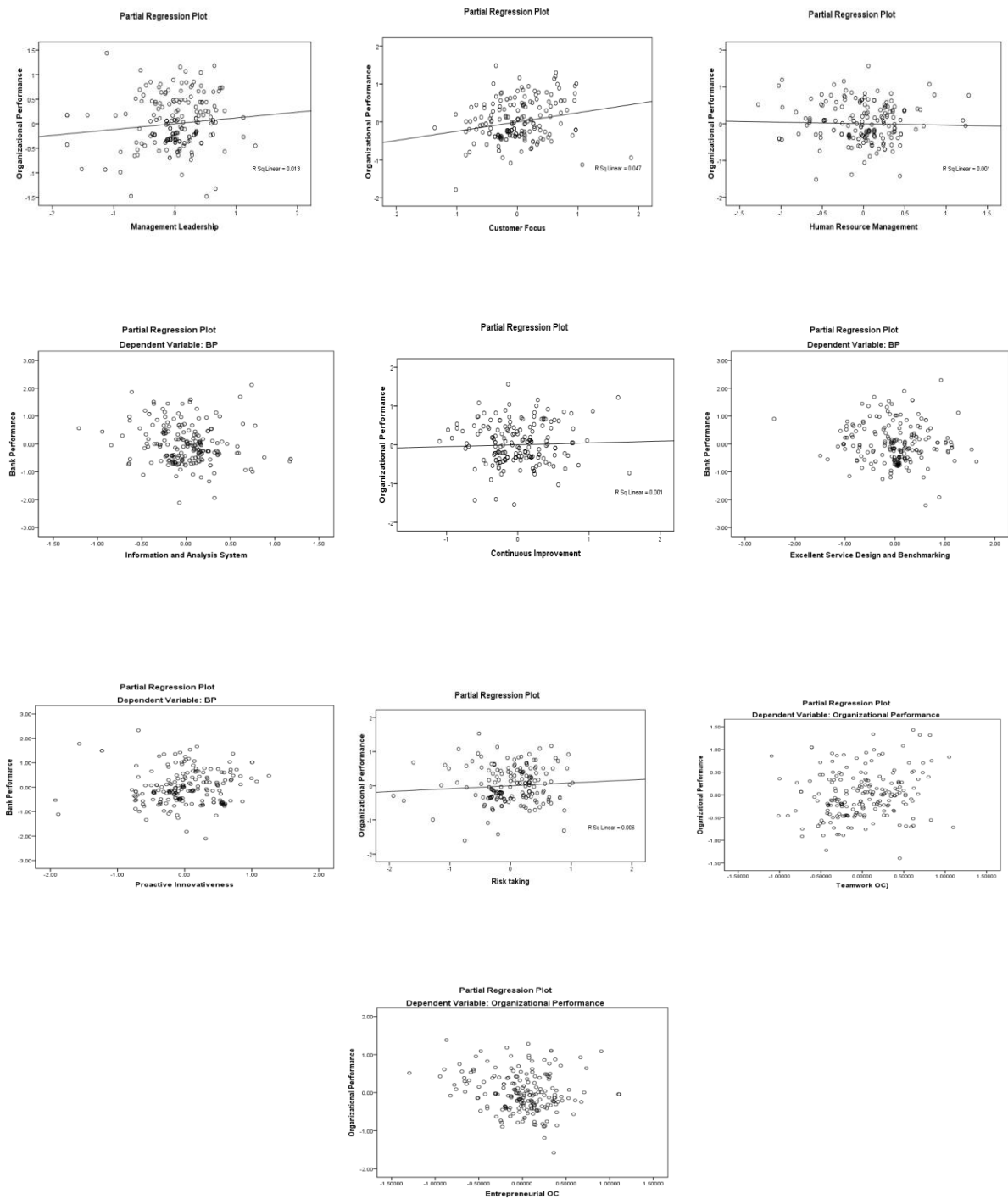


Figure 5.16

*Partial Correlation Plots*

### **5.5.3.2 Regression Analysis Results to Predictive Power of the Variables**

After all the regression assumptions were checked and found to be satisfied, this study ran the regression analysis using SPSS to examine the predictive power of TQM, EO and their dimensions towards the organizational performance. In other words, the main purpose of the carried out multiple regression analysis was to determine the predictive power of each independent variable toward the dependent variable. Moreover, it was used to identify and compare the predictive power of the dimensions of TQM, EO constructs toward the organizational performance.

According to the hierarchical regression performed and its results reported in Table 5.25, 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. Additionally, the results revealed that TQM had greater impact on the organizational performance than that of the EO. The same conclusions apply when organizational culture (OC) was present in the model as can be seen at Table 5.25. These results, however, supported the hypotheses H1 and H8 in which the impact of TQM and EO on the organizational performance were claimed to be significant.

Table 5.25

*Examining Variables' predictive power*

Variables in the model	Standardized $\beta$	
	Composite model	Detailed model
Branch		-0.02
age		
No. Of Employees		-0.092
No. Of Customers		0.294**
TQM	0.329***	
EO	0.189*	
ML		0.147
CF		0.258**
HRM		0.199
IAS		(-)0.349**
CI		0.129
ESDB		0.019
PI		0.166
R		0.109

\* :  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$

In addition to that, results in Table 5.25 revealed that only Customer Focus (CF) and Information and Analysis were found to be powerful predictors of organizational performance at the 0.01 level of significance with the indicators ( $\beta=0.258$ ,  $t=3.458$ ,  $p<0.01$ ) and ( $\beta= - 0.349$ ,  $t= - 3.106$ ,  $p<0.01$ ) respectively. These results, however, supported the hypotheses H3 and H5 respectively.

To summarize the results regarding the hypotheses related to the predictive power of TQM, EO and their dimensions towards the organizational performance, it can be concluded that out of the hypotheses H1 through H10, only H1, H3, H5 and H8 have been supported.

### **5.5.3.3 Regression Analysis Results to examine the Moderating effect**

As stated earlier, this study employed hierarchical multiple regression to examine the moderating effect of group organizational culture (GOC) and entrepreneurial organizational culture (EntOC) on the relationships between TQM, EO and their dimensions and the organizational performance.

The hierarchical regression results were reported according to the analysis stages. First, this study examined the moderating effect of GOC on the above mentioned relationships. Second, the study examined the moderating effect of EntOC on the same relationships. That is, the analysis focused on the moderating effect of GOC and EntOC on the relationships between TQM, EO and their dimensions and the organizational performance.

Following the suggestion of Frazier, Tix, and Barron (2004), 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.

As suggested by 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.

According to the analysis of hierarchical multiple regressions, the results were



reported in the following fashion:

#### **5.5.3.3.1 The moderating effect of the Group Organizational Culture (GOC) on the Composite TQM, EO-Organizational Performance Relationships**

The analysis of this part was reported in the following:

##### **5.5.3.3.1.1 The moderating effect of Group Organizational Culture (GOC)**

According to the regression results depicted in Table 5.26 the analysis was through the following four models:

**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 5.26, this model was significant since F value was significant ( $F=4.823$ ,  $p<0.01$ ). Also, the results in Table 5.26 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 accounted for by these controlling variables was only 6.8 % as indicated by  $R^2$ .

**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  $R^2$  of 30.3 % and significant F change at the 0.001 level of significance as illustrated in Table 5.26. 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, TQM and EO were powerful

predictors of the organizational performance of banks with the indicators ( $\beta=0.329$ ,  $t=3.637$ ,  $p<0.001$ ) and EO ( $\beta=0.189$ ,  $t=2.065$ ,  $p<0.05$ ) respectively.

**Model 3:** the group organizational culture (GOC) was introduced to this model. However, this model was proven to be significant at the 0.001 level ( $F=14.108$ ,  $P<0.001$ ) accounting for 30.4 % of the variance in the model. This model, however, did not show significant difference from the previous model since  $R^2$  change was not statistically significant due to the insignificant increase of the model predictive power due to the introduction of OC (Hair *et al.*, 2010). In this model the number of customer was found to be a significant predictor of organizational performance at the 0.001 level of ( $\beta=0.372$ ,  $t=4.225$ ,  $p<0.001$ ) and TQM ( $\beta=0.300$ ,  $t=2.876$ ,  $p<0.01$ ). On the other hand, the predictive effect of EO even reduced by introducing OC variable to be significant only at the 0.06 level of significance ( $\beta=0.182$ ,  $t=1.962$ ,  $p<0.06$ ).

Table 5.26

*Examining the Moderating effect of GOC*

	Model 1	Model 2	Model 3	Model 4
Variables in the model	Controlling variables	Predictors	Moderators	Interactions
Branch age	-0.007	0.031	0.038	0.015
No. of Employee	-0.113	-0.134	-0.139	-0.143
No. of Customers	0.333**	0.364***	0.372***	0.362***
TQM		0.329***	0.3**	0.253*
EO		0.189*	0.182	0.211*
GOC			0.049	0.019
TQM x GOC				(-)0.283*
EO x GOC				0.219
F value	4.823	16.930	14.108	11.571
F Sig.	0.003	0.000	0.000	0.000
R <sup>2</sup>	0.068	0.303	0.304	0.325
Adjusted R <sup>2</sup>	0.054	0.285	0.282	0.297
R <sup>2</sup> change	0.068	0.234	0.001	0.022
Significant F change	0.003	0.000	0.583	0.049

\*: p< 0.05; \*\*: p<0.01; \*\*\*: p<0.001

**Model 4:** In this model, the interaction between the TQM, EO and group organizational culture (GOC) was examined to test the moderating effect. It can be noticed that the introduction of the interactive terms had improved the predictive power of the model as the model had an R<sup>2</sup> of 32.5 % with significant change at the 0.05 level. The results in Table 5.26 indicated that the number of customers was a significant predictor of the organizational performance at the

0.001 level of significance ( $\beta=0.362$ ,  $t=4.159$ ,  $p<0.001$ ). In addition to that TQM and EO were found to be significant determinant of organizational performance with ( $\beta=0.253$ ,  $t=2.371$ ,  $p<0.05$ ) and ( $\beta=0.211$ ,  $t=2.271$ ,  $p<0.05$ ) respectively.

The interaction terms between group organizational culture (GOC) and TQM, EO were examined. It was found, however, that while the interaction term between TQM and GOC was found to be significant at the 0.05 level of significant ( $\beta= -0.283$ ,  $t= -2.473$ ,  $p<0.05$ ), the interaction term between EO and GOC was significant only at the 0.06 level ( $\beta= 0.219$ ,  $t= 1.898$ ,  $p<0.06$ ). These results indicating that GOC negatively and significantly moderate the TQM-organizational performance relationship at the 0.05 level of significance while. These results, however, supported H11 and did not support H18 stated in section 5.3.6.

The graph in Figure 5.17 illustrated the moderating effect of GOC on the TQM-organizational performance relationship. It can be concluded from the graph that the implementation of TQM leads to higher overall organizational performance in an organization with low group organizational culture than in the case of high GOC organization. Generally, based on the results it is reasonable to confirm that organizations benefit from TQM implementation, no matter whether they have high or low GOC. On the other hand, the advantage of organization is expected to be high if there was low GOC.

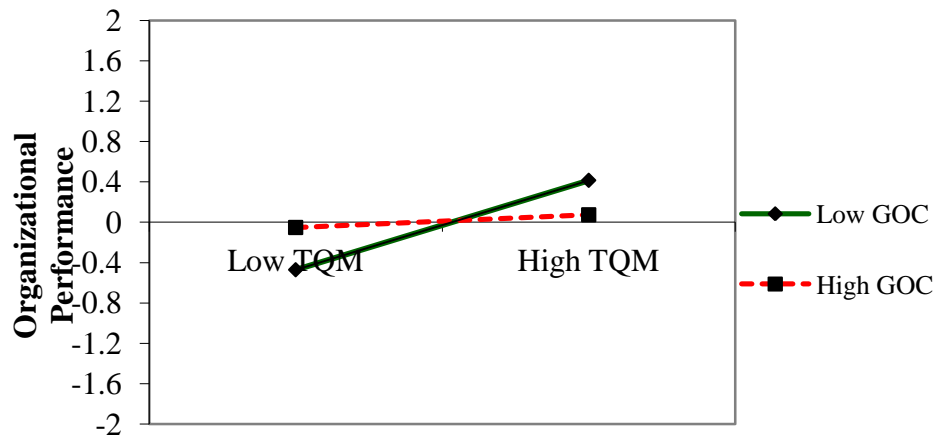


Figure 5.17

*The Moderation effect of GOC on TQM-OP relationship*

In contrary to the findings related to TQM, Figure 5.18 showed that for the organization, the higher GOC it has, the fast and the more benefits it gets from implementing EO strategies.

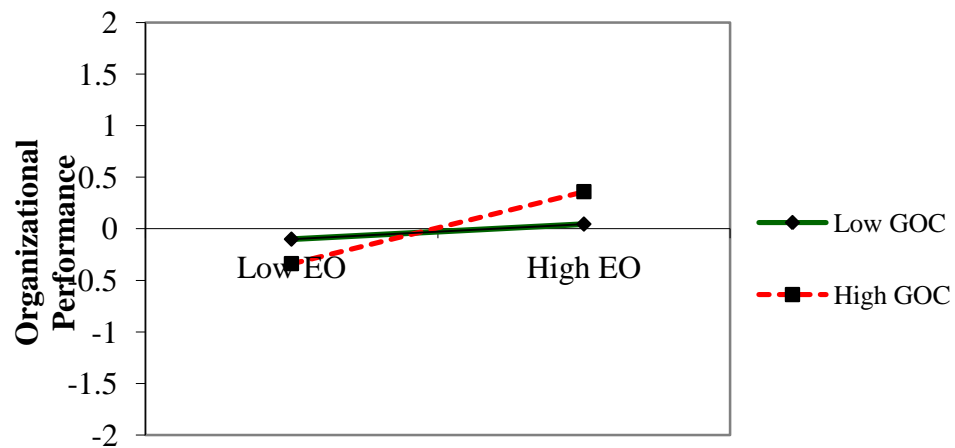


Figure 5.18

*The Moderation effect of GOC on EO-OP relationship*

#### 5.5.3.3.1.3 The moderating effect of Entrepreneurial OC

The results of the hierarchical regression analysis were reported through the following four models as illustrated in Table 5.27.

Table 5.27

*Examining the Moderating effect of EntOC*

	Model 1	Model 2	Model 3	Model 4
Variables in the model	Controlling variables	Predictors	Moderators	Interactions
Branch age	-0.007	0.031	0.020	-0.013
No. of Employee	-0.113	-0.134	-0.131	-0.135
No. of Customers	0.333**	0.364***	0.355***	0.352***
TQM		0.329***	0.446***	0.356**
EO		0.189*	0.260*	0.282**
EntOC			-0.201	(-)0.288
TQM x EntOC				(-)0.361**
EO x EntOC				0.157
F value	4.823	16.930	14.619	12.613
F Sig.	0.003	0.000	0.000	0.000
R <sup>2</sup>	0.068	0.303	0.311	0.344
Adjusted R <sup>2</sup>	0.054	0.285	0.29	0.317
R <sup>2</sup> change	0.068	0.234	0.009	0.033
Significant F change	0.003	0.000	0.120	0.009

\*: p< 0.05; \*\*: p<0.01; \*\*\*: p<0.001

**Model 1 and Model 2:** the same discussion as the previous sub-section.

**Model 3:** in this model entrepreneurial organizational culture (EntOC) was introduced. This model, however, was found to significant at the 0.001 level (F=14.619, P<0.001) explaining 31.1% of the model variance with insignificant R<sup>2</sup> change. It was noticed that the introduction of EntOC to the model did not affect the predictive power of the number of customers, TQM

and EO where they found to remained significant ( $\beta=0.355$ ,  $t=4.109$ ,  $p<0.001$ ), ( $\beta=0.446$ ,  $t=3.807$ ,  $p<0.001$ ) and ( $\beta=0.260$ ,  $t=2.553$ ,  $p<0.05$ ) respectively

**Model 4:** The interaction terms between TQM, EO and the entrepreneurial organizational culture (EntOC) were introduced to this model that was found to be significant ( $F= 12.613$ ,  $p<0.001$ ) at the 0.001 level with a significant  $R^2$  change ( $R^2$  change =0.033,  $p<0.01$ ) accounting for 31.7 % of the overall variance in the organizational performance. Furthermore, the results in Table 5.27 revealed that the number of customers variable remained significant at the 0.001 level ( $\beta=0.352$ ,  $t=4.136$ ,  $p<0.001$ ). Moreover, TQM and EO variables were reported to be significant predictors of organizational performance at the 0.01 level of significance with indicators ( $\beta=0.356$ ,  $t=2.976$ ,  $p<0.01$ ) and ( $\beta=0.282$ ,  $t=2.638$ ,  $p<0.01$ ) respectively. It was worth noting that EntOC was found to be a significant predictor of the organizational performance at the 0.05 level of significance ( $\beta= - 0.288$ ,  $t= - 2.680$ ,  $p<0.05$ ). That means that EntOC gained the predictive power in the model only when the interaction terms were taken into consideration.

In order to conclude about the moderating effect of EntOC, the significance of the interaction terms was investigated. However, results in Table 5.27 showed that the interaction term between EntOC and TQM was found to be negatively significant at the 0.01 level of significance ( $\beta= - 0.361$ ,  $t= - 2.680$ ,  $p<0.01$ ). This result revealed that entrepreneurial organizational culture (EntOC) was found to moderate negatively the TQM-organizational performance relationship at the 0.01 level of significance. In

contrast, results in Table 5.27, also, revealed that the EntOC was not found to be a moderator on the relationship between EO and the organizational performance ( $\beta=0.157$ ,  $t=1.201$ ,  $p>0.05$ ).

To examine the moderating effects of entrepreneurial organizational culture (EntOC) on the model, Figure 5.19 and Figure 5.20 were generated. It was clear from the graph in Figure 5.21 that the implementation of TQM is beneficial to all types of organizations whether or not they have high entrepreneurial culture. However, in organizations with low entrepreneurial culture, the implementation of TQM strategy will increase the organizational performance higher than that of high entrepreneurial culture organizations. In other words, when the organization has high entrepreneurial organizational culture (EntOC), high implementation of TQM strategy leads to an increased performance but not to the high level produced in an organization with low EntOC. In other words, the implementation of TQM strategy can benefit the organization through enhancing its overall performance. It can be concluded, therefore, that organization with low EntOC can benefit very much from TQM implementation more than the benefits gained by organization that have high EntOC. These results, however, supported Hypothesis H11.2 in section 5.3.6.



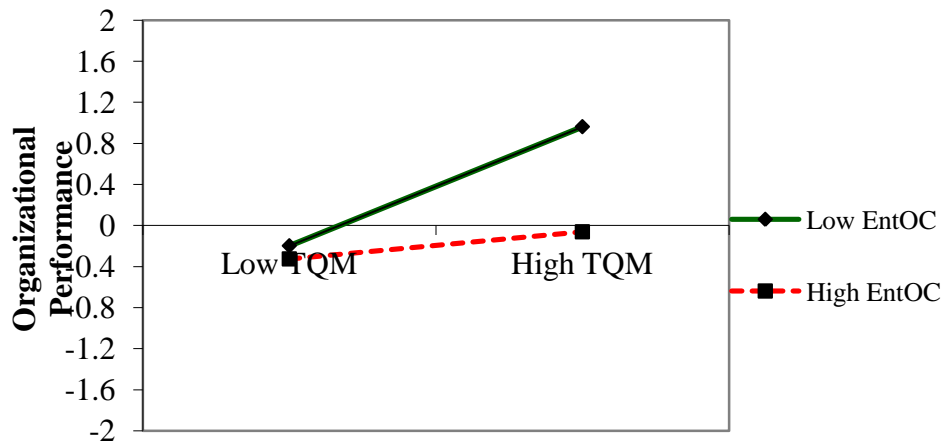


Figure 5.19

*The Moderation effect of EntOC on TQM-OP relationship*

As discussed previously, the results in Table 5.27 did not support the existence of the moderating effect of EntOC on the EO-organizational performance relationship. Nonetheless, the graph in Figure 5.20 showed that EO strategy is more beneficial to the organization with high Entrepreneurial Culture than to low entrepreneurial culture organization. Generally, EO strategy, however, proved to enhance the organizational performance of an organization regardless the organizational cultural practices.

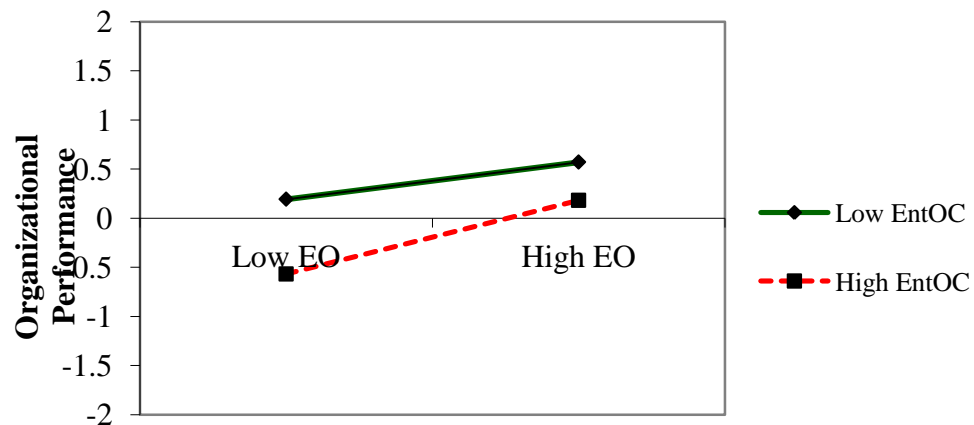


Figure 5.20

*The Moderation effect of EntOC on EO-OP relationship*

In the following few sub-sections, this study discussed the moderating effect of GOC and EntOC on the relationships between TQM factors, EO dimensions and the organizational performance.

#### **5.5.3.3.2 The Moderating Effect of the GOC and EntOC on the relationships between TQM factors, EO dimensions and Organizational Performance**

In the following sub-sections, this study discussed the results of the analysis related to the moderating effect of group organizational culture (GOC) and entrepreneurial organizational culture (EntOC) on the relationships between TQM factors, EO dimensions and the organizational performance of the Yemeni banks. The discussion regarding that was reported as follows:

##### **5.5.3.3.2.1 The Moderating Effect of GOC**

The analysis regarding the moderating effect of the group organizational culture (GOC) was reported through the following four models as depicted in Table 5.28.

**Model 1:** in this model only the controlling variables such as branch age, the number of employees and the number of customer were included. This model was significant ( $F=4.823$ ,  $P<0.01$ ) at the 0.01 level explaining 6.8 % of the variance in the organizational performance. The number of customers variable was reported to be significant at the 0.01 level of significance ( $\beta=0.333$ ,  $t=3.348$ ,  $p<0.01$ ).

**Model 2:** in this model the six TQM factors and the two EO dimensions were introduced to the model. This model, however, was found to be significant ( $F=10.077$ ,  $p<0.001$ ) with adjusted  $R^2$  as 33.3 % and significant F change at the 0.001 level of significance. The results in Table 5.28 showed that the number of customers, Customer Focus and the Information and Analysis System were found to have significant effect on the organizational performance with the indicators ( $\beta= 0.294$ ,  $t= 3.443$ ,  $p<0.01$ ), ( $\beta= 0.258$ ,  $t= 3.458$ ,  $p<0.01$ ) and ( $\beta= - 0.349$ ,  $t= -3.106$ ,  $p<0.01$ ) respectively. In addition to that, ML and PI were found to be significant predictors toward the organizational performance only at the 0.07 level of significance.

**Model 3:** In this model, GOC was introduced to examine its predictive power toward the overall organizational performance. This model, even significant at the 0.001 level, yet did not improve the explanatory power of the model since the  $R^2$  change was not significant ( $R^2$  change=0.003,  $p>0.05$ ). Furthermore, this model accounted for 37.3 % of the variance in the model. Three variables in this model were reported significant predictive power toward organizational performance. These variables were namely, the number of customers, Customer Focus (CF) and the Information and Analysis System (IAS) with indicators ( $\beta= 0.307$ ,  $t= 3.555$ ,  $p<0.001$ ), ( $\beta= 0.249$ ,  $t= 3.309$ ,  $p<0.01$ ) and ( $\beta= - 0.382$ ,  $t= -3.266$ ,  $p<0.01$ ) respectively.

Table 5.28

*The Moderating effect of GOC on the detailed model*

	Model 1	Model 2	Model 3	Model 4
Variables	Controlling variables	Predictors	Moderators	Interactions
Branch age	-0.007	-0.020	-0.006	0.021
No. Of Employees	-0.113	-0.092	-0.101	-0.105
No. Of Customers	0.333**	0.294**	0.307***	0.292**
ML		0.147	0.139	0.185*
CF		0.258**	0.249**	0.256**
HRM		0.199	0.186	0.112
IAS		(-)0.349**	(-)0.382**	(-)0.370**
CI		0.129	0.139	0.147
ESDB		0.019	0.019	-0.002
PI		0.166	0.138	0.125
R		0.109	0.114	0.106
GOC			0.093	0.082
ML x GOC				0.106
CF x GOC				-0.107
HRM x GOC				-0.042
IAS x GOC				(-)0.525***
CI x GOC				0.080
ESDB x GOC				0.033
PI x GOC				0.300
R x GOC				0.091
F value	4.823	10.077	9.326	6.727
F Sig.	0.003	0.000	0.000	0.000
R <sup>2</sup>	0.068	0.370	0.373	0.428
Adjusted R <sup>2</sup>	0.054	0.333	0.333	0.364

R <sup>2</sup> change	0.068	0.301	0.003	0.055
Significant F change	0.003	0.000	0.310	0.034

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\*: p<0.05; \*\*:p<0.01; \*\*\*:p<0.001;

**Model 4:** in this model, the interaction terms between GOC and TQM factors, EO dimensions were examined to test the hypothesized moderating effects of this study. This model was reported to be significant at the 0.001 level of significance (F=6.727, p<0.001) accounting for 42.8 % of the dependent variance. In addition to that, this model showed a significant model fit increase than the previous models (R<sup>2</sup> change= 0.055, p<0.05).

The results in Table 5.28 showed that the number of customers ( $\beta = 0.292$ ,  $t = 3.431$ ,  $p < 0.01$ ), Customer Focus ( $\beta = 0.256$ ,  $t = 3.340$ ,  $p < 0.01$ ) and Information and Analysis ( $\beta = -0.370$ ,  $t = -3.145$ ,  $p < 0.01$ ) were reported to be significant predictors of organizational performance at the 0.01 level of significance. Moreover, Management Leadership variable was found to be significant at the 0.05 level of significance ( $\beta = 0.185$ ,  $t = 2.145$ ,  $p < 0.05$ ).

The results regarding the interaction terms revealed that only one relationship in the model was significantly moderated by the GOC. Specifically, the interaction term between GOC and the IAS was significant at the 0.001 level of significance ( $\beta = -0.525$ ,  $t = -3.609$ ,  $p < 0.001$ ). These results, however, were indicating that GOC negatively moderate the relationship between IAS and the overall organizational performance.

The results reported in Table 5.28 and illustrated in Figure 5.21 revealed that the implementation of Information and Analysis System (IAS) can dump the overall organizational performance. In addition to that this role of IAS implementation may be even severe in high group organizational culture (GOC) organizations.

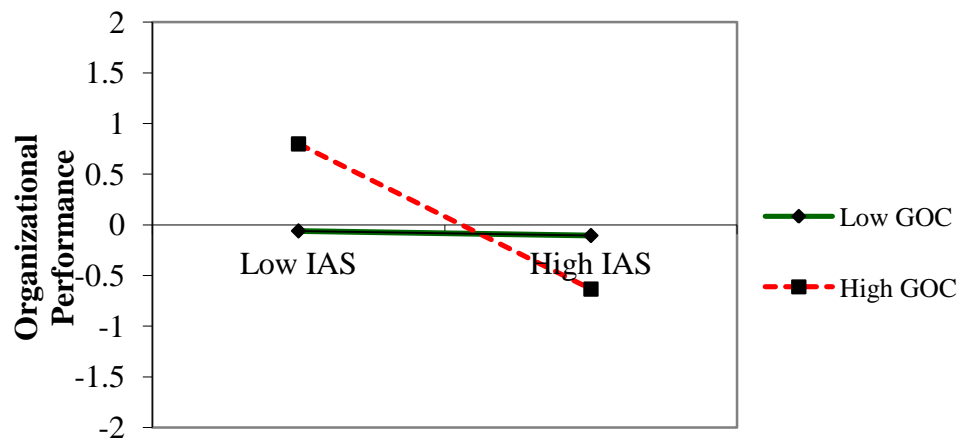
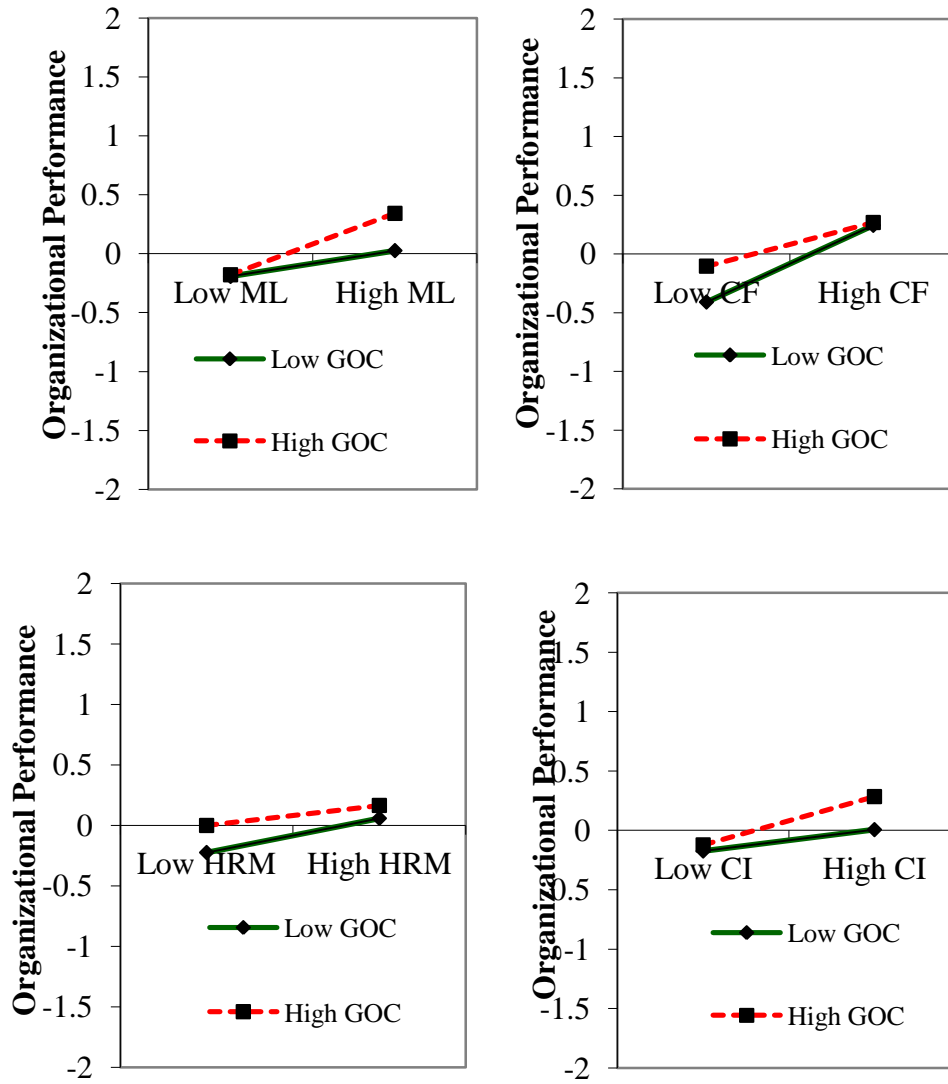


Figure 5.21

*The Moderating effect of GOC on IAS-OP relationship*

These reported results showed that among the hypotheses H11 through H20, only one hypothesis was supported namely H15 whereas others were not statistically supported.

Referring to the Figure 5.22, it can be clearly shown that Management Leadership (ML), Continuous Improvement (CI), Proactive Innovativeness (PI) and Risk-Taking (R) can enhance the overall organizational performance in the presence of high GOC much better than otherwise. On the other hand, Customer Focus (CF) and HRM practices can enhance the overall organizational performance especially when group organizational culture (GOC) is very low.



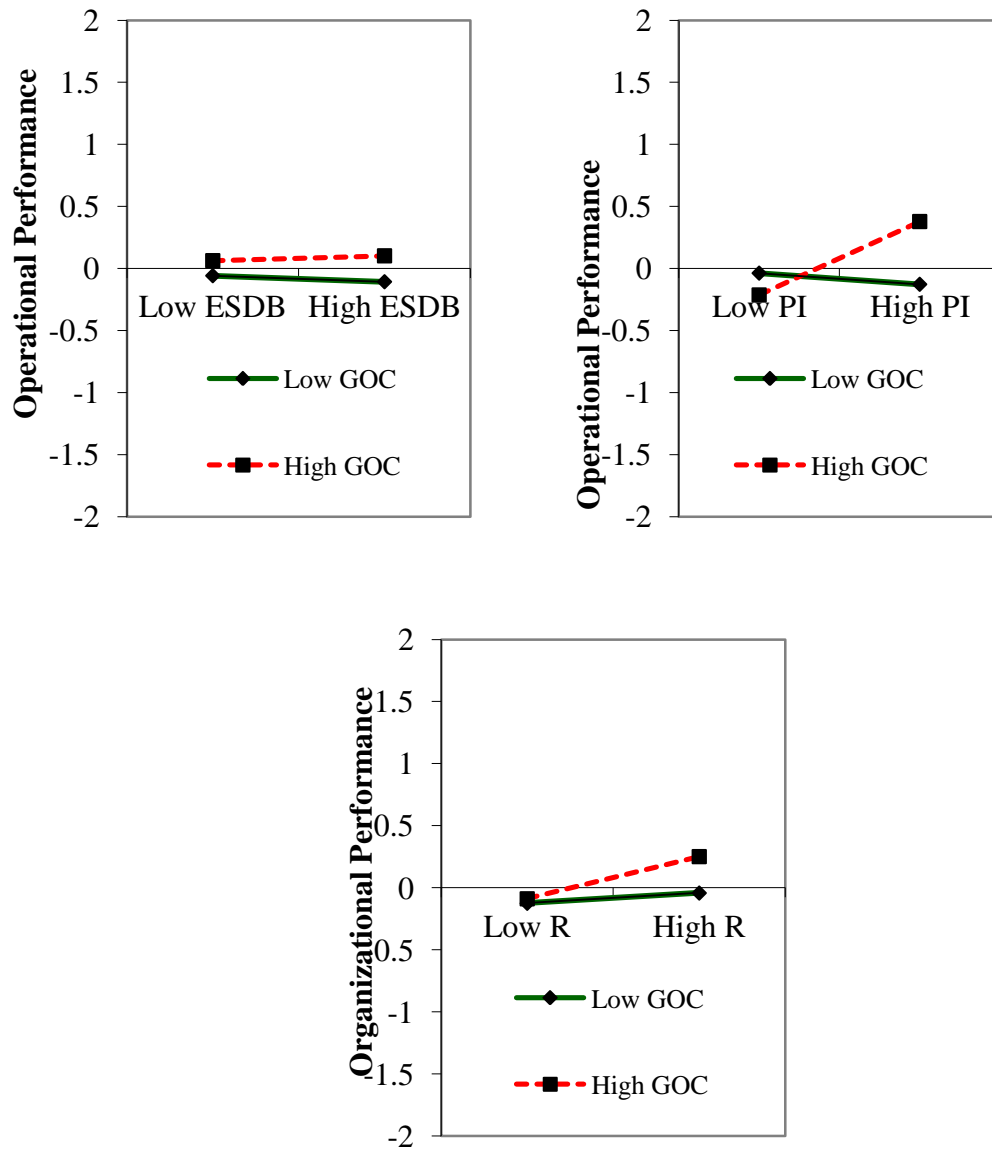


Figure 5.22

*GOC moderating effect on TQM factors, EO dimensions-Performance relationships*

The following sub-sections elaborated the moderating effect of entrepreneurial organizational culture (EntOC).



#### 5.5.3.3.2.2 The Moderating Effect of EntOC

The moderating role of entrepreneurial organizational culture (EntOC) on the model was discussed and reported through the following four models.

**Model 1 and Model 2:** The results for these two models were the same as discussed in the previous two sub-sections. Furthermore, the results were reported in Table 5.29.

**Model 3:** The EntOC as the moderating variable was introduced to this model that was found to be significant at the 0.001 level of significance ( $F=9.345$ ,  $p<0.001$ ). This model, moreover, accounted for 37.4 % of the variance in the dependent variable and showed no explanatory power improvement from previous models ( $R^2$  change=0.004,  $p>0.05$ ). The results in Table 5.29 showed that Human Resource Management (HRM) and Proactive Innovativeness (PI) were significant at the 0.05 level of significance with values ( $\beta= 0.223$ ,  $t= 1.980$ ,  $p<0.05$ ) and ( $\beta= 0.211$ ,  $t= 2.131$ ,  $p<0.05$ ) respectively. Moreover, the results, also, revealed that the number of customers , Customer Focus (CF) and Information and Analysis System (IAS) were found to be significant predictors of organizational performance at the 0.01 level of significant with indicators ( $\beta= 0.291$ ,  $t= 3.412$ ,  $p<0.01$ ), ( $\beta= 0.265$ ,  $t= 3.538$ ,  $p<0.01$ ) and ( $\beta= -0.317$ ,  $t= -2.726$ ,  $p<0.01$ ) respectively.

Table 5.29

*The Moderating effect of EntOC on the detailed model*

	Model 1	Model 2	Model 3	Model 4
Variables	Controlling variables	Predictors	Moderators	Interactions
Branch age	-0.007	-0.020	-0.024	-0.040
No. Of Employees	-0.113	-0.092	-0.091	-0.135
No. Of Customers	0.333**	0.294**	0.291**	0.301**
ML		0.147	0.148	0.153
CF		0.258**	0.265**	0.245**
HRM		0.199	0.223*	0.301*
IAS		(-)0.349**	(-)0.317**	(-)0.436**
CI		0.129	0.136	0.107
ESDB		0.019	0.038	0.090
PI		0.166	0.211*	0.145
R		0.109	0.125	0.179*
EntOC			-0.141	(-)0.282*
ML x EntOC				0.086
CF x EntOC				-0.132
HRM x EntOC				-0.039
IAS x EntOC				(-)0.511**
CI x EntOC				0.094
ESDB x EntOC				0.152
PI x EntOC				0.008
R x EntOC				0.097
F value	4.823	10.077	9.345	6.798
F Sig.	0.003	0.000	0.000	0.000
R <sup>2</sup>	0.068	0.370	0.374	0.430

Adjusted R <sup>2</sup>	0.054	0.333	0.334	0.367
R <sup>2</sup> change	0.068	0.301	0.004	0.057
Significant F change	0.003	0.000	0.278	0.027

\* : p< 0.05; \*\*: p<0.01; \*\*\*: p<0.001

**Model 4:** To examine the moderating effect of entrepreneurial organizational culture (EntOC), the fourth model was created by examining the significance of the interaction terms. In other words, this model employed the interaction terms between EntOC and TQM factors, EO dimensions to conclude about the significance of the hypothesized moderating effects. This model, however, proved to be significant at the 0.001 level of significance (F=6.798, p<0.001) accounting for 36.7% of the model variance with significant increased predictive power (R<sup>2</sup> change=0.057, p<0.05).

The results of this model showed that, as reported in Table 5.29, the number of customers ( $\beta = 0.301$ ,  $t = 3.532$ ,  $p < 0.01$ ), Customer Focus (CF) ( $\beta = 0.245$ ,  $t = 3.146$ ,  $p < 0.01$ ) and Information and Analysis System (IAS) ( $\beta = -0.436$ ,  $t = -3.445$ ,  $p < 0.01$ ) were reported to be significant at the 0.01 level of significance. In addition to that, the results, also, revealed that Human Resource Management (HRM) and Risk-Taking (R) were reported to be significant at the 0.05 level of significance. In contrast to the results obtained previously, in this model the moderator variable namely the EntOC was found to be a significant predictor of the organizational performance at the 0.05 level of significance ( $\beta = -0.282$ ,  $t = -1.984$ ,  $p < 0.05$ ).

The results related to the examining the moderating effect of EntOC on the relationship between TQM factors, EO dimensions and organizational performance revealed that only Information and Analysis System (IAS) was found to be a significant moderator. Specifically, the IAS organizational performance relationship was found to be negatively moderated by the effect of entrepreneurial organizational culture (EntOC). This conclusion drawn based on the results presented in Table 5.29 in which the interaction between Information and Analysis System (IAS) and entrepreneurial organizational culture (EntOC) was proven to be negative and significant at the 0.01 level of significance ( $\beta = -0.511$ ,  $t = -2.908$ ,  $p < 0.01$ ).

To illustrate the above mentioned moderated relationship, graph in Figure 5.23 was created. It was clear from the graph that in the Yemeni business environment, particularly in the banking industry, the implementation of Information and Analysis System (IAS) does not enhance the overall organizational performance. Moreover, in an organization with high EntOC the decline of performance, because of the IAS implementation, is sharper than that in the case of low EntOC organization.

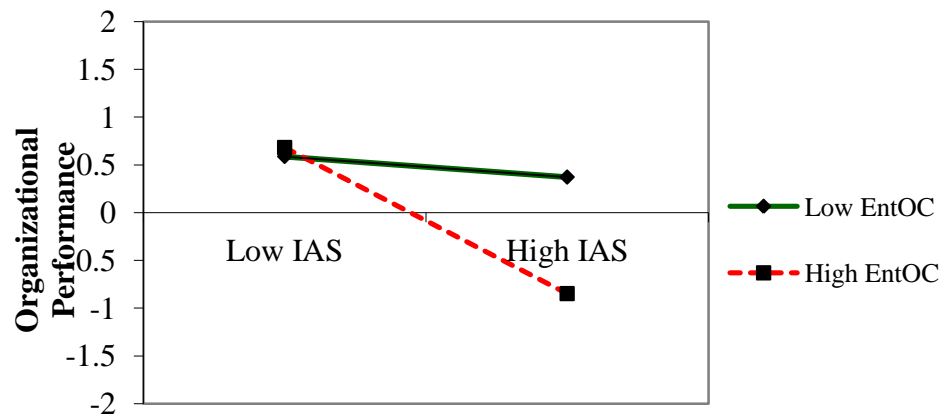


Figure 5.23

*The Moderation effect of EntOC on IAS-OP relationship*

According to these results regarding the examination of the moderating effect of EntOC, only the H25 was empirically supported while the remaining namely, H21 through H24 and H26 through H30 were not.

Additionally, the graphs in Figure 5.24 showed that while the effects of other TQM factors and EO dimensions on performance were proven not to be significantly moderated, their effects on performance were found to be worth noting. Specifically, it can be noticed that in the high entrepreneurial organizational culture (EntOC) environment, Management leadership (ML), Customer Focus (CF), Continuous Improvement (CI), Excellent Service Design and Benchmarking (ESDB) and Risk-Taking (R) practices lead to a better performance. On the other hand, it was also illustrated that Customer Focus (CF) as a TQM factor can enhance the organizational performance in low entrepreneurial organizational culture (EntOC) environment to a higher level than in the case of high entrepreneurial organizational culture organization.

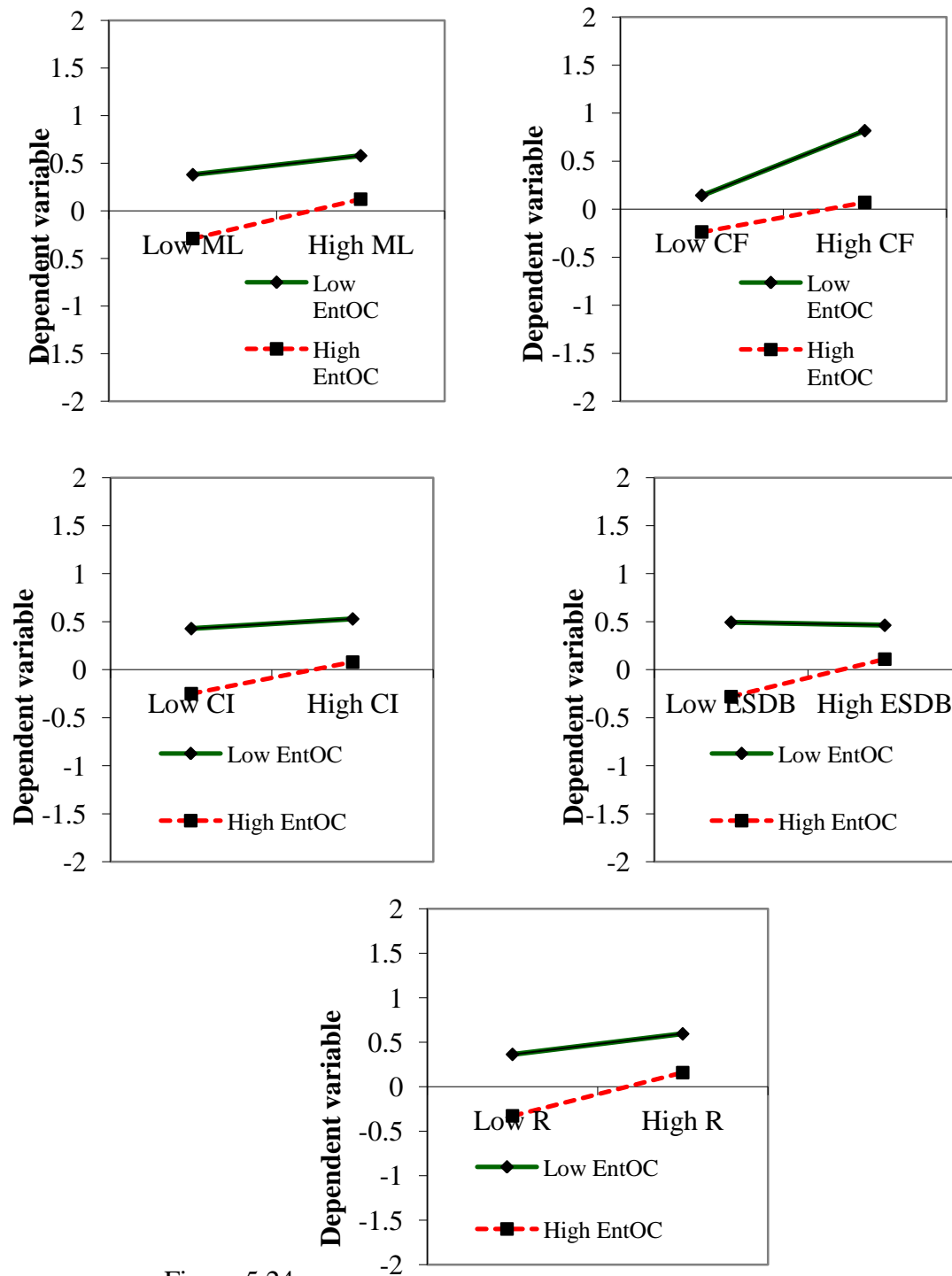


Figure 5.24

*EntOC Moderating effect on TQM factors, EO dimensions-Performance relationships*

### 5.5.3.3.2.3 The Three-Way Interaction Analysis

The results regarding the three way interaction was tabulated in Table 5.30. The results showed that only the ESDB and R factors were significantly affected by the two-way interaction of group and entrepreneurial organizational culture at the 0.05 and 0.001 levels of significant with indicators ( $\beta = -0.889$ ,  $t = -2.210$ ,  $p < 0.05$ ) and ( $\beta = -1.111$ ,  $t = -3.785$ ,  $p < 0.001$ ). These results indicated, in contrary to our expectation, that banks with high group and entrepreneurial organizational cultures showed declining performance for their an increasing focus on ESDB and R practices. These relationships are illustrated in graphs in the figures in appendix 9.

Table 5.30

*The three-way interaction results*

Variables	Standardized Beta
TQM x GOC x EntOC	0.176
EO x GOC x EntOC	-0.152
ML x GOC x EntOC	-0.240
CF x GOC x EntOC	-0.461
HRM x GOC x EntOC	1.122
IAS x GOC x EntOC	0.759
CI x GOC x EntOC	0.039
ESDB x GOC x EntOC	(-)0.889*
PI x GOC x EntOC	0.244
R x GOC x EntOC	(-)1.111***

\* :  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$

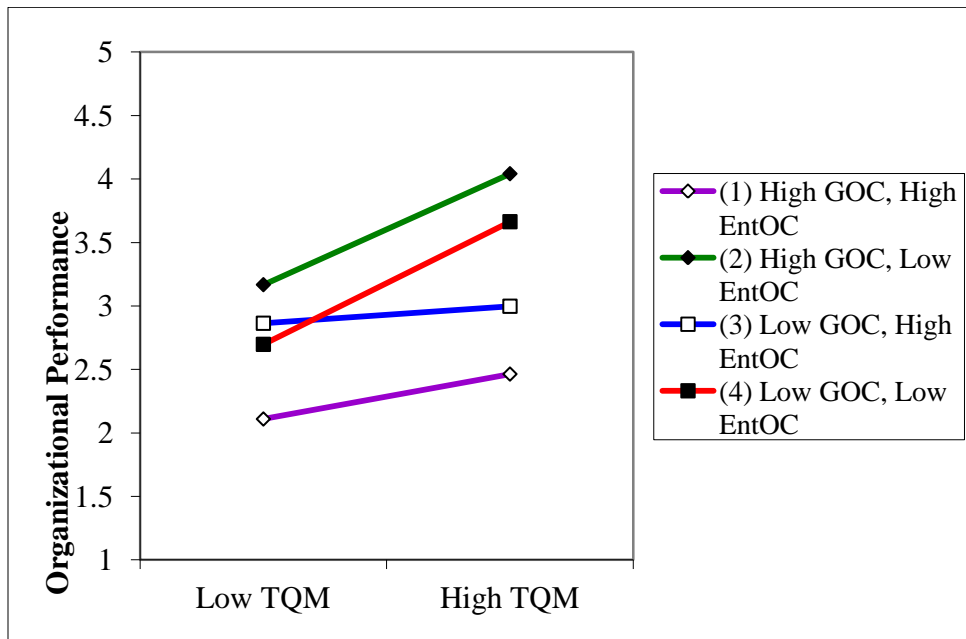


Figure 5.25

*The Three-way interaction amongst TQM, GOC and EntOC*

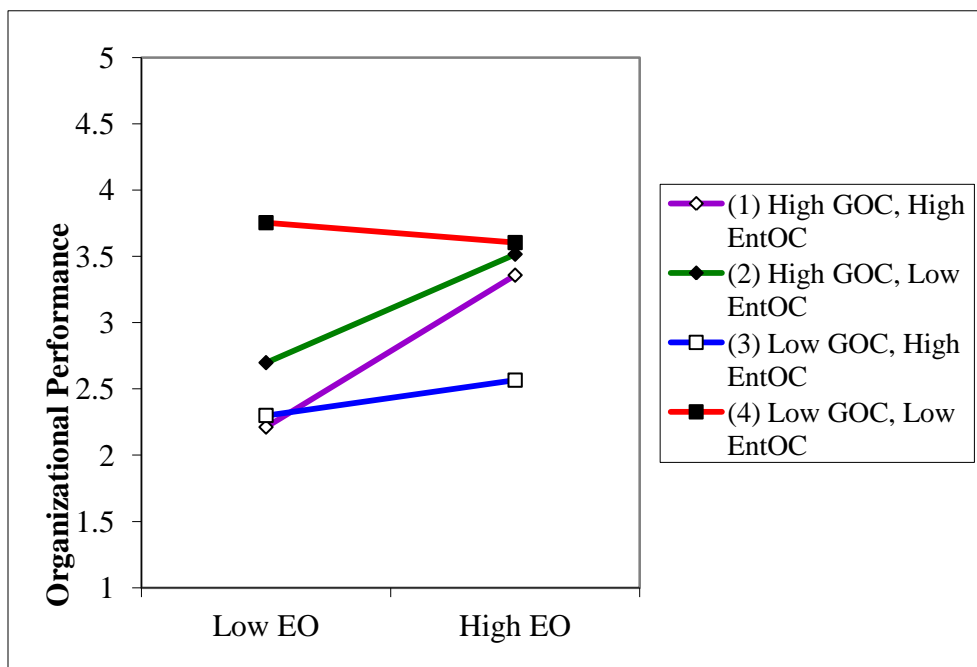


Figure 5.26

*The Three-way interaction amongst EO, GOC and EntOC*



Regarding the TQM and EO with various combinations of group and entrepreneurial organizational cultures, the graph in Figures 5.25 and 5.26 illustrated these relationships. However, the graph in Figure 5.25 showed the increasing slope for all the relationships indicating the importance of TQM strategy for organizational performance. The graph also showed that at low TQM practice, organizations with high group and entrepreneurial organizational cultures were the worst performers. Additionally, the graph indicated that organizations with low EntOC, regardless the level of GOC, were the best performers at high level of TQM implementation when compared with other organizations.

As expected, the graph in Figure 5.26 showed that rate of increase in performance for organizations with high group and entrepreneurial organizational cultures was higher with the increase of EO. The results, moreover, revealed the importance of GOC for organization to achieve high level of performance when EO is practiced.

Generally, by examining the graphs in the Figures in Appendix 9, some points should be emphasized.

First, the depicted relationships revealed the importance of GOC for organizations to achieve high performance records within TQM and EO strategy implementation. Moreover, the graphs revealed that the HRM practices fail to produce high performance if the group organizational culture is not developed and encouraged.

Second, in contrary to the usual expectation, the combination of high GOC and EntOC did not yield always the best results.

Finally, in high entrepreneurial organizational culture situations, a small increase in the risk-taking practices can yield higher organizational performance in comparative to other situations.

To summarize the findings of this study, the following sub-section provided a summary of the results regarding the hypotheses testing procedures performed in this chapter.

## **5.6 Summary of the Findings**

This chapter reported the findings of this study. Initially, this study distributed the respondents according to some characteristics as exhibited in the demographic variables. The next step was to establish the construct validity of the measure through performing EFA and CFA employing SPSS and AMOS statistical packages. In addition to that, a detailed discussion on the construct validity was provided to ensure the quality of the model that was undertaken later to the hypotheses testing procedures.

Due to some limitations related to the size of the collected responses, this study chose not to use SEM techniques that require large sample size to ensure reliable results. Moreover, to test the hypotheses of this study, Pearson correlation and hierarchical multiple linear regression were employed. The results of the study while supported some of the hypotheses, did not support some other hypotheses. The discussion, Tables and graphs in the preceding sub-sections were devoted to examine the results

of the statistical techniques outputs. However, Table 5.31 and Table 5.32 summarized the findings obtained from the moderated models discussed in this chapter.

Table 5.31

*Comparison of the results of moderated composite models*

Variables in the Model	Moderating Variable	
	GOC	EntOC
Branch age	0.015	-0.013
No. of Employee	-0.143	-0.135
No. of Customers	0.362***	0.352***
TQM	0.253*	0.356**
EO	0.211*	0.282**
GOC/EntOC	0.019	- 0.288
TQM * GOC/EntOC	(-)0.283*	(-)0.361**
EO* GOC/EntOC	0.219	0.157

\*:p< 0.05; \*\*: p<0.01; \*\*\*: p<0.001;

Table 5.32

*Comparison of the results of moderated detailed models*

Variables in the model	Moderating Variable	
	GOC	EntOC
Branch age	0.021	-0.04
No. Of Employees	-0.105	-0.135
No. Of Customers	0.292**	0.301**
ML	0.185*	0.153
CF	0.256**	0.245**
HRM	0.112	0.301*

IAS	(-)0.370**	(-)0.436**
CI	0.147	0.107
ESDB	-0.002	0.09
PI	0.125	0.145
R	0.106	0.179*
OC	0.082	(-)0.282*
ML*GOC/EntOC	0.106	0.086
CF* GOC/EntOC	-0.107	-0.132
HRM*		
GOC/EntOC	-0.042	-0.039
IAS*		
GOC/EntOC	(-)0.525***	(-)0.511**
CI* GOC/EntOC	0.08	0.094
ESDB*		
GOC/EntOC	0.033	0.152
PI* GOC/EntOC	0.3	0.008
R* GOC/EntOC	0.091	0.097

\*:p< 0.05; \*\*: p<0.01; \*\*\*: p<0.001

Based on the findings from the Pearson correlation analysis and hierarchical regression analyses conducted in the chapter, Table 5.33 summarized the findings related to the hypotheses testing procedures at the 0.001, 0.01 and 0.05 levels of significance.

Table 5.33: Summary of the hypotheses testing results

Hy no	Hypothesis statement	Decision
H1	TQM has a significant effect on the organizational performance	<b>Supported</b>
H2	TQM-Management Leadership has a significant effect on the organizational performance.	Not Supported
H3	TQM-Customer Focus has a significant effect on the organizational performance.	<b>Supported</b>
H4	TQM-HRM has a significant effect on the organizational performance.	Not Supported
H5	TQM-Information and Analysis System has a significant effect on the organizational performance.	<b>Supported</b>
H6	TQM-Continuous Improvement has a significant effect on the organizational performance.	Not Supported

H7	TQM-Excellent Service Design and Benchmarking has a significant effect on the organizational performance.	Not Supported
H8	EO has a significant effect on the organizational performance.	<b>Supported</b>
H9	Proactive Innovativeness has a significant effect on the organizational performance.	Not Supported
H10	Risk-Taking has a significant effect on the organizational performance.	Not Supported
H11	Group organizational culture (GOC) moderates the relationship between TQM practices and the organizational performance.	<b>Supported</b>
H12	Group organizational culture (GOC) moderates the relationship between TQM-Management leadership (ML) and the organizational performance.	Not supported
H13	Group organizational culture (GOC) moderates the relationship between TQM-Customer Focus (CF) and the organizational performance.	Not supported
H14	Group organizational culture (GOC) moderates the relationship between TQM-HRM and the organizational performance.	Not supported
H15	Group organizational culture (GOC) moderates the relationship between TQM-IAS and the organizational performance.	<b>Supported</b>
H16	Group organizational culture (GOC) moderates the relationship between TQM- CI and the organizational performance.	Not supported
H17	Group organizational culture (GOC) moderates the relationship between TQM- ESDB and the organizational performance.	Not supported
H18	Group organizational culture (GOC) moderates the relationship between entrepreneurial orientation (EO) and the organizational performance.	Not supported
H19	Group organizational culture (GOC) moderates the relationship between Proactive Innovativeness (PI) and the organizational performance.	Not supported
H20	Group organizational culture (GOC) moderates the relationship between Risk-Taking (R) and the organizational performance.	Not supported

H21	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM practices and the organizational performance of the banks.	<b>Supported</b>
H22	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-Management leadership (ML) and the organizational performance.	Not supported
H23	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-Customer Focus (CF) and the organizational performance.	Not supported
H24	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-HRM and the organizational performance.	Not supported
H25	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM-IAS and the organizational performance.	<b>Supported</b>
H26	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM- CI and the organizational performance.	Not supported
H27	Entrepreneurial organizational culture (EntOC) moderates the relationship between TQM- ESDB and the organizational performance.	Not supported
H28	Entrepreneurial organizational culture (EntOC) moderates the relationship between entrepreneurial orientation (EO) and the organizational performance.	Not supported
H29	Entrepreneurial organizational culture (EntOC) moderates the relationship between Proactive Innovativeness (PI) and the organizational performance.	Not supported
H30	Entrepreneurial organizational culture (EntOC) moderates the relationship between Risk-Taking (R) and the organizational performance.	Not supported

In conclusion, the results of this study obtained from Pearson correlation and hierarchical multiple linear regression analyses revealed that while some hypotheses were supported by the empirical results, others were found not to be supported. More specifically, Table 5.32 showed that H1, H3, H5, H8, H11, H15, H21 and H25 were supported. In contrary, H2, H4, H6, H7, H9, H10, H12, H13, H14, H16, H17, H18, H19, H20, H22, H23, H24, H26, H27, H28, H29 and H30 were not supported. However, the next chapter elaborated further discussion and conclusions related to these findings and specified their practical and theoretical implications.

## **CHAPTER SIX**

### **DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

#### **6.1 Introduction**

This chapter is devoted to summarize the study, discuss the findings and highlight the contribution of the study to the existing literature. It also highlights the managerial contributions that might help the decision-makers. This chapter, however, details the limitations of the study and suggests future research avenues based on the faced limitations. Finally, this chapter summarizes and concludes the study.

#### **6.2 Summary of the Study**

The main objective that this study was set up to investigate was the moderating effect of organizational culture(OC) on the TQM, EO and organizational performance relationship as reflected in the Yemeni banks. Essentially, this study was greatly motivated by the inconclusive findings, in the recent relevant literature concerning the relationship between Total Quality Management (TQM), Entrepreneurial Orientation (EO) and the Organizational Performance (OP). However, the inconsistent conclusions about these relationships (Al-Swidi & Mahmood, 2011c) have been an important unresolved issue that needs further examination.

Universally, TQM has been recognized, in the last few decades, to be one of the most popular and commonly practiced management philosophy adopted by organizations to create competitive advantage and enhance their overall

performance. Moreover, an extensive research work has been conducted by researchers to examine the impact of the TQM practices on organizational performance and competitive advantage. These extensive researches were reflected in the bulk of studies examining the TQM effect in the context of all types of organizations such as manufacturing, service, SMEs, higher educational institutions and public sector organizations (see e.g. Arawati, 2005; Al-Swidi & Mahmood, 2011; Das, Paul, & Swierczek, 2008; Douglas & Judge, 2001; Sohal & Terziovski, 2000; Saravanan & Rao, 2006; Yasin *et al.*, 2004; Demirbag *et al.*, 2007; Mohd Nizam & Tannock, 2005; Sohail & Hoong, 2003; Cruickshank, 2003; Dahar, Faize, & Niwaz, 2010; Nor Hazilah, 2004).

However, a comprehensive review of the current quality management literature showed that the results regarding the relationship between TQM practices and organizational performance seemed to be inconclusive (Kaynak, 2003). While the majority of the research conducted to determine the TQM and performance relationship reported positive evidences (Arawati, 2005; Flynn *et al.*, 1995; Douglas & Judge, 2001; Kaynak, 2003; Molina-Azorin *et al.*, 2009; Sila & Ebrahimpour, 2005; Yasin *et al.*, 2004), some other studies reported the opposite results (Dooyoung, Kalinowski, & El-Enein, 1998). In fact, although the TQM implementation was long associated with an enhanced overall organizational performance, some other studies revealed the failure of some TQM implementation initiatives (Sanchez-Rodriguez & Martinez-Lorente, 2004; Sila & Ebrahimpour, 2002). Due to these inconsistent findings, a new research stream emerged in which some researchers such as Ehigie and McAndrew (2005) suggested that this relationship should be modified in the light of some other potential influencing



variables. However, it has been widely acknowledged in the quality management literature that the lack of supportive organizational culture (OC) could be one of the main reasons that may explain the failure of some TQM initiatives (Brah & Lim, 2005).

Similar to the arguments related to the TQM implementation, the past relevant literature revealed that entrepreneurial orientation (EO) was reported to have a positive impact on the organizational performance. Meaning that, organizations with high entrepreneurial orientation (EO) capabilities can explore and exploit unique business market opportunities and subsequently secure a high competitive market position (Keh, Nguyen, & Ng, 2007).

Despite the extensive research work conducted in the literature of entrepreneurship, many empirical researches pointed out that the results related to the EO and organizational performance turned up to be inconsistent. Due to this inconsistency, the appropriateness of entrepreneurial orientation (EO) strategy for organizational effectiveness has been questioned (Li, Huang, & Tsai, 2009; Wiklund & Shepherd, 2005). To resolve this inconsistency, Wiklund and Shepherd (2005) suggested that the effect of other factors on this relationship should be further investigated. In other words, in the current era of globalization, fast-paced technological advancements and knowledgeable customers, organizations should be entrepreneurial in order for them to grow or even survive (Dess, Lumpkin, & McGee, 1999). Therefore, organizations should develop their supportive culture so as to be the base for any strategy implementation initiatives.

In the general sense, the substantial role attributed to organizational culture (OC) is because the expected solid ground it forms for any strategy implementation

processes. Moreover, organizational culture (OC) can be looked at as one of the main players in establishing the fit between strategy adoption, such as TQM and EO and the organizational internal environment (Kanji & Wallace, 2000; Llorens Motes & Verdu Jover, 2004; Yasin *et al.*, 2004).

Additionally, this study was also motivated by the fact that although both TQM and EO practices share the same objectives in enhancing the organizational performance. However, there has been a paucity of empirical research investigating the integrated role of quality and innovation-based strategies on the organizational performance. That is to say, a comprehensive review of the relevant literature revealed that although there has been an extensive research work regarding the separate impact of TQM, EO and OC on the organizational performance, the integrative impact has been greatly neglected. Additionally, the role that can be played by organizational culture (OC) on the form of this relationship, even expected to be very significant, yet has been attracting the minimal scholar attention.

Based on the problem of this study and the comprehensive review of the relevant literature conducted in Chapter 1 and Chapter 2, this study aimed to achieve the following main objectives:

1. To study the state of TQM practices and entrepreneurial orientation (EO) strategy in the banking industry in Yemen?
2. To examine the effect of TQM practices on organizational performance of banks in Yemen?
3. To examine the effect of entrepreneurial orientation (EO) on organizational performance of banks in Yemen?

4. To study the moderating effect of organizational culture (OC) on the relationship between TQM practices and organizational performance of banks in Yemen?
5. To study the moderating effect of organizational culture (OC) on the relationship between entrepreneurial orientation (EO) and organizational performance of banks in Yemen?

In order to achieve the aforementioned objectives of this study, a comprehensive review of the literature was conducted and reported throughout this study especially in Chapter 2 and Chapter 3. The past relevant literature, related to quality management and entrepreneurship, revealed that Total Quality Management (TQM) and entrepreneurial orientation (EO) despite their wide use in Manufacturing and service organizations, they had been given the minimal research attention in the banking industry. In addition, as stated earlier, the majority of the previous studies related to TQM and EO supported their positive effect on organizational performance. On the other hand, not all the cases of TQM implementation and EO practices were successful. Therefore, some researchers have paid a considerable attention to explore the reasons behind some reported TQM and EO initiative failure. As an attempt to resolve this controversy, some scholars suggested that the effect of some other influential variables in these relationships may better explain these findings. In general, the ambiguity regarding these relationships still calling for further research work to be conducted.

As it has been widely discussed in the contingency theory literature, the failure or unsuccessful organizational strategy is attributable to the lack of the fit or misfit

between the organizational strategy and organizational culture (OC). To resolve the inconsistent findings regarding the TQM, EO and OP relationship, many researchers asserted that organizational culture (OC), that stemmed from the national culture, in most of the developing countries might be one of the main factors that explain these findings and thus to be further investigated (Prajogo & McDermott, 2005; Prajogo & Sohal, 2001). This study, in essence, was a response to that call, using the fit concept of the contingency theory, to examine the role of organizational culture (OC) on the articulated relationships.

According to the literature review work conducted and reported in Chapter 1 and Chapter 3, eight critical factors of TQM and three dimensions of entrepreneurial orientation (EO) have been identified. Specifically, this study recognized some TQM factors that have been widely studied in quality management research conducted in service organizations. These factors namely management leadership (ML), customer focus (CF), strategic planning (SP), human resource management (HRM), service design (SD), information and analysis system (IAS), continuous improvement (CI) and benchmarking (B). Similarly, innovativeness (I), proactiveness(P) and risk-taking (R) were the three recognized dimensions of the entrepreneurial orientation (EO) construct which have been the most commonly used dimensions in the literature of EO.

Furthermore, in Chapter 3, many issues were raised indicating the existence of many future research opportunities. Firstly, for instance, the direct effect of TQM strategy on the organizational performance, even has been commonly supported by many researchers, yet needs to be further examined in different contexts. Secondly, the inconsistent results regarding the EO and organizational performance relationship call for further examination to achieve the convergence desired. Thirdly, the integration

between quality management policies and innovative strategies has been lacking in the literature of management. This integration could help organizations to seek high quality profile while, at the same time, producing innovative products and services to retain their excited and loyal customers especially in the fast-paced technological era. Fourthly, as suggested by many scholars, the failure of many strategy implementation initiatives might be attributed to the lack of the fit between the intended strategy and the organizational culture. The role of organizational culture (OC) in organizational strategy implementation processes remains inefficiently explored. In the light of contingency theory, organizational change theory and the congruence model, this area of research offers a promising field of research.

In the light of the objectives of the study and the discussions provided, in Chapters 1, Chapter 2 and Chapter 3 to extract the variables to be used for this study, the framework was formulated in Chapter 3. As it has been argued in Chapter 3, this framework could be theoretical grounded by many theories such as the Resource-Based view of the firm, the contingency theory and the organizational change theory, just to mention some. However, focusing on the concept of the fit between many organizational variables, the congruence model can be considered as an appropriate theoretical guidance. In the Yemeni context, the implementation of TQM initiatives and EO strategies is considered an attempt to transform the organization through an organizational change process to achieve a better position and gain the competitiveness in the market. In the view of the above, organizational culture (OC) is considered as one of the factors than decides either the success or failure of such initiatives.

To test the developed research framework, this study applied a quantitative research methodology as introduced and justified in Chapter 5. In line with the chosen

research design, a survey questionnaire was used to collect the data necessary that reflect the constructs of the study. All the questions used in the research instrument were adapted and adopted from various resources to support the face and content validity. Moreover, a five-point Likert scale was used to measure all the items. To get the final score of each construct, the average of its items to be used to represent the overall construct. The higher mean value of the construct represents a higher level of TQM, EO, OC and a better organizational performance.

To ensure valid and reliable results of this study, the measure used underwent through a rigorous validation process. Prior to the real data collection stage, the measurable items for each construct were reviewed by academicians and practitioners to establish the face and content validity. To ensure an initial valid and reliable measure for the study, a Pilot test was conducted involving 52 respondents. Since the results of the Pilot test were indicating satisfactory level of goodness of the measure, the questionnaire was used to collect the data for the study.

In collecting the data for the undertaken study, the self-administration mechanism was used by distributing copies of the translated questionnaire to all the bank branches in all the cities, excluding the respondent involved in the Pilot test. A number of 201 returned questionnaire were received back accounting for 70 % as a response rate. Later, using the real data collected, the construct validity and reliability of the measure were established. In doing that, EFA using SPSS and CFA using AMOS were performed to establish the convergent and discriminant validity. At every stage of measure development and validation, many suggested modifications were performed. This study, however, established the construct validity to guarantee that the obtained results are valid and reliable and efficiently explain the phenomenon understudy.

After the construct validity and reliability of the measure have been established, this study performed the hypotheses testing procedures employing hierarchical regression analysis using SPSS software package version 16.0. This analysis was used to examine the explanatory power of TQM, EO and their dimensions towards the organizational performance. Also, this analysis was used to examine the moderating effect of OC and its dimensions on the aforementioned relationships. The findings of the analysis were reported in Chapter 5 to be further discussed in the following sub-sections. This study concluded with some recommendations and suggestions for future research directions.

### **6.3 Discussion**

To discuss the findings of the study, the following sub-sections reported these findings following the same order of the objectives of the study.

#### **6.3.1 The State of TQM and EO strategies in the Yemeni banks**

In order to achieve the first objective of the study, a descriptive statistics was conducted and reported in Table 5.20 in chapter 5. Those results revealed that among the TQM factors, Management Leadership (ML), with mean of 4.08 and standard deviation as 0.77, was perceived by banks' managers to be practiced relatively higher than other TQM practices. On the other hand, the results also showed that there has been a lack in the customer and market focus among the Yemeni banks. This was noticeable since Excellent Service Design and Benchmarking (ESDB) and Customer Focus (CF) had the lowest means with 3.63 and 3.78 respectively when compared to other TQM dimensions. In general, the TQM practices when taken as a composite score showed that the mean was 3.877

with a standard deviation as 0.67 indicating that even TQM principles were adopted and practiced yet these practices could have been further improved. This perception was quite common among banks managers as their opinions don't vary very much as reflected in the small standard deviation. These results, however, indicated that the efficiency in implementing TQM is still not to the expectation as perceived by the managers of banks branches.

In addition, the results in Table 5.20 showed that the entrepreneurial orientation (EO) was moderately high in the banking industry in Yemen. This conclusion was drawn from the fact that the mean of the EO was 4.03 with a standard deviation of 0.66. It was also showed that the Risk-taking practice was higher than the Proactive Innovativeness (PI) with means 4.19 and 3.89 respectively.

In the view of the above, the results pertaining to the states of TQM and EO revealed that even the Yemeni banks had the propensity to take risk to advance their performance; they lack the customer and market focus (Al-Swidi & Mahmood, 2011d). More importantly, the results also showed that Yemeni banks lack the service design and benchmarking practices which are considered to be one of the crucial factors that help any organization to survive and grow in the current turbulent business environment. These findings justify the lagged position occupied by the Yemeni banks regionally and globally.

### **6.3.2 TQM and Organizational Performance**

In order to achieve the second objective of this study regarding the effect of TQM on the organizational performance, the regression paths between TQM



dimensions and organizational performance were examined. As illustrated in Table 5.25 in Chapter 5, the relationship between TQM, as a composite variable, and the organizational performance was found to be significant at the level of 0.001 of significance supporting the hypothesis H1. This finding is consistent with the finding of the previous studies (such as Escrig-Tena, 2004; Flynn *et al.*, 1995; Douglas & Judge, 2001; Kaynak, 2003; Llorens Montes & Verdu Jover, 2004; Molina-Azorin *et al.*, 2009; Sila & Ebrahimpour, 2005; Terziovski & Samson, 1999; Zhang, 2000). This finding, in turn, supported effect of TQM on organizational performance (OP) as widely reported in the quality management literature.

As it is the core of TQM management philosophy, the ultimate aim is to satisfy the customers through continuous improvements of the organizational; various processes and managerial practices (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 be always designed according to the comprehensive knowledge about the customers' needs, requirements and expectations.

Additionally, TQM successful implementation and institutionalization can help banks to improve the quality of the offered services and prevent significant defect in work process. For example, with successful TQM initiatives results in less repetitive work and reduce the service processing time, loans and ATM, credit cards, opening new accounts, waiting times and accuracy and timeliness of financial records. Moreover, time to respond to customers' inquiries and guiding lost

customers are considered as some of the activities that need continuous improvements. Moreover, the rate of errors can be maintained as minimum with TQM successful initiatives (Al-Mansour, 2007).

More specifically, since the degree of contribution of each TQM critical factor varies (Llorens Montes & Verdu Jover, 2004), this study conducted further investigation to examine the relative importance of each TQM factor. However, the comprehensive understanding regarding the relative contribution of each TQM critical factor towards successful TQM initiative can help a bank to better utilization of its available resources. That is to say, that high contributing TQM factors towards a successful quality initiative should be paid more attention and allocated more investment compared with the less contributing factors.

The Pearson correlation analysis results reported in Table 5.19 revealed that all the dimensions of TQM had significant correlations with the organizational performance at the 0.01 level of significance. Nonetheless, the regression analysis results reported in Table 5.25 in Chapter 5 revealed that only two out of six TQM critical factors were found to be significant predictors of the organizational performance. However, while Customer Focus (CF) ( $\beta=0.258$ ,  $t=3.458$ ,  $p<0.01$ ) was found to be significantly and positively affecting the organizational performance, the Information and Analysis System (IAS) ( $\beta= - 0.349$ ,  $t= - 3.106$ ,  $p<0.01$ ) has, strikingly, a negative significant effect on the organizational performance. The non-significance of the other TQM factors needs future deep examination.

In contrary to our expectations, the regression results showed that

Management Leadership (ML) ( $\beta=0.147$ ,  $t=1.832$ ,  $p<0.07$ ) was not found to be a significant predictor of organizational performance at the 0.05 level of significance. This result contrasts the findings of the existing studies (see for example Arawati, 2005; Flynn *et al.*, 1995; Llorens Montes & Verdu Jover, 2004; Powell, 1995; and Yasin *et al.*, 2004). These studies, however, emphasized that the primary attention should be given to the leadership system designed on the clear quality values and vision to stimulate the entire organization to contribute to the successful TQM programs (Gupta *et al.*, 2005). The management leadership system should be based on all the employees capabilities and skills and address the stakeholders' needs to achieve high level of customer satisfaction through continuous improvement processes.

Despite the fact that ML has a significant positive correlation with the organizational performance as revealed by the results of this study, the causality relationship was not supported. One plausible reason that explain this finding is that the branch managers and the corporate managers are not given the authorities to decide on their banks' strategic directions. Moreover, they are just employees to put in action the instructions of the banks' owners. In other words, Yemeni banks' managers and executives think that their jobs are to control the daily activities and seriously lack the capabilities and the visions to play the role of strategic leaders (Al-Zamany *et al.*, 2002). This may explain the lack of quality management supportive leadership styles being practiced by branch managers to yield successful strategy implementation. This fact was confirmed by Al-Zamany *et al.* (2002) where he stated that the management leadership system in the Yemeni organizations was not effective to yield successful quality initiatives.

Additionally, the poor effect of the management leadership system towards organizational performance can be attributed to the low involvement of managers in setting the goals and objectives of their organizations. These managers, also, lack the strategic planning skills, which take them beyond managing by functions and focusing only on the daily activities, to consider the overall future organizational direction. More importantly, many managers failed to transform the vision and future goals of their organizations to their employees (Al-Zamany *et al.*, 2002).

Consistent with the findings of the previous literature regarding the effect of Customer Focus (CF) on the organizational performance (e.g. Llorens Montes & Verdu Jover, 2004; Yasin *et al.*, 2004), this study confirmed the existence of positive significant effect. Specifically, Customer Focus (CF) factor ( $\beta=0.258$ ,  $t=3.458$ ,  $p<0.01$ ) showed a significant power in explaining the variation in the organizational performance construct supporting the hypothesis H3. This implies that customer focus factor is one of the main determinants of a successful TQM implementation.

For banks, it has been widely emphasized that customers are more important than the salesmen in promoting service and products. Loyal customers for a bank can attract new customers and recommend the service to their relatives and friends. In the high competition business environment, banks' customers have become very sensitive to the quality and innovation of offered services. Therefore, they may easily switch to other service providers if not satisfied. Because of that, banks have to adopt customer and market oriented strategies to achieve high levels of customer satisfaction (Al-Mansour, 2007). In the Yemeni context, the Yemeni banks should exert huge efforts to first gain the customer trust and later seek their satisfaction

through high quality services. Without customer focus strategies, banks will not be able to survive in the opening economy with expected increasing competition (Rana, 2004). The institutionalization of customer focus can help in deterring the unnecessary processes and help the organization to design all the services as well as activities based on the customers' needs and expectations (Juran, 1988).

As discussed in Chapter 1 and Chapter 2, only 2.7 to 4.0 % of the Yemeni population had banks accounts (Al-Swidi & Mahmood, 2011d). These figures reflected the local image of Yemeni banks and imply the necessity for these banks to adopt long-term customer-focused strategies. In addition to that, for the Yemeni banks to be able to satisfy the already-existing customers and attract even new ones, the level of customers' satisfaction, needs and expectations should be consistently measured and objectively examined. Regular and consistent measuring of the customers' needs, expectations and levels of satisfaction could save a lot of resources and push the bank towards achieving its overall objectives.

As for the effect of HRM on the organizational performance, this study revealed that HRM was insignificant determinant of organizational performance. This result was not supportive to the hypothesis H4 in Chapter 5. Moreover, this result is not in line with the previous results already existed in the literature regarding this relationship. As it has been discussed earlier, the instrument used to measure the TQM-HRM was based on the measure used by Brah, Wong, and Rao (2000). This measure, however, consisted of employee involvement, employee training and employee empowerment. Nonetheless the wide consensus and agreement in the literature regarding the positive effect of these practices on the

organizational performance, this study found that HRM has insignificant effect on organizational performance.

These findings could be plausibly explained by the fact that the employees in Yemeni banks are not effectively involved in decision making processes, receiving very less and low quality relevant training and less empowered. This argument was confirmed by Al-Zamany *et al.* (2002) when they pressed that the poor HRM practices in the Yemeni business environment is one of the main difficulties to a successful TQM implementation in Yemen.

Related to the employees involvement, they are very less involved in decisions concern their organization due to the dominant autocratic management style of managers. Rather, most of the employees avoid discussing or having arguments with their managers as this, sometimes, might be considered unpleasant behavior even they aim at the interest of the organization.

Regarding the training of employees, many Yemeni managers do not pay a great attention to the employees' education or training as this could be a valuable investment for the future development. This might be driven by the lack of strategic vision of managers as they perceive the money spent on training as a loss since it cannot be immediately paid back. Also, some of the managers, as argued by Al-Zamany *et al.* (2002), are afraid that if innovative people are trained and further educated they may take over their positions.

In a similar argument related to the lack of empowerment of employees in the Yemeni banks. Based on the conclusions of Al-Zamany *et al.* (2002)'s study, there is a lack of trust between the employees and their managers in the Yemeni business environment. Within such an environment, employees, if empowered,

may affect the personal interests of their managers. Moreover, in the family-owned banks, like the case in many Yemeni banks, only the family members enjoy high level of empowerment.

By and large, the correlation between TQM-HRM and organizational performance revealed that this association is significant ( $r=.430$ ,  $p<0.01$ ) and had the greatest level of association with the performance. It has been also known that an effective organizational performance of the Yemeni banking industry is heavily dependent of the motivated, skillful, experienced, talented and innovative employees to attract new customers and retain the existing ones. Therefore, the HRM practices should be reviewed and critically evaluated to play its crucial as a critical success factor of TQM implementation.

In the view of contingency theory and congruence model, it can be argued that HRM practices can only yield the desired results if there was a good fit between managers and employees capabilities and the involvement and empowerment premises. If managers are not qualified to the level with which they can monitor the overall direction of the organization, HRM practices including involvement, training and empowerment may not be in the interest of the organization. Conversely, these practices may negatively affect the organizational performance. Similarly, if employees are not to the level of qualification to be involved in decision-making processes and empowered, they may drive the organization away from the right direction. Once again, it is to what extent the level of capabilities and qualification of both managers and employees fits the intended human resource practices. Therefore, prior to plan any change or improvement, there should be a proper studies to identify the determinants of a good fit and how

these factors to be enhanced to reach a successful level.

Another TQM critical factor which was found to be a significant predictor of organizational performance is the Information and Analysis System (IAS). In contrary to the existing literature, this study revealed that there is a negative significant effect ( $\beta = -0.349$ ,  $t = -3.106$ ,  $p < 0.01$ ) of information and analysis system on the organizational performance. Regardless the negative effect of IAS on OP, the finding provided evidence supporting the hypothesis H5 postulated in Chapter 5 regarding the IAS and organizational performance relationship. As a matter of fact, these results are not consistent with the findings of the previous studies in the literature of quality management (i.e. Ahire *et al.*, 1996; Kartha, 2004; and Saraph *et al.*, 1989). In the literature of TQM, the information and analysis system (IAS) has been recognized to have a significant role in banks overall performance. It has been widely known that the information system allows the operational cost reduction, increases the productivity, improves the service quality, reduces the risk and uncertainty in the decision making processes and optimizes the use of the workforces (Bilich & Neto, 2000). Notwithstanding, the results of actual data of this study showed that IAS negatively affects the organizational performance of banks in Yemen. These striking results can be partially explained by the following facts:

First, the respondents' profiles revealed that more than 75 % of the respondent were college graduates and it is expected that the majority of them were graduated from the Yemeni higher education institutions. The Yemeni higher education has very poor information system infrastructure and as a result of that the university graduates have the minimal, if not at all, knowledge about the



information systems (Mohammed, 2003). As a result of that, both students and lecturers, according to the higher ministry advisor Baabad (2005), have very limited exposure to all the technological advancements and tools and have lack the abilities to extract and take the advantages of available information. As outcomes of this situation, most of the workforces, either managers or employees, prefer the traditional work processes and think that the investment of the advanced information system may preclude the development processes (Al-Zamany *et al.*, 2002).

Second, with poor IT-related qualification, the implementation of information system in Yemeni business organizations, including banks, may produce negative results. As confirmed by the deputy minister of higher education in Yemen, Mutahar (2005), one of the major challenges to the Yemeni university graduates is the lack of qualification related to the use of information and communication systems. This obstacle may prevent them from the proper interaction with the global knowledge community and affect their future performance in technologically-driven business environment. This challenge becomes even severe in the absence of in-the-job education and training programs for employees in the Yemeni banks (Al-Zamany *et al.*, 2002). Therefore, in this case, there will be no fruitful interaction with the information system rather there might be a lot of errors that affect the overall organizational performance of banks.

Third, as the data are available in the Yemeni business organizations, Yemeni banks, among other business organizations, lack the structured way of data utilization for planning and assessment purposes (Al-Zamany *et al.*, 2002). More importantly, as argued by Al-Hamdany (1999), most of the decisions taken in the

Yemeni organizations are based on intuition and opinions rather than on the results of the data analysis.

Fourth, in the view of the contingency theory, the lack of fit between the current training and education of the Yemeni managers as well as workers in the banking industry can lead to negative business outcome (Lawrence & Lorsch, 1967). In fact, this lack of proper education and training coupled with the traditional cultural factors related to the resistance to change. This argument was also supported by the findings of the three-way interaction that showed that, as shown in appendix 9, in the Yemeni business environment whatever the level and combination of organizational culture, the IAS always resulting in declining organizational performance. Therefore, huge efforts should be put forth by all the concerning people to align all the organizational important factors before undertaking any strategy implementation initiatives.

Finally, the managers of Yemeni organizations, including banks, give very little attention to the strategic planning and strategic focus to lead their organizations on the right path on the long-term (Al-Hamdany, 1999). This situation resulted since most of the Yemeni banks' managers are being appointed because of political reasons, family relations, or long experience and not based on their proper qualifications. In other words, Yemeni banks lack the capabilities to foresee the future potential benefits that can be gained if the information systems were efficiently installed and utilized and the employees were qualified and trained as assets of their banks. As a result of that, the Yemeni banks are highly recommended to train and educate their employees to be able to utilize all the available modern business processes if they plan to successfully implement any

quality management strategy (Tari, 2005).

The finding of this study also reported the insignificant causal effect of the continuous improvement on the organizational performance. This finding, however, is in contrast to the results of the previous researchers (such as Benavent *et al.*, 2005; Gatchalian, 1997). The continuous improvement practices are not given the deserved attention and still not effectively implemented in the Yemeni banking industry. This is so because the role of managers, as perceived by the managers themselves, is to control the status quo of the business and avoid the uncertainty that leads to undesirable results. In addition to that, as argued by Al-Zamany *et al.* (2002), the Yemeni managers are very sensitive to any criticism even if they may contribute significantly to the work improvement and development. Furthermore, the lack of training of the managers and the absence of process review sessions and meeting contributed to the poor continuous improvement activities and programs.

As it has been widely discussed in the literature, the continuous improvement practices have wide scope of practice. That is, the continuous improvement practices should go above and beyond the delivered services to cover all the management practices (Benavent *et al.*, 2005). For the Yemeni banks, to ensure a successful TQM implementation, comprehensive continuous improvement programs should be planned and implemented with the commitment of all the members of the organization.

The findings of this study, also, revealed that Excellent Service Design and Benchmarking (ESDB) has insignificant effect on the organizational performance.

In this study, the ESDB consisted mostly of the items of the original Benchmarking construct. Therefore, these findings of this study regarding the effect of ESDB on organizational performance can be compared to that of benchmarking in other studies. This finding is in line with the finding of Samson and Terziovski (1999) where they revealed that the soft TQM factors, like customer focus, might be more important in producing an enhanced organizational performance than hard TQM factors like benchmarking.

The insignificant effect of ESDB on organizational performance in the Yemeni banks could be explained by the fact that the customers' voice is still absent in the Yemeni banks. This fact is one of the major issues in the Yemeni business environment at large despite the huge efforts exerted to be customer-focused. This means that the impact of customers on the organizational service design and benchmarking plans is not effective (AL-Zamany *et al.*, 2002). This situation can be partially attributed to the limited competition resulted in limited alternatives for customers to choose. However, this situation will not last forever, especially, if the economy opened up because of the accession to the World Trade Organization (WTO) that is expected to be approved soon. Therefore, the Yemeni banks and all other organizations, should review their policies related to the customers' focus and the design and benchmarking of products and service to satisfy the customers' needs and go beyond their expectations. Moreover, these policies and strategies should be linked to the capability of the employees so that the quality of outcomes could be sustained.

In conclusion, this study supported the significant importance of TQM as a determinant of organizational performance based on the data collected from the

Yemeni banking industry. In addition to that, it has been emphasized by many researchers (see for example Gadenne & Sharma, 2009) that for TQM to be successfully implemented, an organization should implement a combination of the TQM practices and should not be selective among TQM practices. This can be supported by the fact that all the TQM practices showed high correlation among each other and the positive significant combined effect of TQM on organizational performance. This suggestion corroborated what has been mentioned earlier that TQM should be viewed as a package of complementary practices that jointly change organizational culture towards achieving better organizational outcomes.

Additionally, the findings of this study, also, were in line with the premises of the contingency theory and organizational change theory as modeled in the congruence model that insists on the concept of fit. Unless there is a good fit between the employees' capabilities, qualification and training and the intended strategy, any strategy implementation would end up failure.

### **6.3.3 EO and Organizational Performance**

The results of this study Tabulated in Table 5.25 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. This result confirmed the importance of EO to the organizational performance as acknowledged in the existing literature ( see for example Keh *et al.*, 2007; Li *et al.*, 2009; Miller, 1983; Wiklund & Shepherd, 2005; Wiklund. 1999; Zahra & Covin, 1995; Zahra & 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). Despite the small number of studies not supporting the positive impact of EO on performance, the majority of the existing studies supported the positive impact of EO on organizational performance. These results lead to say that organizations with high entrepreneurial activity involvement have better performance than those with low entrepreneurial activity involvement.

Additionally, the results of this study showed that TQM practices are almost twice as important as EO for the overall organizational performance as the standard beta indicators showed. This could be explained as for the Yemeni banks the first step is to be customer-focused by aligning all the internal processes towards building an overall quality culture. After this culture has been established, the efforts should be focused to explore new business opportunities and tolerate the risk in taking their advantages.

The results of this study also showed that notwithstanding the composite entrepreneurial orientation (EO) was found to have a significant impact on the organizational performance, its dimensions were not. Specifically, the results in Table 5.25 revealed that proactive innovativeness (PI) ( $\beta=0.166$ ,  $t=1.843$ ,  $p>0.05$ ) and risk-taking (R) ( $\beta=0.109$ ,  $t=1.435$ ,  $p>0.05$ ) were not significant predictors of organizational performance. However, referring to the Pearson correlation analysis results, there were a significant positive correlations between proactive innovativeness (PI), risk-taking (R) and the organizational performance with indicators ( $r=0.374$ ,  $p<0.01$ ) and ( $r=0.366$ ,  $p<0.01$ ) respectively.

The poor predictive power of proactive innovativeness (PI) and risk-taking

(R) towards the organizational performance of the Yemeni banks could be explained by the fact that all the decisions regarding the strategy adoption are made solely by the business owners who have tendency to run stable and secure business activities. That means that banks' managers usually are not given the freedom to decide about taking the new business opportunities that might be associated with high risk. Additionally, due to the moderate education level of most of the managers in the Yemeni banking industry, their role is to run the business and stabilize the performance and to control the business (Al-Zamany *et al.*, 2002). This perception is enhanced by the fact that they are not encouraged to undertake risk businesses and they might be hold responsible for any undesirable outcomes.

These findings are once again attributable to the absence of entrepreneurial culture in the Yemeni business environment due to the lack of competition, particularly in the near past and current periods. With such cultural practices, all the Yemeni organizations will not be able to grow or even survive if the economy has been opened up as expected soon. Moreover, as stated earlier, the lack of fit between the cultural value practiced by the Yemeni banks and doing business processes will preclude any improvement initiative, according to the contingency theory assumptions. Therefore, all the concerned about the Yemeni banks' performance should trigger cultural organizational changes to ensure a good and fruitful fit between the cultural practices within the Yemeni banks and intended strategies.

Adding to the previous arguments regarding the findings of this study, the following subsection discussed the moderating effect of cultural factors on the hypothesized model of the study.

#### **6.3.4 The Moderating role of Group and Entrepreneurial Organizational Cultures**

The results of this study revealed, as illustrated in Table 5.26; Table 5.27; Table 5.28 and Table 5.29, group organizational culture (GOC) and entrepreneurial organizational culture (EntOC) negatively moderate the relationship between TQM and the organizational performance with indicators ( $\beta = -0.335$ ,  $t = -2.789$ ,  $p < 0.01$ ), ( $\beta = -0.283$ ,  $t = -2.473$ ,  $p < 0.05$ ) and ( $\beta = -0.361$ ,  $t = -2.680$ ,  $p < 0.01$ ) respectively. As these results indicated the crucial role of organizational culture (OC) as the most important base of any strategy implementation, they revealed that the lack of fit between the current cultural practices and the TQM initiatives may produce the opposite intended results. Moreover, the same tables revealed that group organizational culture (GOC) ( $\beta = 0.219$ ,  $t = 1.898$ ,  $p > 0.05$ ) and entrepreneurial organizational culture (EntOC) ( $\beta = 0.157$ ,  $t = 1.201$ ,  $p > 0.05$ ) had no significant moderating effect on the relationship between EO and the organizational performance of the Yemeni banks.

Additionally, only one factor among the TQM and EO factors was found to be significantly moderated by the organizational cultural values namely the information and analysis system (IAS). Specifically, results in Tables 5.28 and Table 5.29 showed that group organizational culture (GOC) and entrepreneurial organizational culture (EntOC) negatively affect the relationship between information and analysis system (IAS) and the organizational performance with indicators as ( $\beta = -0.525$ ,  $t = -3.609$ ,  $p < 0.001$ ) and ( $\beta = -0.511$ ,  $t = -2.908$ ,  $p < 0.01$ ) respectively.

In contrary to our expectations, the findings of this study revealed the negative moderating effect of group organizational culture (GOC) and



entrepreneurial organizational culture (EntOC) on the relationship between TQM and the OP. Similarly, it also showed that the effect of information and analysis system (IAS) on OP was negatively moderated by GOC and EntOC. In relation to that, the three-way interaction revealed that organizations with high group and entrepreneurial organizational culture were not the best performers. These findings may be explained, in the view of the contingency theory, organizational change theory and congruence model as follows.

First, for most of the Yemeni banks, there is unclear vision that directs all the individual and group efforts towards one objective. Because of that, the majority of the banks, even have been appreciative of the importance of customers for the business success, have failed to create and develop a quality culture among the employees (Al-Zamany *et al.*, 2002). In relation to that, all the quality issues have not been given the deserved attention in various meeting or assessment sessions. Moreover, the Yemeni managers themselves allocate the minimal time, if at all, to discuss the quality issues and review the organizational quality objectives and policies.

Second, another reason behind the ineffective strategy implementation in the Yemeni business environment is the poor quality of the qualification and within-work training programs. As it was argued by Al-Zamany *et al.* (2002) that the Yemeni managers and employees, due to the level and the quality of their educational background and the poor in-the-job training, lack the abilities to utilize the available data for planning and assessment purposes. It was widely known that the first step in the strategic planning is the environment scanning to identify the strengths, weaknesses, threats and the available business opportunities. Without

utilizing the information available all the planning efforts turned useless. In fact, this is common in most of the developing countries as argued by Salaheldin (2003). He also argued that the lack of competent management, the lack of technological-related training for the employees and the inadequate educational base are some of the main obstacles of strategic success. In other words, the current level of qualification and in work training for all the working in the Yemeni banks cannot fit the modern and integrated information and analysis systems. Rather, using these systems and their outputs by non-professional may cause negative performance results due to the costly mistakes and erroneous conclusions.

Third, it has been widely acknowledged in the literature that the appropriate organizational culture is necessary of successful innovative strategies such as TQM strategy (Prajogo & McDermott, 2005). In the Yemeni banking industry, 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. Therefore, this overemphasis on the hierarchical culture produced very poor performance and low quality work life of employees (Zu *et al.*, 2010). This reasoning is also consistent with the premise of the contingency theory that the organizational culture of the organization must fit the organizational strategy to ensure the success. This arguments are also in line with the premises of the organizational change theory and the congruence model that emphasized the necessity of the fit of organizational culture and planned strategies to produce enhanced performance.

Fourth, in the Yemeni business environment, in general, and in the banking industry, in particular, there has been a poor culture of continuous improvement.

This is a natural result of the lack of information utilization and the absence of meeting and sessions to review and assess all the activities processes (Al-Zamany *et al.*, 2002). In addition to that, managers in the Yemeni banking industry devote themselves to control the daily activities and thus spend the minimal time, if any, in critical work assessment and improvement planning.

Fifth, in the Yemeni banking industry even the service quality is poor and the process of doing business is not efficient, yet both employees and managers show a great resistance to any change initiatives (Al-Zamany *et al.*, 2002). Both employees and managers resist any change or improvements to avoid the uncertainty that may require for highly qualified and technological-based employees and managers.

Sixth, in the Yemeni banking industry, due to low education and training factors that coupled with the uncertainty avoidance culture (Salaheldin, 2003), the development of innovative and risk tolerant business environment is very lagged. One plausible factor behind that is the lack of customer-focused service system and the lack of competition among banks at least in the current situation. It has been widely asserted that banks, among other organizations, cannot survive in the current age of technology without having innovative capabilities to attract the customers and proper risk management system to seize the available business opportunities to lead the trend.

Last but not least, one of the main reasons of the poor effect of the current culture in the Yemeni business environment is the lack of human development policies or the poor human resource management system (Al-Zamany *et al.*, 2002; Salaheldin, 2003). In his attempt to identify the difficulties for implementing TQM

in Yemen, Al-Zamany *et al.* (2002) stated that, the employees in the Yemeni organizations, including banks, not involved in all the planning and decision making activities. In addition to that, employees, regardless their responsibility level, are not delegated or empowered to take initiatives to improve the business processes. More importantly, the employees are not trained and qualified to fit the strategy implementation processes. Moreover, there is no incentive programs that encourage and take the advantage of all the innovative ideas to improve the service quality.

Essentially, the human resources in any organization are the first element to be considered when designing any strategic plan, all the steps and procedures will be based and aligned with the intellectual capital of the organization. Moreover, the quality and entrepreneurial culture might be effected greatly by the by banks plan and implement their human resource policies. In the current Yemeni business environment, if the objective is to be customer-focused achieving high level of customer satisfaction, there should be cultural change that fit the intended strategies (Prajogo & Sohal, 2001). Moreover, if the objective of the bank to be entrepreneurial to foresee and exploit the available business opportunities, all the entrepreneurial capabilities should be enhanced by the incentives designed by the human resource management policies.

Overall, as it has been mentioned earlier, this study had many contributions to the academia and to the practical knowledge; some of the significant contributions are briefed in the following sub-sections.

## **6.4 Contributions of the study**

Throughout this study, many insights regarding the issues related to the organizational performance of banks have been arisen. As to date, this study is one of the very few studies conducted in the Arab countries' business environment to examine the effect of TQM and EO on the organizational performance. Furthermore, no empirical work has been conducted to examine the effect of TQM and EO on the banking sector. In addition to that, this study attempted to expand the boundary of the current literature as it investigated the moderating effect of the organizational culture (OC) on the relationship between the joint effect of TQM and EO on the organizational performance using the hierarchical regression analysis. By integrating the effect of TQM, EO and OC, this study had many contributions to the literature and to the practice as well. Some of the contributions of this study were elaborated in the following sub-sections.

### **6.4.1 Contribution to the Literature**

As it has been discussed in the significance of the study in Chapter 1, the contributions of this study are many. Some of these contributions are discussed as follows.

First, from the theoretical perspective, this study demonstrated the importance of TQM in the service industry, particularly in the banking industry. Moreover, it contributed to the TQM literature by reexamining the unresolved issue concerning the relationship between TQM and organizational performance. In other words, the big disagreement in the literature regarding the TQM performance implication called for further investigation and discussion. This study, however,

significantly contributed to the literature by integrating the effect of EO as the innovative strategy to the model to better explain the variance in the organizational performance construct. As stated earlier, the direct relationship between TQM and organizational performance examined in the previous literature revealed inconclusive results (Prajogo & McDermott, 2005). As previously argued, the reported failure of some TQM initiatives in the literature was attributed to the lack of supportive organizational culture (OC). In general, the findings of this study confirmed and supported the existence of a positive impact of TQM strategy on the organizational performance.

Second, this study showed the importance of EO for the organizational performance. In addition, this study contributed to the management literature by reexamining the impact of EO on the organizational performance. A review of the literature concerning this relationship revealed that the results were inconsistent. Notwithstanding the extensive research work in the literature that examined the EO and organizational performance relationship, there has been scholarly disagreement. Due to these inconclusive results, many academics and practitioners question the appropriateness of entrepreneurial orientation strategy for organizational effectiveness (Li, Huang, & Tsai, 2009; Wiklund & Shepherd, 2005). To explain these results, Wiklund and Shepherd (2005) suggested that other factors might be incorporated when further examination is to be carried out. The results of this study, however, confirmed the positive significant effect of EO on the overall organizational performance.

Third, the results of this study revealed that the joint effect of TQM and EO on the organizational performance was stronger than the separate effect of each strategy

taken alone. Moreover, the results of this study suggested that TQM and EO strategies should be implemented as packages rather than piece by piece basis. This was clear from the inter-dependent exhibited among the dimensions of each construct. Also, comparing the effects of TQM and EO as composite variables with the effects of their dimensions on performance strongly recommended that these strategies should be considered as packages rather a pool of practices to be freely selected.

Fourth, this study provided a significant insight into the role played by group and entrepreneurial organizational culture in organizational strategy implementation processes. The results of this study revealed that the supportive organizational culture should be the first step in any intended strategic organizational change. However, the lack of such organizational culture may lead to waste the organizational resources through failure strategy adoption. These results were in line with the organizational change theory as TQM and EO were considered as change initiatives aiming to change the organizational process and managerial practices. In addition, it revealed the importance of the establishment of a good fit between organizational culture and TQM strategy and EO practices to ensure a successful implementation as has been emphasized in the contingency theory and congruence model.

Fifth, contrary to the majority of the previous studies that had concentrated on the manufacturing sector, this study extended the existing literature concerning TQM, EO and OC on the service sector namely, the banks in Yemen. As argued earlier, despite the importance of the banking sector in the any economy development plans, most of the studies concerning TQM and EO in banks were

conceptual, descriptive and observational in nature. Hence, this study on the Yemeni banks has been an attempt to add empirical insights concerning this matter to the literature. However, this study revealed that organizational culture of the Yemeni banks found to enhance the effect of EO while, at the meantime, impede successful TQM implementation.

Last but not least, in addition to testing the postulated hypotheses, this study conducted a rigorous goodness of the measure analysis to validate the research instrument and establish the construct validity and reliability. This study had gone beyond the traditional testing procedures like Cronbach's alpha coefficient and exploratory factor analysis by conducting the confirmatory factor analysis. By and large, this study rigorously validated the research instrument to ensure valid and reliable results since poorly validated measures yield erroneous conclusions.

#### **6.4.2 Practical Contribution**

The results of this study have important contributions and implications for practitioners and policy-makers. This study, moreover, provided advantageous insights on how TQM, EO and OC can enhance the overall organizational performance. Some of these contributions and insights are in the following.

Firstly, the findings of this study can raise the awareness among managers of the Yemeni banks on the importance of institutionalizing TQM in their organizations. Moreover, the results also insisted that being entrepreneurial is one of the main characteristics of an organization to survive and achieve a strategic competitive position in the marketplace. Taking the advantages of these findings,



the owners and managers of Yemeni banks should follow effective plans to enhance TQM implementation and create entrepreneurial business environment.

Secondly, more importantly, as TQM and EO strategies have been considered as organizational change initiatives, an extensive efforts should be put forth to establish supportive environment. The findings of this study revealed that, in line with the organizational change theory, organizational culture (OC) of the organization can facilitate or impede TQM and EO change initiatives. Therefore, managers can ensure the success of TQM and EO through the establishment of a supportive organizational culture (OC). In other words, the finding of this study suggests that banks' managers should necessary actions in building a supportive organizational culture (OC) prior to choosing to implement any strategy, like TQM and EO, to save the organizational resources and ensure fruitful organizational change initiatives.

Thirdly, the findings of this study suggested that TQM principles and entrepreneurship fundamentals should be effectively incorporated in the Yemeni public as well as private tertiary educational systems. That is to say that the outcomes of the universities should have the basic knowledge to respond well to all the required changes in the business environment. Without this knowledge the graduates would not have been able to lead successful businesses in the turbulent business environment. Rather they will lack the minimum knowledge required for any decent jobs. In addition to that, the Yemeni policy-makers should pay an increasing attention to restructure the tertiary curriculum to be aligned with the technological current advancements. That does not mean that the graduates, of different disciplines, should be IT professionals, but at least they have the abilities

to effectively use the modern tools and means to seek information and extract the knowledge. More importantly, the higher educational institutions should equip the graduates with the abilities to use the available information to predict the future business opportunities. With these skills, the Yemeni future workforce will accommodate themselves with fast-paced technological advancements and acquire the abilities not only to respond well to any new technological techniques, but also to use them to get better business outcomes.

Fourthly, the findings of this study confirmed that organizational culture (OC) negatively moderates the TQM and organizational performance relationship. Thus, the effectiveness of TQM is inseparable from the considerations of cultural forces (Al-Zamany *et al.*, 2002). It was also confirmed that since TQM practices can be seen as Western originated practices, these strategy may not trusted and welcomed by a highly cultural driven countries, like Yemen. This perception may be an obstacle to slow the successful TQM implementation processes (Al-Zamany *et al.*, 2002). Moreover, it was argued by Al-Meer (1999) and Bjerke and Al-Meer (1993) that the perception that TQM were built on Western principles that contradicts the Islamic values may be the main reasons behind the failure of TQM initiatives. This suggests that the Yemeni policy-makers should develop a quality model, based on the same philosophy, that is designed to be in a good alignment and consistent with the cultural values (Al-Zamany *et al.*, 2002).

Finally, this study is also of a great value for the companies offering consultation related to TQM implementation. The consultant companies, instead of insisting on TQM practices implementation and assessment, they first should exert a lot of efforts to establish a supportive quality culture. Without this culture, any

quality efforts may end failure as argued earlier.

As it is the case in any research work, the following sub-section discussed the limitation of this study.

## **6.5 Limitations**

Even though this study provides good insights and many contributions, the contributions of this study, interpretation of the results obtained and the conclusions drawn accordingly should be considered in the light of the study's limitations. As it is always the case in doing research work, this study had many limitations that were recognized and to be explicitly reported in this section. The main limitations of this study can be addressed through three main categorizations namely, causality, generalizability and methodology. These three categories are further discussed as in the following.

### **6.5.1 Causality**

The research design employed by this study was a survey questionnaire research design that used the cross-sectional data collected at a particular point of time to test the hypotheses. As it is always the case in the survey research design, the information obtained only show the degree of association between variables. Therefore, whilst the causal relationships can be inferred based on the results obtained, they cannot be strictly ascertained.

Additionally, a comprehensive review of the TQM and EO revealed that they are long-term strategies in nature. Given this fact, examining the association between TQM, EO and the organizational performance at one point of time will lack the accuracy since the results will be dependent on the time of their

implementation. This implies that in order to be able to examine the effect of these strategies on the organizational performance, it is strongly advised that longitudinal studies should be conducted to examine this effect.

### **6.5.2 Generalizability**

Due to some factors in which the researcher had no control, there exists some limitations pertaining to generalizability.

Firstly, slightly more than 36 % of the respondents were other than the branches' managers namely deputy managers and supervisors. These respondent, although represent their branches, are surely did not have the same level of exposure of the managers to the quality and entrepreneurial practices. Consequently, the results could have been different if all the respondents were branch managers.

Secondly, the results of this study and consequently the conclusions drawn were based on the data collected from branch representatives based on their perception about the TQM, EO practices at one point of time. This study did not consider the continuous changes in the psychological human aspects that could have taken place on branch representatives due to the continuous exposure and growing experience. This was so since the data was based on the cross-sectional approach and no follow up data were collected. Based on that, the conclusions of the study could have been different if the research design was longitudinal rather than cross-sectional study.

Finally, although the Yemeni banking industry is one of the main service sectors in the whole economy, it would be difficult to generalize the results on the

service sector and other sectors of the economy. This difficulty could be because the results obtained about the negative effect of information and analysis system on the organizational performance might be different in other sectors.

### **6.5.3 Methodology**

Likewise the case in other research work, this study had inherent limitations pertaining to the methodological aspects.

One of the major limitations of this study was that this study used five-point Likert scale in which the respondents measure their degree of agreement towards statements related to TQM, entrepreneurial orientation (EO), organizational culture (OC) and organizational performance of the bank (BP). Using such measure may cause the patterned response which is the fact that respondent tend to answer the questions automatically without paying careful attention to their statements. This happened since different individuals have different interpretation to the numbers used to measure their perceptions. However, it is difficult to assume that all the questions have been understood completely and the high quality of the data accordingly.

Moreover, as it is the case in quantitative research design, one of the limitations of this study was that respondents were requested to translate their perception about the statements in the survey questionnaire into numbers through Liker-type scale. However, the answers of the respondent may be influenced by the biased perception of the situation (Macinati, 2008). Since the biasedness might be present in the data collected, this study may recommend that future research design studying the effect of strategies on the organizational performance should consider

mixed research design. In such design quantitative as well as qualitative research design to be employed to complement each other.

From another methodological perspective, this study employed perceptual measures to measure organizational performance construct. Although this measure was gone through rigorous validity and reliability examination either while it was developed and pretested, Pilot Study, or in prior to testing the hypotheses based on the real data collected, the results of such measures are still questionable compared to the outcomes of objective measures. Therefore, future research work could benefit from using both perceptual and objective measures to be able to draw reliable conclusions about the organizational performance construct.

Additionally, the results of this study were based on the data collected from branches' managers. These respondents were the best authoritative representatives who can describe the TQM, EO and OC practices as well as the level of organizational performance of their respective banks. These constructs could also be evaluated in some future studies by other stakeholders such as employees and customers.

Finally, another limitation of this study was the lack of accurate data in developing countries like Yemen. This is to say that the unavailability of public databases limits the research's ability to compare his findings with other sources. Moreover, in the context of Yemen there has been no other studies previously examined the effect of all or some of the constructs of this study, the researcher had to proceed without the advantage of having other findings to be benchmarked or to be used in further explanations.

## **6.6 Directions for Future Research**

Throughout the progressive work of this study, many future research opportunities have been prompted.

Firstly, as it has been discussed in the limitations section, this study employed the survey questionnaire research design to collect the data for this study. However, the nature of cross-sectional data collected at one point of time limited the researcher to observe and subsequently examine the dynamic nature of the effect of TQM, EO strategies, as long-term strategies, on the organizational performance. However, to be able to investigate the natural and dynamic relationships operating in dynamic organizational culture, case study approach could be better potential choices. The case study approach will enable the researcher to carry out a deeper investigation on the complex relation between TQM, EO and the organizational performance. The results could be different and give more insights into other potential success factors.

Secondly, to further examine the complex joint effect of strategies such as TQM and EO on the organizational performance, a longitudinal research could be extended. The suggested that longitudinal approach could explain this complex relationship over long period of time. This approach, however, could better reveals the development of the variables over time and detect the changes in their relationships through the process.

Third, since the organizational culture (OC) can be a critical factor in successful TQM and EO strategic implementation, it can also be affected, due to its dynamic nature, by these strategies implementations. Therefore, some future research efforts may be put forth to explore further the importance of supportive

organizational culture (OC) as the foundation of any organizational change initiative and how the dynamic interaction can produce an improved business results.

Fourthly, there has been a great emphasis by the contingency theorists and organizational change proponent that any strategy implementation initiative cannot be turned up successful unless there is a good fit between the intended strategy and the influential organizational factors. Organizational culture factor, however, always surfaces as one of the main strategy implementation key success factor. These facts prompted the future research to give more attention to investigate the type of organizational culture that fits the intended strategy implementation. Questions such as what organizational culture fits the TQM implementation? What type of culture that suits EO initiatives? Might be arisen and sought for their research-based answers.

Fifthly, future research should focus on taking the required cultural values of each strategy as a factor of the strategy construct. For example, when studying TQM strategy the quality culture should be studied as a dimension of TQM construct. Also, when studying the impact of EO on performance, the entrepreneurial culture should be incorporated as a dimension of EO and so on. This may help researchers to identify the types of culture that is required and fits the strategy.

Finally, to be able to draw conclusions that are generalizable to the Yemeni context as well as other developing countries with similar cultural practices, other studies examining the effect of OC on TQM and EO strategic implementation should be conducted. Meaning that, other studies in Yemen examining the same



model in manufacturing and other service sectors, such as insurance, health care and hotel industry, are highly recommended. In addition to that, for further investigations, this model can also be tested empirically using data collected from other countries that have unique and strong cultural practices.

## **6.7 Conclusion**

In conclusion, the organizational performance of banks will remain one of the major issues related to the overall economic development and growth of any economy. The enhancement of the overall organizational performance of banks has been the concern of all decision-makers in all the developing countries, including Yemen. It has been widely recognized that TQM and EO have been growing in popularity to be among the most effective strategies that can help organizations to seek better performance and produce innovative products and services. In Yemen, the importance of TQM and EO has been widely acknowledged despite the short history of these strategies in the Yemeni business environment.

The results of this study confirmed the significant impact of TQM and EO on the organizational performance. Despite the origin of such strategies as Western products, they can be helpful for enhancing and maintaining an impressive organizational performance of the Yemeni banks.

This study examined the role of organizational culture (OC), with two dimensions GOC and EntOC, on the relationship between TQM, EO and organizational performance. There has been a growing emphasis in the literature on the importance of TQM and EO for the overall organizational performance and competitive advantage (Al-Swidi & Mahmood, 2011c). However, it has been widely

argued in the literature that a good strategy per se could not generate the desired results (Chenhall & Langfield-Smith, 1998). That is so because, according to the contingency theory, any organizational strategy must have a good fit with the organizational culture of that organization (Prajogo & McDermott, 2005).

Apparently, the role of organizational culture (OC) in understanding the organizational strategy outcomes has been receiving a growing attention in the quality management and entrepreneurship literature (Prajogo & Sohal, 2001). Therefore, it was suggested by many scholar that OC should be examined to resolve the inconsistent results found in the literature regarding TQM and EO implementation.

The findings of this study indicated the significant role of the organizational culture (OC) as the ground of TQM and EO strategies. The results also showed that the organizational culture in the Yemeni banks are not supportive for successful TQM implementation. Rather, with the current organizational culture (OC), HRM system and knowledge management practices, the TQM implementation may decline the performance. Given the key role of the organizational culture (OC) in organizational strategy, this study suggested that all the banks' owners and policy-makers should initiate cultural changes through the establishment of an appropriate education, training and incentives programs to change the employees thinking and behaviors towards the culture change. Therefore, based on the empirical results of this study it can be concluded that the supportive organizational culture can yield a successful TQM and EO implementation.

This study also revealed that the customer focus was among the critical factors of TQM. Therefore, all the Yemeni banks' efforts should be based on an

appropriate knowledge of the customers' needs and requirements to gain their trust and acquire high level of satisfaction. This implies that there should be a reliable system of information regarding the customers' feedback and complaints. In addition to that, banks should regularly conduct survey to measure the customers level of satisfaction on the service provided and get suggestions how to improve them. In conclusion, Yemeni banks should establish the customer first culture and align all the efforts and activities towards that level.

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**Appendix 1**  
**Questionnaire**  
**English Version**



Universiti Utara Malaysia

### **Survey of Banks in Yemen 2011**

**Dear Respondent,**

Let me first congratulate you as you have been chosen to be one of our valuable respondents. To introduce myself, I am Abdullah Kaid Al-Swidi, a Yemeni doctoral candidate in the area of Management at the Universiti Utara Malaysia, Sintok, Malaysia. Here we kindly request you to spend nearly 20-30 minutes of your valuable time in order to fill out this questionnaire which is related to the competitive nature of Yemeni banking industry. This questionnaire is the research instrument I am using in order to complete the doctoral requirement of my dissertation.

For your kind information, the package you have received has two copies of the questionnaire in both Arabic and English. I am kindly requesting you to complete the one you prefer its language. My representative or I will be back to pick-up the questionnaires in the enclosed envelop within 10 days.

**Dear respondent,**

Your responses are very important and will be kept strictly confidential for the sake of knowledge. If you have questions, please contact me at: E-mail: **swidi75@yahoo.com**; Tel: **0060124662754**; Mailing address: 17, 2D, Sisiran Sintok 06010, Kedah, Malaysia. Or my supervisor Prof. Dr. Rosli Mahmood at: Phone 00604928

Once again we would like to express sincere appreciation for your cooperation.

Most cordially,

Abdullah Kaid Al-Swidi, Universiti Utara Malaysia Sintok, 06010, Kedah, Malaysia

## Yemeni Banks Survey 2011

### Section I

In this section, we are interested in your total quality management practices in your bank (branch)s. Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

<b>1.</b>	In our bank (branch), long-term plans focused on quality are developed.	1	2	3	4	5
<b>2.</b>	In our bank (branch), there are clear quality goals identified by top-level managers.	1	2	3	4	5
<b>3.</b>	In our regular meeting, we always emphasize the importance of service quality delivered to our customers.	1	2	3	4	5
<b>4.</b>	In our bank (branch)s, we view service quality as being more important than cost.	1	2	3	4	5
<b>5.</b>	In our bank (branch), we depend heavily on quality performance to evaluate employees.	1	2	3	4	5
<b>6.</b>	In our bank (branch), a summary of customer complaints is always given to floor and departments' managers.	1	2	3	4	5
<b>7.</b>	It is the policy in Our bank (branch) to use the customers' feedback to determine their needs and requirements.	1	2	3	4	5
<b>8.</b>	In our bank (branch), customers' requirements and expectations are used as the basis for measuring quality.	1	2	3	4	5
<b>9.</b>	In our bank (branch), floor and departments' managers are aware of the level of customer satisfaction.	1	2	3	4	5
<b>10.</b>	It is the policy of our bank (branch) to keep in close contact with our customers.	1	2	3	4	5
<b>11.</b>	It is the policy of our bank (branch) to regularly measure external customer satisfaction.	1	2	3	4	5
<b>12.</b>	In our bank (branch), we have a mission statement which has been effectively communicated to all the employees and gained their support.	1	2	3	4	5
<b>13.</b>	In our bank (branch), we have comprehensive planning process which sets and reviews short and long-term goals.	1	2	3	4	5
<b>14.</b>	Our plans focus on the achievement of the best practice in the banking industry.	1	2	3	4	5

15.	When we develop our plans, policies, and objectives, we always incorporate customer requirements and the needs of all stakeholders, including the community.	1	2	3	4	5
16.	In our bank (branch), we have a written statement of strategy covering all the operations which is clearly articulated and approved by our senior managers.	1	2	3	4	5
17.	Our branch operations are effectively aligned with the central business mission.	1	2	3	4	5
18.	In our bank (branch), all employees' suggestions are evaluated.	1	2	3	4	5
19.	In our bank (branch), most employees' suggestions are implemented.	1	2	3	4	5
20.	In our bank (branch), we often work in teams, with members from a variety of departments.	1	2	3	4	5
21.	In our bank (branch), we use the ability to work in teams as a criterion in employees' selection.	1	2	3	4	5
22.	In our bank (branch), employees' training is provided in quality principles.	1	2	3	4	5
23.	In our bank (branch), resources are available for employees training.	1	2	3	4	5
24.	In our bank (branch), there is always a kind of employees' training going on.	1	2	3	4	5
25.	In our bank (branch), the top management is often involved in quality training.	1	2	3	4	5
26.	In our bank (branch), employees are encouraged to take initiatives when dealing with customers' complaints.	1	2	3	4	5
27.	In our bank (branch), problem solving ability is a criterion for selecting employees.	1	2	3	4	5
28.	In our bank (branch), employees are given the resources necessary to deal with customers' complaints.	1	2	3	4	5
29.	It is the policy in our bank (branch) to thoroughly review the new service designs before its marketing.	1	2	3	4	5
30.	In our bank (branch), the quality of new service is more important than reducing the cost.	1	2	3	4	5
31.	When designing new service, employees from different departments often participate in the process.	1	2	3	4	5
32.	In our bank (branch), we have a program to reduce the time between receiving an order and its satisfaction.	1	2	3	4	5
33.	In our bank (branch), performance data is collected and analyzed in regular basis.	1	2	3	4	5
34.	In our bank (branch), information allows us to control and improve core processes and services.	1	2	3	4	5
35.	Customer and performance data allows us to track performance and the benchmarking data is used.	1	2	3	4	5

36.	In our bank (branch), everyone has easy access to the needed information.	1	2	3	4	5
37.	In our bank (branch), we receive timely information and the important data is presented and communicated to employees in regular basis.	1	2	3	4	5
38.	In our bank (branch), information systems are always evaluated and improved.	1	2	3	4	5
39.	In our bank (branch), there is always an emphasis on the continuous improvement in all the activities at various levels.	1	2	3	4	5
40.	In our bank (branch), there is always an emphasis on the quality-awareness programs for employees.	1	2	3	4	5
41.	In our bank (branch), continuous improvement is emphasized in the training programs provided to employees.	1	2	3	4	5
42.	In our bank (branch)'s policies, improving the quality is more important than the quantity and short term goals.	1	2	3	4	5
43.	In our bank (branch), all branches believe that by implementing continuous improvement strategies, they can survive and serve better in the highly competitive environment.	1	2	3	4	5
44.	In our bank (branch), it is always emphasized that benchmarking is our strategy to achieve a better competitive	1	2	3	4	5
45.	We visit other banks (branches), locally and internationally, to investigate their practices.	1	2	3	4	5
46.	In our bank (branch), we conduct research to find out the best practices of other local and international bank (branch)s.	1	2	3	4	5
47.	In our bank (branch), we monitor competitors to find out the best bank (branch) practices in the banking industry.	1	2	3	4	5

## Section II

In this section, we are interested in your opinion about the entrepreneurial orientation (EO) behaviors among the management of your bank (branch). Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

48.	It is the culture of our bank (branch) to emphasize innovation and research and development activities.	1	2	3	4	5
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<b>49.</b>	Our bank (branch) introduces new products and service at a high scale.	1	2	3	4	5
<b>50.</b>	Our bank (branch) supports bold approaches to innovative product development.	1	2	3	4	5
<b>51.</b>	Employees in our bank (branch) are encouraged to take initiatives and proactive moves.	1	2	3	4	5
<b>52.</b>	Our bank (branch) is usually the first bank (branch) to introduce new technologies and products.	1	2	3	4	5
<b>53.</b>	Our bank (branch) has a strong competitive posture toward competitors.	1	2	3	4	5
<b>54.</b>	Our bank (branch) has a strong proclivity for high return projects.	1	2	3	4	5
<b>55.</b>	The environment faced by our bank (branch) requires boldness to achieve objectives.	1	2	3	4	5
<b>56.</b>	Our bank (branch) usually adopts an aggressive, bold posture when faced with risk.	1	2	3	4	5

### **Section III**

In this section, we are interested in your opinion about the Organizational Culture (OC) developed and maintained in your bank (branch). Please read the following statement and circle the number that most accurately reflects your opinion on each statement.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>

<b>57.</b>	In our bank (branch) most employees are highly involved in their work.	1	2	3	4	5
<b>58.</b>	Information in our bank (branch) is widely shared so that everyone can get the information he or she needs when it is needed.	1	2	3	4	5
<b>59.</b>	Teams are the primary building blocks in our bank (branch).	1	2	3	4	5
<b>60.</b>	Work is organized so that each person can see the relationship between his/her job and the goal of our overall bank.	1	2	3	4	5
<b>61.</b>	In our bank (branch) There is continuous investment in the skills of employees.	1	2	3	4	5
<b>62.</b>	In our bank (branch) the capabilities of people are viewed as an important source of competitive advantage.	1	2	3	4	5
<b>63.</b>	In our bank (branch) there is a clear and consistent set of values that governs the way we do business.	1	2	3	4	5

<b>64.</b>	In our bank (branch) there is a clear agreement about the right way and the wrong way to do things.	1	2	3	4	5
<b>65.</b>	In our bank (branch), there is a good alignment of goals across levels.	1	2	3	4	5
<b>66.</b>	In our bank (branch), we respond well to competitors and other changes in the business environment.	1	2	3	4	5
<b>67.</b>	Different parts of our bank (branch) often cooperate to create change.	1	2	3	4	5
<b>68.</b>	In our bank (branch), customers' input directly influences our decisions.	1	2	3	4	5
<b>69.</b>	In our bank (branch), we encourage direct contact with customers by our people.	1	2	3	4	5
<b>70.</b>	In our bank (branch), we view failure as an opportunity for learning and improvement.	1	2	3	4	5
<b>71.</b>	In our bank (branch), innovation and risk taking are encouraged and rewarded.	1	2	3	4	5
<b>72.</b>	In our bank (branch), there is a clear mission that gives meaning and direction to our work.	1	2	3	4	5
<b>73.</b>	In our bank (branch), employees understand what needs to be done for us to succeed in the long run.	1	2	3	4	5
<b>74.</b>	Our vision creates excitement and motivation for our employees.	1	2	3	4	5

#### **Section IV**

In this section, we are interested in your assessment of your bank (branch)'s performance. Please read the following statements and circle the number that most accurately reflects your bank (branch)'s performance.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Far Below the Average</b>	<b>Slightly Below the Average</b>	<b>Average</b>	<b>Slightly Above the Average</b>	<b>Far Above the Average</b>

<b>75.</b>	Overall performance of our bank (branch) last year was	1	2	3	4	5
<b>76.</b>	Overall performance of Our bank (branch) relative to competitors last year	1	2	3	4	5
<b>77.</b>	Overall sales growth of our bank (branch) relative to major competitors last year was	1	2	3	4	5
<b>78.</b>	Through the last year, our unit cost of service delivered was	1	2	3	4	6
<b>79.</b>	Customer satisfaction level on services provided by our bank (branch) last year was	1	2	3	4	5
<b>80.</b>	All the employees of our bank (branch) have a level of job satisfaction that last year was.	1	2	3	4	5

## **Section V**

In this section, we ask you for personal and organizational information. Please be assured that your responses to these questions are confidential. Please answer each item.

1. What is your title?

1.....Branch Manager

2. Other (Specify).....

2. What is your gender?

1.....Male

2.....Female

3. What is your educational background?

1.....High School

2.....Community College

3.....College Degree

4.....Graduate Studies(Master/Doctorate)

5.....Other specify).....

4. What is your educational major?

1.....Business

2.....Non Business

3.....Other (Specify).....

5. How long have you been serving in a senior management capacity for this branch?.....

6. What is the approximate age of this branch?.....

7. How many full time employees are with branch?.....

8. What is your estimate of the total number of your branch's customers?.....

9. Your bank (branch) primarily is:

1.....Private

2.....Public

3.....Joint Venture

4.....Foreign

5.....Other( Specify).....

10. Your bank (branch) primarily is:

1.....Traditional

2.....Islamic

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**!!! YOUR PARTICIPATION IN THIS SURVEY IS HIGHLY APPRECIATED**

**Appendix 2**  
**Questionnaire**  
**Arabic Version**



Universiti Utara Malaysia

### إستبيان حول البنوك اليمنية للعام 2011

السادة الكرام...

السلام عليكم ورحمة الله وبركاته

إسمحولي في البداية أن أشكركم على موافقتكم المشاركة في هذا الإستبيان. كما أود أن أقدم لكم نفسي , أنا عبد الله قائد السويدي طالب يمني في برنامج الدكتوراه في تخصص إدارة الأعمال في ماليزيا.

يقوم الباحث بجمع معلومات عن ممارسات الجودة الشاملة والتوجه الريادي بين البنوك اليمنية , بالإضافة الى أن نجاح هذا الإستبيان والنتائج المترتبة عليه أمر مهم لإستكمال متطلبات برنامج الدكتوراه , فإنها قد تكون مهمة للبنوك اليمنية من خلال التوصيات الهادفة الى رفع مستوى الأداء الكلي.

بناءً على ذلك فأنا اكتب اليكم هنا لمساعدتي في هذا الإستبيان من خلال تخصيص 20-30 دقيقة من وقتكم الثمين لتعبئة هذا الإستبيان بصفحتكم مديراً لهذا البنك أو الفرع.

ونحن إذ نحيطكم علماً بأن هذه الدراسة تعد من أوائل الدراسات من نوعها حول البنوك في اليمن , لندرجو منكم الإجابة على جميع الأسئلة والعبارات والتي تتطلب رأيكم بخصوص بعض الممارسات الإدارية ولا تتطلب معلومات شخصية عنكم أو مالية عن البنك.

أخيراً , ونحن إذ نشكر لكم تعاونكم معنا سلفاً بتعبئة هذا الإستبيان لنؤكد لكم أن هذه المعلومات ستعامل بسرية تامة ولن تستخدم إلا لغرض البحث العلمي , كما يمكن مراسلتنا على العنوان التالي لمزيد من التوضيح

عبد الله قائد السويدي

Abdullah Kaid Al-Swidi, 17, 2D, Sisiran Sintok 06010, Kedah ,Malaysia

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## إستبيان البنوك اليمنية 2011

### القسم الأول

في هذا القسم من الإستبيان نرغب في معرفة وجهة نظركم عن ممارسات الجودة الشاملة في بنكمم (فرعكم). الرجاء قراءة العبارات التالية ووضع دائرة حول الرقم الذي يعكس وجهة نظركم

5	4	3	2	1	
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة	
5	4	3	2	1	1. في هذا البنك لدينا خطط لضمان جودة خدماتنا على المدى الطويل .
5	4	3	2	1	2. في هذا البنك , لدينا منظومة من الأهداف المتعلقة بالجودة تم وضعها من قبل الإدارة العليا.
5	4	3	2	1	3. في إجتماعاتنا المنتظمة في هذا البنك (الفرع) يتم التأكيد على أهمية جودة خدماتنا المقدمة لعملائنا.
5	4	3	2	1	4. في هذا البنك (الفرع) تعتبر جودة الخدمة بأنها أكثر أهمية من التكلفة
5	4	3	2	1	5. في هذا البنك (الفرع) يتم الإعتماد على جودة الأداء بشكل كبير عند تقييم الموظفين
5	4	3	2	1	6. من ثقافة هذا البنك(الفرع) أن يتم توزيع نسخة من شكاوى العملاء على مدراء الإدارات ومدراء خدمات العملاء.
5	4	3	2	1	7. من سياسة هذا البنك (الفرع) أن يتم استخدام آراء ومقترحات العملاء لتحديد حاجاتهم ومتطلباتهم.
5	4	3	2	1	8. في هذا البنك (الفرع) تعتبر متطلبات وتوقعات العملاء هي الأساس في قياس جودة خدماتنا .
5	4	3	2	1	9. في هذا البنك (الفرع) مدراء الإدارات وخدمة العملاء يعلمون جيداً مستوى الرضا عند عملائنا عن خدماتنا المقدمة اليهم.
5	4	3	2	1	10. من سياسة هذا البنك (الفرع) تعميق التواصل المباشر بين الموظفين و العملاء.
5	4	3	2	1	11. من سياسة هذا البنك (الفرع) القيام بصورة منتظمة بقياس مستوى رضا العملاء عن جودة الخدمات المقدمة اليهم.
5	4	3	2	1	12. في هذا البنك (الفرع) لدينا رسالة مستقبلية واضحة تم تناقلها بكفاءة وفاعلية وحظيت على دعم وتأييد كل الموظفين.
5	4	3	2	1	13. في هذا البنك (الفرع) لدينا منظومة تخطيط شاملة يتم الإعتماد عليها عند وضع ومراجعة الأهداف قصيرة وطويلة المدى.
5	4	3	2	1	14. خططنا في هذا البنك (الفرع) تركز على تحقيق أفضل الممارسات في الصناعة المصرفية
5	4	3	2	1	15. عندما نقوم بتطوير الخطط والسياسات والأهداف الخاصب بهذا البنك (الفرع) يتم الأخذ في الإعتبار متطلبات العملاء وكل المهتمين بما في ذلك المجتمع.

5	4	3	2	1	16.	في هذا البنك لدينا منظومة واضحة ومحددة من الإستراتيجيات التي تغطي مختلف العمليات تم وضعها وإعتمادها من قبل الإدارة العليا.
5	4	3	2	1	17.	كل العمليات في هذا الفرع متناسقة بصورة جيدة مع توجهات بنكنا العامة وتخدم الرسالة طويلة المدى التي يتبنها بنكنا.
5	4	3	2	1	18.	في هذا البنك (الفرع) يتم دراسة وتقييم الآراء المقدمة من جميع الموظفين ليتم تطوير الأداء ورفع الكفاءة.
5	4	3	2	1	19.	في هذا البنك (الفرع) يتم تنفيذ أغلب المقترحات المقدمة من الموظفين.
5	4	3	2	1	20.	من ثقافة العمل في هذا البنك أن ينخرط الموظفين في فرق عمل تضم موظفين من مختلف الأقسام لتطوير منظومات العمل.
5	4	3	2	1	21.	في هذا البنك (الفرع) يتم إعتبار قدرة الفرد على العمل ضمن فرق عمل من أهم المعايير في إختيار الموظفين.
5	4	3	2	1	22.	في هذا البنك (الفرع) يتم تدريب الموظفين بصورة مستمرة على مبادئ الجودة.
5	4	3	2	1	23.	من سياسة هذا البنك (الفرع) تخصيص الموارد اللازمة لتدريب الموظفين.
5	4	3	2	1	24.	في هذا البنك (الفرع) يوجد غالباً برامج تأهيلية للموظفين على مدار العام.
5	4	3	2	1	25.	من سياسة هذا البنك (الفرع) أن تشترك الإدارة العليا بفعالية في أي برامج تأهيلية للموظفين فيما يتعلق بالجودة .
5	4	3	2	1	26.	من سياسة هذا البنك (الفرع) تشجيع الموظفين للمبادرة في تسوية شكاوى العملاء .
5	4	3	2	1	27.	في هذا البنك (الفرع) يتم إعتبار قدرة الفرد على حل المشكلات من المعايير الضرورية عند إختيار الموظفين.
5	4	3	2	1	28.	في هذا البنك (الفرع) يتم توفير الموارد الضرورية التي تساعد الموظفين على تسوية شكاوى العملاء بفعالية.
5	4	3	2	1	29.	من سياسة هذا البنك أن يتم دراسة ومراجعة الخدمات الجديدة المصممة قبل الشروع في تسويقها للعملاء.
5	4	3	2	1	30.	في هذا البنك (الفرع) تقديم خدمة بجودة عالية أكثر أهمية من تخفيض التكلفة.
5	4	3	2	1	31.	عند تصميم خدمة جديدة في هذا البنك (الفرع) يتم الأخذ بآراء ومقترحات الموظفين من مختلف الأقسام وإشراك الجميع في عملية التصميم والتقييم.
5	4	3	2	1	32.	في هذا البنك (الفرع) لدينا برامج فعالة لتقليل الوقت بين استلام طلب العميل وتنفيذه .
5	4	3	2	1	33.	في هذا البنك (الفرع) يتم دراسة وتحليل البيانات المتعلقة بالأداء بصورة منتظمة.
5	4	3	2	1	34.	في هذا البنك (الفرع) يسمح لنا التدفق المستمر للمعلومات عن العمليات بمراقبة وتحسين مختلف العمليات والخدمات الأساسية.
5	4	3	2	1	35.	في هذا البنك (الفرع) يسمح لنا التدفق المستمر للمعلومات عن العملاء بتحسين الأداء كما يمكن أن تستخدم .
5	4	3	2	1	36.	في هذا البنك (الفرع) يمكن لأي موظف الحصول على المعلومات التي يريدها بسهولة ويسر.



37.	في هذا البنك (الفرع) نحصل على المعلومات في الوقت المناسب كما ان المعلومات الضرورية اللازمة لتحسين الأداء يتم تدولها بصورة منتظمة بين الأقسام المختلفة.	1	2	3	4	5
38.	في هذا البنك (الفرع) يتم تطوير وتحديث أنظمة المعلومات بصورة منتظمة.	1	2	3	4	5
39.	في هذا البنك (الفرع) هناك تأكيد مستمر على أهمية التحسين المستمر لمختلف العمليات في كل المستويات.	1	2	3	4	5
40.	في هذا البنك (الفرع) هناك تأكيد مستمر على أهمية برامج التوعية بأمور الجودة لجميع الموظفين في مختلف المستويات الوظيفية.	1	2	3	4	5
41.	في هذا البنك (الفرع) يتم التأكيد بصورة مستمرة على أهمية التحسين المستمر في جميع البرامج التدريبية التي تقدم للموظفين.	1	2	3	4	5
42.	من سياسة هذا البنك (الفرع) فيما يتعلق بالخدمات الإهتمام بالكيف لا بالكم كما ان جودة الخدمات أبالنسبة للبنك اهم من تحقيق الربح السريع.	1	2	3	4	5
43.	في هذا البنك كل الفروع تؤمن بأن تطبيقها لإستراتيجيات التحسين المستمر هو السبيل الوحيد لضمان قدرتها على البقاء والنمو في ظل التنافس المحموم في بيئة العمل الحالية.	1	2	3	4	5
44.	في هذا البنك (الفرع) يتم التأكيد بصورة مستمرة على أهمية استراتيجية المراقبة والمقارنة مع البنوك الرائدة في الصناعة المصرفية لتحقيق مركز منافس في السوق المصرفي.	1	2	3	4	5
45.	نقوم بزيارة البنوك المحلية والعالمية للإطلاع على ممارساتها المختلفة لمقارنتها والإستفادة منها.	1	2	3	4	5
46.	في هذا البنك (الفرع) نقوم ببحوث عميقة لإستكشاف والإستفادة من أفضل الممارسات في المجال المصرفي والتي يتم تطبيقها في البنوك المحلية أو العالمية.	1	2	3	4	5
47.	في هذا البنك (الفرع) نقوم بمراقبة المنافسين للوقوف على أفضل الممارسات في الصناعة المصرفية للإستفادة منها.	1	2	3	4	5

### القسم الثاني

في هذا القسم من الإستبيان نرغب في معرفة وجهة نظركم (رأيكم) عن مستوى التوجه الريادي لدى إدارة بنكم/فرعكم. الرجاء قراءة العبارات التالية ووضع دائرة حول الرقم الذي يعكس رأيكم في مضمون كل عبارة.

5	4	3	2	1
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
5	4	3	2	1
48. تركز السياسات العامة في هذا البنك(الفرع) على اهمية تطوير الأبحاث والإبداع.				

49.	يقدم هذا البنك خدمات حديثة على مستوى عالٍ.	1	2	3	4	5
50.	يدعم هذا البنك إتخاذ الخطوات الجريئة في التحديث والتجديد.	1	2	3	4	5
51.	يشجع هذا البنك موظفيه على إتخاذ مبادرات وخطوات إيجابية.	1	2	3	4	5
52.	يعتبر هذا البنك (الفرع) في طليعة البنوك في ما يتعلق بإستخدام الوسائل الحديثة للخدمات.	1	2	3	4	5
53.	يتخذ هذا البنك (الفرع) خطوات جريئة لمواجهة منافسيه.	1	2	3	4	5
54.	يتخذ هذا البنك (الفرع) خطوات جريئة إذا توقع مردوداً عالياً.	1	2	3	4	5
55.	تستوجب الصناعة المصرفية إتخاذ خطوات جريئة لتحقيق الأهداف.	1	2	3	4	5
56.	يتبنى هذا البنك (الفرع) سياسة جريئة وشجاعة عندما يتطلب الأمر مواجهة الأخطار المحيطة بأعمال البنك.	1	2	3	4	5

### القسم الثالث

في هذا القسم من الإستبيان نرغب في معرفة وجهة نظركم رأيكم عن الثقافة المؤسسية السائدة في بنكم\فرعكم. الرجاء قراءة العبارات التالية ووضع دائرة حول الرقم الذي يعكس وجهة نظركم.

5					4					3					2					1				
موافق بشدة					موافق					محايد					غير موافق					غير موافق بشدة				
5	4	3	2	1	كل الموظفين في هذا البنك (الفرع) يتمتعون بروح المشاركة التامة في أعمالهم.															57.				
5	4	3	2	1	في هذا البنك (الفرع) المعلومات متوفرة على نطاق واسع بحيث يمكن للموظف الحصول على المعلومات التي تهمة أو يحتاج اليها لأداء عمله بصورة جيدة.															58.				
5	4	3	2	1	فرق العمل هي المكون الرئيسي لبيئة العمل في هذا البنك (الفرع) وجميع الموظفين يعملون بروح الفريق الواحد.															59.				
5	4	3	2	1	من خلال طبيعة العمل في هذا البنك (الفرع) يستطيع كل موظف أن يرى العلاقة بين عمله والهدف الكلي للبنك (الفرع).															60.				
5	4	3	2	1	يقوم هذا البنك (الفرع) بالإستثمار بصورة مستمرة في رفع كفاءة ومهارات موظفيه.															61.				
5	4	3	2	1	في هذا البنك (الفرع) تعتبر قدرات و مهارات الموظفين اللبنة الأساسية لرفع القدرة التنافسية في السوق.															62.				

5	4	3	2	1	63.	لدينا في هذا البنك (الفرع) منظومة متكاملة وواضحة من القيم والمثل التي تحكم طبيعته عملنا.
5	4	3	2	1	64.	لدينا في هذا البنك (الفرع) إتفاق تام حول ماهية الممارسات الصائبة والخطئة .
5	4	3	2	1	65.	في هذا البنك (الفرع) يوجد تنسيق فعال لتحقيق الأهداف من خلال كل مستويات العمل.
5	4	3	2	1	66.	في هذا البنك (الفرع) لدينا قدرة عالية على مواجهة المنافسين والاستجابة بإيجابية لمختلف التغيرات في بيئة العمل.
5	4	3	2	1	67.	تتعاون كل الأقسام في هذا البنك (الفرع) لتخطيط وإنجاح أي تغيير يهدف الى تطوير العمل.
5	4	3	2	1	68.	إقتراحات العملاء هي المرتكز الرئيسي لأي قرارات وتوجهات يتخذها هذا البنك (الفرع) .
5	4	3	2	1	69.	الإدارة في هذا البنك (الفرع) تشجع التواصل المباشر بين الموظفين والعملاء.
5	4	3	2	1	70.	من ثقافة هذا البنك (الفرع) إعتبار الفشل فرصة للتعلم وتطوير الأداء.
5	4	3	2	1	71.	في هذا البنك (الفرع) يتم مكافأة وتشجيع الإبداع والأفكار الجريئة الهادفة الى تطوير الأداء.
5	4	3	2	1	72.	في هذا البنك (الفرع) لدينا رسالة واضحة ومحددة تبرر وجودنا وتحدد توجهنا المستقبلي.
5	4	3	2	1	73.	كل الموظفين في هذا البنك (الفرع) يفهمون جيداً ما يجب عمله لتحقيق الأهداف طويلة المدى.
5	4	3	2	1	74.	الرؤية المستقبلية لهذا البنك (الفرع) تخلق الإثارة والدافعية لدى كل الموظفين.

### القسم الرابع

في هذا القسم من الاستبيان نرغب في معرفة رأيكم حول الأداء الكلي للبنك (الفرع) في ما يتعلق بالنمو , المنافسة , الأرباح , ... الخ. الرجاء قراءة العبارات التالية ووضع دائرة حول الرقم الذي يعكس تقييمكم لكل عبارة.

5	4	3	2	1
ممتاز	جيد جداً	جيد	مقبول	ضعيف

5	4	3	2	1	75.	عموماً خلال العام الماضي كان مستوى أداء البنك (الفرع).
5	4	3	2	1	76.	عموماً خلال العام الماضي مقارنةً بأداء المنافس الرئيسي كان مستوى أداء البنك (الفرع).
5	4	3	2	1	77.	عموماً خلال العام الماضي مقارنةً بأداء جميع المنافسين كان مستوى النمو في المبيعات للبنك (الفرع).

78.	خلال العام الماضي كانت تكلفة خدمات البنك مقارنة بالمنافسين				
	5	4	3	2	1
79.	عموماً، الخدمات التي يقدمها هذا البنك (الفرع) حازت خلال العام الماضي على مستوى من رضا العملاء يمكن وصفه بأنه.				
	5	4	3	2	1
80.	بشكل عام، كل الموظفين في هذا البنك (الفرع) في العام الماضي كان لديهم مستوى من الرضا الوظيفي يمكن وصفه بأنه.				
	5	4	3	2	1

### القسم الخامس

في هذا الجزء نرجو منكم الإجابة عن بعض الأسئلة المتعلقة بشخصكم الكريم وعن البنك (الفرع). مرةً أخرى نؤكد لكم أن هذه المعلومات ستعامل بسرية تامة ولن تستخدم الا لغرض هذا البحث .

1. وظيفة أو مركز المجيب

أ. مدير البنك (الفرع ) ب. غيره (الرجاء التحديد ) .....

2. الجنس

أ. ذكر ب. أنثى

3. التعليم والمؤهل العلمي

أ. ثانوية عامة  
 ج. بكالوريوس  
 د. دراسات عليا (ماجستير أو دكتوراه )  
 هـ. غيره (الرجاء التحديد ) .....

4. التخصص العلمي

أ. علوم إدارية (محاسبة أو إدارة أو إقتصاد)

ب. .... أخرى (الرجاء التحديد)

5. سنوات الخدمة في هذه الوظيفة في البنك (الفرع).....

6. العمر التقديري لهذا البنك (الفرع).....

7. عدد الموظفين الإجمالي لهذا البنك (الفرع).....

8. التقدير الإجمالي لعدد العملاء.....

9. طبيعة الملكية في هذا البنك

أ. قطاع عام                      ب. قطاع خاص

ج. قطاع مختلط                      د. أجنبي

هـ. غير ذلك

10. طبيعة العمل في هذا البنك (الفرع)

أ. تقليدي                      ب. إسلامي

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في الختام نشكر لكم ونثمن عالياً مشاركتكم في هذا الإستبيان,,,,,

## Appendix 3

### Deming's 14 Points (Source: Walton, M, 1990, pp.17-18)

1. *Create constancy of purpose for improvement of product and service.* Dr. Deming suggests a radical new definition of a company's role. Rather than making money, it is to stay in business and provide jobs through innovation, research, constant improvement, and maintenance.
2. *Adopt the new philosophy.* Americans are too tolerant of poor workmanship and sullen service. We need a new religion in which mistakes and negativism are unacceptable.
3. *Cease dependence on mass inspection.* American firms typically inspect a product as it comes off the line or at major stage. Defective products are either thrown out or reworked; both are unnecessarily expensive. In effect, a company is paying workers to make defects and then to correct them. Quality comes not from inspection but from improvement of the process. With instructions, workers can be enlisted in the improvement.
4. *End the practice of awarding business on the basis of price tag alone.* Purchasing departments customarily operate on orders to seek the lowest-price vendor. Frequently, this leads to supplies of low quality. Instead, they should seek the best quality and work to achieve it with a single supplier for any one item in a long-term relationship.
5. *Improve constantly and forever the system of production and service.* Improvement is not a one time effort. Management is obligated to continually look for ways to reduce waste and improve quality.
6. *Institute training.* Too often, workers have learned their job from another worker who

was never trained properly. They are forced to follow unintelligible instructions. They cannot do their jobs because no one tells them how.

7. *Institute leadership.* The job of a supervisor is not to tell people what to do or to punish them, but to lead. Leading consists of helping people do a better job and of learning, by objective methods, who is in need of individual help.
8. *Drive out fear.* Many employees are afraid to ask questions or to take a position, even when they do not understand what the job is or what is right or wrong. People will continue to do things the wrong way, or to not do them at all. The economic loss from fear is appalling. It is necessary for better quality and productivity that people feel secure.
9. *Break down barriers between staff areas.* Often an organization's departments or units are competing with each other, or have goals that conflict. They do not work as a team so they cannot solve or foresee the problem. Worse, one department's goals may cause trouble for another.
10. *Eliminate slogans, exhortations, and targets for the work force.* These never helped anybody do a good job. Let workers formulate their own slogans.
11. *Eliminate numerical quotas.* Quotas take into account only numbers, not quality or methods. In contrast, they usually guarantee inefficiency and high cost. To hold a job, a person meets a quota at any cost, without regard for the larger organization.
12. *Remove barriers to pride of workmanship.* People are eager to do a good job and distressed when they cannot. Too often, misguided supervisors, faulty equipment, and defective materials stand in the way of good performance. These barriers must be removed.

13. *Institute a vigorous programme of education and retraining.* Both management and the work force will have to be educated in the new methods, including teamwork and statistical techniques.
14. *Take action to accomplish the transformation.* It will require a special top management team with a plan of action to carry out the quality mission. Workers cannot do it on their own, nor can managers. A critical mass of people in the organization must understand the 14 points.



## Appendix 4

### Juran's 10 steps. (Source: Juran, J. M., 1988)

1. *Build awareness of the need and opportunity for improvement.* Before a quality improvement programme can be successfully launched, managers and administrators need to be convinced that a problem exists. This can be done by acknowledging the loss of customers due to foreign competition, poor records of delivery times, etc.
2. *Set goals for improvement.* Ford Motor set its goals as "Quality is Job One." Some companies decide to be very specific with goals like "We will cut the cost of poor quality by 25% within two years'. The major reason goals are important is to announce to all that a change is taking place within the company and that quality is important.
3. *Organize the overall programme.* Juran suggests the development of a quality improvement council that actively involves upper management. This group of upper managers guides, supports and coordinates the overall programme. The council helps to identify training needs, establishes support for team designs recognition plans and plans for publicity.
4. *Provide training.* The implementation of a quality improvement effort assigns new role to every associate. To be successful requires training in concept, skills and tools of continual improvement.
5. *Carry out projects to solve problems.* Juran teaches that breakthroughs in quality improvement are achieved project-by-project, and in no other way. A project is a problem chosen for a solution and is also a managerial way of life. There is no such thing as an improvement in general.

6. *Report progress.* Reporting progress is critical to ensure that there really is a 'meeting of the minds' as to what is happening and what plans are in store for the future. Reports keep managers informed so that they can help the team overcome obstacles.
7. *Give recognition.* There are numerous ways that recognition can be given to project teams including certificates, plaques, and dinners, in addition to the opportunity to report in the office of the ranking local manager.
8. *Communicate results.* Good communication is an essential component of a continual improvement effort. Communication can be enhanced through regular stories in the company's newsletter and local newspapers, posters and notes on bulletin boards.
9. *Keep score.* Scores can be kept in several ways, including 'progress on individual improvement projects, progress on projects collectively and merit rating of individuals with respect to quality improvement'. Juran states that there is no debate on revising the merit system to include performance on quality improvement. To do otherwise weakens the emphasis on quality.
10. *Institutionalize the annual improvement process.* Quality improvements need to become a regular component of the manager's job along with supervising, monitoring etc. Quality efforts should not be viewed as an 'add-on' to the other responsibilities of anyone working in the company. No meetings should be held without quality playing an important role in the agenda.

## Appendix 5

### Crosby's 14 steps (Source: Crosby, 1980)

1. *Management commitment.* Make it clear that management stands on quality, and that the final product will conform to standards at the optimum price.
2. *Quality improvement teams.* Representatives from each department will participate on teams because each is a contributor to defect levels.
3. *Quality measurement.* Quality measurement provides an overview of current and potential non-conformance problems that allow objective evaluation and corrective action. The measurement reports are straightforward and expressed in terms that can be understood and used.
4. *Cost of Quality.* Define and evaluate the cost of quality and explain its use as a management tool. Crosby states that the cost of quality is composed of the costs of scrap, rework, warranty, service (except regular maintenance), inspection labour, engineering charges, purchase order charges, software correction, consumer affairs, audit, quality control labour, test labour, acceptance equipment cost, and other cost of doing things wrong. The total expense of these costs should be no more than 2.5 percent of sales dollar.
5. *Quality awareness.* It is important that the personal concern for quality be raised by all within the company. This can be accomplished in a number of ways including regular meetings to discuss non-conformance problems, through articles in the company newsletter, etc.
6. *Corrective action.* The goal of corrective action is to provide a systematic method of resolving forever the problems that are uncovered through previous action steps. Corrective action is best accomplished when teams work on the most serious

problems first-following the Pareto principle.

7. *Zero defect planning.* The purpose of this planning by a special quality improvement tasks team is to list all the individual action steps that must be taken before the zero defect day to ensure success. The concept and programme of zero defects are explained to all supervisors so that they may explain it to their staff. A time scheduled is prepared; functions outlined, and the method of launching the program decided.
8. *Supervisor training.* The key to a successful quality improvement program is the supervisor. Supervisors need to be knowledgeable and skilled in what to do to carry out their part of the quality improvement programme.
9. *Zero defect day.* The purpose of zero defects days is to let all employees realize through a personal experience that there has been a change. Zero defect is a new way of life, and accomplishing this requires a personal commitment and understanding that is new to most people.
10. *Goal setting.* Shortly after zero defects day, the supervisors should meet with their individual workers to determine what kinds of goals they should set for themselves. The goals should be specific and measurable. The goals should be developed by the people themselves rather than by their supervisors and should be challenging. The goals should be posted by the worker in a conspicuous place.
11. *Error-cause removal.* Individual employees should communicate to management any obstacle that makes it difficult to meet their goals. This is important because one of the most difficult problems employees face is in communicating with management.

12. *Recognition.* People appreciate recognition. Initially, they come to work for the money, but once the salary is established, their concern is for appreciation. Through recognition they realize that management seriously needs and values their help.
13. *Quality council.* Quality councils offer the opportunity for professional quality people to communicate on a regular basis to share their problems, feelings and experiences with each other.
14. *Do it over again.* The purpose of this step is to emphasize that quality improvement programme never ends.

## Appendix 6

### Assessment of Normality of the measurement model items

Variable	min	max	skew	c.r.	kurtosis	c.r.
EntOC1	1.000	5.000	-1.129	-6.535	1.381	3.997
EntOC2	1.000	5.000	-1.363	-7.890	2.161	6.254
EntOC3	1.000	5.000	-1.077	-6.234	1.594	4.613
EntOC4	1.000	5.000	-1.193	-6.905	.768	2.222
EntOC5	1.000	5.000	-1.050	-6.075	1.915	5.541
EntOC6	1.000	5.000	-1.089	-6.301	1.124	3.252
EntOC7	1.000	5.000	-1.255	-7.263	1.443	4.177
GOC1	1.000	5.000	-1.460	-8.453	2.974	8.608
GOC2	1.000	5.000	-1.362	-7.883	2.451	7.094
BP5	1.000	5.000	.010	.058	.678	1.963
BP3	1.000	5.000	.175	1.015	.857	2.481
BP2	1.000	5.000	-.154	-.892	.493	1.425
BP1	1.000	5.000	-.316	-1.829	.564	1.633
R1	1.000	5.000	-.899	-5.204	1.377	3.984
R2	1.000	5.000	-1.394	-8.071	2.873	8.315
PI1	1.000	5.000	-1.106	-6.400	1.453	4.206
PI2	1.000	5.000	-.999	-5.780	.928	2.687
PI3	1.000	5.000	-1.129	-6.536	1.059	3.064
ESDB3	1.000	5.000	-.771	-4.462	-.062	-.178
ESDB1	1.000	5.000	-.950	-5.497	1.178	3.409
IAS12	1.000	5.000	-.968	-5.600	.969	2.803
IAS11	1.000	5.000	-1.074	-6.217	1.254	3.629
IAS9	1.000	5.000	-1.198	-6.933	1.410	4.080
IAS5	1.000	5.000	-.953	-5.516	.177	.513
CI2	1.000	5.000	-1.254	-7.259	2.017	5.838
CI1	1.000	5.000	-1.072	-6.205	1.560	4.514
HRM5	1.000	5.000	-1.056	-6.110	.820	2.374
HRM4	1.000	5.000	-.983	-5.692	.331	.959
HRM1	1.000	5.000	-1.062	-6.149	1.095	3.167
CF4	2.000	5.000	-.839	-4.857	1.101	3.185
CF2	1.000	5.000	-.379	-2.191	-.504	-1.457
ML2	1.000	5.000	-1.393	-8.065	2.707	7.834
ML1	1.000	5.000	-1.348	-7.801	2.941	8.511
Multivariate					400.129	59.015

## Appendix 7

### Measurment Model Fit Summary

Fit Measure	Default model	Saturated model	Independence model
NPAR	89	561	33
CMIN	944.317	0	5753.03
DF	472	0	528
P	0		0
CMIN/DF	2.001		10.896
RMR	0.039	0	0.39
GFI	0.79	1	0.118
AGFI	0.75		0.063
PGFI	0.665		0.111
NFI Delta1	0.836	1	0
RFI rho1	0.816		0
IFI delta2	0.911	1	0
TLI rho2	0.899		0
CFI	0.910	1	0
PRATIO	0.894	0	1
PNFI	0.747	0	0
PCFI	0.813	0	0
NCP	472.317	0	5225.03
LO 90	388.618	0	4984.556
HI 90	563.788	0	5471.987
FMIN	4.722	0	28.765
F0	2.362	0	26.125
LO 90	1.943	0	24.923
HI 90	2.819	0	27.36
RMSEA	0.071		0.222
LO 90	0.064		0.217
HI 90	0.077		0.228
PCLOSE	0		0
AIC	1122.317	1122	5819.03
BCC	1158.775	1351.807	5832.548

BIC	1416.311	2975.154	5928.039
CAIC	1505.311	3536.154	5961.039
ECVI	5.612	5.61	29.095
LO 90	5.193	5.61	27.893
HI 90	6.069	5.61	30.33
MECVI	5.794	6.759	29.163
HOELTER			
.05	111		21
HOELTER			
.01	116		22

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## Appendix 8

### Descriptive Statistics, Skewness and Kurtosis of Constructs

Descriptives			
		Statistic	Std. Error
ML	Mean	4.0846	.05442
	95% Confidence Interval for Lower Bound	3.9773	
	Mean Upper Bound	4.1919	
	5% Trimmed Mean	4.1660	
	Median	4.0000	
	Variance	.595	
	Std. Deviation	.77156	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.50	
	Skewness	-1.606	.172
	Kurtosis	3.750	

Descriptives			
		Statistic	Std. Error
CF	Mean	3.7761	.05205
	95% Confidence Interval for Lower Bound	3.6735	
	Mean Upper Bound	3.8788	
	5% Trimmed Mean	3.8094	
	Median	4.0000	
	Variance	.545	
	Std. Deviation	.73799	
	Minimum	1.50	
	Maximum	5.00	
	Range	3.50	
	Interquartile Range	1.00	
	Skewness	-.654	.172
	Kurtosis	.474	

**Descriptives**

		Statistic	Std. Error
HRM	Mean	3.8242	.05911
	95% Confidence Interval for Lower Bound	3.7077	
	Mean Upper Bound	3.9408	
	5% Trimmed Mean	3.8694	
	Median	4.0000	
	Variance	.702	
	Std. Deviation	.83802	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.67	
	Skewness	-1.053	.172
	Kurtosis	.528	.341

**Descriptives**

		Statistic	Std. Error
IAS	Mean	3.9776	.05761
	95% Confidence Interval for Lower Bound	3.8640	
	Mean Upper Bound	4.0912	
	5% Trimmed Mean	4.0389	
	Median	4.0000	
	Variance	.667	
	Std. Deviation	.81670	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	1.13	
	Skewness	-1.085	.172
	Kurtosis	.979	.341

### Descriptives

		Statistic	Std. Error
CI	Mean	3.9701	.05823
	95% Confidence Interval for Lower Bound	3.8553	
	Mean Upper Bound	4.0850	
	5% Trimmed Mean	4.0445	
	Median	4.0000	
	Variance	.682	
	Std. Deviation	.82559	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.50	
	Skewness	-1.344	.172
	Kurtosis	2.283	

### Descriptives

		Statistic	Std. Error
ESDB	Mean	3.6294	.06029
	95% Confidence Interval for Lower Bound	3.5105	
	Mean Upper Bound	3.7482	
	5% Trimmed Mean	3.6743	
	Median	4.0000	
	Variance	.731	
	Std. Deviation	.85480	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	1.00	
	Skewness	-.973	.172
	Kurtosis	.705	

### Descriptives

		Statistic	Std. Error
PI	Mean	3.8889	.05732
	95% Confidence Interval for Mean		
	Lower Bound	3.7759	
	Upper Bound	4.0019	
	5% Trimmed Mean	3.9542	
	Median	4.0000	
	Variance	.660	
	Std. Deviation	.81263	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	1.00	
	Skewness	-1.246	.172
	Kurtosis	1.728	.341

### Descriptives

		Statistic	Std. Error
R	Mean	4.1866	.04994
	95% Confidence Interval for Mean		
	Lower Bound	4.0881	
	Upper Bound	4.2850	
	5% Trimmed Mean	4.2460	
	Median	4.0000	
	Variance	.501	
	Std. Deviation	.70800	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.75	
	Skewness	-1.196	.172
	Kurtosis	2.477	.341

**Descriptives**

			Statistic	Std. Error
TWO C	Mean		4.0572	.05556
	95% Confidence Interval for	Lower Bound	3.9477	
	Mean	Upper Bound	4.1668	
	5% Trimmed Mean		4.1327	
	Median		4.0000	
	Variance		.620	
	Std. Deviation		.78769	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		.50	
	Skewness		-1.462	.172
	Kurtosis		3.514	.341

**Descriptives**

			Statistic	Std. Error
EntOC	Mean		3.8507	.05544
	95% Confidence Interval for	Lower Bound	3.7414	
	Mean	Upper Bound	3.9601	
	5% Trimmed Mean		3.9158	
	Median		4.0000	
	Variance		.618	
	Std. Deviation		.78601	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		.86	
	Skewness		-1.345	.172
	Kurtosis		1.565	.341

### Descriptives

		Statistic	Std. Error
BP	Mean	3.4291	.04837
	95% Confidence Interval for Mean		
	Lower Bound	3.3337	
	Upper Bound	3.5245	
	5% Trimmed Mean	3.4433	
	Median	3.2500	
	Variance	.470	
	Std. Deviation	.68576	
	Minimum	1.00	
	Maximum	5.00	
	Range	4.00	
	Interquartile Range	.75	
	Skewness	-.200	.172
	Kurtosis	1.021	.341

## Appendix 9

### Three-way interactions

