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**Investigation of TQM Implementation to the U.A.E.  
Public Sector Organisations**

**AL AWADHI, A. Y.**

A thesis submitted in partial fulfilment of the requirements of  
Sheffield Hallam University  
for the degree of Doctor of Philosophy

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## ABSTRACT

This research explores the possibility of adopting quality approach for the United Arab Emirates Public Sector Institutions (UAEPSI), aiming to improve their performance and enable them to provide quality standard services for customers and other stakeholders.

The research was based on a literature study of the quality advocates for a better understanding in the field of TQM. A triangulation research method of quantitative (survey questionnaires) designed, evaluated the reliability and the concurrent validity of the questions. The gathered data were subjected to a series of correlation and regression analysis.

The results demonstrated a wide gap between TQM principles and the actual practices of the UAEPSI. Certain aspects were found inhibiting proper implementation of TQM. Based on the research theoretical and empirical evidences a Quality Appraisal Model (QAM) emerged as a self assessment instrument against the U.A.E. Government Excellence Program (UAEGEP) criteria's. The QAM comprises of four core quality critical factors: people, leadership, processes and system, and resources and facilities, in which fragmented to twenty sub-factors. The framework model divides the TQM implementation into five sequential phases namely; identification, appraisal, implementation, monitoring and evaluation. A weighting scoring scale was also formulated as a measurement tool, to facilitate the measurement of quality quotient in the UAEPSI. Furthermore the QAM was benchmarked against widely adopted quality and excellence models and its contribution to the development of TQM knowledge. Two focus groups of top and senior management in the UAEPSI were formulated to validate the QAM viability as a performance assessment vehicle that is in alignment with the UAEGEP quality criteria's. The model provides a model for creating awareness and understanding of TQM concepts and techniques and their impact on developing a quality culture. It is hoped that this in the long run, may encourage the Government of United Arab Emirates to adopt quality strategy in alignment with its corporate strategy.

The thesis reveals that there is a paucity of research in this area and this research study makes a contribution towards filling this gap and for further research in future.

## ACKNOWLEDGMENTS

IN THE NAME ALLAH THE MOST GRACIOUS THE MOST MERCIFUL.

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## ABBREVIATIONS

ADAEGP	Abu Dhabi Award for Excellence in Government Performance
AED	Arab Emirates Dirham
AEP	Ajman Excellence Program
CWQC	Company Wide Quality Control
DGEP	Dubai Government Excellence Program
DQA	Dubai Quality Award
EFQM	European Foundation for Quality Management
EFQM-EM	European Foundation for Quality Management Excellence Model
FNC	Federal National Council
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
HDI	Human Development Index
ILO	International Labour Organization
JIT	Just In Time
JMS	Juran Management System
MBNQA	Malcolm Baldrige National Quality Award
MOL	Ministry of Labour
PDCA	Plan, Do, Check, and Act
PSI	Public Service Institutions
QAM	Quality Appraisal Model
QC	Quality Control
QCC	Quality Control Circles
RADAR	Results, Approach, Deploy and Assess and Review
SCUAEF	Supreme Council of the U.A.E. Federation
SKEA	Sheikh Khalifa Excellence Award
SKGEP	Sheikh Khalifa Government Excellence Program
SPC	Statistical Process Control
SSPGE	Sheikh Saqr Program for Government Excellence
TPS	Toyota Production System
TQM	Total Quality Management
TQM&OE	Total Quality Management and Organizational Excellence
U.A.E.	United Arab Emirates

UAEGEP	United Arab Emirates Government Excellence Program
UAEPSI	United Arab Emirates, Public Sector Institutions
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Program



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# CHAPTER ONE

## RESEARCH INTRODUCTION

### 1.1 THE RESEARCH RATIONALE

After three decades of prevalent embarkation of the Total Quality Management (TQM) phenomenon by academics and quality advocates across the globe. It has been realized that theoretical understanding of quality concepts and approaches, sound undemanding. On the contrary, when it comes to its practical side, most organizations that experienced it tend to struggle when it comes to the actual implementation practices processes of TQM. As they find it not an easy task on how to grasp its benefits in performance improvement and increasing efficiency. So far, various investigative studies related to TQM implementations have been carried out in America, Europe and Asia on a wide range of organizations (large, medium, small, transnational, manufacturing and/or services private or public) which have implemented TQM criteria and approaches. The majority of results of such investigations revealed that less than half of the organizations which launched quality programs neither had any success in achieving their goals, nor gained any quality benefits. The core reason is that many organizations lacked TQM knowledge, and did not know how to evaluate their quality implementation success. (Ahmed, *et al.* 2008; Psychogios, and Priporas, 2007; Feng, *et al* 2006; Yasin, *et al.* 2004; Hides, *et al.* 2004; Taylor, 1997; and Miller, 1992),

What's more, empirical evidences on the adoption of the TQM as a tool for self-assessment within the public sector, reveals that found public service organizations, had lagged behind those organizations in the private sector. This lagging was due to misunderstanding and ambiguity in not knowing when to initiate suitable quality programmes, and how to properly implement TQM models and approaches. As a result, this has created a huge gap in terms of improving and delivering services to customers in the public sector compared with those in private organizations. (Hides, *et al*)

Alternatively, in contrasting the complexity associated with quality implementation practices between organizations in western societies such as: U.S.A. and European Union Nations with those in eastern societies for instance: China and Malaysia, it is more likely that the eastern organizations share to some extent the same dilemma as

those organizations in the western countries. Despite the fact, of current boom in Chinese exports of products and goods that dominated the world trade. However, in reality the situation does not necessarily always reflect the facts. This was discovered with an empirical study carried out by Chin and Pun, which revealed that the majority of Chinese organizations were not endorsing a sufficient or even essential awareness of how to implement and measure TQM benefits. In fact, the Chinese organizations acknowledged that they had a complex and uphill struggle in introducing and maintaining quality norms (Chin and Pun, 2002).

Quality researchers and practitioners such as Salazar and Tan classified a range of crucial obstacles that hindering organizations in pursuing successful quality implementation schemes. They are summarized as follows:

1. *Organizations do not understand what quality means and how to measure its outcomes*
2. *The resistance to changes in the behaviour of people*
3. *Habits and relationship between leaders and employees*
4. *Weak organizational performance and ethics*
5. *Reward of individuals rather than team*
6. *Intrinsic preference for individuality over group accountability*
7. *Size of organization: the larger is the organization, the harder its TQM implementation task becomes*
8. *The diversity and locations of organizations*

(Salazar, 1994 and Tan, 1997)

Djerdjouri and Al Eter (2007) pointed out that in recent years, many quality management programs have been introduced into the public sector in many countries around the world. In search of excellence for their organizations, the public sector managers have gradually adopted quality-based programs and methodologies to improve service to their customers and stakeholders. This trend has reached the U.A.E. in the last few years

The situation of quality practices and implementation in the United Arab Emirates Public Sector Institutions (UAEPSI) does not differ from those organizations in other countries. Such organizational inexperience in implementing a successful TQM

program is felt with the same intensity in the U.A.E. as in other developing countries. According to statement cited by deputy manager of the U.A.E. civil servants department revealed that, just forty to fifty percent of the UAEPSI capacities output are properly utilized. As he refers the incapacity of the UAEPSI mainly caused by the intensified bureaucracy, lack of employee's capabilities, inefficiency work processes, and inexistence of adequate use of quality implementation and performance measurements. (Al Khaleej, 2008 p.25). Furthermore, in the annual report of the U.A.E. Ministry of Labour, it indicated that only five percent of total UAEPSI employees went through systematic training schemes. The report claims that, this is due to a lack of inappropriate quality training programs. As a result, this caused a steady decline of the UAEPSI work efficiency and in the delivery of its services since 1995 at an annual average rate of 3.8%. (Ministry of Labour, 2008)

The U.A.E. federal as well as local governments have realized that adopting most recent TQM principles in the UAEPSI is a short cut route to get rid of current drawbacks, and to enhance productivity and institutional effectiveness. The U.A.E. government believed that by implementing TQM approaches it should boost institutional productivity, and overall outputs, which lead to better improved services. By taking this step, it should also lead to a rise in the level of satisfaction among the employees in the UAEPSI. And additionally, it enables the U.A.E. government to achieve its short and long term national development strategy along with gradual economical growth.

In 2006, the government of U.A.E. proclaimed its 2020 strategic development agenda. One of the agendas prime aims is to become one of the five foremost governments in the world by the end of 2015. With the intention of achieving this aim, the government of the U.A.E. commenced momentous organizational reforms and institutional rehabilitations. Intensive and collective efforts were made to increase the UAEPSI efficiency, productivity and its services. Hence, a number of quality programs were launched on a federal as well as on a local government's level. The objective was to elevate the knowledge and understanding of quality concepts and ultimately creates a culture of quality amongst the people in the UAEPSI. (Abdulla, 2008)

In theory, the implementation of TQM sounds simple, but many UAEPSI have encountered difficulties in implementing the basic principles of TQM when it comes to the practical side. The researcher perceived that the ad hoc TQM enforcement by the



U.A.E. government put the UAEPSI management in profound turmoil, with little known about the nature and extent of quality management and organizational excellence in relation to service institutions in the U.A.E. The UAEPSI simply wanted to fulfil the U.A.E. government quality demand. They basically rushed themselves by commencing a tremendous quality and excellence awareness campaigns in conjunction with intensive employees training schemes. As majority of the UAEPSI had realized later on that, these campaigns were to some extent unsuccessful in placing quality criteria into actual practice. Equally crucial, that due to the absence of current research of its kind in tackling problems and obstacles of TQM implementation practices had made the effort of UAEPSI in implementing TQM ineffective and more likely unfruitful. Also, it created vagueness among the UAEPSI in not knowing what precisely they should need to do and what they are attempting to change and to achieve by implementing quality and excellence criterions.

Accordingly, and prior to the research fieldwork the researcher carried out a preliminary investigation into sample of ten distinctive government institutions. The purpose was to explore, gauge and to review past experiences and current quality implementation practices of those institutions. The investigation also engaged in identifying the driving and inhibiting forces associated with UAEPSI quality initiatives. Those listed below are the summarized findings of the preliminary investigation:

- 1. Almost all the UAEPSI management aware about the benefits that could such an implementation of quality practices could increase their institutions performance.*
- 2. Lack of people and customers involvement in quality process, and employees rewarding and recognition systems.*
- 3. Some UAEPSI seemed to be reluctant and impatient to recognize the long term benefits of TQM. Therefore quality is a non continuous process*
- 4. UAEPSI are committed to TQM, they adopt the widely used and most recent excellence model, but they find it hard and difficult to use it properly and put its tenets into practice.*

5. *Inadequate experience in performing self assessment techniques, carrying out internal and external performance measurements leads to ambiguity and frustration in not achieving the designated goals of TQM*
  
6. *Lack of local TQM experts and quality culture*

The above facts have shaped in the researcher mind the idea of developing a quality model that assists UAEPSI on how to initiate successful and effective quality implementation practices which lead to an increase in efficiency and service improvement and which meet government quality standards and regulations.

The research emphasis literature related to TQM and particularly to implementation processes in UAEPSI. By empirically examining the perceptions of the employees in the UAEPSI it takes into consideration to find out the main factors that have made a considerable contribution and help UAEPSI to achieve a successful quality implementation practices.

The basics of the research literatures review were, build up from academic backgrounds and exploratory analysis, that relevant to the research concept. The academic source were principally from TQM literatures, the researcher reviewed, extracted and considered all research methods. Whereas, the exploratory source were obtained from the preliminary investigation conducted by the researcher to explore the current UAEPSI quality practices and to evaluate their appreciation to such model. Information from two sources played a major role in enabling the researcher to evaluate and to determine the most appropriate research methodology for the research work.

Based on reviewing literatures related to TQM implementation practices specifically those related to public sector organizations. Besides that, further literatures were revised about research methodologies, as to allow the researcher to justify and choose a suitable research method and tool to carry out the empirical stage of the research fieldwork. Adding to that, by utilizing the findings with the above mentioned outcomes of the preliminary investigation of TQM implementation practices in the U.A.E. as an authentic source of information. The researcher has decided to use a mixed research method to carry out the fieldwork stage, a combination of survey questionnaire supported by structured interviews were selected. However, due to cultural backgrounds

of the population sample, it perceived that survey questionnaire is the most appropriate data collection tool in the UAEPSI. Therefore, significant emphasis was laid on it as a main research methodology tool. Interviews were also, conducted as a supplementary tool that supports the results and fill the gaps that it may emerge during the data analysis stage.

The outcomes of the data analysis identified a number of Quality Critical Factors (QCF) were found significant to the success of TQM implementation in the UAEPSI. Together with reviewing the literature, broadly adopted quality models and approaches were exploited as a basic foundation for the development of the research generic model. This process eventually emerged the Quality Appraisal Model (QAM). The model outline contains a set of core factors and sub-factors; supported by systematic sequential phases of the implementation cycle, and self assessment scoring techniques was evolved. The purpose is to enable the UAEPSI to appraise their quality status and benchmark their performance improvements against the United Arab Emirates Government Excellence Programmes (UAEGEP) criteria and quality standards. In order to examine the QAM feasibility, a second research method of qualitative focus groups was carried out. Two focus groups of top management in a designated UAEPSI were formed. The focus group made considerable statements and observation that it enhanced the model to fit in accordance to their TQM implementation requirements. This enabled the model the advantage of flexibility and required adjustments to respond to the individual institutional needs of such implementation mechanisms by various UAEPSI.

## **1.2 RESEARCH AIM AND OBJECTIVES**

### ***Research Aim***

The research aims is “*to investigate current TQM practices in the United Arab Emirates public service institutions, in order to develop a generic quality appraisal model that assist them in enhancing their quality performance and to betterment of services*”.

## ***Research Objectives***

In order to achieve the above aim which is pertinent to the current TQM implementation practices in the UAEPSI, the researcher aspires to acquire the following objectives in which they facilitates the researcher task in fulfilling the research foremost aim:

- 1. To investigate current TQM practices in the UAEPSI*
- 2. To identify quality critical factors for successful TQM implementation in the UAEPSI*
- 3. To determine the appropriateness of the developed model to the UAEPSI.*

## **1.3 RESEARCH QUESTIONS**

The questions below are formulated on the bases the researcher's knowledge as they enables him to attain the research aim and objectives relevant to the TQM implementations practices in the UAEPSI.

- 1. What are the quality critical factors, and to what extent they are significant for successful implementation of TQM in the UAEPSI?*
- 2. What problems and/or obstacles are associated with TQM implementation practices in the UAEPSI?*
- 3. What are the UAEPSI anticipations of quality appraisal model?*

Obviously, answering such questions keeps the debate open to explain the findings; whether or not the QAM reflects the UAEPSI cultural values, specifically the traditions and the management values that can be demonstrated in practice.

## **1.4 RESEARCH STAGES OUTLINE**

The researcher reviewed and developed a body of knowledge from the academic literature related to the research concept. He, then, considered all the research methodologies in order to determine the most appropriate method relevant to the research topic. Afterwards, he carried out an empirical fieldwork applying a survey questionnaire which evaluated and assessed the current quality practices and implementation processes from the employees perspectives in the UAEPSI. Subsequently, the researcher compiled the gathered data from the fieldwork survey and used statistical analysis tools to interpret and analyze the data. The results obtained identified the key critical factors, problem areas, and gaps between the UAEPSI current practices and the TQM practices. Based on the results of the previous stage, a customized Quality Appraisal Model (QAM) was developed for the UAEPSI. Then, the model was tested to ensure its applicability; a focus group was formed in a designated government institution. After that the researcher validated and amended the model based on the above stage outcomes. Finally, the researcher highlights the research contribution, its limitations and proposes; a set of recommendations is proposed for future research.

## **1.5 RESEARCH STRUCTURE**

The thesis falls into ten chapters as illustrated in Figure (1.1); though the chapters are discrete, they complement each other and they are sequenced logically. Chapter one serves as an introduction.

### *Chapter Two: Research Literature Review*

This chapter sets the theoretical background; information was extracted and reviewed from the most recent academic publications and sources, such as, books, journals, articles that relate to the research topic. The chapter is divided into three sections. The first section explains in detail the quality philosophy and its concept, the quality definition and the development of the quality theory from its inception to the present day quality excellence. The second section outlines the quality gurus and their

contribution to the development of the conception of quality. The third section reviews the most common used and implemented quality approaches.

### *Chapter Three: Research Methodology*

This chapter serves as an overview of the research methodologies, their advantages and disadvantages; thus, justifying which research design and methodology was used. The triangulation method of both the quantitative survey questionnaire and the qualitative of the focus groups were employed. The chapter also discusses what sort of data gathering instruments and techniques are employed and it accounts for them.

### *Chapter Four: Fieldwork and Data Collection*

This chapter illustrates the development of the research survey questionnaire, how it is designed, piloted, tested and distributed. It also, discusses in greater detail the sampling design of the study and the process of getting back the questionnaires.

### *Chapter Five: Data Analysis*

This chapter examines and interprets the data gathered from the research fieldwork study, from both sources: the questionnaire and interview. The data obtained are then analyzed in order to identify problem areas and gaps. The results of the data analysis were used as basic layers for the research model development.

### *Chapter Six: Quality in the U.A.E.*

This chapter demonstrates the quality characteristics of the UAEPSI. The first section aims to provide a general background to the U.A.E. social and economic perspective. The second section elaborates the U.A.E. government quality initiative. The third discusses the current quality practices and implementation in the UAEPSI. The chapter rounds up by explaining the need for a model to implement the TQM in the UAEPSI.

### *Chapter Seven: The Model Development*

This chapter presents the sources of information utilized for the development of the QAM. The researcher combined theories and empirical evidence to envisage the development of the model. The chapter is divided into two main sections. Section one, demonstrates the theoretical development of the QAM. The researcher extensively reviewed the most recent existing literature, research studies, and universally adopted quality models and approaches. Section two manipulates the results of the data analysis which develop the empirical part of the model.

### *Chapter Eight: The Model Emergence*

In this chapter the researcher presents the development stages of the model based on the outcomes of the previous chapter. Section one expounds the emergence of the quality appraisal model based on the existing TQM practices in the UAEPSI, the results of data analysis, and the unique characteristics of the UAEPSI. Section two portrays the model framework of the core factors and sub-factors. Section three explains the implementation process and proposes the mechanisms along with systematic scoring techniques that transform the theoretical principles of the model into practical ones. The last section benchmarks the development by comparing the matrix with other existing broadly adopted quality models.

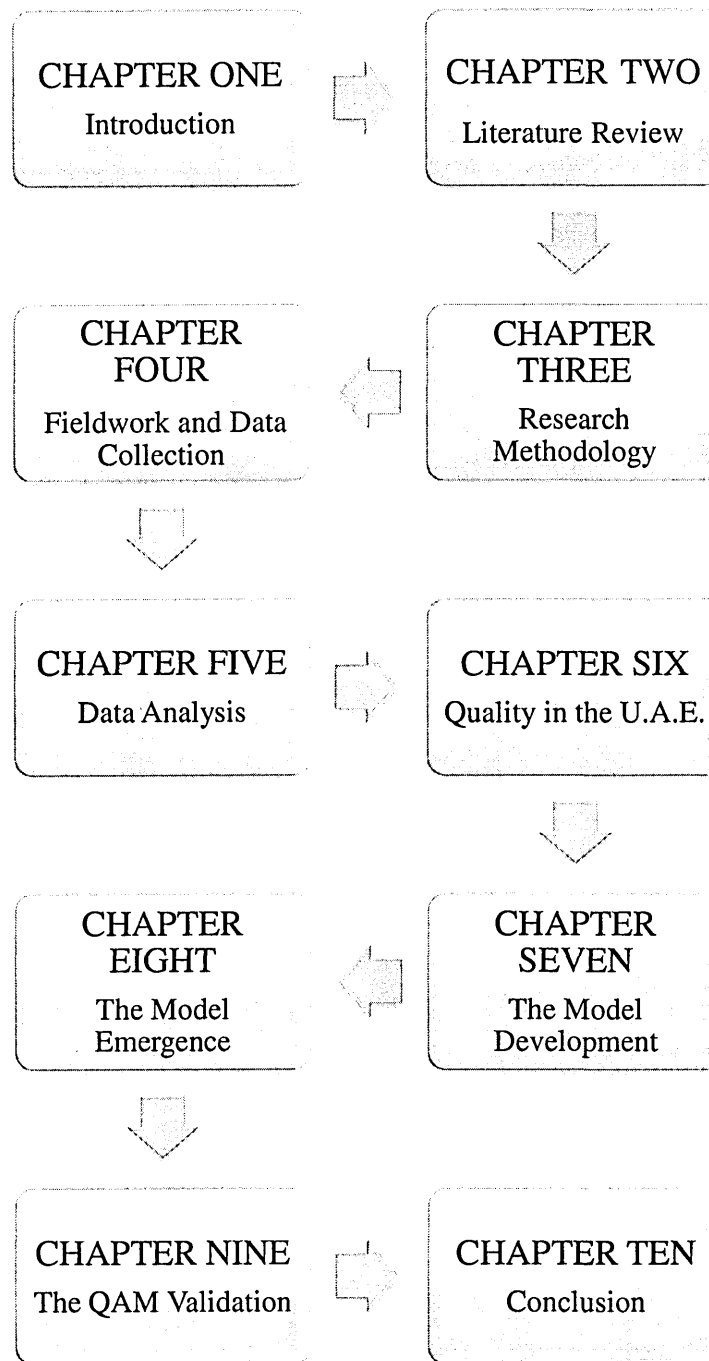
### *Chapter Nine: The QAM Validation*

This chapter displays the practical validation of the emerged QAM. In order to evaluate the applicability and credibility of the QAM, the researcher addresses a pragmatic demonstration regarding the viability of the QAM to determine its appropriateness to the UAEPSI quality needs. Section one explains the process of forming the focus groups of the top management UAEPSI. Section two discusses the issues and the set of questions that aimed to acquire the perceptions of the focus groups about the model. Section three summarizes the observations and feedback received by the focus groups and the possibilities of the actual implementation of QAM.

This chapter presents the research study contribution to knowledge together with the pitfalls; it proposes a set of recommendations for the UAEPSI and for the researchers working in the same field. The chapter illustrates the main driving and inhibiting forces in quality implementation practices, the factors influencing the success and benefits of TQM in the UAEPSI. The conclusion wraps up the research general outcomes that provide a guidelines for further future work. Eventually, the research overall contribution is to develop a set of recommendations and guidelines for the management and for the people in UAEPSI that would make them aware of how to introduce a quality implementation programme in their institutions; it demonstrates the factors that are crucial for quality success. Besides, the research enriches the conception of TQM and presents a genuine resource with empirical evidence that supports the literature and the practitioners in this field.



Figure 1.1: Thesis Outline



Source: The Author

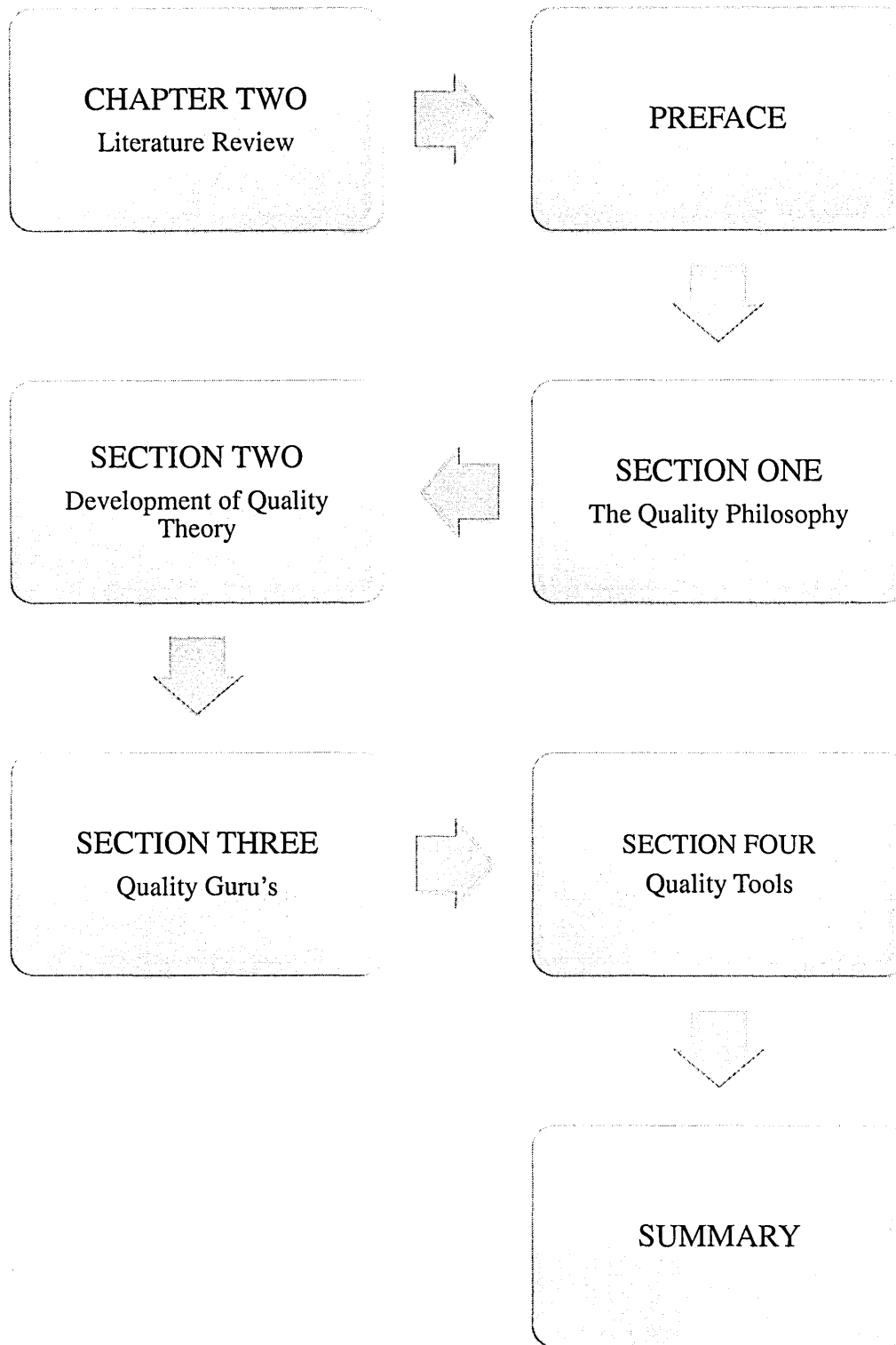
# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **PREFACE**

This chapter reviews the development of the quality theory from the early days of quality inspection to the most recent days of organizational excellence. Equal emphasis was placed on the quality concept and the definition of quality excellence. The following section highlights the background of the quality gurus, their contribution to the development of quality concepts and theories and their implementation techniques and practices. Several recent books, publications, articles, and technical papers were reviewed. Comments were made regarding the relevance of the theories and their implications, techniques and practices to the quality concept. A summary of comprehensive literature on the most common quality tools and quality performance measurements is presented at the end of the chapter. See Figure 2.1 as it outlines the chapter.

*Figure 2.1 Chapter two outline*



*Source: The Author*

## **2.1 THE QUALITY PHILOSOPHY**

Quality concept has its roots in the industrial revolution whereby products were made by the use of non-standards materials and methods; the results were products of varying quality. In the turn of the last century, Taylor (2010) developed a system of scientific management that emphasized productivity and quality control. In reality, it is one of the few management thoughts that are not developed by researchers and scholars in the west, and then implemented in industry. Quality is a thought and a cultural practice developed through implementation; first in Japan and then in the Western firms. Afterwards, it was moved to the academies for more theoretical research, elaboration and refinement.

The great shift of the Total Quality Management TQM phenomena took place after the Second World War when the American manufactures observed a dramatic demand decline on their products. As a result, quality ideology was advanced and developed by a number of quality pioneers such as Deming, Juran, Feigenbaum, Crosby, Ishikawa and Shewhart (Swift *et al.*, 1998). In the 1990s, the TQM progress was accelerated in order to meet the needs of the organizations; it performed several organizational functions for the improvement of the total output of the organization as well as the quality of the output within each function. TQM helps the organizations to focus on both the external and internal needs of the customers with the objective of achieving top quality performance in all business areas; thus, enhancing the customer's loyalty and reducing the costs through getting things done right first time and every time (Long, and Moullin, 2002; and Stahl, 1999).

### **2.1.1 The Quality Concept**

The concept of quality involves different approaches developed in the last decade by quality gurus such as Deming, Crosbey, Juran, Feigenbaum, and Ishikawa, in the field of TQM. Their theories and quality approaches acquired remarkable recognition; they were adopted as quality management fundamentals by present practitioners and researches all over the globe. Although they commonly shared thoughts on quality management and on the significance of quality to the organisation success, they emphasized one factor and that was the customer satisfactions. Their insights constitute a good reference for understanding quality philosophy mainly its principles and quality

implementation techniques and practices for both the organisations that strive for quality and the researchers as well as the quality experts. However, after careful review of their exertion, it has been found out that they had quite different perceptions and contributions to the development of the theory of quality. Gurus disagree with respect to what each considers as part of quality success. These differences were reflected on the level of perceiving quality definitions by different TQM gurus, practitioners and theorists as it is clearly observed in the upcoming sections.

### **2.1.2 The Quality Definition**

The differences in quality understanding and in its adoption by different researchers have created an unbroken debate and showed a lack precise definition. As a result, there appears to be no uniform understanding and definition of the meaning of the term quality (Hackman and Wageman, 1995). However, these divergences had played a vital role in the evolution and enrichment of quality concepts. The following interpretation of quality definition is extracted from the different TQM perspectives.

Deming (1986) suggested that the quality of a product must be defined by the ultimate customer or user of that product and that it must be measured by the interaction between three components: the product, the user and the method of using it taking into account how the user exposes/exhibits the product and takes care of it; whether or not he follows the instructions for use; the customer and the repairman may need some training, some spare parts and repair services that may or may not be available. Crosby (1984), for instance, perceived quality in terms of its conformance to the requirements; that is to say, the products could be of a high quality only if it conforms to all of its requirements.

Feigenbaum (1991) defined quality as the total composite product and service characteristic of marketing, engineering, manufacturing, and maintenance through which the product and the service in use will meet the expectations of the customer and pointed out some individual characteristics associated with the product quality, for instance, the product must have good reliability; it must perform its intended function constantly. Moreover, it must have proper serviceability and maintainability during its life cycle. Juran (2000) defined quality as fitness for use. He described a product that does not perform as one that definitely dissatisfies the customer.

Garvin (1988) observes that researchers cannot agree on a particular definition; he thus developed a conceptual framework for quality, categorizing divergent approaches and providing five definitions for quality:

1. *Transcendent definition:* quality cannot be defined precisely and that it can only be recognised.
2. *Product-Based definition:* quality is a precise and measurable variable. This means that an expensive product is considered a high quality product because quality reflects the quantity of attributes that a product has; thus, eminent products will be more expensive than the lower quality ones.
3. *User-Based definition:* a customer oriented definition; a product with high quality will definitely meet the customers' expectations; that will satisfy the customer's needs
4. *Manufacturing-Based definition:* the emphasis is placed on the suppliers' needs together with the engineering and manufacturing practices and cost reduction. Improvement in quality leads to lower costs since preventing defects in the first place reduces expense, re-work and repair
5. *Value-Based Definition:* quality is defined in terms of costs and prices; thus, a quality product is one that provides conformance at an acceptable price or cost, Garvin (1988). See Table (2.1) outlines Garvin's quality categories definitions.

Flood (1993) defined quality in terms of its compliance to the customer's agreed requirements, both formal and informal; the product should not be costly in the first place

ISO 9000 (2000) also provided different definitions for quality; quality must take account of:

- *The degree of excellence*
- *Conformance with requirements*
- *Its ability to satisfy stated or implied needs*

- *Fitness for use and purpose*
- *Freedom of defects, imperfections or contamination*
- *Delighting customers*

These aspects focused on an entity that was described as a product or service. Due to quality theory development, the definition of quality is changed in 2000 to “the degree to which a set of inherent characteristics fulfils a need or expectation that is stated, generally implied or obligatory” ISO 9000 (2000: 9). According to Hoyle, (2006) the new definition is wider in meaning in that it includes the product, service, decision making processes, documentation and information relevant to the output process.

**Table 2.1 Quality Definitions of Different Categories**

<i>Transcendent</i>	<i>Product</i>	<i>Manufacturing</i>	<i>Consumer</i>	<i>Value</i>
<i>Even though quality cannot be defined, you know what it is (Pirsig 1974).</i>	<i>Differences in quality amount to differences in the quantity of some desired</i>	<i>Conformance to specification (Levitt 1972)</i>	<i>Fitness for use (Juran 1988)</i>	<i>Affordable excellence</i>
<i>Quality is a principle that encourages excellence in everything: products, strategies, systems, processes, and people ( Bounds et al., 1994)</i>	<i>ingredients or attribute ( Abbott. 1955)</i> <i>The totality of features and characteristics of a product or services that bear on its ability to satisfy stated or implied needs. ISO, (see Freund 1985)</i>	<i>The degree to which a specific product conforms to a design or specification Gilmore (1974)</i> <i>The consistent conformance to customer expectations. Lew Lehr, quoted in Anderson (1988: 2-3)</i>	<i>Meeting the customer requirements Oakland (1989)</i> <i>Delighting the customer. (Peters&amp;Austin 1985)</i>	<i>The presence of value defined by the customer.</i>
<i>Fine craftsmanship and a rejection of mass production. (Lewis, 1984)</i>			<i>Meeting or exceeding customer expectations (Gronroos, 1983)</i>	
<i>Quality is the goodness or excellence of something. It is assessed against accepted standards of merit for such things and against the interests / needs of users and other stakeholders (Smith, 1993)</i>		<i>Quality can be defined as conformance to specifications for output that is tangible and standardized. For output that is customized and intangible, quality can be defined as the extent to which the output meets and/or exceeds customer expectations ( Reeves&amp; Bednar 1994)</i>	<i>The degree of conformance of all the relevant features and characteristics of the product (or service) to all aspects of a customer's need, limited by the price and delivery he or she will accept. (Grocock, 1986)</i>	

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*Quality is the degree of excellence at an acceptable price and the control of variability at an acceptable cost. (Broh. 1982)*

*A predictable degree of uniformity and dependability at a low cost suited to the market (Deming 1986)*

*Minimizing the loss imparted to the society from the time a product is shipped (Taguchi 1993)*

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*Source: Garvin, (1988:43)*

As mentioned earlier, it appears that there is no commonly agreed specific definition of the term quality among researchers though they share a common perspective on quality, a perspective that focuses on both product and service quality and the interaction between them, such a definition which ultimately meets the customer's expectations and ensures his satisfaction.

## **2.2 DEVELOPMENT OF QUALITY THEORY**

The emergence of quality theory and concepts dates back to the early twenties of the last century. Since then, the concept developed in the course of time and intermingled with other aspects of social sciences and management disciplines. The increasing interest in quality worldwide in the past few decades has stimulated manufacturers and service-men, private and public sectors, small, middle and large organisations in all countries to get involved in quality activities and business improvements (Omachonu, and Ross, 2004; and Sandholm, 1996).

The development of quality and excellence concepts, quality approaches and implementation techniques in manufacturing enterprises as well as in the service organizations emerged through five development phases:

### *The Dormant phase*

Companies do not feel any threat in the marketplace. They earn an acceptable income. Executives are satisfied with the business results. They experience no need to give any special consideration to quality.



### *The Awakening phase*

The situation is dramatically changed. Market shares are lost. Income drops. Profit turns into loss. Executives awake and feel that they are facing a crisis.

### *The Groping phase*

This phase is characterized by trial and error. Upon awakening, executives have realized that they have to do something in the field of quality, but what they can specifically do. Fashionable tools and methods are there as a possibility highlighting aspects in business literature and at management seminars and conferences. Lacking sound knowledge on managing quality, executives just select whatever presents itself.

### *The Action phase*

Some companies discover that the trendy tools and methods do not lead to excellent results. They then, embark on carrying out an effective programme for changing the situation. Such a programme includes a change of the internal culture, as well as improvements of products and processes.

### *The Maturity phase*

A real sign of maturity is that when quality is no longer discussed in the enterprise. Full customer satisfaction is realized through integrative processes at all the organizational levels. The concept of quality applies not only to products, i.e., the goods and services produced and supplied, but also to all the other supporting activities. A total quality approach is applied which includes all processes and functions, as well as the involvement of the organization members, (Sandholm, 1996). Table (2.2) illustrates the chronological order of quality concept development.

**Table 2.2 The Historical Events of Quality Concept Development.**

<i>Time</i>	<i>Event</i>
<i>Prior to 20th Century</i>	<ul style="list-style-type: none"><li>- <i>Quality in an art</i></li><li>- <i>Demand overcomes potential production</i></li><li>- <i>An area of workmanship</i></li></ul>
<i>1900's</i>	<ul style="list-style-type: none"><li>- <i>The scientific approach to management resulting in the rationalization of work and its breakdown leads to greater need for standardization, inspection and supervision</i></li></ul>
<i>1930's</i>	<ul style="list-style-type: none"><li>- <i>Statistical beginnings and study of quality control. In parallel, studies by Fisher on experimental design</i></li><li>- <i>The beginnings of control charts at Western Electric</i></li></ul>
<i>Late 1930's</i>	<ul style="list-style-type: none"><li>- <i>Quality standards and approaches are introduced in France (Darmois) and Japan</i></li><li>- <i>Beginnings of SQC, reliability and maintainability engineering</i></li></ul>
<i>1942</i>	<ul style="list-style-type: none"><li>- <i>Working group set up by Juran and Dodge on SQC in US army</i></li><li>- <i>Concepts of acceptance sampling devised</i></li></ul>
<i>1944</i>	<ul style="list-style-type: none"><li>- <i>Dodge and Deming seminal research on acceptance sampling</i></li></ul>
<i>1945</i>	<ul style="list-style-type: none"><li>- <i>Founding of the Japan Standard Association</i></li></ul>
<i>1946</i>	<ul style="list-style-type: none"><li>- <i>Founding of ASQC (American Society for Quality Control)</i></li></ul>
<i>1950</i>	<ul style="list-style-type: none"><li>- <i>Visit of Deming in Japan at invitation of K. Ishikawa</i></li></ul>
<i>1951</i>	<ul style="list-style-type: none"><li>- <i>Quality Assurance increasingly accepted</i></li></ul>
<i>1954</i>	<ul style="list-style-type: none"><li>- <i>TQC in Japan (Feigenbaum and Juran), book published in 1956</i></li></ul>
<i>1957</i>	<ul style="list-style-type: none"><li>- <i>Foundation of European Organization for the control of quality (France-AFCIQ, Germany, Italy, Holland and England)</i></li></ul>
<i>1961</i>	<ul style="list-style-type: none"><li>- <i>Growth for the study and application of experimental design and response surface methodology in designing quality</i></li></ul>
<i>1962</i>	<ul style="list-style-type: none"><li>- <i>The Martin (Marietta) Co. introduces the Zero defects approach while developing and Pershing Missiles (Crosby). Quality motivation started in the US and integrated programmes begun</i></li><li>- <i>Quality circles started in Japan</i></li></ul>
<i>1964</i>	<ul style="list-style-type: none"><li>- <i>Ishikawa publishes book on Quality Management</i></li></ul>
<i>1970</i>	<ul style="list-style-type: none"><li>- <i>Ishikawa publishes a book on the basic of Quality Circles and the concept of Total Quality is affirmed and advised in Japanese industries</i></li></ul>
<i>1980</i>	<ul style="list-style-type: none"><li>- <i>Just in time and quality becomes crucial for competitiveness</i></li></ul>
<i>1990</i>	<ul style="list-style-type: none"><li>- <i>A large number of US and European corporations is beginning to appreciate the advance of Japan's industries</i></li><li>- <i>Taguchi popularizes the use of experimental design to design robust systems and products</i></li></ul>

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<i>2000</i>	<ul style="list-style-type: none"> <li>- <i>Facing the rising sun challenges in quality management</i></li> <li>- <i>Development and greater dependence on supplier and contracts</i></li> <li>- <i>Growth of economic based quality control, information software packages</i></li> </ul>
<i>2000 to current</i>	<ul style="list-style-type: none"> <li>- <i>The management of quality has become a necessity which is recognized at all levels of management</i></li> <li>- <i>Increasing importance is given to off-line quality</i></li> <li>- <i>Management for the design of robust design of manufacturing processes and products</i></li> <li>- <i>The growth of process optimization</i></li> </ul>

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*Source: Tapiero (1996: 21-22)*

Quality is just a natural aspect of the work involving the entire organization. Executives regard quality as naturally as they regard finances. The Japanese companies have successfully realized the maturity phase. According to Juran (1999: 37), the winners of the Malcolm Baldrige National Quality Award are basically from the United States and the European Quality Award is granted to organisations that can be fairly considered to have reached the maturity phase.

The global trade competition is a global trade battle among companies in the US, Europe and Japan during the trade deficit of 1980's. The ever-increasing global competition, the world economic slump and the threat of losing the dominance of global trade shared by US companies in favour of their traditional competitors constitute huge hazards alarming US companies which took corrective measures in order to regain some of their lost market share. Thus, the ultimate cure to this problem was to adopt the TQM practices of the Japanese (Goetsch, and Davis, 2010)

### **2.2.1 Quality Inspection (QI)**

Inspection is considered as one of the elementary tools of quality that involves activities such as measuring, examining and/or testing a product or a service; a product may be judged by the specified requirements to determine conformity. Taylor (1998) provided a framework for the effective selection of people in the industrial organisations. One of Taylor's concepts was the clearly defined tasks performed under certain specified standard conditions. Inspection was one of these tasks and it was intended to ensure that no faulty product is produced. Inspection is an efficient and effective method that detects defects in services and products. It aims to identify a defect product and to eliminate it before it is too late or before production becomes ineffective and costly (Oakland 2003; Stahan 2002; BSI 2000; and Deming 1986).

However, as industries expanded and the technical problems become frequent, the need for more effective operations and more skilled workers arose. Inspectors were ordered to accept defective products to increase output. Skilled workers were promoted to perform other functions leaving the less skilled workers to carry out the operational jobs such as manufacturing. Boddy (2000) observed that inspection still has an important role to play in modern quality practices. However, it is no longer seen as the sole answer to all quality problems. Rather, it is one tool within a wider array. Problems arise anyway: among them are:

- 1. Technical problems that require specialised skills often not possessed by production workers and*
- 2. Inspection problems: inspectors may lack adequate and proper training; they should also be ordered not to accept defective goods in order to increase output.*  
(Boddy, 2002)

### **2.2.2 Quality Control (QC)**

Quality control aims at optimizing production; it is based on practices developed in the Japanese industries. In the beginning, it was part of the concept of quality circles, in which a team of ten to twenty people were given responsibility for the quality of the products they produced. It gradually utilized various techniques involving both workers and managers to maximize productivity and quality. Among these techniques are those that involve close monitoring of staff and excellent customer service. The concept of kaizen that considers improvement involves all members of an organisation. Its aim is to detect and amend problems along the production line to avert the production of defected products. Quality control is a detective method that organisations have used to manage quality. Juran (1992) defined quality control as a regulatory process that measures actual quality performance; he, then contrasted the final products with the specified standards to determine differences. It is a more sophisticated management tool that aims at preventing goods and services that do not conform to the basic requirements from getting to the final consumer. Quality controls are operational techniques and activities that are used to fulfil quality requirements (ISO, 1994).

As a measure of quality, quality control, however, is costly when viewed in terms of tangible and intangible variable cost. It could also result in the production of substandard goods and services when applied late in the process of production. Due to the problems associated with quality control, organisations now focus on other methods through which quality could be managed effectively (Kelemen, 2003; Evans, and Lindsay, 2002; and Feigenbaum, 2001).

### **2.2.3 Quality Assurance (QA)**

The principles of Quality assurance (QA) are based on defining the process of production with a view of a programme for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that the standards of quality are being met. Oakland (2003) defined quality assurance as the broadly prevention of quality problems through planned and systematic activities.

Dale *et al.*, (2007) affirmed that quality assurance is a prevention based system, which improves the product and service quality increasing its productivity by placing emphasis on the product, service and process design. Quality assurance emphasis on defect prevention is different from quality control that focuses on defect detection once the item is produced. Preventing the production of a non conforming product is not the same as the increased emphasis placed on the activities involved in the process of production. Thus, it is a management technique to control quality at all stages of production and to avert problems. Quality assurance functions are performed at the design stage of the products or services.

The concept of quality assurance can be outlined in terms of the following criteria: the cost effectiveness of a product or service, the enhanced productivity, accuracy and staff involvement. Effective quality assurance must involve the development of a new operating philosophy and an approach that seems to be proactive rather than reactive and that involves motivated and dedicated people in the process across normal departmental obstacles. (James, 2011; Holmes, 2010; and Sale, 2000)

## 2.2.4 Quality Management (QM)

Quality management is the management of the organisation by systematic planning, measurement and evaluation of performance so that the organization achieves its objective (Smith *et al.*, 1993, ISO 9000, 2000). Quality management involves the formulation of strategies, the setting of goals and objectives, the planning and implementation of plans and the use of control systems for monitoring feedback and taking corrective actions. The Organisation implements quality management for two main reasons:

1. *To Satisfy the customer's expectation and*
2. *To improve the overall business efficiency* (Dale, *et al.*, 2007)

According to Juran (1992), the basic goal of quality management is the elimination of failure in the concept, products, services and processes. This does not mean that products, services, and processes necessarily fail in fulfilling their function but that their function was not what the customer desires. Failure must be averted in quality management; to handle this, there should be planning, organization, and control.

## 2.2.5 Total Quality Management (TQM)

The term 'total quality' was used for the first time by Feigenbaum, (1991). It referred to wider issues within an organisation. Ishikawa, (1991) also discussed 'total quality control' in Japan, which is different from the western idea of total quality. According to him, total quality control means 'company-wide quality control' that involves all employees in quality control, from top management to the workers. However the term "TQM" was first introduced by Oakland (2001); he defines it as an approach to improve the effectiveness and flexibility of business as a whole – quality in all functional area.

The word "total" in "Total Quality Management" means that everyone in the organization must be involved in the constant improvement effort; "quality" displays the concern for the customer satisfaction, and "management" refers to the people and processes needed to achieve that quality.

A typical definition of TQM includes phrases such as: the customer focus, the involvement of all employees, the constant improvement and the integration of quality management into the total organisation. The definitions given were all similar; thus, they were confusing. It was not clear what sort of practices, policies, and activities they involve. (Summers, 2009; Oakland, 2003; Feigenbaum, 2001; Reed, *et al.*, 2000; and Smith *et al.*, 1993), Figure (2.2) presents the quality evolution from early inspection to most recent quality excellence.

The core of TQM is the customer-supplier interfaces, both external and internal, and at each interface, several processes are involved. This must be supported by a commitment to quality, communication of the quality purposes, and recognition of the need to change the culture of the organisation to create total quality (Vermeulen, 1997).

Recently, TQM moved from being what some believed to be only a way of competitive advantage for organisations to survive in the very challenging and changing customer's demands, to what others adopt TQM and consider as a fashion and fad. Equally true that a lot of organisations attribute scepticism about TQM to the length of implementation procedures. Yet, TQM remains a long and non-stop process, a process and strategy that in certain situations can improve the organisations effectiveness and efficiency.

TQM places responsibility for quality problems within management rather than on the employees. A principal concept of TQM is the management process variation, which seeks to identify special and common needs. The objective of TQM is the continual improvement of processes, achieved through a shift from outcomes or finished products to the processes that produce them.

This objective is realized through data collection and analysis, the use of statistical tools such as: flow charts, histograms, cause and effect diagrams, and other performance measurements, which are used to interpret and improve processes. These tools are discussed in further detail in section 2.4.

**Figure 2.2 The Evolution of Quality**



Source: Oakland, (2003); and Reed, (2000)

### 2.2.6 Quality Excellence Service (QES)

The organizations realized that not only the quality of their manufactured products fulfils their customers' needs, but also the continued emphasis on service as the key to competitive success provided to customers. It's believed that the development concepts and literatures of TQM created and inspired ideas in manufacturing industries. Despite the fact that there are many differences between quality in manufacturing and in services, there are also many similarities. These differences result from the nature of services themselves. In service organizations, the delivery of service involves an immediate interaction between customers and the service delivering organization while in manufacturing organizations, a limited connection exists where the focus is much more on finishing the product. The three well documented characteristics of service quality that must be acknowledged by organization management for a full understanding of service quality. These are:

*Intangibility:* most of the service processes are intangible because they are performance rather than objects, i.e., precise manufacturing specifications concerning quality. They



can't be tested before purchasing to ensure their quality; as a result, it is difficult for organizations to understand their customer's perceptions.

*Heterogeneity:* the quality of services differs from one customer to another and from day to day; the consistency of the service delivered and its measurement are difficult to attain because what the organization intends to deliver may be totally different from what the customer receives.

*Inseparability:* the production and consumption of many services such as the consequence quality delivered may have less managerial control where the customer's perception is intense.

In contrast to manufacturing, service organizations produce a product that is intangible. Usually, the complete product cannot be seen or touched. Rather, it is experienced. Examples include the delivery of health care, the experience of staying at a vacation resort and/or of learning at a university. The intangible nature of the product makes defining quality difficult.

Furthermore, since a service is experienced, perceptions can be highly subjective. In addition to the tangible factors, the quality of services is often defined by perceptual factors. These include responsiveness to the customer needs, courtesy and friendliness of the staff, promptness in resolving complaints and friendly atmosphere (Ferlie, *et al.*, 2007; Pollitt, 2007; Hood, 2007; Denis, *et al.*, 2007; Dingwall, and Strangleman, 2007; Frohlich and Westbrook, 2002; and Parasuraman, *et al.*, 1985)

Some definitions of quality in services include aspects such as time, the amount of time a customer has to wait for the service, and consistency: the degree to which the service is rendered recurrently despite time. For these reasons, defining quality in services can be especially challenging (Frohlich and Westbrook, 2002; Nie and Kellogg, 1999).

Normann (2000) identified five key elements of quality management service through developing a useful conceptual framework for managing services, as illustrated in Figure (2.3). The five elements are:

1- *The market segment that demonstrates the specifically designed service for a particular customer.*

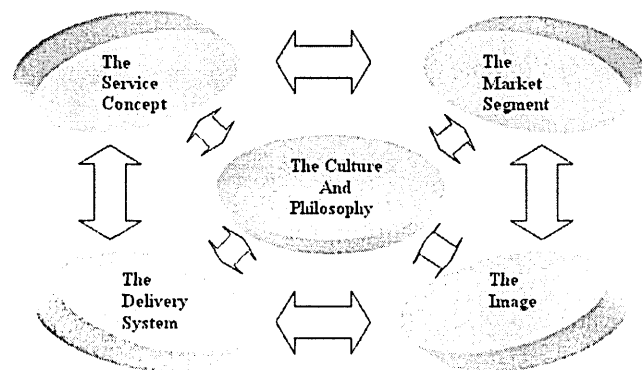
2- *The service concept that combines the benefits to be delivered to customers; some of these benefits are tangible and others are intangible. The concepts are categorised as core and peripheral; some services are easy to measure and others are quite difficult to quantify.*

3- *The service delivery system that describes the systematisation and the different roles of stakeholders in delivering services. The role of people in the system and the level of involvement and motivation they perceive. The role of customers' expectations in the service process along with the other physical elements involved in service delivery.*

4- *The image of the service that depends on what the management and the whole organisation actually do; it is considered as a tool whereby management can influence the perceptions that people, customers and other stakeholders involved have about the organisation*

5- *The culture and philosophy that refer to the method, by means of which the social process leading to the delivery of services is controlled, maintained and developed.*

**Figure 2.3 Five Key Elements of Quality Management Service**



Source: Normann (2000)

TQM has proven to be very successful and promising in the manufacturing industry. It has been said that TQM can be equally applicable with success in the service industry. But, due to the distinctive nature of service organisations, the application and success of TQM have been limited to administrative and other supportive functions only in most service organizations. In fact, the statement made by TQM experts that TQM can be successfully applied in every organization is based on two implicit but important assumptions:

- *The hierarchical control dominance of management over the technical processes and*
- *The dominance of rational decision-making processes*

Most service organizations head off largely from those two assumptions (Prajogo, and Sohal, 2006). TQM encompasses a number of strategies designed to improve quality and reduce costs. These strategies include:

- *Identifying and meeting customer needs;*
- *Reducing the cost of non-compliance with standards;*
- *Striving for zero defects;*
- *Reducing outcome variability;*
- *Using statistical methods to identify and monitor processes (Terziovski and Samson 2000)*

Williams, *et al.*, (2004) presented three scenarios on why TQM became again a top management issue; he addressed that in the past couple of years organization and mainly the CEO's and top management that shifted their attention in quality approaches toward Six sigma as a new tool for combining the improvement efforts and defects reductions with the organizations overall corporate strategies. They argue for the return of top management to TQM due to three scenarios: first, the growing pressure because of the use of the Internet to create excellence at the operational level; second, they think TQM is able to bridge the gap towards increasing demand for improved measures of the performance of companies; third, increasing the number of networked organizations that need them to stick together with common shared values.

Finally, below summarises some benefits that the organisations can gain as a result of applying the quality principles.

### *Benefits of Quality*

Organizations could not fully enjoy the quality privileges unless certain core elements are made available. Dale, (2007) defined eight quality management principles. They are:

1. *The Customer focus:* the organizations depend on their customers; they thus should understand the current and future customers` needs, meet the customer requirements and strive to exceed the customer expectations.
2. *The Leadership:* the leaders establish the unity of purpose and the direction of the organisation. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives.
3. *The involvement of people:* People at all levels are the essence of an organization and their full involvement enables them to contribute to the organization's benefit.
4. *The process approach:* the organizations' desired results could be achieved more efficiently when the activities and related resources are managed as a process.
5. *The System approach to management:* identifying, understanding and managing interrelated processes as the system contributes to the organization's effectiveness and efficiency in achieving its objectives.
6. *The continual improvement:* the constant improvement of the organization overall performance should be a permanent objective of the organization.
7. *The factual approach to decision-making:* effective decisions are based on the analysis of data and information.

8. *The mutually beneficial supplier relationships*: an organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value, (Dale 2007:26-27). Table (2.3) summarizes the quality focus, role and its merits.

**Table 2.3 The TQM Focus, Role and Privileges**

	<i>Focus</i>	<i>Role</i>	<i>Privileges</i>
1	Customers	<i>Enables to understand current and future needs</i>	<i>Betterment in meeting customers' requirements, and exceeding their expectation</i>
2	Leadership	<i>Establishes a unity of objectives, and maintains organization internal environment</i>	<i>People are more involved in achieving organizations objectives</i>
3	People Involvement	<i>Encourages the essence involvement to organization</i>	<i>Full exploitation of people's effort in</i>
4	Process Approach	<i>Directs organizations to manage processes</i>	<i>More efficient processes and activities</i>
5	Management System	<i>Identifies in understanding better managing processes as a system</i>	<i>Contributes to the organizations effectiveness and efficiency in achieving its objectives</i>
6	Continual Improvement	<i>Helps to set improvements as a permanent objective</i>	<i>Enhances the organization overall performance</i>
7	Decision Making	<i>Focuses on factual analysis of data</i>	<i>More effective decisions are taken</i>
8	Beneficial Supplier Relationships	<i>Creates an interdependent relationships between organizations and suppliers</i>	<i>Enhances the ability of both to create more value</i>

*Source: Dale, (2007) P. 26-27*

Successful TQM implementation has a positive influence on both the microeconomics at individual organizations levels and the macroeconomics at the national level. The results of many recent empirical studies provided evidence of positive, direct and indirect influence of successful TQM implementation on the overall business performance of the organization (Al Shaghana, 2004; Terziovski, and Samson, 2000; Easton, and Jarrell, 1998; Lemak, *et al.*, 1997; and Youssef, and Zairi, 1995).

## **2.3 QUALITY GURUS**

This section sheds light on the perspectives of the quality gurus and the contribution they made to the concept of quality. A guru, by definition, is a counsellor, or / and an expert. A quality guru should have all these attributes. Moreover, he should possess a concept and an approach to quality within business that could have a major and lasting impact. This section presents the main principles and practices of TQM proposed by the chief icon quality gurus such as Deming, Juran, Crosby, Feigenbaum, Shewhart, Taguchi, and Ishikawa,.

### **2.3.1 Deming (1900 – 1993)**

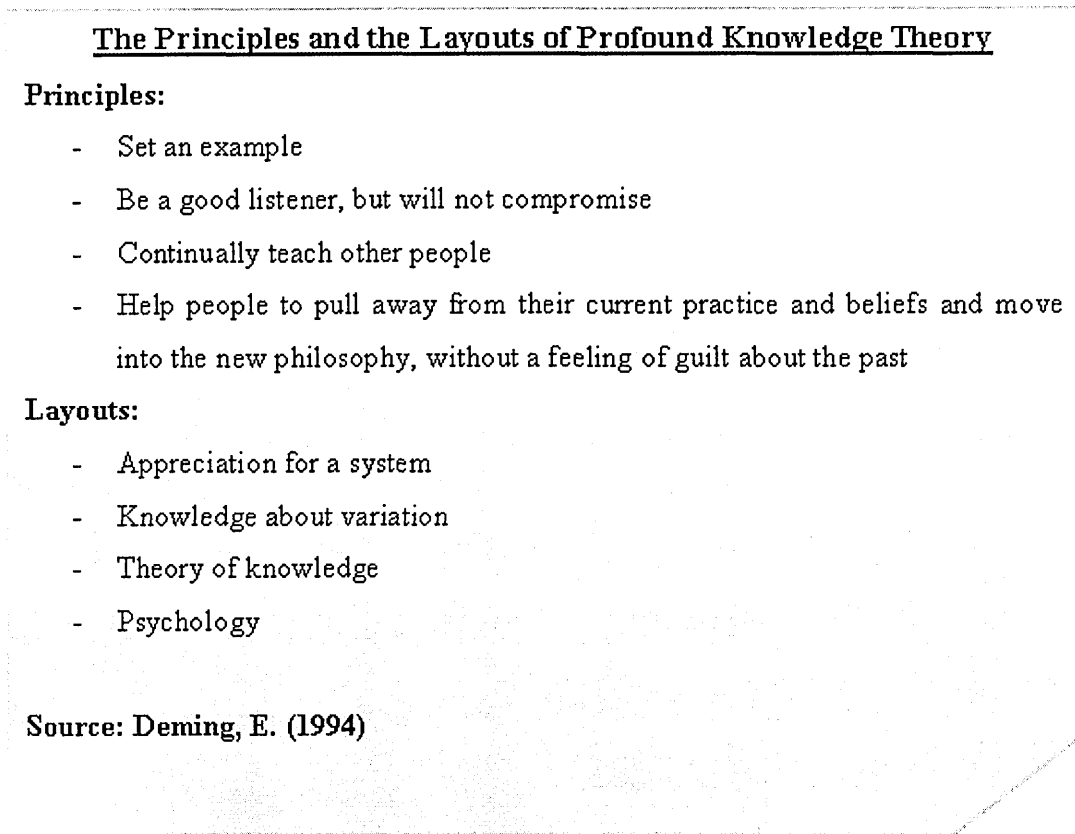
Deming is well known for his emphasis on Statistical Process Control (SPC) techniques that were originally introduced by Shewhart, at the Bell Telephone Laboratories in the 1930s. His early career was spent teaching the application of statistical concepts and tools. Latterly, he developed a theory of management and "Profound Knowledge".

The theory presents to management an outside view about their organisation system. It demonstrates the management judgment in perceiving the principles in every kind of relationship with other people. The principles along with the layouts of theory application are illustrated in Figure (2.4)

In 1950s, Deming was the first quality guru that arrived Japan where he introduced quality principles and applied the SPC techniques on the Japanese organisations. He was well known to the Japanese and their national award for quality management 'Deming Prize' was named after him in 1950 as appreciation for his contribution and generosity by the Union of Japanese Scientist and Engineers.

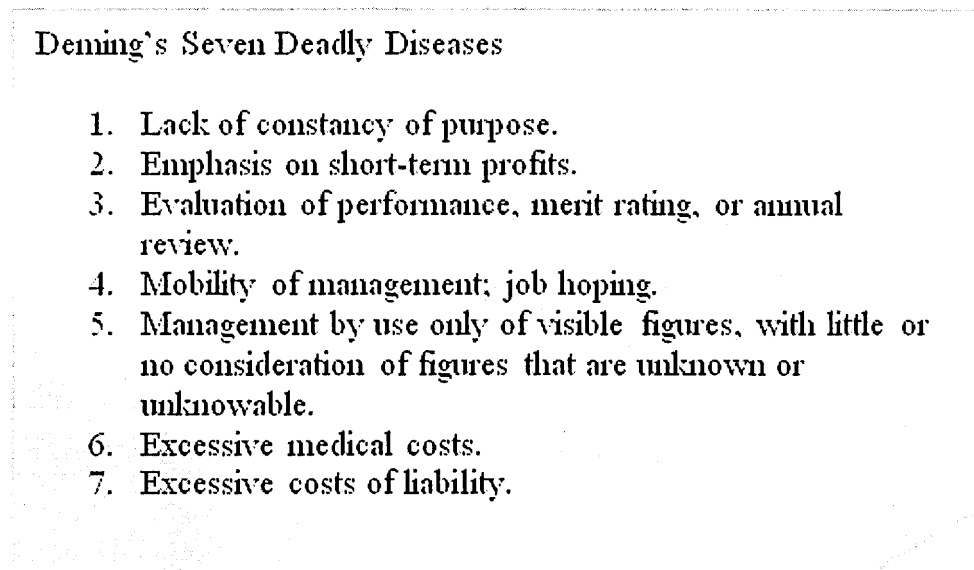
Deming believed in quality as an important issue for improving the organisation performance and efficiency and for gaining competitive advantage. He also believed that top management is responsible for most quality problems arising in any organisation and, thus, it is the responsibility of top management to engage in solving quality problems.

*Figure 2.4 The Principles and Layout of Deming's Profound Knowledge Theory*



Deming (1986) noted that there are seven deadly diseases encountered by most organizations in attempting to improve the quality and management processes. These diseases or obstacles are displayed in Figure (2.5)

*Figure 2.5 Deming's Seven Deadly Diseases*



*Source: Deming (1986)*

In 1986, Deming presented in his book 'Out of Crises' the fourteen points of management, which serve as guideline for management if they intend to stay in the business. He claims that these points are applicable anywhere in manufacturing or in service industry, to large organisations as well as small ones; these points are:

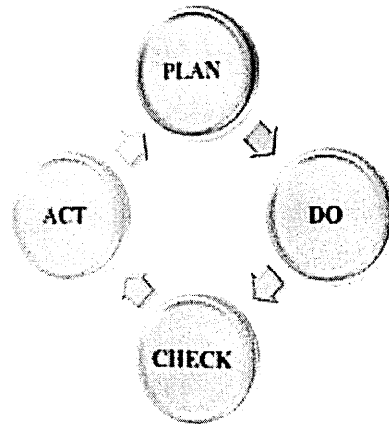
1. *Create constancy of purpose toward the improvement of product and service.*
2. *Adopt the new philosophy.*
3. *Cease dependence on inspection to achieve quality.*
4. *End the practice of awarding business on the basis of price tag. Instead, minimise total cost.*
5. *Improve constantly and forever the system of production and service to advance quality and productivity, and thus constantly decrease costs.*
6. *Institute training on the job.*
7. *Institute leadership.*
8. *Drive out fear, so that everyone may work effectively for the company.*
9. *Break down barriers between departments.*
10. *Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.*
11. *Eliminate work standards. Eliminate management by objective. Eliminate management by numbers or numerical goals. Substitute leadership.*
12. *Remove barriers that rob people of their right to pride of workmanship.*
13. *Institute a vigorous programme of education and self improvement.*
14. *Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.*

Deming also emphasized the importance of identification and measurement of customer requirements, the creation of supplier partnership, the use of functional teams to identify and solve quality problems, the enhancement of employee skills, the participation of employees, and the pursuit of continuous improvement. As a tool for quality and management improvement, Deming recommended a systemic approach to problem solving that is widely known as Plan-Do-Check-Act (PDCA) Cycle or Deming's Cycle. The cycle was originally developed by Shewhart and later modified by Deming. See Figure (2.6).



*Figure 2.6 The Deming Cycle*

The PDCA or Deming Cycle



**PLAN:** Design or revise business process components to improve results

**DO:** Implement the plan and measure its performance

**CHECK:** Assess the measurements and report the results to decision makers

**ACT:** Decide on changes needed to improve the process

*Source: Deming (1986) and redesigned by the Author*

The basic concept of the cycle is that the organization plans a change or an improvement process, implements it, and checks the results. He recommended that the business processes be placed in a continuous feedback loop so that managers can identify and change the parts of the process that need improvements and depending on the results, they act either to prioritize the change or to begin the cycle of improvement again with the new information.

### 2.3.2 Juran (1904 - 2008)

Juran is a management consultant and a prolific author whose trait is common-sense and a practical approach. Like Deming, he was influential in helping the Japanese to learn and apply quality management in the 1950's. Juran viewed quality management as a process consisting of three basic processes; the Juran Trilogy: quality planning, quality improvement and quality control (see Table 2.4). In his view, the approach to managing quality implies the detection of a persistent problem. Then, acting upon it by the process of quality control; the constant problem requires a different process, namely, quality improvement; such constant problems are traceable to an inadequate quality planning

process. Furthermore, Juran identified a universal sequence of three quality activities, quality processes, and a quality improvement process. These processes are:

*Quality Planning:* a process of developing products and their features. It identifies the customers and determines their needs and requirements. The process involves developing processes capable of producing product features required by the customers, and transferring the resulting plans to operating forces.

*Quality Control:* a process of examining and evaluating the product against the original requirements of the customers. The detected problems are then corrected.

*Quality Improvement:* a process of identifying the specific needs for improvement and setting up project teams that are responsible for identifying problems and solving them; the process involves allocating resources and providing training, both of which are needed by the teams for achieving their goals.

**Table 2.4 Juran's quality management basic processes**

<b>Quality Planning</b>	<b>Quality Control</b>	<b>Quality Improvement</b>
<i>Establish quality goals</i>	<i>Choose control subjects</i>	<i>Prove the need</i>
<i>Identify customers</i>	<i>Choose units of measure</i>	<i>Identify projects</i>
<i>Discover customer needs</i>	<i>Set goals</i>	<i>Organize project teams</i>
<i>Develop product features</i>	<i>Create a sensor</i>	<i>Diagnose the causes</i>
<i>Develop process features</i>	<i>Measure actual performance</i>	<i>Provide remedies, prove remedies are effective</i>
<i>Establish process, controls transfer to operations</i>	<i>Interpret the difference</i>	<i>Deal with resistance to change</i>
	<i>Take action on the difference</i>	<i>Control to hold the gains</i>

*Source: Juran, (2000)*

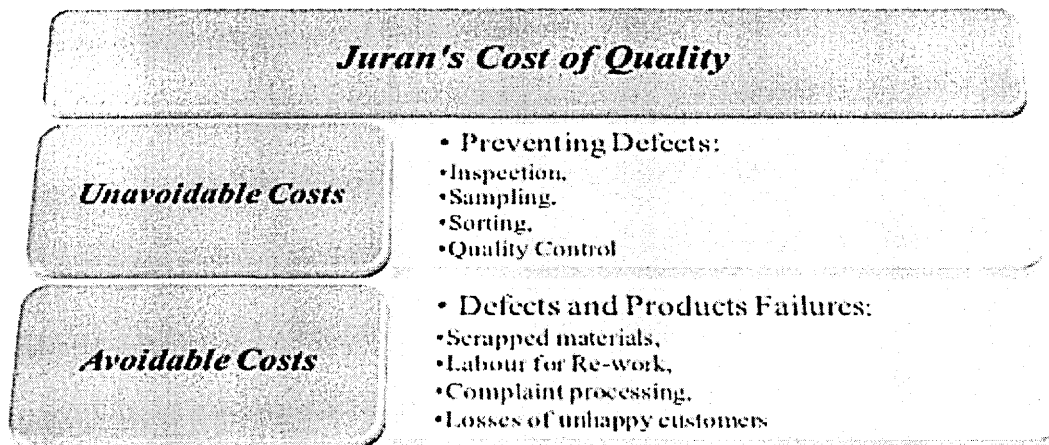
Juran (2000) defined four broad categories of quality costs which can be used to evaluate the firm's costs related to quality. Such information is valuable to quality improvement. The four quality costs are:

1. *The Internal Failure Costs* (scrap, rework, failure analysis, etc.) associated with defects found prior to the transfer of the product to the customer;

2. *The External failure costs* (warranty charges, complaint adjustment, returned material, allowances, etc.) associated with defects found after product is shipped to the customer;
3. *The Appraisal Costs* (incoming, in-process and final inspection and testing, product quality audits, maintaining accuracy of testing equipment, etc.) incurred in determining the degree of conformance to quality requirements;
4. *The Prevention Costs* (quality planning, new product review, quality audits, supplier quality evaluation, training, etc.) incurred in keeping failure and appraisal costs to a minimum (Gryna, *et al.*, 2007; Juran and Gryna 2006; Juran, 2003; Juran, 2000; and Juran, 1999).

Juran (1999) differentiated two types of costs of quality: unavoidable and avoidable, as presented in Figure (2.7)

*Figure 2.7 Juran's Cost of Quality*



Source: Juran, J. and Blanton, A. (1999)

Juran (2003) believed that the main quality problems are due to the management rather than to the workers. The attainment of quality requires activities in all functions of a firm. Firm-wide assessment of quality, supplier quality management using statistical methods, quality information system and competitive benchmarking are essential to quality improvement. Juran's approach emphasises team circles and self-managing teams which can promote quality improvement, improve communication between management and employees and improve coordination between employees themselves.

Juran, and Blanton, (2000) proposed ten point plan as an approach to quality and management process improvement

1. *Create awareness of the quality crisis; the role of quality planning in that crisis; and the need to revise the approach to quality planning.*
2. *Establish a new approach to quality planning.*
3. *Provide training in how to plan for quality, using the new approach.*
4. *Assist company personnel to re-plan those existing processes which contain unacceptable quality deficiencies (March right through the company).*
5. *Assist company personnel to acquire mastery over the quality planning process, a mastery derived from re-planning existing processes and from the associated training.*
6. *Assist company personnel to use the resulting mastery to plan for quality in ways that avoid creation of new chronic problems.*
7. *Establish specific goals to be reached.*
8. *Establish plans for reaching the goals.*
9. *Assign clear responsibility for meeting the goals.*
10. *Base the rewards on results achieved*

The Juran Management System (JMS) is a comprehensive business management system that incorporates lessons learned from over 50 years of research and study. It is a system that began in Toyota Company in the 1950s and has continued to evolve over many decades (Juran 2003). The JMS focuses on changing the culture of an enterprise. It empowers the employees to:

1. *Be proactive in understanding the customer needs and in satisfying them*
2. *Provide high quality services and products to customer, while improving efficiency. The JMS enables an organisation to improve quality while simultaneously reducing costs*
3. *Become information-driven and solve problems faster with data*
4. *Stay involved in meeting the customer needs.*
5. *View management as a quality leader.*
6. *Reduce the costs of non-performing processes.*

Juran has written and edited a number of authoritative books and countless articles. He is also the founder of the Juran Institute that helps organizations around the world respond to the emerging needs of businesses and society. The Juran Institute is a benchmarking, consulting, and training service firm that helps organizations implement performance excellence programmes. (Gryna, *et al.*, 2007)

### 2.3.3 Crosby (1926-2001)

Crosby began his career as a quality manager; he is well known by introducing the concept of "Zero defects", in his best seller book "Quality is Free". As a result of his contribution and accumulated experience, he established Crosby's quality consultancy and training centre. One of the key features of Crosby's approach is the use of financial indicators of waste (e.g. the cost of poor quality) to capture management's attention. Emphasis is placed on prevention rather than on after-the-event inspection doing things right the first time

Crosby (1979) describes quality as the result of a carefully constructed cultural environment. It has to be the fabric of the organization, not part of the fabric. He opposed other quality gurus when he observed that 'quality has to be caused, not controlled'; he deems that management should take prime responsibility for quality and that only workers follow their managers' example. He defined Four Absolutes of Quality Management.

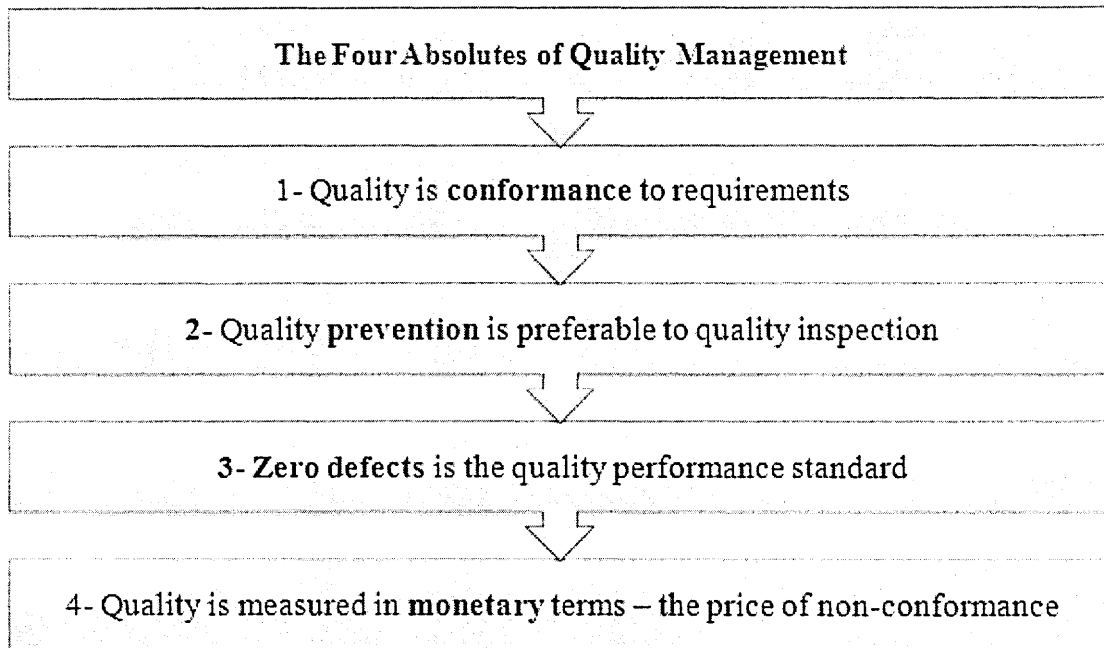
*The First Absolute:* the definition of quality should be in conformance with the requirements, not with goodness

*The Second Absolute:* the system for causing quality is preventive not appraisal.

*The Third Absolute:* the performance standard must be zero defects, not that it is close enough

*The Fourth Absolute:* the measurement of quality is the price of non-conformance, not the indexes as presented in Figure (2.8).

*Figure 2.8 Crosby's absolutes of quality management*



Source: Crosby, P. (1984)

Crosby (1984) provided a guideline for quality improvement in the organisation; he called it 'Crosby's fourteen steps to quality improvement'. They are:

1. *Management is committed to quality and this is clear to all*
2. *Create quality improvement teams with representatives from all departments.*
3. *Measure processes to determine current and potential quality issues.*
4. *Calculate the cost of (poor) quality*
5. *Raise quality awareness of all employees*
6. *Take action to correct quality issues*
7. *Monitor progress of quality improvement, establish a zero defects committee.*
8. *Train supervisors in quality improvement*
9. *Hold "zero defects" days*
10. *Encourage employees to create their own quality improvement goals*
11. *Encourage employee communication with management about obstacles to quality*
12. *Recognise participants' effort*
13. *Create quality councils*
14. *Do it all over again, quality improvement does not end*

Crosby's book 'Quality without Tears' introduced his famous concept of the vaccination serum ingredients. The vaccine is explained as a medicine for management to prevent poor quality. It falls in five sections that cover the requirements of Total Quality Management.

*Section One: Integrity:* Treat quality seriously throughout the whole business organisation from top to bottom; i.e., the organisation's future will be measured on the bases of its performance on quality.

*Section Two: Systems:* Appropriate measures and systems should be put in place for quality costs, education, quality, performance, review, improvement, and customer satisfaction.

*Section Three: Communication:* The communication systems are of paramount importance since they are utilized to communicate requirements, specifications and improvement opportunities around the organisation. Customers and operators know what needs to be put in place in order to improve the business; listening to them will yield better results.

*Section Four: Operations:* Working with and developing suppliers; the processes should be potential and improving culture should be the norm.

*Section Five: Policies:* the policies must be clear and consistent throughout the business.

Crosby (1984) also stressed the importance of management style to successful quality improvement. He broadened his approach to include wider improvement ideals. He defined them as:

*The Five characteristics of an "Eternally Successful Organisation"*

1. *People routinely do things right first time*
2. *Change is anticipated and used to advantage*
3. *Growth is consistent and profitable*
4. *New products and services appear when needed*
5. *Everyone is happy to work there*

### 2.3.4 Feigenbaum (Born in 1922)

Feigenbaum is also considered one of the quality gurus that have made a significant contribution to the development of the quality management concepts. His contribution is observable in introducing the concept of Total Quality Control; thus, he published his book that holds the same title, "The Approach to Quality and Profitability"; it has profoundly influenced management strategy in the global markets competition.

Feigenbaum (1991:6) defines Total Quality Control as an effective system for integrating quality development, quality maintenance and quality improvement efforts of the various groups in an organization so as to enable production and service at the most economical levels which ensure full customer satisfaction. He considers quality as a business method and proposed three steps to quality:

- *Quality leadership*
- *Modern quality technology*
- *Organisational commitment*

In his book, Feigenbaum's aim is to integrate the organisation quality development with the most recent business practices and with the TQM methods in order to improve productivity and to secure the quantifiable customer's satisfaction and retention. His emphasis on generating quality products and service organisations culminates in building a total quality system, exploring the factors that control the quality by explaining the functions of quality control. Feigenbaum (2001) notices that in understanding the mechanisms of total quality control, the organisations ought to organise themselves utilizing quality management strategies, achieve total commitment to quality, introduce and practice quality engineering technology and make use of the statistical technology of quality (Feigenbaum and Feigenbaum, 2003). Feigenbaum (1986) introduced nine fundamental factors affecting quality in today's businesses; they must be met by the corresponding strong programmes for quality control. These are:

1. *Markets:* Since today's markets are becoming broader in scope, more functionally specialised in the goods and services offered and globalised resulting in competition and a variety of choices for customers, business must be highly flexible and capable of changing direction rapidly.



2. *Money:* Quality costs associated with maintenance rework and quality improvement resulting in management focus on the quality cost area as one of the “soft spots” via which operating costs and losses can be decreased to improve profits.
3. *Management:* Managing quality becomes an organisation-wide responsibility which results in an increased load on top management officials, particularly the increased difficulty of allocating appropriate responsibility for correcting departures from quality standards
4. *Men:* The great demand for workers with specialised knowledge results in breaking the responsibility for quality into a number of pieces
5. *Motivation:* The human motivational aspects have led to an unparalleled need for education and training in quality methods, tools, and techniques and improved communication of quality awareness
6. *Materials:* The production costs and quality requirements resulted in stricter material specifications and in the use of highly specialised laboratory machines as tools for quality measurement
7. *Machines and Mechanization:* Cost reduction and increased production volumes have forced companies to use modern and complex manufacturing equipment
8. *Modern Information Methods:* The information technologies have provided the means for an unmatched level of control of machines and processes and have made available to management more helpful, precise, timely, and prognostic information upon which to base the decisions that guide the future of a business
9. *Mounting Product Requirements:* Higher performance requirements for products has emphasised the importance of product safety and reliability; thus constant attention must be given to ensure that no factors interfere to reduce the reliability of the components or the systems.

Feigenbaum is also known for his concept of the “hidden plant“: in every factory, extra work is performed in correcting defects and mistakes; thus, efforts are wasted through not getting it right first time; that is there is a hidden plant within any factory (Feigenbaum and Feigenbaum, 2009). In describing his approach to quality, Feigenbaum, points out that organization quality is everyone’s job. Thus, quality improvement leads to improvement throughout the organisation. He claims that today organisations are having too many isolated quality initiatives and that organisation did not understand that quality is a management style. The organisations must provide sufficient quality infrastructure that supports both the work quality of the individual and the teamwork between organisation departments.

### **2.3.5 Shewhart (1891-1967)**

Shewhart is considered the father of Statistical Process Control (SPC). He worked in Bell Laboratories and was engaged in a search for the practical methods of quality control for the emerging telephone industry, which required mass production on a huge scale. His ideas, published in the 1930's, formed the basis for a process oriented approach to quality control viewing any recurrent activity as a process and using statistics to understand and manage the variations that always occur.

### **2.3.6 Ishikawa (1915-1989)**

Ishikawa is one of the famous Japanese quality gurus. The remarkable success of quality initiatives and quality improvement of the Japanese products are due to him and in gratitude to his contribution, the Japanese awarded him the nickname of the father of the Japan quality efforts. In 1952, he introduced the term “Company Wide Quality Control” (CWQC). His aim was to remove confusion and to make differentiation between the Japanese style quality control approach and the American one. Ishikawa (1991) describes his approach as one that relies on management that respects the humanity aspects of people. Ishikawa believes that the organisation top management should know that employees play a vital role in contributing to the success of the organisation by empowering their involvement taking into account their suggestions and creative ideas.

The CWQC involves the participation of the people of an organisation from the top to the bottom and from the start to the finish of the product life cycle.

Ishikawa (1990) emphasised the need for all employees in any organisation to understand the concept of the CWQC used to analyse problems and develop improvements. The organisations should train them in the seven basic tools of quality, he described:

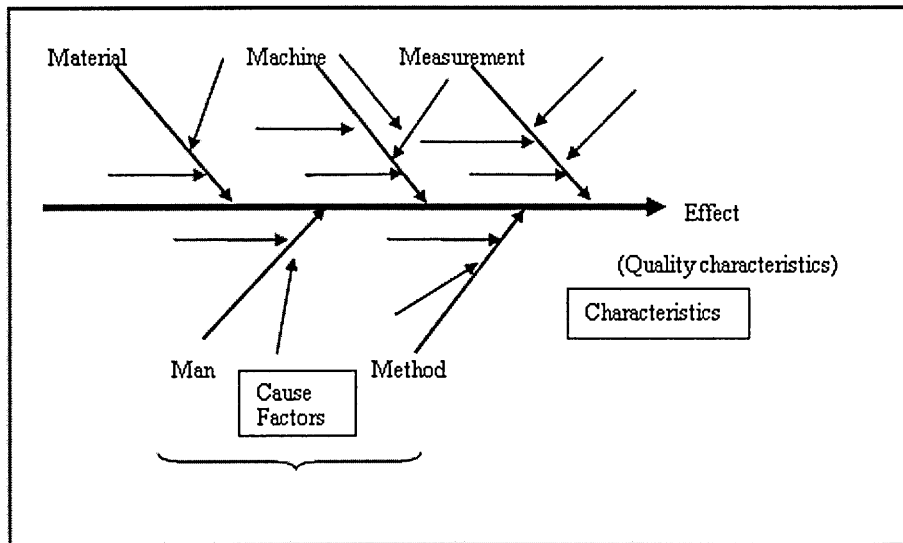
- 1. Pareto analysis which concerns the big problems*
- 2. Cause and effect diagram: what causes the problems*
- 3. Stratification: how the data is made up*
- 4. Check sheets: how often it occurs or is done*
- 5. Histograms: what overall variations look like*
- 6. Scatter charts: what the relationships between factors are*
- 7. Process control charts: which variations to control and how*

In order to enhance the techniques of CWQC, Ishikawa (1990) introduced the concept of Quality Circles (QC) as a tool that enables organisation to encourage and motivate their employee's involvement and contribution to the problem solving. Later, this concept was accepted worldwide by western organisations. The quality circle aims to support employees to form informal meetings discussing what causes problems to occur and set strategies to solving it.

Furthermore, in order to encourage people to understand this concept and practice, Ishikawa develops the well known concept of the fishbone shaped diagram; also known as the Ishikawa or the cause and effect diagram (see Figure 2.9).

The diagram aims to improve the performance of teams in determining the potential root causes of their quality problems and to work on solving them.

*Figure 2.9 Ishikawa fishbone diagram*



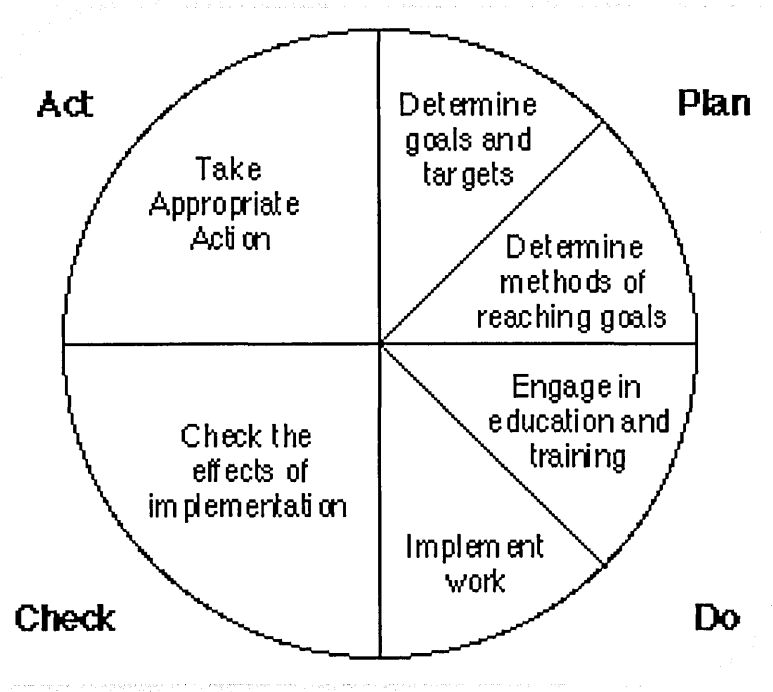
Source: Ishikawa (1991)

Ishikawa (1990) expanded Deming's four steps (Plan-Do-Check-Act) Cycle into six stages:

1. *Determine goals and targets.*
2. *Determine methods of reaching goals.*
3. *Engage in education and training.*
4. *Implement work.*
5. *Check the effects of implementation.*
6. *Take appropriate action.*

He divided the “plan stage” into further two stages and the “do stage” into another two stages, and called the cycle the “control cycle”, (see Figure 2.10). He recommended the application of quality control methods, such as the statistical quality control method and the use of a cause and effect diagram, in the “plan stage” as approaches for reaching the desired goals, and education or training, in the “do stage”, as a requirement for the improvement process.

Figure 2.10 Ishikawa control cycle



Source: Ishikawa (1991)

### 2.3.7 Shingo (1909 – 1990)

Shingo is also a Japanese quality guru; his main contribution was the introduction of the concept of ‘Poka’ which means the elimination of mistakes during the production process, and ‘Yoke’ which means the prevention of mistakes. He argues that errors must be identified before they become defects. The process stops whenever a defect occurs in order to define the source and prevent recurrence. In addition, he developed other inspection and quality control concepts such as the Zero Quality Control where he claims that goods are shipped with no defects.

Shingo (1986) co-worked with Taiichi Ohno and invented the Just-In-Time (JIT) or the Toyota production system (TPS) applicable to an integrated widely used manufacturing strategy. The concept is recently known as the lean manufacturing strategy. It aims at improving the process functions. The system is for low-cost and high-quality production.

### 2.3.8 Taguchi (1924 )

Taguchi is another Japanese quality guru who started his career as an engineer and worked in the area of product design. He has developed an approach called the Taguchi Method or the Robust Design. The method primarily focuses on reducing the variations of the manufactured products by using systematic and planned statistical experiments. The methods help manufacturers to gain better control over products manufactured and also to design products under a wide range of environmental and product process conditions.

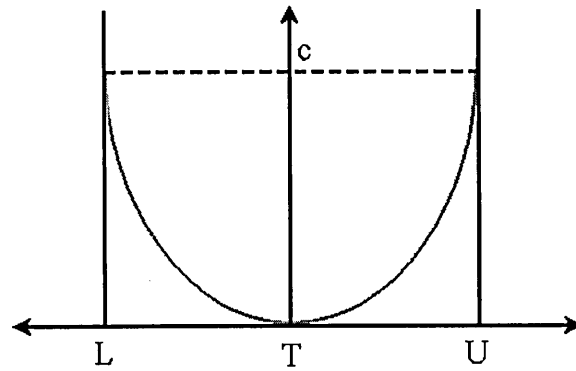
Taguchi (1993) divided the product design and the production process stages into three main phases:

1. *System design: choosing the most appropriate system for the production process and for product development from all possible systems that can perform the objective functions.*
2. *Parameter design: deciding the optimal nominal values for the parameters of the chosen systems.*
3. *Tolerance design: finding the optimal trade-off between quality loss due to the variation of objective functions and the cost of high-grade components.*

Taguchi, *et al.*,(2005) stresses that manufacturers should focus their quality efforts on the design stage as it is much cost effective and simpler to make changes during the product design stage than later during the production process. The emphasis is placed on products cost reduction and the measurement of the cost of quality and the cost of conformance and non-conformance. As a result of continuous statistical experiments, Taguchi developed his “Loss Function” phenomenon, (see Figure 2.11).

The function is basically that of smaller differences in the target result in smaller costs; this means that the larger the differences, the greater the cost. He thinks that the loss is the cost of operating, failure to function, maintenance and repair, customer satisfaction and poor design. The loss function has had a significant impact on changing the view of quality cost.

*Figure 2.11 Tagushi's loss function*



T = Target value of quality characteristic.  
L = Lower specification limit of quality characteristic.  
U = Upper specification limit of quality characteristic.  
c = Loss associated with a unit produced at the specification limits, assuming the loss at the target is zero.

*Source: Ross, P. (1996) p.5*

Taguchi (1993) believes that there is some level of loss associated with a product based on whether it falls within or without the specification limits. (Taguchi, *et. al.*, 2005; Ross, 1996; Taguchi, 1993).

In the light of the preceding discussion about TQM conceptual development, and by revision of the TQM approaches of eight quality gurus. It has become evident that each guru has his own distinctive approach. Nevertheless, the proposed principles and practices of TQM can equip researchers with better understanding of the concept of TQM. It's obvious that they basically developed their theories and quality concepts from statistical background. As explained earlier, the majority of quality gurus started their career in the field of quality and products manufacturing improvement by deploying statistical tools in measuring and quantifying the level of quality and process improvement.

It is also, evident that most of quality gurus focus essentially on eliminating product variances, cutting costs, reducing waste and defect goods and improving quality practices by identifying success factors and providing guidance that needs to be considered by the organisations in order to excel in their transformation processes with regard to implementing quality concepts. Some of them record points and others refer to the process as steps to quality improvement. No matter what they call it, it is meant to provide a road map for the organisation on how to embark on and maintain the quality

initiatives that yield short and long term benefits. Their insights offered a solid foundation for conducting this study.

The results obtained from applying these tools were visible in reducing the number of defect products and enhancing the productivity of the organizations. However, this did not work properly as they discovered that these tools and measurements can't be used in isolation with the involvement of a human factor. Thus, they have shifted and developed their quality methods by urging organisations to integrate and balance their emphasis with equal attention to both, technical and human elements during the life cycle of products or services they render.

The Western as well the Japanese quality gurus realised that this integration process can't be realized or succeed unless the management and the leadership play a fundamental and prominent role in the promotion and success of quality improvement in their organisation if they intend to survive in the ever-increasing competitive global businesses.

From reviewing the literature it appeared to that, although the quality guru's approaches to TQM were not entirely similar, they do share some common points which could be summarized as follows:

- 1. The importance of management's commitment to quality, visionary leadership, people empowerment, and the appropriate support to technical and human processes*
- 2. The emphasis on strategy, policy, and organization self assessment activities*
- 3. The importance of the employee capabilities and training is emphasized; so is the role they play in changing employee's attitudes and engaging them in the whole process of quality implementation*
- 4. The employees' recognition and rewarding system for quality improvement efforts should be established*



5. *The significance of controlling processes and improving quality systems and products design*
6. *The management role in encouraging the participation of the employees in quality improvement and in creating a quality culture by changing perceptions and attitudes toward quality*
7. *The top management's responsibility to determine the appropriate quality framework of operations in the organization*
8. *The emphasis is on preventing product defects and not on inspection after they are produced*

Undoubtedly quality gurus have contributed significantly towards the development of the quality concepts. Conversely, they appeared inadequate or imperfect with respect to the transfer of these methods and concepts or their application within the framework of a scientific and systematic approach. This has created ambiguity and confusion on the part of the organisations that tend to implement such concepts regarding the means of application and the measurement tools of the expected outputs in order to validate the tested outcomes.

Thus, this issue remains challenging to successive quality practitioners and experts who embark on developing a new approach to quality implementation strategies that can help quality implementers as well as organisations to execute quality improvement in a systematic method. As a result of that a number of quality frameworks with action plans were developed by various quality experts and practitioners as further literature review related to this issue are presented in chapter seven.

## **2.4 QUALITY TOOLS**

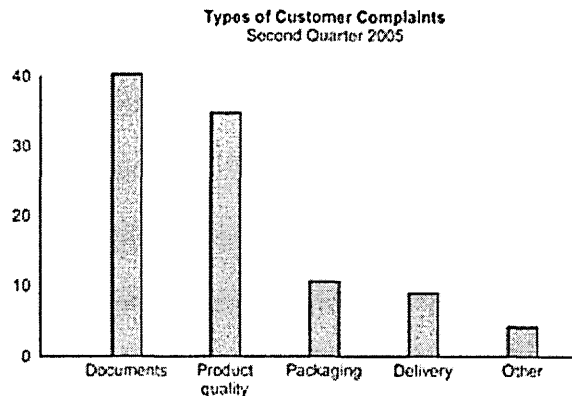
As stated earlier in the previous section, quality gurus used statistical tools to develop their concepts and methods of quality improvement. Some of these tools are generally used to measure quality and performance improvement by quality experts as well as organisations. The term “quality tool” is meant to be a structured process or a methodology that aids or contributes to improving or preserving quality practices,

management and control. These tools are used at the organisation level, their main function is to measure performance, identify and solve problems, and provides a source of decision providing assistance for management. Quality tools are widely used and they come in many different types; they also vary in their use. In this section, a wide range of quality tools will be introduced and explained; a general perspective will be given on their use and purpose.

### 2.4.1 Pareto Chart

The chart was invented by an Italian economist called Vilfredo Pareto in the late of eighteenth century. The purpose of the chart is demonstrated on a bar graph which clarifies factors that are more significant by segmenting the range of the data into groups; for example time or cost. It identifies the factor that may have a negative effect on the order of the bars and consequently prescribes a remedy course, (see Figure 2.12). The length of the bars represents frequency. The bar charts are arranged in a descending order of height from left to right. However, those on the left are relatively more significant than those on the right. The Pareto chart helps to identify the significant factors, breaks major problems into smaller pieces and shows where to focus efforts (Tague, 2005).

*Figure 2.12 The Pareto chart*

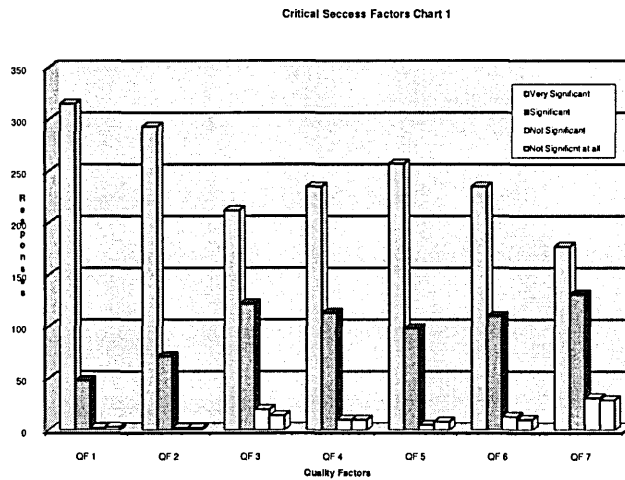


Source: Tague, (2005)

## 2.4.2 Histogram

A histogram is one of the simple and widely used quality tools. It is a bar chart representing frequency distribution; the height of the bars represents observed frequencies. It is used to display a pattern of variation in a particular process; such as describing a problem or it may be utilized as an aid in data collection and analysis (see Figure 2.13). The organizations use it to observe how a procedure is working; they gather data about that procedure such as the time it may take a specific procedure to be carried out and to create a histogram. The organisations can notice the variation in the amount of time it takes to perform that process (Robert, 2008; and Triola, 2004).

*Figure 2.13 The histogram*



*Source: Author 2010*

## 2.4.3 Statistical Process Control (SPC)

The statistical process control was invented by Shewhart in the early 1920s. Deming later applied the SPC methods in the United States during the Second World War, thereby successfully improving quality in the manufacture of munitions and other strategically important products. Deming was also instrumental in introducing the SPC methods to the Japanese industry after the war had ended; they were applied as statistical methods for the purposes of quality control and improvement enabling data analysis decision making. The methods are basically based on the philosophy that manufacturing the right product in the first place is better than trying to rework the

defect product. They ensure conformance to the requirements and secure corrective actions when necessary to remedy problems.

They are used to advance process improvement over time by examining product variations and eliminating their sources. The techniques of SPC are dependent on developing control charts that can indicate when the process changes. The control charts are used to monitor a process and to signal when it goes out of control. The SPC has a distinct advantage over the other quality methods, such as the inspection in that it applies resources to detecting and correcting problems after they have occurred.

The SPC helps improve a process to perform consistently and predictably for higher quality, lower cost, and higher effective capacity; it provides a continuous control of processes such as:

1. *Top management commitment*
2. *Project champion*
3. *Initial workable project*
4. *Employee education and training*
5. *Accurate measurement system*

#### **2.4.4 Performance Indicators (PI)**

Performance indicators enable the organizations to understand the needed measures to evaluate their quality performance and to make comparisons against predetermined targets. They provide a description of what is measured. The measurement plays a monitoring or an evaluating role with regard to specific processes, services or systems. Due to product and service improvement and the ever-increasing pressure for compaction, the organizations ought to improve their performance. Therefore, managers face the complex task of choosing appropriate key performance indicators for their respective organizations and of implementing them in a systematic way. The data collected and analyzed in this way are used to measure progress, to demonstrate accountability, to determine effectiveness and efficiency and to identify problem areas.

The results of the analyzed data are in a quantified outcome or in a qualitative measure which identify organizations in a particular situation at a specific time and location. In addition, the data results indicate whether an outcome or objective has been

accomplished, determine the extent to which objectives and outcomes have been achieved, identify targeting data and allow objective assessment of an organization's overall performance.

This approach obscures the possibility that any single performance indicator may be a more important determinant of service quality compared to the rest of the chosen indicators. One of the major drawbacks of most performance indicators is that they usually do not measure service quality. (Coffey, 2007; Antony, 2003; and Al-Mashari, and Zairi, 2000).

#### **2.4.5 Balance Scorecard (BSC)**

The balanced scorecard (BSC) is an ever-increasing tool of performance measurement used by organizations to support the long-term and forward thinking strategic view across the entire organization and to communicate that strategy down to the individual performance level. According to Pearce and Robinson (2000), the balance scorecard enables organization management to balance between short and long term objectives, between the desired and undesired outcomes and between objective and subjective performance measures. The balanced scorecard provides a view across a range of measures that encompass all the key issues for continued quality success (Moullin, 2006; Kanji, and Moura, 2002; Ellis, 2000; and Kanji, and Asher, 1996).

Ellis (2000) remarked that the balance scorecard is currently being applied in major organisations worldwide to help drive and configure the quality practices around the organisational performance. He assumes that the benefits of the balance scorecard lies in compiling a scorecard that not only drives strategic objectives and quality initiatives through the use of cutting edge technologies and processes but also people performance to enhance capabilities.

Lawton (2002) describes the balance scorecard as a management decision tool intended to integrate the organisations strategy with operational performance measures. It often shows the diverse areas of performance an organisation values most. The major dimensional perspectives of the balance scorecard are: the internal business perspectives, the learning and growth perspectives, the financial perspectives and the customer perspectives. The term "balanced" suggests that the organisation objectives

and measures along different dimensions are accumulated on one sheet, which ensures multidimensional and qualitative drivers organisational current and future quality performance success.

Kanji and Moura (2002) perceive that the balance scorecard helps organisations to make prompt decisions on what to improve or rectify. It also reflects the potential growth of interest in performance measurement and quality improvements tools. Additionally, the balance scorecard measures of process performance highlight that an activity is performed or an orderly work is carried out. They believe that the measures may include cycle time, productivity and hurdle. (Moullin, *et al.*, 2007). The process measures usually focus on operations, while the outcome measures focus on the strategic intent. On the other hand, Kueng (2000) contends that the adoption of the balance scorecard reflects the balanced priorities of organisations and their customers. He observes that this requires classification of measures such as processes, products, and results that the organisations want to achieve and that reflect the values of both the organisations and customers.

#### **2.4.6 Benchmarking**

Benchmarking is one of the most widely adopted tools of quality and performance measurement used by organisations. Its core theme is to identify the best quality practice of those organisations that have gained recognition for their excellent achievements in particular in business processes such as decreased product cycle time, cost reductions and improved product or service quality. Morling and Tanner (2000) regarded benchmarking as a continuous process of measuring products, services and quality practices against the existing competitors or those organisations recognised as leaders. It provides a systematic technique to discover better products, services, systems and processes that can be linked and adapted into the organisations current operations. It is a positive, proactive process to change functions in the organisation in a structured manner, to gain superior performance and improved product quality aimed at achieving greater perfection in fulfilling the internal and external customer requirements. (Matzdorf, 2010)

The benefits of benchmarking are that the organisations are forced to investigate the external best practices of other organisations and to incorporate those practices into their

operations. This is a costless method of performance measurement that the organisations often use for better efficiency that leads to higher responsiveness to the customers needs. Benchmarking allows organisations to redeploy the most effective way of supporting customer requirements and obtaining their satisfaction. As a result, its activity requires a resource increase in both human and capital in order to correctly determine the true customer satisfaction levels and demands derived from benchmarking activities, which ultimately reflects the organisation struggle for excellence in all activities. Benchmarking is thus, a rational approach of ensuring that the organisation satisfies the customer requirements and continues to consider the customer requirements changes over time (Dervitsiotis, 2001; and Carpinetti and Martins, 2001).

Swift *et al.*, (1998) suggest a ten step process for conducting a benchmarking investigation.

1. *Identify the problems.* Decide what has to be benchmarked. All functions have outputs, services or products which could be processes to benchmark to improve performance.
2. *Identify benchmark partners.* This is a major step in benchmarking. A successful approach includes internal, competitive and functional benchmarking.
3. *Determine the measurement method.* Plan, determine data collection method and conduct the investigation. Collect data from various sources that can be used, such as conducting a site visit.
4. *Pre-measure the organization own performance.* This should be done before comparing it with the external organization. Examine the best practices from other organization and measure the performance gap.
5. *Determine future performance levels.* Comparing the performance levels objectively can help to determine how to achieve a performance edge. Redefine goals and incorporate them into the planning process.

6. *Communicate benchmark findings* and gain approval from management. In some cases, a written report is required with detailed supporting documentation.
7. *Revise performance goals* after management approves the recommendations.
8. *Integrate targets and strategies* into action plans and operational reviews and update them as needed.
9. *Implement best practices and monitor the progress made*. Periodically readjust as needed.
10. *Recalibrate benchmarks* re-evaluate and update the benchmarks to ensure that they are based on current performance data. (Swift et al., 1998:146)

## SUMMARY

This chapter reviewed most recent literatures pertaining to TQM philosophy. It covered different rationalizations of TQM concepts and approaches. It has also provided an overview of quality management as a field of study, based on a historical review of its evolution from quality inspection to quality excellence, alongside with the widely adopted tools and approaches concerning TQM implementation. Following this, the principles of TQM provided in literature that are relevant to the research theme were also discussed in this chapter. Through extensive examination of literature review carried out to identify the concepts of TQM showed that there is no precise common definition of the term quality, as it means different things to different people.

The chapter also, presented a broader revision on eight quality gurus, and their approaches related to the development of the quality management. It has become evident that each guru had his own distinctive approach. Nevertheless, the proposed principles and TQM practices conceived by them enabled the researcher to a better understanding of the concept of TQM. It is believed that their propositions are the foundation for understanding the conceptual development of TQM. The previous subsections presented the main principles and practices of TQM proposed by them in which it inspired the researcher to accumulate a body of knowledge that shaped the



theoretical basics of the self assessment framework model and eventually formatting the reset of consecutive chapters of this research.

It was also explained in this chapter that although quality gurus did not agree on a particular quality model or a practical approach of quality implementation. This has resulted difficulties among quality advocators to reach an analytically justifiable about which quality approach to TQM represents the best. What has become clear is that there considerable disagreement exists among various quality gurus over the best approach that any organisation should adopt. However, their remarkable contribution to the development of the TQM provided the organisations with contemporary managerial techniques for managing quality and organisational processes and for their performance improvement. Thus the most important thing is for the organisations to start the quality journey. Whatever, the adopted approach to TQM the most important factors are the commitment to work through a continuous quality implementation process.

Furthermore, the chapter reviewed the most unanimously adopted quality models of self assessment tools, which allow organisations to assess and measure their quality capabilities and performance improvement. The in depth reading of literatures related to the quality and excellence models of Deming model, Baldrige model, the EFQM excellence model, the Toyota production system and Six sigma. Had resulted to clear understanding of the concept of TQM, forms an essential part of the initial foundation on which to build a self assessment framework model that responses to the UAEPSI quality implementation needs.

Further literature discussion on critical success factors and current quality and excellence models by various researchers and quality practitioners were critically reviewed. With an attempt is made to construct the core elements of the research self assessment framework model for the implementation of TQM by considering the unique characteristics of the UAEPSI. As the situation in the UAEPSI is still lagging behind in quality management due to limited studies found in the TQM area and in particular to UAEPSI. Therefore, the model enables them to evaluate their current quality situation and to be in alignment with the UAEGEP quality and excellence criteria's.

It is aimed that the UAEPSI would benefit from the implementation of the model to leverage the culture of quality in the U.A.E. The emphasis on a core values of TQM as

they serve as the basis through which the UAEPSI performance improvements and service delivery are achieved. It is worthwhile to mention that the detailed literature explanations of model development were segregated from this chapter and presented in chapter seven. By doing this it considered to be in consistent with chapter seven themes, and to flow of thoughts of the conceptual development of the model. The next chapter presents the research methodological approach in which the researcher applied it in order to address the research questions.

# **CHAPTER THREE**

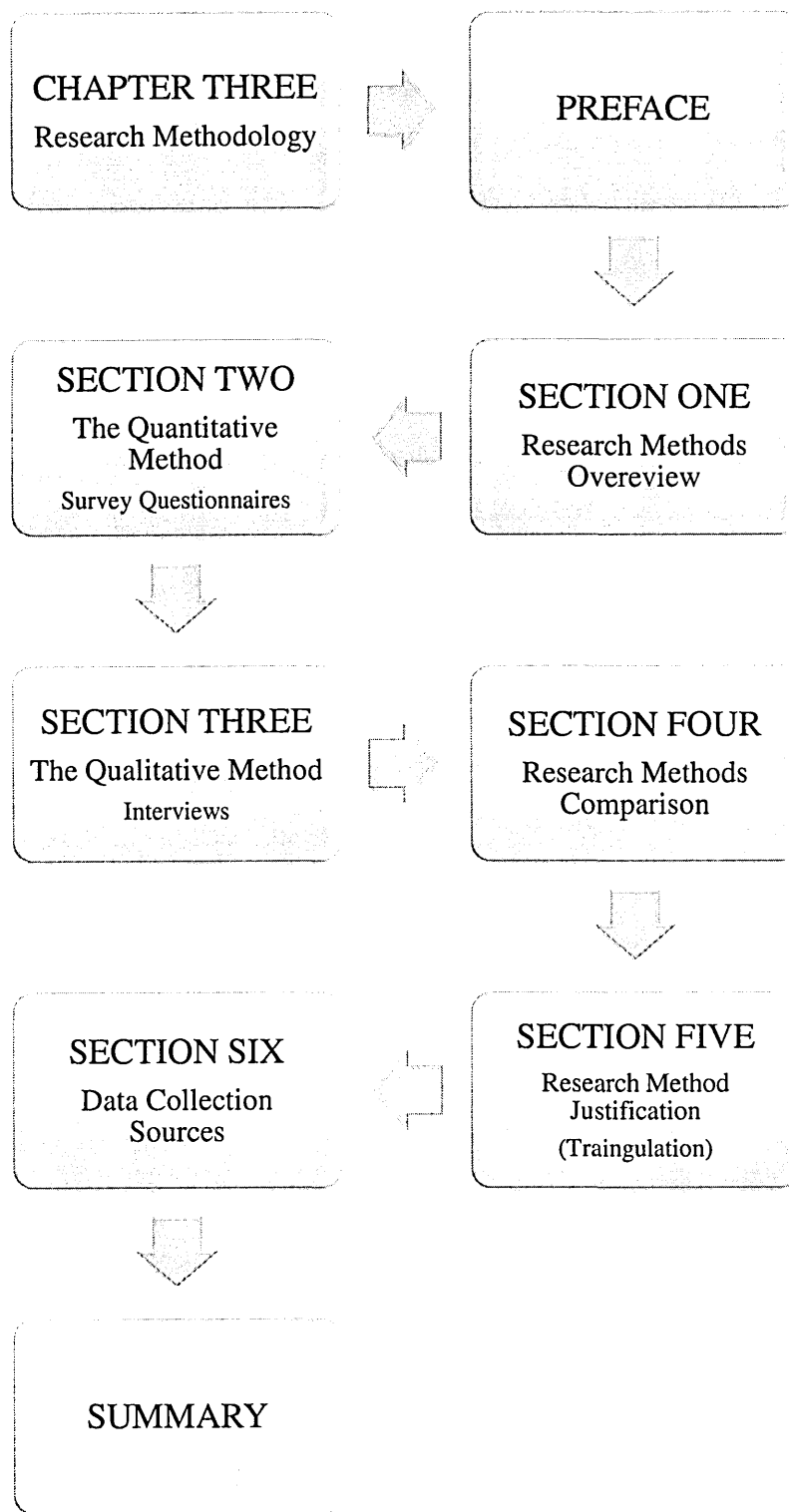
## **RESEARCH METHODOLOGY**

### **PREFACE**

This chapter outlines the structure of the empirical examination covering the research question posed in Chapter One. Chapter Two discussed the literature theoretical aspects, the characteristics, notions, and approaches of TQM conceived by the quality gurus. This chapter reviews the rationale behind the research methodology and the justifications underlying the selection of the mixed or triangulation data collection method. In order to select the most appropriate research methodology for this study. The first section of this chapter reviews the available research methodologies and outlines the characteristics, advantages, and drawbacks of each method. The second part of this chapter identifies the most viable methods that could be adopted in this study and argues for the appropriateness of the adopted method and possible difficulties that might be encountered.

Furthermore, it reviews the research methods that are commonly applied in carrying out the research fieldwork, the stance that the researcher has adopted in approaching the selection of appropriate research methods. Then, the selection of a particular research method is discussed and accounted for. A questionnaire survey is also presented and the reasons for the selection of such research approach were outlined. Figure (3.1) outlines the content of this chapter.

Figure 3.1 Chapter three outline



Source: The Author

### 3.1 RESEARCH METHODS OVERVIEW

Research is a systematic investigation that aims to find answers to a problem. It can also be viewed as an act with an objective. It is about anything that has to do with procedures or techniques of investigation; i.e., the set of techniques used in one piece of research. It is all about the methods used in the study of the research. It is essential for gathering relevant information thereby giving effective and reliable representation. It enables the researcher seeking, enquiring about, investigating, and exploring, constantly, carefully and closely a specific topic or subject of the study. A research methodology provides the philosophical ground work for methods implying a theoretical underpinning to the thesis. Research methods are tools for eliciting data; they are the guiding principles for choosing and using those tools, in order to come up with appropriate solution for a problem. Undoubtedly, this particular research also deserves a carefully selected methodology (Walter 2009; Weerakkody 2008; and Daymon and Holloway, 2002).

The function of the research methods is to link the questions under investigation to the alleged data and the information they aim to obtain. The research structure depends on two main elements: how the research questions are connected to the data and tools and what approaches are used in responding to them. The established research method structure should include main ideas, strategies, samples, tools and procedures that should be used for collecting and analysing empirical data. This is the basic plan for a successful empirical research (Bryman and Bell, 2007; Rolfe, 2006; Daymon and Holloway, 2002; Leedy, and Ormrod, 2001; Punch, 2000).

Neuman, (2006) divides research into three major paradigms or sets of propositions that explain how the subjects under investigation are perceived; these are: the positive, the interpretative and the critical. Reality is seen in the interpretative paradigm; the participants are manipulating physical objects because reality is internally experienced and socially constructed through interaction; it is interpreted through the actors and it is based on the definition people attach to it (Neuman, 2006)

Yin (2004) points out that the selection of appropriate research techniques in the social sciences involves three contextual conditions: the nature of the research question, the extent to which the researcher can control actual events and the focus of the study-

whether it is on contemporary or historical events. For the first condition, Yin classified the nature of questions into widespread Wh/Questions such as “who, where and what”; these are questions that lead to derivative questions involving “how much or how many”, These are raised when the intention of the study is to describe the frequency of the incidence of a particular event or to identify outcomes.

However, the question words “how and why” deal with more than frequencies and incidences. They suggest explanations and are used for tracing the behaviour of processes over time. For the second condition, the extent to which the researcher can control events differentiates the research strategies that are appropriate to answering the how and why questions. If the researcher has absolutely no access control, as in focusing on past events when the events are beyond the memory of the people involved, then the only strategies available are history and archival analysis. When the researcher gains access to and focuses on contemporary events but has no control over any of the behavioural events involved, then an appropriate strategy is the case study. When the researcher can control behavioural events directly and precisely, then the strategy of the experiment is most appropriate (Yin, 2004).

As a general rule, research methodologies can be broadly classified into two different approaches: the scientific empirical tradition and the naturalistic phenomenological modes. These two approaches are also very well known as quantitative and qualitative research methods (Bryman and Bell, 2007; Collis and Hussey, 2003; Yin, 2004; Kane and Brun, 2001; Bryman, 2001; Bryman, 1995).

While the social science research literature tends to draw a sharp distinction between qualitative and quantitative techniques of data collection and analysis, the distinctions are relatively clear in practice. The distinction between the two types of data can become conclusive. The next sections 3.2 and 3.3 illustrate in more detail the characteristics of each method and the tools of data gathering.

### **3.2 QUANTITATIVE METHOD**

Quantitative research is a social research method that relies upon numerical and statistical methods; it is characterized by surveys and experiments, where the goal is to produce general statements. The method is more concerned with questions about

measurements and measuring information, for example: “How much? How many? How often? To what extent?” From the data presentation perspective, quantitative data mainly involves counting and measuring numbers; for example, an experiment conducted to investigate the maximum speed limit and the performance of different brands of sport cars. “Quantitative research method is often conceptualized by its practitioners as having a logical structure in which theories determine the problems to which the researchers address themselves in the form of hypotheses derived from general theories” (Bryman, 1995:18). According to Yates (2004), quantitative research methods are methods for analysing numeric information in the form of statistical methods. Quantitative research methods transform the information into numbers and amounts.

A quantitative technique is an approach which seeks to inquire into an identified problem; it is based on testing a theory measured with numbers and on analysing the data using statistical techniques. The main objective of the quantitative technique is to find out if a theory can be generalized. The techniques of data gathering are distinct from the process of data analysis. Data can be gathered by various means. The most common tools of data collection used by a quantitative method are: questionnaire surveys, observation schedules, interviews, experiments, psychological tests and archival records (Sekaran, 2003; Bryman, 1995)

Quantitative research methods usually involve large randomized samples, more application of statistical inference and few applications of cases demonstrating findings. The objective of quantitative research is to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population. Quantitative research designs are either descriptive or experimental. A descriptive study establishes only associations between variables; an experiment establishes causality (Robert, *et al.*, 2009; Creswell, 2009; Liamputtong, 2009; Hutcheson, and Sofroniou, 2009; Bryman, and Bell, 2007; Yates, 2004; and Moore, 2001).

The main advantages of this method lie in precision and control. Precision is reached through quantitative and reliable measurement and control is achieved by the sampling and design. Furthermore, hypotheses are tested via a deductive method and the use of quantitative data to allow for statistical analysis. However, the main disadvantage of the

quantitative approach is that the results provide less detail on human behaviour, attitudes, and motivation. Although the response of opinions and perceptions can be converted into digitised results, it mainly leaves no meaning to the researchers. Accordingly, many researchers are concerned that the quantitative approach reduces human individuality and ability to think (Bryman, and Bell, 2007; and Mason, 2002).

### 3.2.1 Survey Questionnaires

Survey questionnaires represent one of the most common types of quantitative, social science research method. In survey research, the researcher selects a sample of respondents from a population and administers a standardised questionnaire to them. A questionnaire is a series of written questions a researcher supplies to subjects, requesting their response. Usually the questionnaire is self-administered in that it is posted to the subjects, asking them to complete it and post it back (Brace, 2008; Fowler, 2008; Bradburn, *et al.* 2004). The use of survey questionnaire is a valid and useful approach to data gathering which is not resource intensive; it involves many people of the organization and can be completed quickly. It is an excellent way of gather information on the perceptions of the people of the organization quality practices.

The survey questionnaire can be a written document that is completed by the person being surveyed, an online questionnaire, a face-to-face interview, or a telephone interview. Using surveys, it is possible to collect data from large or small populations. Survey research does not belong to any one field and it can be employed in almost any discipline. Surveys come in a wide range of forms and can be distributed using a variety of media. In general, there are three categories of survey presentations: written surveys, oral surveys, and electronic surveys. Furthermore, there are several types for each of these categories. The subsequent paragraphs give details on these types, and provide the strengths and weaknesses of each.

Hancock, observes that questionnaires are often used to assess attitudes and that respondents may be asked to choose a point on a scale, to indicate how they perceive or feel about a situation. Table (3.1) is adapted from Hancock (1998); it outlines the advantages and disadvantages of survey questionnaire.



**Table 3.1 Advantages and Disadvantages of Survey Questionnaire**

<i>Advantages</i>	<i>Disadvantages</i>
<i>1 Relatively simple method of collecting data. Novice researchers can design simple questionnaires</i>	<i>Cannot probe a topic in depth without being lengthy.</i>
<i>2 Rapid and efficient method of gathering data.</i>	<i>Respondent can omit items without explanation therefore data incomplete</i>
<i>3 Can collect data from a widely scattered sample.</i>	<i>Selection of forced choice items may be insufficient to reflect respondent's choice</i>
<i>4 Can collect data from a large sample.</i>	<i>Amount of information limited by respondent's interest and attention</i>
<i>5 Relatively inexpensive.</i>	<i>Questionnaires can go astray</i>
<i>6 Respondents can remain anonymous</i>	<i>Production and distribution can become expensive</i>
<i>7 One of easiest tools to test for reliability and validity</i>	<i>Sample is limited to those with literacy skills</i>
<i>8 Respondent has time to consider each question</i>	<i>Most people express themselves better through the spoken word</i>
<i>9 Analysis of data can be done quickly</i>	<i>No opportunity for researcher to interact with respondents</i>
<i>10 Can be used to collect data on a wide range of topics/attributes</i>	<i>If respondents are anonymous they cannot be followed up</i>

*Source: Hancock, (1998)*

In addition, a questionnaire is an instrument that is designed for a specific purpose, embracing relevant substances i.e. questions to determine the relationship between causes or results and different variables in order to determine the current or potential status of the issue that is empirically examined. Although the use of questionnaires to obtain data is widely practiced, nevertheless it has to be borne in the researcher mind that it may encounter the jeopardy of low percentage of documents being returned. This concern is discussed broadly in chapter 4, Section 4.3. (Liamputtong, 2009; Wrench, *et al.*, 2008; Bryman, and Bell, 2007; Claver, *et al.*, 2003; Bryman, 2001; Bradburn, and Sudman, 1999; and Carlson and Thorne 1997)

In this research, the quantitative data gathered by the survey questionnaire were used primarily to support the analysis and development of the anticipated model. However, cross comparisons were made to explore other possible relationships. The quantitative

data were obtained and analyzed by using a statistical software programme of the SPSS 16.0 for windows as well as the Microsoft Office Excel 2007 spreadsheet that provides a sufficient range of statistical tools to meet the objectives of the study.

### **3.3 QUALITATIVE METHOD**

The qualitative research method is concerned with developing explanations of social phenomena. That is to say, its aim is to help to understand why things are the way they are. Qualitative data are mainly words, sounds, or images. The method is concerned with the social aspects of the life, it focuses on what people say and do. In addition, the qualitative approach is supported by action research or by a case study method. An example of a qualitative method is to observe the reasons for buying, or preferring particular products for instance: mobile phone or a service an airline company. The data collection instruments of a qualitative method are: Interviews, document analysis, direct observation, focus groups, participant observation, surveys, open-ended surveys, video and audio recording, (Flick, 2007; Bryman, and Bell, 2007; Litosseliti, 2005; and Yates, 2004).

According to Yates (2004), qualitative research methods, are methods used for analyzing other information, such as interpretations of a text. Qualitative research methods use the researcher's interpretation of information which cannot or should not be translated into numbers or amounts. A qualitative research on the other hand is aimed at understanding a social or human problem from multiple perspectives and it is mostly conducted in a natural setting. The qualitative method is concerned with the process rather than simply the outcomes. The method mainly strives to find an answer for the meaning certain terms and conditions come to be applied and for the backgrounds of a precise activity or event under investigation.

Bogdan and Biklen (2006) articulated that qualitative research uses factual circumstances as the direct source of data and that the researcher is the decisive instrument. The researcher probes into a particular issue under study because he is concerned with contextual aspects. He does not merely search data or provide evidence to prove or disapprove an assumption under study. He feels that an action can be better understood when it is observed in the setting in which it occurs. In addition, the researchers replicate that the qualitative method is basically descriptive. The data

collected are in form of words or pictures rather than numbers. The written results of the research contain quotations from the data to illustrate and validate the situation examined. The perceived qualitative method includes a variety of data gathering tools, for instance: interviews, transcripts, field notes, photographs, videotapes, personal documents, memos, and other official records. In their search for understanding the qualitative method, researchers do not reduce the number of page description and other data to numerical symbol. Rather, they try to analyze the built-in data as the particulars that have been gathered are grouped together from different sources of collected evidence. Thus, they emerge as closely as possible in the form in which they were documented or demonstrated (Bryman and Bell, 2007; and Bogdan and Biklen, 2006)

Qualitative research is generally defined as research that utilizes open-ended interviewing techniques to explore and understand the attitudes, opinions, feelings and behaviour of individuals or a group of individuals. It is a research that applies any method relying upon primary source information, where very often the data are not numerical. The technique is that the researcher must ensure that the phenomenon is investigated in terms of the meanings that the participants involved bring to the situation. It is perceived in terms of providing a lower level of objectivity and scientific value (Wrench *et al.*, 2008; Yates, 2004; Yin 2004; and Garson, 2002).

Flick, (2007) argue that qualitative research is indicative in the sense that researchers develop concepts and insights from patterns of data. Researchers use descriptive data, i. e., and the people's own writing and observable behaviour in contextual situations. Qualitative research involves the development of methodological skills, such as conducting interviews and applying different approaches that involve the participants' observations. In qualitative research, validity analysis is conducted in order to determine whether the findings are accurate from the standpoint of the researchers, the participants, or the readers, i.e. meeting the criteria of trustworthiness, authenticity, and credibility by using methods such as triangulation, member checking, bias clarification, external audit, etc. Silverman (2001) observes that the reliability of qualitative research can be ensured by documenting procedures and demonstrating that the categories are consistently used, though this aspect plays a minor role (Franzosi, 2010; Creswell, 2009; Alvesson, and Skoldberg, 2009; Wrench, *et al.*, 2008; Bryman, and Bell, 2007; Huberman, and Miles, 2002; Bryman, 2001; Morse, *et al.*, 2001; Silverman, 2001).

(Bryman, 1995) elucidated some of the main characteristics of qualitative research methods. These are:

*Seeing:*

The strategy of making connections: the events, actions, norms, values, etc, are being studied from the perspectives of the people in order to observe how different sensitive perceptions can determine the feasibility of the issue under investigation.

Description: the researcher needs to provide a detailed description of the issue under investigation, whereby he advocates that such description is consistent with the perspectives of people involved.

*Contextualism:*

Investigating the connection of people's behaviour in especially the values and practices for understanding the society in a wider range

*Process:*

Observing the change in people's view of the social reality of events in a continuous change state

*Flexibility:*

Using an open and unstructured research strategy of people's perception of issues under investigations; this may enhance the opportunity of coming across entirely unexpected outcomes.

*Theory and Concepts:*

The formulation of fieldwork theories in advance, the qualitative research is frequently rejected; it is rather sceptical prior to the onset of the research project (Bryman, 1995: 61-69).

Qualitative research is best used for the in-depth of information. It is the best research method for discovering underlying motivations, feelings, values, attitudes, and perceptions. The main disadvantage is that, unlike quantitative research method, the findings are not statistically predictable to the population under study. This limitation is created by two facts: recruiting is rarely completely representative; and, the very nature of qualitative research necessitates small sample sizes. (Bryman, 1995: 72) outlined some problems associated with qualitative research:

- *Interpretation problems: whereby it is difficult for the researcher to demonstrate the devotion of the participant's perspectives*
- *Methodological problems: involving the relationship between theory and research in the qualitative tradition*
- *Overgeneralization problems: the extent to which qualitative research derived from case studies can be generalized (Bryman, 1995:72).*

### **3.3.1 Interviews**

An interview is a series of questions a researcher addresses personally to the respondents. An interview may be structured: whereby the researcher asks clearly defined questions or unstructured: the researcher may allow some of the questioning to be led by the responses of the interviewee. To be specific, structured data are organized and can be produced by closed questions. Unstructured data are relatively disorganized and can be produced by open questions. (Bourque, and Fielder, 2002; Punch, 2000; and Forza, and Filippini, 1998).

Qualitative interviews are semi-structured or unstructured. If the interview schedule is tightly structured, the researcher may be able to explore the phenomena under investigation broadly and deeply. Semi-structured interviews tend to work well when the interviewer has already specified certain aspects he intends to address. The interviewer can decide in advance what areas to cover; but the responses of the interviewee are unexpected. This aspect can be principally important if the time available for each interview is limited and the interviewer wants to be sure that the main issues are covered

(Blain, *et al.*, 2004; Gubrium, and Holstein, 2003; Mauthner, and Birch, 2002; Hancock, 2002; Wengraf, 2001; and Lee-Trewick, and Linkogle, 2000).

In this study the method of interviews were chosen as a secondary research instrument designed to collect the necessary background or contextual information, which facilitates and supports the analysis questionnaire and thus contributes to the original credibility of the research as a whole.

### **3.4 RESEARCH METHODS COMPARISON**

One can not draw a demarcation line between qualitative and quantitative research methods. The differences are subtle; they are mainly concerned with the original research question of how people or situations are studied and the way the data are analyzed, interpreted and presented (Wrench, *et al.*, 2008; Bataille, and Phil, 2002; and Bryman, 2001).

Bryman, and Bell (2007) were against listing the merits of each research method, both quantitative and qualitative methodologies have their own advantages. The quantitative method focuses on measurement and independent relationship between the various variables, whereas the qualitative method lays emphasis on the documentation of specific description of situations and procedures Bryman, and Bell (2007).

The researcher, in line with Brayman (2000), contend that it would be methodologically naive to argue that quantitative research methods are more appropriate to organizational research than qualitative methods but that the distinction between the two approaches are merely technical.

Quantitative research is often contrasted with qualitative research. The distinct characteristics of both research approaches support researchers in making appropriate decisions on designing new research in the initial stage. Based on the discussion above, Table (3.2) provides comparison between quantitative and qualitative research with further features of qualitative research and how it differs from quantitative research: these differences were listed below

Qualitative research is concerned with the opinions, experiences and feelings of individuals producing subjective data.

1. *Qualitative research describes social phenomena as they occur naturally. No attempt is made to manipulate the situation under study as is the case with experimental quantitative research*
2. *Understanding of a situation is gained through a holistic perspective. Quantitative research depends on the ability to identify a set of variables*
3. *Data are used to develop concepts and theories that help us to understand the social world. This is an inductive approach to the development of theory*
4. *Quantitative research is deductive in that it tests theories which have already been proposed*
5. *Qualitative data are collected through direct encounters with individuals, through one to one interviews or group interviews or by observation. Data collection is time-consuming*
6. *The intensive and time consuming nature of data collection necessitates the use of small samples*
7. *Different sampling techniques are used. In quantitative research, sampling seeks to demonstrate representativeness of findings through random selection of subjects*
8. *Qualitative sampling techniques are concerned with seeking information from specific groups and subgroups in the population*
9. *Criteria used to assess reliability and validity differ from those used in quantitative research*

*Table 3.2 Comparison Between Quantitative And Qualitative Research Methods*

	<i>Quantitative</i>	<i>Qualitative</i>
1	<i>Objective</i>	<i>Subjective</i>
2	<i>Literature review must be done early in study</i>	<i>Literature review may be done as study progresses or afterward</i>
3	<i>Tests theory</i>	<i>Develops theory or tests the theory</i>
4	<i>One reality: focus is concise and narrow</i>	<i>Multiple realities: focus is complex and broad</i>
5	<i>Reduction, control, precision</i>	<i>Discovery, description, understanding, shared interpretation</i>
6	<i>Measurable</i>	<i>Interpretive</i>
7	<i>Report statistical analysis.</i>	<i>Report rich narrative, individual interpretation</i>
8	<i>Basic element of analysis is numbers</i>	<i>Basic element of analysis is words/ideas.</i>
9	<i>Researcher is separate</i>	<i>Researcher is part of the process</i>
10	<i>Subjects</i>	<i>Participants</i>
11	<i>Context free</i>	<i>Context dependent</i>
12	<i>Hypotheses</i>	<i>Research questions</i>
13	<i>Reasoning is logistic &amp; deductive</i>	<i>Reasoning is dialectic &amp; inductive</i>
14	<i>Establishes relationships, causation</i>	<i>Describes meaning, discovery</i>
15	<i>Uses instruments</i>	<i>Uses communication and observation</i>
16	<i>Strives for generalization</i>	<i>Strives for uniqueness</i>
17	<i>Designs: descriptive, correlation, quasi-experimental, experimental</i>	<i>Designs: phenomenological, grounded theory, ethnographic, historical, philosophical, and case study.</i>

*Sources: The Author; Wrench, et al. 2008; Bataille, and Phil, 2002;and Bryman, 2001*

Bryman, (2004) outlined some differences between quantitative and qualitative research. These are related to:

Role of research method: in quantitative methodology, researchers at the preparatory stage rely on an exploratory approach of conducting investigation whereas in a qualitative unstructured approach, they use different means of exploring the participant's interpretations.



The relationship between the researcher and the subject: in a quantitative method, the relationship is distant and contact with the individuals is usually brief whereas the relationship is much closer between the researcher and the people observed; a constant contact within the particular study is established.

The researcher's position in relation to the subject: in a quantitative method, the researcher adopts the attitude of an outsider to the subject matter, as assumed protocols were applied. However, in a qualitative method, the researcher is more an insider to his investigated subject; he interacts regularly with the participants.

The relationship between theory, concepts and research: since the method is exploratory, the theoretical and conceptual framework is the principal phase for an investigation, which researchers consider in quantitative studies whereas such relationship is often redundant in a qualitative method as it emerges throughout the study phases.

*The research strategy:* Quantitative researches implement a structured approach, i.e. sampling and questionnaire are prepared prior to the start of data collection. On the contrary, qualitative research tends to be more open, flexible and unstructured as it permits the researcher to observe individuals' behaviour in the data.

*The scope of findings:* The findings of quantitative research are homothetic, i.e., the researcher attempts to set up general findings disregarding time and place. However, qualitative approach tends to be pictorial whereby great emphasis was laid on drawing its findings in a specific time and place.

*The images of social reality:* The reality of the social world is stationary; the constant changes in the behavioural patterns of the participants involved in a quantitative approach are ignored. But in a qualitative approach, the social reality is more process oriented and alterations in the interpretation of people's behaviour are mirrored.

*The nature of data (participation, observation, and theory testing):* In a quantitative method, the data are not easily gathered or obtained but the final outcome is more reliable. Nevertheless, in a qualitative research, the data are richer in generating theories that can produce insightful findings (Bryman, 2004: 93-123).

The findings of the research questions and propositions discussed in the preceding sections need to be matched with the range of available techniques that have been discussed, in order to determine the appropriate research method to employ in order to investigate and come up with an answer to the research question.

### 3.5 RESEARCH METHOD JUSTIFICATION

Different research methods with different characteristics are suitable for different research purposes; they differ with respect to the kind of data involved and their means of classification. Both the qualitative and quantitative research methods can often be combined; each supports the other in research. Attempts are made to combine different methodological traditions in development research. The combination of different perspectives necessarily requires recruiting individuals with different skills, which makes such projects costly in terms of time, talent, and resources. (Breakwell, *et al.*, 2006; and Brayman, 2000)

There is no rule in research that says that only one method must be exercised in an empirical investigation. Using more than one method in an empirical investigation can have substantial privileges. One significant benefit of triangulation methods lies in the reduction of inappropriate certainty. Exercising a single research method and finding a straightforward result may deceive researchers into assuming that they have found the right answer. Whereas, using other or additional approaches, may point to different answers which eliminate specious certainty (Creswell, 2009; Alvesson, and Skoldberg, 2009; Wrench, *et al.*, 2008; Bryman, and Bell 2007; Silverman, 2004a; Silverman, 2004b; Huberman, and Miles, 2002; Morse, *et al.*, 2001; Bryman, 2001; and Robson, 2002).

The research has a similar apprehension to that stated above since he embarks on examining the employee's perceptions of quality implementation practices, with a specific reference to the UAEPSI. The researcher cautiously considered these assumptions in order to surmount the constraint of inconsistency in the outcomes obtained. An alternative strategy was employed to benefit from both qualitative and quantitative intermarriage in a way that strengthens and supports the research finding.

Therefore, the analysis outcomes of the quantitative survey questionnaire were used to develop the theoretical structure of the quality implementation model referred to in

chapter 4, section 4.1 and chapter 8, section 8.1, where a qualitative method of the focus group was used to gauge the perceptions of people involved and their anticipations with regards to accepting the model as an aid tool for better quality implementation practices in the UAEPSI, (for further details, see chapter 5, section 5.1 and chapter 9, section 9.2.)

As argued in the previous chapter, research evidence on quality implementation mechanisms involving the participation of people in the government institutions are relatively new phenomena in the U.A.E.; it could be argued, hence, that this study is mainly exploratory as the notion of quality implementation system is relatively immature in the UAEPSI context due to the noticeable lack of theory and previous research on the topic. To the best of the researcher's knowledge, no sustained academic study has been conducted on the implementation of TQM in the UAEPSI owing to the lack of new theoretical and empirical insights into the U.A.E. government institutions.

Therefore, there is a need to investigate and explore the perceptions of key stakeholders involved in the implementation of the customized model in the UAEPSI. Perhaps, the most effective way of doing this is by focusing on a carefully designated PSI. Thus, for this kind of exploratory study, a mixed method of quantitative and qualitative approaches is deemed appropriate. This approach investigates the employee's perceptions of the quality implementation practices in the UAEPSI, and attempts to explore the impact of their perceptions: firstly, perceptions concerning the significance of the critical success factors as a set for enhancing quality practices and secondly: perceptions concerning the acceptance of the accustomed quality implementation model. An exploratory approach to data investigation and analysis extends the findings to a wide range of alternative explanations since the researcher remains open to unexpected possibilities.

As pointed out earlier, this research study is a pioneer one in the field of UAEPSI; there is no specific theoretical model that can be tested and adopted. The research strategy was based on a combination of qualitative and quantitative approaches. Two reasons led to the adoption of such methodology: the first is a pragmatic one. It is associated with the general problems of academic research in the U.A.E. The problem is related to the access that a researcher can have to people as well as to secondary data. This problem has two dimensions. The first dimension is that there are no databases in terms of a list

of particular public institutions, from which a researcher can obtain a representative sample of research subject, (see chapter 4, and section 4.1 for further details). The second dimension is the limited access that a researcher has to the UAEPSI profiles. The second reason for the adoption of an integrated research methodology is that the studies that have looked into the perceptions of employees towards quality implementation practices are essentially quantitative, while very few qualitative researches looked into government institutions. In addition, a merged methodology would provide evidence towards a wide range of people and government institutions, operating in different sectors, without missing the stronger explanatory advantage of the qualitative survey questionnaire approach.

The quantitative approach aimed to provide a wide range of data concerning TQM implementation practices in the UAEPSI. This approach is based on a survey questionnaire theme. This method has three interrelated advantages. The first is that it is aimed to come up with a conclusion referring to quality implementation practices in the UAEPSI. At a different level of the institutional hierarchy, there is an interest in two methodological and one theoretical implication. From the methodological perspective, this structural level includes a wide range of employees. Thus, the survey obtained a variety of responses that include different views on TQM implementation practices.

Moreover, it is more feasible to gain access to this occupational level than to try to reach people at the senior hierarchical level. The theoretical implication is related to the importance of the employee's involvement in TQM implementation. As mentioned in chapter 2, the importance of the employee's involvement has been underlined by quality gurus and experts (Oakland, 2003; Juran, 2003; Wilkinson, *et al.*, 1997; Hill 1995; Feigenbaum, 1991; Deming, 1986; and Crosby, 1984). Therefore, a survey questionnaire of a wide range of people would offer evidence supporting the TQM implementation practices in the UAEPSI.

The second advantage of choosing a survey questionnaire method is that through quantitative data, the researcher can obtain two objectives. Firstly, a comparative analysis of the various employees' perceptions on TQM implementation practices in different government institutional sectors. The comparative quantitative data had shown great differences between the UAEPSI current quality practices and TQM implementation practices, which provided credible evidence to the debate on the

different perceptions of quality implementation practices. Secondly, the quantitative data facilitate comparison among employees with different age, gender, educational qualifications and years of job experience (for further details, see Chapter 5, section 5.4.).

Lastly, the third advantage is that a survey questionnaire can explore not only the responses and processes adopted by specific group of people, but also the new conditions introduced by the TQM approach. A variety of information items had been collected and correlated to issues directly or indirectly related to the key factors of TQM implementation. The former relates to issues such as, top management commitment, customer satisfactions, employees involvement. The later includes a set of issues related to the organizational performance, service improvement, employee's reward and recognition.

However, a qualitative approach was also required in order to shed light on issues related to the background and the context of the employee's responses to TQM implementation practices. This approach was based on exploratory focus group. The focus group sessions were held with people who participated in the quantitative stage of the research and volunteered themselves as potential candidates. The general aim of this approach was to examine the anticipations of people on the development of the research implementation model; a list of findings including leadership, process and systems, customer and employee's satisfactions was related to the results extracted from the quantitative approach. These issues cannot simply be explored through a survey questionnaire. Furthermore, the focus group team responds to the need of the exploratory mode of the research by giving further explanations on how things happened. As a final point, the qualitative approach subjects can express several different opinions regarding their own unique view on the research topic. (Litosseliti, 2005)

### **3.5.1 Why Survey Questionnaires**

A survey questionnaire was selected as one of the two research method tools employed in this study since it facilitates the researcher's task of quantifying information. The purpose of this instrument was to gather information about the quality implementation practices in the UAEPSI. One needs to examine the perceived and actual practices of

quality critical factors from the UAEPSI point of view. In addition, the questions contained in the questionnaires investigate the most common driving and inhibiting forces of quality implementation practices in the UAEPSI. McAdam, and Henderson, (2004)

It is believed that survey questionnaires are a more likely accepted data gathering instrument due to cultural and customary traditions in the UAEPSI; therefore, the perceptions of respondents can be obtained in a structured and friendly manner.

From reviewing literature relevant to carrying out research empirical fieldwork in the government institutions in the U.A.E., it became obvious that survey questionnaires were the most commonly applied research methods in the UAEPSI. As a result, the researcher became convinced that in order to attain the thesis objectives, he should apply the survey questionnaires. Despite the fact that constructing a questionnaire seems to be quite simple, it in reality is a complex and strenuous process. It must be borne in mind that information needs to be acknowledged and that survey questions must be properly formulated and carefully selected. Furthermore, they should be aligned with the research aims and objectives.

The information gathered from survey questionnaire are then analyzed and used to formulate and develop the QAM within which the problem is investigated as depicted in Chapter 8, section 8.2. However, the effective development of a reference model requires an equally important scientific approach that should preferable be based on theoretical and empirical research. In integrating both the theoretical conceptions of quality together with the empirically based information, a solid foundation is provided for the development of a model, peculiar to the problem being investigated, and the development of a questionnaire with practical questions fragmented into separate sections and based on the variables contained in the model.

### **3.5.2 Why Interviews**

Consequently, the researcher has opted to conduct semi-structured interviews with top management in the UAEPSI; the objective is to enrich the research fieldwork investigation since interviews:

1. *Support research validity and reliability:* avoiding the expected weaknesses of a questionnaire, interviews enhance the research validity and credibility of the data gathered
2. *Meet Cultural prerequisites:* most of top management administrators in the UAEPSI prefer face to face communication to the written questions because their cultural behaviour as well as their prestige obliges them to express their unwillingness to respond to the questionnaire questions as they primarily believe that they are designed for lower managerial and clerical posts
3. *Facilitate the questionnaires distribution:* in interviewing UAEPSI top management executives, the distribution of questionnaires among organisation employee is facilitated. Managers request them to take it seriously. This support is a golden opportunity for the researcher; it's like killing two birds in one stone
4. *Secure Continuous source of information:* providing an opportunity for building up a good relation with the management in the UAEPSI since they are considered a continuous source of information for future studies
5. *Enable the researcher to communicate with a large population*
6. *Prove to be an aid that is inexpensive and easy to administer:* one can easily administer the people involved, which ultimately lead to higher representation, higher response rate, reliability, credibility and feasibility of interacting with large population samples.

### **3.6 DATA COLLECTION SOURCES**

This section explains the researcher`s endeavour with regard to data collection. The research design addresses the subjects selected and the data collected or generated. The researcher made two claims: the first concerns the investigation of quality practices in the UAEPSI and the second involves scepticism about how quality implementation processes proceed in the UAEPSI. This might be referred to as the realistic position: the function of the UAEPSI involves practical aspects that can be identified or modified by

the view of the employee's ability or inability to describe them objectively. This realistic position was extended to the selection of methods of investigation and the implementation of the research work.

The choice of a survey questionnaire and a semi-structured interview as the primary method of investigation supported by secondary data collection through the preliminary survey was made. The selection of focus group was also based on realistic criteria. The primary consideration was that this theme provided an opportunity to test the research paradigm. At the same time, it was necessary to have access to the UAEPSI and to relevant people. A practical way of achieving this was the use of personal relations to identify the appropriate group team. This approach together with the conditions of confidentiality and anonymity ensured that potential ethical dilemmas were addressed in the planning process.

Testing the research paradigm required the broadest view possible about the conduct of the teamwork. A team selection criterion was that the team members had recognized a team leader who was willing to report on the details of the event and the behaviour of people participating in the project. Only the leader is in a position to view the behaviour of all people involved from a potentially objective standpoint. Observing these behaviours from a uniform standpoint was considered more important to testing the research proposal than the possibility of the observer partiality in the overall team descriptions. Additional participant observers would have enhanced the details of the focus group, but they would not have the reliability of the observation of behaviours necessary to testing the research proposal.

With the team leader being the primary source of data, self serving and attribution biases were expected. Several strategies were adopted to minimize the bias and to standardize any effect across the focus group. First, objectivity was encouraged. Interviews were conducted in environments chosen by the researcher and were made comfortable to the subject, under conditions of cordiality, confidentiality, and anonymity. Second, the interview questions were set down in a format that emphasized open questioning and encouraged dialogue, allowing the researcher to evaluate and answer questions (see chapter 9, section 9.2).



In keeping with the focus group method, the question orientation was towards the researcher rather than subject. A taped recording of the dialogue allowed the researcher to revisit the question and reconsider judgments. Third, the survey questionnaire was personally administered with the researcher determining the questionnaire response. Again, this enabled the researcher to review and reconsider the subject's responses, and to identify any obvious individual bias. (Silverman, 2004b; and Yin, 2004)

In this study, the researcher is responsible for all recording and transcription, and the translation of the data. The issues concerning the description of the focus group and the dialogue between the researcher and the theme concerning the procedure and the survey questions were observed. Written transcriptions of the interview were not made. The perceptions and perceptions analysis were written from the researcher's interpretation of the interview dialogue. The follow-up question written team reports were provided to subjects for verification and additional comment.

### **3.6.1 Secondary Sources**

The investigation and gathering of the research secondary data resource was carried out in the very early stage of the research. The researcher relied heavily on documentary and archival records of the UAPSI who have been so far the recipients of the local quality awards. Silverman, (2004b) pointed out the significance of the documentary and archival records as a source of data gathering. They noted that data could be obtained from different sources such as: letters, administrative documents, textbooks, journals, and items from mass media, agendas, policy documents and other similar items. Semi-structured interviews with a number of quality managers and quality advisors in the UAEPSI were conducted. Besides, the researcher gathered information from a range of most recent documentary and official records, quite few of the UAEPSI, as they are very rare and on most occasions, they do not exist.

Further data were obtained from a variety of sources such as: local and international newspaper, government bulletins, Journals and magazines and last but not least from the internet. The purpose of the investigation is justified on the basis of the following.

- 1. Analysis of the quality initiatives and probing into the organisations records to determine the most critical success factors that contributed positively to the*

*implementation of TQM practices. The results of this were experimented with and applied in designing the questionnaire questions. This drives the researcher to test and validate his questions, and to determine to what extent it could be applied to the UAEPSI.*

- 2. The use of documentation and archival records alongside the semi-structured interviews as techniques for the researching secondary data; they helped the researcher to assemble indisputable facts and evidence were used as a foundation for launching the research fieldwork.*
- 3. Carrying out this investigation was in part for fulfilling the second objective of the research. Furthermore, the accomplishment of the above objective, subsequently paves the road to realize objective three.*

The researcher has designed the research fieldwork approaches by applying two research methods, quantitative and qualitative to UAEPSI. For the quantitative method, the researcher used a questionnaire as an investigation instrument. It specifically dispatched to selected employees in different posts and department. Whereas, in qualitative research method, the researcher formulated two focus groups to carry out research on the senior management in the UAEPSI exclusively.

### **3.6.2 Primary Sources**

Based on the earlier discussion, the research employed both quantitative and qualitative data to address different but complementary questions within the study and to develop a quality implementation model for the UAEPSI. The model focuses on the use of different research methods for alternative tasks. It predicts what happens when an initial fieldwork is carried out by means of the descriptive and exploratory survey questionnaire with the structured interviews. It were used to investigate current quality practices in the UAEPSI, to identify factors affecting quality implementation from the employee's perspective in the UAEPSI, and to determine the suitability of the developed model to the nature and culture of the UAEPSI, from the employee's perspectives. The subsequent focused group work is directed to explore the willingness to accept and the suitability of the model developed to the nature and needs of the UAEPSI. The goal was to use the quantitative and qualitative approaches in a complementary manner to enhance the interpretation of the data gathered.

## SUMMARY

Identifying the appropriate research methodology is crucial to conducting any research. Unquestionably, this study requires appropriate research methodologies. First of all, this chapter begins with reviewing possible research approaches such as qualitative and quantitative techniques and data collection methods. The strengths and drawbacks of each research approach and data collection method are investigated and documented. After the examination of available research methods, the remaining chapter concentrates on the methods selected for this study. The main research methodology chosen for this study is the quantitative approach using a survey questionnaire for data collection.

The second research methodology for this study is the qualitative approach of focus groups, interviewing top management of the UAEPSI. This stage of the research is discussed in further details in chapter eight.

In addition, the chapter illustrated the research methodology that was employed, the stages of research and the methods applied to ensure validity and reliability. Measures taken to preserve the anonymity of the UAEPSI current quality practices in the UAEPSI were described as well as the temperament of the research. This chapter outlined the design of the investigation carried out and the expectations of its outcomes. The chapter reviewed the research methods available and the approaches adopted to select of the appropriate methods. The reasons for choosing a research strategy based on mixed (triangulation) aspects of survey questionnaire and focus group were explained and justified (see also chapter eight). The rationale behind the selection of focus group was outlined, and the procedures adopted for recruiting participants were explained.

The chapter also displays the design and development of a survey questionnaire, the approach taken for testing and refining them, the data collection methodology and the strategy and procedures for analyzing the data obtained. The next chapter discusses the fieldwork survey carried out, the design of the questionnaire, the preparations for the interviews and the data gathering instruments employed in the empirical study. The chapter also discusses the sampling design of the study and the data analysis process.

## **CHAPTER FOUR**

### **FIELDWORK AND DATA COLLECTION**

#### **PREFACE**

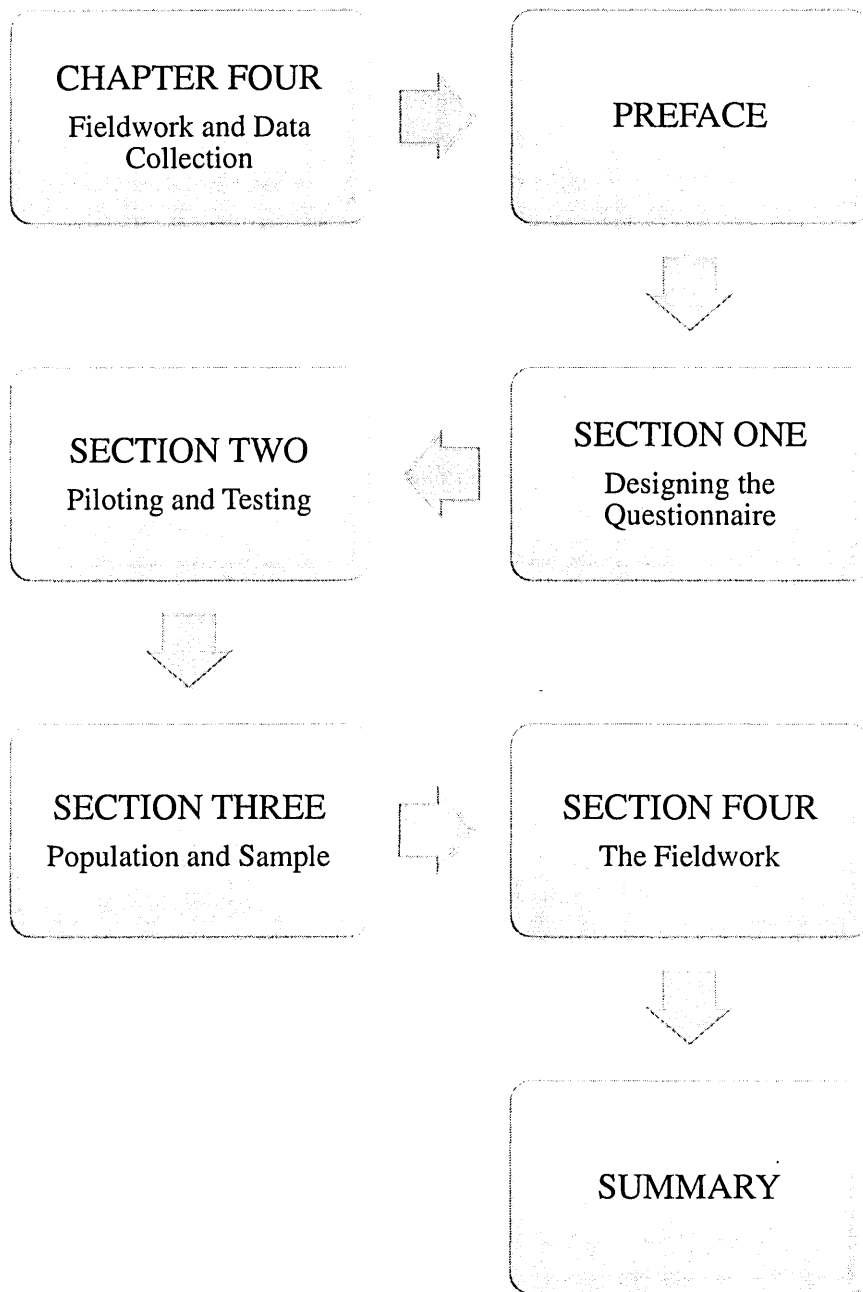
In undertaking the empirical stage of the research, the researcher emphasises the careful selection of appropriate research methodology. The theoretical literature on TQM implementation practices in UAEPSI was reviewed in depth. Besides the literature review, the researcher manipulated the feedback obtained from the preliminary investigation of quality and the implementation practices in a number of public service institutions in the U.A.E. (see Chapter Three, section 3.6). Furthermore, by integrating the theories and practices on quality implementation, the researcher got acquainted with a wider spectrum of different research methods, which helped him to select the most appropriate research methodology, plan and conduct his empirical research. This is carried out within the context of the research aim, and objectives and the research methods discussed in chapter one and chapter three.

The aim of this chapter is to define the method applied for collecting data for the empirical research. Due attention is accorded to selecting the method appropriate for processing the data to test the applicability of the proposed quality appraisal model for the UAEPIS, (see Chapter Three for more details). The research design addresses the structure of the information produced: what information to be collected or generated, when and how it will be collected. The data obtained for this study were collected by means of administered survey questionnaire and semi-structured interviews. The prerequisites for a successful questionnaire were examined before providing details on its design and development of the questionnaire, on the content and the process of distribution methods applied for getting them back. Particular attention was given to the respondent's confidentiality as well as to the discussion on the reliability test analysis and validity.

As explained in chapter three, the research relied on two main sources of information for data collection. The primary source of information which consists of information collected from literature, journals and technical papers related to the thesis and the secondary source which incorporates information gathered by the researchers. They are

based on preliminary visits to predetermined UAEPSI to examine their perceptions of the quality appraisal model that responds to their needs. Figure (4.1) outlines the content of this chapter.

*Figure 4.1 Chapter four outline*



*Source: The Author*

## 4.1 DESIGNING THE QUESTIONNAIRE

In discussing the design and the structure of the research survey questionnaire, it is necessary to highlight the rationality for using a survey questionnaire as a research tool for investigation and collecting data. To create a well structured questionnaire, the researcher considered the following aspects: the variables to be measured, the type and the size of the population sample, the need for particular control groups if required and the type of questions together with the appropriate scale, (Dornyei, and Taguchi, 2010; Walter 2009; McColl, 2005; and Oppenheim, 2000).

Although the structured survey questionnaire is used in this research as a prime tool for collecting data (due to several reasons mentioned in Chapter 3 Section 3.4), the researcher should bear in mind the scenario of the low percentage of returned and number of statistically usable or unusable questionnaires. Thus, to alleviate this problem, two cover letters were enclosed along with every questionnaire sent out. (See Appendix 1). The first letter was a support letter issued by the researcher`s employer; in which it introduces the researcher as a member of the staff, and as a part of his research, he needs to conduct a study fieldwork survey. The letter also requested those who are concerned (the management of the UAEPSI) to provide every assistance should the researcher need for carrying out the survey successfully.

The second letter was issued by the researcher in coordination with the research director of studies. The letter clarified the aim of the research, the purpose of the study; it stated in clear statement that the data and results of the study would be used for academic purposes and guarantees the confidentiality of the potential respondent`s personnel details. Both letters were written first in English and then translated, by the researcher to Arabic language. This is because, it is compulsory by the law that all official correspondences forwarded to government institutions in the U.A.E. should be written in Arabic. In addition, the vast majority of respondents were Arabic speakers, therefore it was sensible to write and interact by Arabic for better communication. The intention of the two covering letters was to:

*Provide support and backup:* to give the researcher full support and the necessary backing required from the researcher employer i.e. government institution to carry out the fieldwork.

*Ensure Legitimacy and authenticity:* to provide a secure sense to the intended PSI management; that the research is authentic since has been approved by two eminent references.

*Secure confidentiality:* to emphasise confidentiality. The researcher assures that no person or institution name will be mentioned or disclosed under any circumstances.

*Serve the academic purpose:* the researcher stresses that research is for academic purposes and information obtained will not commercialized or shared by third party.

It was hoped that these measures would have a positive impact on the response rate by directing the rate of the returned questionnaires to the presumed target.

#### **4.1.1 Questionnaire Development**

The aim of this section is to collect the necessary data for the development of the research proposed model. To attain such objective, a set of questions for measuring the variables was well developed. This was carried out through reviewing the TQM literature and with continuous guidance and assistance from the research director of studies.

With all the intended questions meeting the criterion of relevance, the content issue revolves around whether the questions provide sufficient and appropriate coverage of the research objectives being measured by that question. Excessive questioning may lead to ambiguity and to the respondent encountering difficulty in interpreting the question. Otherwise, shortfall question content may cause the respondents to envisage inappropriate assumptions and misleading responses. Accordingly, the aim of researcher was to minimize measurement errors by making questions as clear and understandable as possible.

Distortions were minimized by ensuring that the terminologies used and their meanings are clear to the native respondents and that technical terms were properly rendered in Arabic. Special attention was given to the questionnaire sequential layout, to the impartiality of the questions and to the elimination of ambiguity and to assess no confusion would be caused with regard to whom the questions were addressed (Walter,

2009; Weerakkody 2008; Richards, 2005; Marquis, 2005; Bourque, and Fielder, 2002; Punch, 2000; and Oppenheim, 2000).

Hence, a number of challenges were encountered in this phase; among which was that of accessing the UAEPSI to collect information. This was not an easy task because all the UAEPSI participants were very conservative and sensitive with respect to providing the strangers with any kind of information related to their staff personal details or about their institution. The second problem was that of language barrier and communication since the majority of the respondents were Arabic speakers. To overcome this obstacle, the English version had to be translated into Arabic. This translation might not be accurate as few quality terms, such as benchmarking, could not be precisely translated into Arabic (Dornyei, and Taguchi, 2010).

The theoretical background and the development of the survey questionnaire were based on reviewing different sources of literatures and empirical studies related to TQM implementation in the public sector institutions. However, the researcher did not adopt or use a specific existing survey questionnaire. Instead, the researcher adopted an eclectic approach making use of the previous empirical research studies conducted by other researchers sharing similar concept but, carried out in different countries. Notably, this study differs from other researches in its kind that it primarily examining public sector institution in the U.A.E., whereas, previous studies were largely examining quality practices in private organisations. Briefly, the development questions set of questionnaire was based on two sources. The first was the adoption of questions from similar studies. In this respect, the researcher made use of questionnaires developed by (Walter, 2009; Hafeez, K. *et al.*, 2006; Colinson, *et al.*, Edwards, 1998; Loomba, and Spencer, 1997; and Dean, and Helms, 1996). Several questions were formulated from these sources to meet the objectives of the survey.

Second, the set of factors especially those in section three and four were developed from data analysis obtained from the preliminary research investigation on quality implementation practices in the UAEPSI. Initially, the components of the quality critical factors were identified in TQM literature (see Chapters one and six). Then, the differences among the quality critical factors were identified. Furthermore, some basic evaluation criteria were obtained from the U.A.E. Government Excellence Programmes



(UAEGEP)<sup>1</sup>. More significantly, the majority of the questions in section five of the questionnaire (see Appendix 2) were developed as mentioned earlier from different sources and were further amended to suit the UAEPSI current quality situation. On these bases, the author constructed the survey questionnaire that hoped to fulfil the aim and meet the objectives of the research

#### **4.1.2 Type of Questions**

The previous section discourses on the design and the structure of the survey questionnaire. This section deals with the different types of questions incorporated in the survey questionnaire (see Appendix 2). It is believed that well crafted survey questionnaires containing a variety of questions more likely increase the likelihood of the respondents return rate.

Prior to deciding on the type of questions in the questionnaire, the researcher reviewed the literature as well as the previous researches which conform to the research topic. As for the selection of the types of questions, Sekaran (2003) observed that the questionnaires are efficient data collection mechanisms when the researcher knows exactly what is required and how he can measure the variables of interest. In relation to this study, the data required from the field survey, the variables to be tested empirically, and the means by which these variables were to be measured were defined prior to designing the questionnaire. Consequently, the researcher sought to include commonly used types of questions usually embraced in survey questionnaires. Below paragraphs demonstrate the type of questions were enclosed in survey questionnaire.

#### ***Closed-Ended Questions***

This type of questions contains a predetermined set of answers provided by the researcher from which the respondents can choose the most appropriate one. This type of questions is easier than the open-ended questions in terms of response classifications, and statistical analysis. According to Weisberg *et al.*, (1996:84), the main advantage of closed-ended questions is that they provide the same frame of reference for all

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<sup>1</sup> The U.A.E. Government Excellence Programmes (UAEGEP) is an independent local government institution in individual emirates. Their main function is to enforce and ensure that all UAEPSI are in line with the government quality initiatives. The UAEGEP, principle criteria are based on the EFQM-EM.

respondents to use in determining their answers. It is also easy to work with the resulting data. Heather and Stone (1984:13) listed the following advantages of closed-ended questions:

- *They are simple to administer.*
- *Because the categories are determined in advance, it is easy to pre-code the responses, which facilitates the analysis.*
- *They have a frame of reference which guides the respondents' replies.*
- *They may clarify the concepts used and make clear the kind of answers sought.*

Despite the advantages of the closed-ended questions, they have some drawbacks. They may be biased in that they may enforce a statement of opinion on an issue when the respondents do not have any opinion. They are also hazardous in that they may offer an easy choice that the respondents might not make if forced to recall, organize, and evaluate a personal experience, etc. Therefore, a written, closed-ended and self-completion questionnaire was designed. The justification for employing such type of questionnaire is derived from a consideration of its major advantages, (see Table 4.1).

### ***The Likert-Scale Questions***

The most frequently used ordinal scale that is relevant to the research topic is the five-point Likert-type scale which uses a series of statements or matters, each of which expresses an opinion that the respondent clearly agrees or disagrees with. The response is usually expressed in terms of the following five categories: (*1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree*), (Flynn *et al.*, 1994), The Likert-Scale is used in this exact form in the survey questionnaire (see Table 4.1 and Appendix 2). It is presumed that including this type of questions in the survey questionnaire would give an indication about people's perceptions on the critical significance of quality factors and their level of practice in the UAEPSI.

### ***Multiple Choice Questions***

This type of questions enables the respondents to choose the most appropriate answer or sometimes even more than one answer from pre-listed options. This type of questions is included in sections two and five, (see Table (4.1) and Appendix 2).

### *Numerical Questions*

This type of questions is basically asked when the answer ought to be a real number like, age, weight...etc. the study survey questionnaire used this type of questions in sections one and two, see Table (4.1) and Appendix 2. The following section in this chapter presents in further detail such questions.

### *Ordinal Questions*

In this type of questions, the respondents in the UAEPSI were asked to rank in a sequence the possible answers. For instance, the respondents were first asked about their perception on a particular issue. Then, they were requested to select numbers from one to five next to each of the five options provided. Number one represents the most important and number five represents the least important. The researcher omitted this type of question during the piloting and testing stage of the survey questionnaire because the majority of those involved remarked that the ordinal questions caused a lot of confusion to them.

To avoid the risk of havoc and to eliminate any mistake that might occur in the responses, the researcher changed the ordinal question to *Partially Close-Ended Questions*. It is believed that such attempt remedies the drawbacks of the closed-ended questions, (see Table 4.1 and Appendix 2).

### *Open-Ended Questions*

This type of questions gives the respondents a large amount of freedom and space to express their point of views, or if they like to add further details. Hence, these types of questions are quite difficult to classify and to interpret individually. The researcher had overcome the complexity of embracing all the possible answers in each question by changing some of the open-ended questions to *partially open-ended question* and by attaching to the end of most of the survey question the option (*Other*).

The researcher was thus, able to extract more information that strengthens the validity of data analysis. Moreover, this allowed the respondents to write a substitute answer

that is not included within the options given. Table (4.1) below, displays examples about type of questions in which they were included in the survey questionnaire.

**Table 4.1 Type of questions included in the research survey questionnaire**

Type of Question	Examples of types of questions																													
1 Open Ended	<p>In your opinion what are the min constraints in implanting the UAEGEP in your institution?</p> <p>-----</p>																													
2 Multiple Choice Question	<p>Does your institution currently adopting other quality and excellence models?</p> <table border="1"> <tr> <td>1</td> <td>Yes</td> <td><input type="radio"/></td> <td>2</td> <td>No</td> <td><input type="radio"/></td> </tr> <tr> <td>3</td> <td colspan="4">Don't Know</td> <td><input type="radio"/></td> </tr> </table>						1	Yes	<input type="radio"/>	2	No	<input type="radio"/>	3	Don't Know				<input type="radio"/>												
1	Yes	<input type="radio"/>	2	No	<input type="radio"/>																									
3	Don't Know				<input type="radio"/>																									
3 Partially Open-Ended Questions	<p>What is principally responsible for driving quality excellence improvement in your Institution?</p> <table border="1"> <tr> <td>1</td> <td>Managerial leadership</td> <td><input type="radio"/></td> <td>2</td> <td>People initiatives</td> <td><input type="radio"/></td> </tr> <tr> <td>3</td> <td>Government policy</td> <td><input type="radio"/></td> <td>4</td> <td>Innovations</td> <td><input type="radio"/></td> </tr> <tr> <td>5</td> <td>C stomers</td> <td><input type="radio"/></td> <td>6</td> <td>Don't know</td> <td><input type="radio"/></td> </tr> <tr> <td>7</td> <td colspan="5">Others: Please Specify</td> </tr> </table> <p>-----</p>						1	Managerial leadership	<input type="radio"/>	2	People initiatives	<input type="radio"/>	3	Government policy	<input type="radio"/>	4	Innovations	<input type="radio"/>	5	C stomers	<input type="radio"/>	6	Don't know	<input type="radio"/>	7	Others: Please Specify				
1	Managerial leadership	<input type="radio"/>	2	People initiatives	<input type="radio"/>																									
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5	C stomers	<input type="radio"/>	6	Don't know	<input type="radio"/>																									
7	Others: Please Specify																													
4 Checklist Questions	<p>Apart from UAEGEP Which of the following quality and excellence models or approaches currently adopted in your institution?</p> <table border="1"> <tr> <td>1</td> <td>ISO 9000:2000</td> <td><input type="radio"/></td> <td>2</td> <td>EFQM-EM</td> <td><input type="radio"/></td> </tr> <tr> <td>3</td> <td>Statistical Process Control</td> <td><input type="radio"/></td> <td>4</td> <td>Baldrage</td> <td><input type="radio"/></td> </tr> <tr> <td>5</td> <td>Benchmarking</td> <td><input type="radio"/></td> <td>6</td> <td>Six Sigma</td> <td><input type="radio"/></td> </tr> </table>						1	ISO 9000:2000	<input type="radio"/>	2	EFQM-EM	<input type="radio"/>	3	Statistical Process Control	<input type="radio"/>	4	Baldrage	<input type="radio"/>	5	Benchmarking	<input type="radio"/>	6	Six Sigma	<input type="radio"/>						
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5	Benchmarking	<input type="radio"/>	6	Six Sigma	<input type="radio"/>																									
5 Likert Scale Questions	<table border="1"> <thead> <tr> <th>Critical Factors</th> <th>Not Significant at all</th> <th>ess Significant</th> <th>Not Su e</th> <th>Significant</th> <th>Very Sig ificant</th> </tr> </thead> <tbody> <tr> <td>1 Top management commitment</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </tbody> </table>						Critical Factors	Not Significant at all	ess Significant	Not Su e	Significant	Very Sig ificant	1 Top management commitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>												
Critical Factors	Not Significant at all	ess Significant	Not Su e	Significant	Very Sig ificant																									
1 Top management commitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																									

Source: The Author

Before the final draft was printed in large quantity and then distributed to the participants employees in the UAEPSI, the researcher ensured that the questionnaire is perfectly outlined and presented, friendly to use and that it includes an assortment of choices. It thus, serves the research objectives. At the end of the questionnaire, the respondents were offered with an optional question to express their comments and suggestions on the issues incorporated in the questionnaire.

### 4.1.3 Questionnaire Layout

It is necessary at this stage to describe briefly the main five sections of the questionnaire, (see Appendix 2).

#### *Section One*

The first section covers the personal attributes and the general profile of the respondents. Thus, the section presented the respondents with the study's independent variables that include the following:

- *Name*
- *Nationality*
- *Gender*
- *Age group*
- *Educational qualification*
- *Current occupation*
- *Years of service in the current position*

These variables were based on the nominal scale of measurement in which they qualitatively distinguish the respondents by classifying them into mutually exclusive categories. The respondents were asked to distinguish themselves by selecting the appropriate optional variables.

#### *Section Two*

The second section establishes a general profile about the UAEPSI in which their employees were the potential respondents of the research survey questionnaire. Thus, the section presented the respondents with the study's independent variables that include the following:

- *The institutions legal entity*
- *The total Number of workforce*
- *The service sector they operate*

- *The type of quality models or other approaches adopted*
- *The reasons of adopting other quality models and approaches in conjunction with the UAEGEP*

The questions in section two of the research survey questionnaire aimed to explore the institutions size, which service sector they operate, whether their institutions adopt quality model or approaches other than the UAEGEP, and to what extent these models or approaches were helpful with respect to improving the quality of their services. The respondents were provided with twelve optional statements of dependent variables relating to reasons for adopting the quality model or approaches other than the UAEGEP. The dependent variables presented in this section were based on an itemized interval rating scale (see Appendix 2).

### ***Section Three***

The third section of the questionnaire refers to the employees perceptions of the UAEPSI on what quality factors are vital for successful implementation of quality in their institutions. The major part of this section comprised the quality critical factors derived from the previous literature; they believed to encompass all the major elements of the TQM philosophy. The factors were carefully chosen in order to reflect the UAEPSI quality implementation practices. Thirty seven major factors believed to be crucial for the UAEPSI were proposed.

For each factor, the respondents were asked to rate the level of significance they place on each on a five-point Likert scale: 1 = Not significant at all; 2 = Less significant; 3 = Not Sure; 4 = Significant; 5 = Very significant. The identification of the significance of these factors was part of answering the first question of the research which is 'What are the key critical success factors, and to what extent they are vital for the successful implementation of TQM from the employee's perspectives in the UAEPSI? The identification of these factors laid the foundation of the intended research quality appraisal model that compatible to the nature of the UAEPSI.

#### *Section Four*

The fourth section is almost similar to the third section in presenting the set of the twenty- seven critical factors. It also, seeks the perceptions of the employees regarding the significance of the critical factors which leads to the successful implementation of quality in their institutions. The only difference is that the respondents were asked to rate the extent to which these factors actually been practiced in their institutions. The Five-point Likert scale rates the extent to which practice was given as *1= very low; 2= Low; 3= Not sure; 4= High; and 5= Very high*'. The middle, '*Not sure*', was provided to allow for those respondents who did not know or were unsure of the answer

This interval scaling reflects the perceptions of the respondents on how these factors are actually emphasized, practiced and demonstrated in their institutions. By ranking the actual level of the practiced factors, this should answer the research second question, which explores 'how divergent quality practices are in the UAEPSI and TQM practices'. The data analysis of this section and section of the survey questionnaire represents the respondents` view and viewpoint as well as their level of understanding the most critical quality factors that are significant, well-recognized and practised in the UAEPSI.

#### *Section Five*

The questions in section five investigates into the UAEPSI current and past experience of quality implementation practices. This is due to the fact that UAEGEP compel all UAEPSI to adopt the EFQM-EM as a quality tool for their performance assessment and services improvement measurement. Therefore, the questions of section five were primarily directed to those institutions experienced in quality implementation practices, (see Appendix 2). The set of questions were designed to explore and examine the UAEPSI familiarity with and ability to execute such approach. A question was presented to the respondents on type of self assessment and improvement measurement was adopted. Furthermore, they were asked to highlight factors that could facilitate and enhance quality implementation. In addition, they were asked to identify the driving forces that could promote the implementation of TQM in the UAEPSI. The factors included in this section related to the recent U.A.E. public sector reforms in conjunction with the economic turndown which severely affected the U.A.E. economy. These issues were presented in the last part of the fifth section as respondents were given a space to

express their views and perception on whole research issues. The outcomes of these questions should respond to the third question of the thesis, which is ‘What problems and/or obstacles are associated with the implementation of TQM tenets in the UAEPSI?. It’s also, important to mention that this section like other sections was amended and some repetitive questions were omitted.

The suggestions of the pilot group were to avoid any replication that might disrupt the respondents` focus away from the main themes of the intended questions. At mentioned earlier, in order to gain more accurate data and to secure a high response rate from more than one group of respondents, the questionnaire was designed in two different languages (Arabic and English) since it was distributed to more than one group within the total sample population. The group that represented U.A.E. nationals whose mother language is Arabic, and the expatriates whose language is not Arabic. It has thus, kept its respondents comfortable using their normal language and made them feel that its use is not only legitimate but also valued.

Eventually, the questionnaire attempts to expedite the process of gathering information required for exploring the general view of the collective opinions, views and perceptions of people directly involved in the quality implementation practices in the UAEPSI. The researcher estimated that the questionnaire leaflet will probably take fifteen to twenty minutes to complete.

The ultimate aim of the survey questionnaire should explore employee’s perceptions in the UAEPSI on:

- *The most quality critical factors perceived.*
- *The actual practices of critical factors*
- *The acquaintance of the UAEGEP*
- *The quality implementation practices in the UAEPSI.*
- *The driving forces for quality and service improvements*
- *The awareness level of quality and the UAEGEP*
- *The methods of self assessment*
- *The constraints associated with quality implementation in the UAEPSI.*



## 4.2 PILOTING AND TESTING

This section describes stages that the survey questionnaire went through subsequent to its design and development. Consequently the section is divided into three main subdivisions, the piloting of the survey questionnaire, then making necessary modifications and amendments, and finally testing the reliability of questions and the quality critical factor.

### 4.2.1 Piloting

Piloting gives the researcher an opportunity to identify any problem and to modify the research method accordingly before carrying out the research survey questionnaire. The pilot study enabled the researcher to examine the following:

- *To acquire external views on the questionnaire contents and consistency*
- *The accessibility of the sample group*
- *The likely response rate*
- *Whether or not the data collection tool provides the depth, range and quality of information required*

Having selected the appropriate vocabulary, the wording of the questions needed to be tested to ensure that the questions were expressed clearly, that no unwarranted assumptions were made, that the questions were not biased and that there was no confusion regarding to whom the question was addressed to (Yates, 2004). Piloting also allows the researcher to detect potential problems that might occur and to take all possible prevention measures to avoid them. Therefore, the researcher has to make revisions before undertaking the main study. It is the survey targeted respondent, who can truly judge whether or not the questions are clear and comprehensive. This ensures that the data collected in the main study will be usable.

The selection of the questions was based at the outset on a small scale pilot study that took place almost one month prior to the commencement of the actual fieldwork. The researcher ensured that questions had to be easily understood by the respondents so as to avoid confusion. Otherwise, the research findings might have been biased. In this study, various measures were taken to minimize these potential problems. The English

version was translated into Arabic by the researcher. A few English terms were translated into Arabic by providing additional explanations so that the respondents could understand them better. After translating them, the Arabic version of the questionnaire was presented to a group of five people who had good experience of quality and were familiar with interpreting English terms into Arabic. They were asked whether:

- *The questions were stated in a shared vocabulary*
- *The questions were precise and unambiguous and*
- *The questions were simple and direct.*

The criteria for selecting the test cases were firstly a range of UAEPSI that covered the potential workspace of the empirical study, and secondly an access to people experienced in quality implementation and familiar with the quality management idioms currently used in the UAEPSI. The relationship with the latter people needed to be consistent in nature, so that the actual research study could be adopted and the interaction between the subject and the researcher could be made flexible enough to allow the researcher to try different approaches to questioning.

A pre-test or a pilot study was conducted, before handing the questionnaire to the potential population to test the validity and reliability of the questions included in the questionnaire. Fifteen copies of the questionnaire were distributed randomly to a stratified group of people in different UAEPSI, representing various position levels. The pilot test included two managers, three officers and three supervisors together with seven clerics, both males and females. The pilot testing was conducted on two phases.

In the first phase, the pilot group were asked to review the questionnaire handout without help from the researcher. They were first asked to comment on their understanding of the questions and second, to comment on the relevance of the questions to the research paradigm that they brought to the pilot testing. After reviewing their responses, revision was made to the format of the questionnaire and to the individual questions.

In the second phase, both the content of the revised draft of the questionnaire and the procedures of data collection were tested. This phase consisted of full scale practice

sessions administered verbally. While no concern arose from the data collection process, further minor revision of the Arabic interpretation of the survey questionnaire was made. The feedback was really valuable; it contributed positively to the final draft of the questions and the form of answers.

Although the majority of the questions were of the multiple choice and partially open-ended type; there was a subsidiary of open-ended questions attached to section five of the questionnaire, allowing the respondents to make their comments and suggestions. However, only few of them answered these questions.

#### **4.2.2 Modifications**

Some alterations were made according to the piloting group feedback and suggestions. During the researcher visit to U.A.E., the Arabic version of the questionnaire was formally pre-tested on different group of people. These people were asked to note their feedback on: the questionnaire simplicity level and the clarity of specific items; they were also asked to make suggestions for possible changes or any other general proposition. Based on their observation and feedback, the Arabic version of the questionnaire was further modified. They encountered two important issues related to the critical factors in section three of the questionnaire.

First, they detected some factors which were most likely repetitive. They alleged that the repetitive factors were written in different words but, they signal the same meaning. So, they strongly suggested removing the repetitive factors as they might confuse the respondents.

Second, they felt that the pre-listed factors need to be short-listed; therefore, they suggested either to reduce the number of factors or to combine them into groups. These two notes assisted the researcher in changing the critical factors layout. Therefore, the amended final draft of the questionnaire omitted the repetitive factors which were then re-classified and categorized into twenty-seven critical ones.

In addition, the task of minimizing distortions was to ensure that the words used together with their meanings would be perfectly understood by the respondents. The vocabulary used was intended to bridge the differences in the educational level and the

experiential background of the respondents and to encompass the Arabic vocabulary of TQM technical terms that the people in the UAEPSI use in discussing the quality implementation processes. The final Arabic version of the questionnaire was similar to the English version in containing of five main sections (see Appendix 2 and Chapter Four section 4.1.3).

### **4.2.3 Reliability Testing**

The measurement of the survey questionnaire set of questions reliability was the final stage of the questionnaire design and testing process. Issues covered in question development were the question content and question wording (Emory, and Cooper, 1991). They were checked for their relevance and for the extent to which the questions contributed towards answering the research questions. The approach adopted was: if the research question could be answered without resorting to the anticipated measurement questions, then the question was redundant and could be removed from the survey questionnaire without any loss of information.

With all anticipated questions meeting the reliability test measurements, the content issue revolves around whether the questions provide sufficient coverage of the concept being measured by the questions. Overloading the question content may result in ambiguity and, as far as the respondents are concerned, to having difficulty in expounding the question. Less question content may lead to the respondents making inappropriate assumptions and misleading responses. The content of the survey questionnaire was matched to the prior understanding of the potential respondents in the UAEPSI.

The aim of the reliability test was to measure each question (i.e., item or variable)<sup>2</sup> and its relevance to others and to minimize errors by making the questions as clear and understandable as possible. The test identifies the correlation of different sections and question contents in the survey questionnaire: checking whether or not the questions correspond in a scientifically measurable manner.

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<sup>2</sup> The term Item in this study represents the question contents in the individual sections of the questionnaire. However, it is synonymous with the term Variable which is often used in statistical studies.

The reliability of the questions also ensures the involvement of the respondents to the greatest possible extent and ascertains that the findings reflect an authentic understanding of the people's perceptions. The fact that someone could make another interpretation of the material does not necessarily disqualify the first interpretation, as long as it is based on the material (Silverman, 2004a; Yin, 2004).

The reliability test was executed in order to ensure the internal consistency of a set of measurements. It refers to the degree to which questions in the set of the questionnaire are homogeneous. Internal consistency can be estimated using a reliability coefficient such as Cronbach's alpha (1951). The coefficient is computed as a scale based on a set of questions or any subset of questions. It is therefore, possible to identify the subset that has the highest reliability coefficient.

Moreover, it is worth mentioning that the reliability test can be used to assess the reliability of the survey questions that represent a construct (a twelve item scale that measures, for instance, the reasons behind adopting such quality model or approach). Furthermore, the coefficient alpha was used as a common formula for scale reliability based on measuring the internal consistency of the responses to questions designed to represent a construct.

Coefficient alpha measure should always be equal or exceed 0.70, in case it is lower than 0.70 then it indicates poor scale reliability. (Cronbach, 1951) When the coefficient alpha is high, then the items that constitute the scale are highly correlated with one another. Sekaran (2003) stated that reliabilities below 0.60 are considered to be poor, those in the 0.70 range are acceptable and those over 0.80 are good (Hays, and Revicki, 2005; and Munro, 2005)

The reliability test was executed on four sections of the survey questionnaire i.e., sections two, three, four, and five. The reason behind getting acceptable alpha coefficient was that the items were positively correlated whereas the reasons underlying unacceptable coefficients were:

- *Some items are not related to others.*
- *The Number of items was not sufficient to run the reliability test; the minimum requirement is three items.*

- *Questions are not coded numerically (text question).*

Cronbach's Alpha test was used for testing the reliability of questionnaire questions in sections two, three, four and five as illustrated below:

### *Section One*

No reliability test was run for questions in this section as they were text questions concerned with the personnel details of the respondent. Therefore, testing section one questions was unnecessary since it was not coded numerically, and the test did not add any genuine information; it did not have any positive or negative effect on the research data analysis outcomes, either.

### *Section Two*

Excluding questions six, seven and eight, the rest of the questions in this section are similar to the questions in section one. The questions were concerned with collecting information about the respondent's institutions they work for. Testing was run on questions six, seven and eight together. The problem with question eight is that it doesn't work with the reliability analysis in harmony with questions six and seven because it is not coded numerically (being a text question).

Another test was administered to measure reliability between questions six and seven. The result was unacceptable reliability coefficient, where Alpha equalled 0.5013 because question eight was not related to the rest, (see Table 4.2). An additional test scenario was executed in attempt to get a positive alpha if question six was eliminated, but the test results did not make theoretical sense without question six.

*Table 4.2 Section two reliability tests*

*RELIABILITY ANALYSIS - SCALE (ALPHA)*

<i>Total Item Statistics</i>	<i>Scale Mean if Item Deleted</i>	<i>Scale Variance if Item Deleted</i>	<i>Corrected Item Total Correlation</i>	<i>Alpha if Item Deleted</i>
<i>1 MOD_27</i>	<i>24.8016</i>	<i>8.2222</i>	<i>0.0625</i>	<i>0.7276</i>
<i>2 ACHI_281</i>	<i>25.7043</i>	<i>12.4513</i>	<i>0.3104</i>	<i>0.4696</i>
<i>3 NEW_282</i>	<i>25.0934</i>	<i>12.3975</i>	<i>0.3506</i>	<i>0.4658</i>
<i>4 PROD_283</i>	<i>25.5175</i>	<i>11.9147</i>	<i>0.3994</i>	<i>0.4493</i>
<i>5 CUST_284</i>	<i>25.1751</i>	<i>11.9809</i>	<i>0.4338</i>	<i>0.4488</i>
<i>6 EASY_285</i>	<i>25.2140</i>	<i>12.2626</i>	<i>0.3189</i>	<i>0.4646</i>
<i>7 CO_286</i>	<i>25.0117</i>	<i>12.5506</i>	<i>0.4025</i>	<i>0.4682</i>
<i>8 COM_287</i>	<i>25.2529</i>	<i>11.9319</i>	<i>0.4097</i>	<i>0.4490</i>
<i>9 INCR_288</i>	<i>25.3307</i>	<i>12.4878</i>	<i>0.2206</i>	<i>0.4783</i>
<i>10 INC_289</i>	<i>25.0156</i>	<i>12.9685</i>	<i>0.1992</i>	<i>0.4879</i>
<i>11 CO_2810</i>	<i>25.0623</i>	<i>12.6289</i>	<i>0.2918</i>	<i>0.4751</i>
<i>12 WID_2811</i>	<i>25.3074</i>	<i>12.7450</i>	<i>0.1481</i>	<i>0.4899</i>
<i>13 IM_2812</i>	<i>25.1518</i>	<i>12.8949</i>	<i>0.1381</i>	<i>0.4920</i>
<i>14 TAK_2813</i>	<i>25.4864</i>	<i>12.6805</i>	<i>0.1639</i>	<i>0.4874</i>
<i>15 CON_2814</i>	<i>25.6109</i>	<i>12.6605</i>	<i>0.1936</i>	<i>0.4835</i>
<i>16 OT_2815</i>	<i>24.9222</i>	<i>13.4314</i>	<i>0.0769</i>	<i>0.5014</i>

*Reliability Coefficients*

*Number of Cases = 257.0*

*Number of Items = 16*

*Alpha = 0.5013*

*Source: The Author*

The coefficient alpha of section two showed that it was below the acceptable range. As a result of testing questions in section two, were it indicated in which it have nil impact on other section of the questionnaires. Furthermore, these items do not contribute to or support the development of the research proposed quality appraisal model. Therefore, the aim of the reliability test of these items was to give an indication for the cohesiveness of the set of questions of the survey questionnaire.

### Section Three

The results of the reliability test of the items in section three of the questionnaire was very satisfactory. The reliability alpha was 0.9507 for the twenty-seven critical factors scale, which was an acceptable and largely reliable coefficient. The tests results also showed that the twenty seven items were positively correlated among themselves. Table (4.3) illustrates the scale mean, the correlated items and the alpha of every item in section three.

**Table 4.3 Section three reliability tests**

<b>RELIABILITY ANALYSIS - SCALE (ALPHA)</b>					
<b>S. No</b>	<b>Critical Factors</b>	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected-item-Total Correlation</b>	<b>Alpha if item deleted</b>
1	TOP_31	118.4917	127.0388	0.4789	0.9503
2	LEA_32	118.5479	127.0234	0.4358	0.9506
3	INVOL_33	118.7954	121.7461	0.6406	0.9488
4	RECO_34	118.7459	121.6206	0.5848	0.9495
5	ENC_35	118.6469	123.5404	0.5995	0.9492
6	SATI_36	118.7426	121.6951	0.6519	0.9487
7	MAN_37	118.9670	121.0916	0.5833	0.9496
8	COME_38	118.7459	122.6273	0.6346	0.9489
9	TECH_39	118.7921	122.3176	0.6158	0.9490
10	PART_310	118.8614	121.2191	0.7047	0.9481
11	STRA_311	118.5776	123.9468	0.6599	0.9488
12	TEA_312	118.8284	120.8579	0.7458	0.9477
13	SUG_313	118.8317	122.6504	0.6472	0.9488
14	DIAL_314	118.8020	121.4375	0.6913	0.9483
15	STR_315	118.7261	121.5241	0.6856	0.9483
16	REC_316	118.8779	119.7698	0.7497	0.9476
17	PER_317	118.8185	120.3411	0.6897	0.9483
18	PRO_318	118.6634	122.5022	0.6841	0.9484
19	AW_319	118.8053	120.8924	0.7383	0.9478
20	IM_320	118.7129	121.8941	0.7002	0.9482
21	BEA_321	118.8548	120.8331	0.6971	0.9482
22	BEH_323	118.8020	121.7686	0.6666	0.9485
23	SPE_325	118.6601	124.7947	0.5653	0.9496
24	FACI_326	118.8449	123.3567	0.5471	0.9497



25	RES_328	118.9901	120.4800	0.6681	0.9485
26	RES_329	119.1254	120.0836	0.6194	0.9492
27	CAR_330	119.0099	120.9370	0.4845	0.9516

*Reliability Coefficients*

*Number of Cases = 303.0*

*Number of Items = 27*

*Alpha = 0.9507*

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*Source: The Author*

From Table (4.3), the column labelled “Corrected Item-Total Correlation” is the Pearson correlation coefficient between the score on the individual item and the sum of the scores on the remaining items.

All the items were positively correlated; alternatively, the researcher further examined if there were items that were not correlated with the remaining items, they could be dropped from the scale, since they do not appear to measure the same construct as the other items. In the column labelled alpha, in case an item was deleted, the scenario of eliminating an item and re-run the test, should substantially increase the alpha.

However, alpha was at 0.9507 for the critical factors scale. That outcome is acceptable and largely reliable, in which indicates that the items were positively correlated far above the alpha scale of 0.70. Therefore, there was no need to delete or eliminate any item.

*Section Four*

The reliability test for the twenty-seven items in this section indicated that they were even more positively correlated than the items in section three. The practiced critical factors alpha correlation ranged from 0.9725 to 0.9708, this indicates highly acceptable and largely reliable coefficient. All items well exceeded the acceptable alpha scale of 0.70. Table (4.4) illustrates the scale mean, correlated items and the alpha of every item in section four.

*Table 4.4 Section four reliability tests*

**RELIABILITY ANALYSIS - SCALE (ALPHA)**

<i>S. No</i>	<i>Critical Factors</i>	<i>Scale Mean if Item Deleted</i>	<i>Scale Variance if Item Deleted</i>	<i>Corrected-item-Total Correlation</i>	<i>Alpha if item deleted</i>
1	MA_41	95.6915	389.1732	0.6221	0.9721
2	LEAD_42	95.9017	383.8645	0.6896	0.9717
3	INV_43	96.3763	376.8409	0.7816	0.9711
4	RECO_44	96.5864	376.3522	0.7588	0.9713
5	TALE_45	96.4814	375.1417	0.7875	0.9711
6	SATI_46	96.5559	373.0572	0.7946	0.9711
7	CHA_47	96.3288	378.4459	0.7546	0.9713
8	COM_48	96.0068	383.9387	0.7312	0.9714
9	TEC_49	95.7627	388.3313	0.6634	0.9719
10	COLL_410	96.0407	381.6786	0.7837	0.9711
11	STRA_411	95.9322	378.3083	0.8185	0.9708
12	TEAM_412	96.1017	377.1529	0.8161	0.9708
13	SUGG_413	96.1898	381.3584	0.7603	0.9712
14	COMM_414	96.1966	379.1245	0.7883	0.9710
15	STR_415	96.0644	379.5911	0.7784	0.9711
16	REC_416	96.0678	379.7301	0.8191	0.9709
17	PER_417	96.1153	377.9527	0.8097	0.9709
18	IMP_418	96.0000	379.1497	0.8053	0.9709
19	AWAR_419	96.0203	380.3941	0.7638	0.9712
20	CONT_420	95.9797	382.1765	0.7674	0.9712
21	BES_421	96.2000	380.8340	0.7536	0.9713
22	BEHA_423	96.0000	383.8776	0.7581	0.9713
23	SPEE_425	95.9458	385.6093	0.7464	0.9714
24	FACI_426	96.0136	389.3127	0.5593	0.9725
25	SOCI_428	96.0305	387.1521	0.6916	0.9717
26	ENVI_429	96.2644	383.3584	0.6827	0.9718
27	EMI_430	96.1220	390.6041	0.5527	0.9725

*Reliability Coefficients*

*Number of Cases = 295.0*

*Number of Items = 27*

*Alpha = 0.9724*

*Source: The Author*

## Section Five

A test was executed covering questions one, five, six, eleven, twelve and thirteen which all shared the same measurement scales. However, the rest of the questions were not tested because they were under the same conditions mentioned earlier in this section. The running of the reliability test results in an acceptable reliability coefficient of correlation alpha of 0.7176 on the scale, in which items are positively correlated. Table (4.5) illustrates the scale mean, the correlated items and the alpha of every item in section five, the maximised reliability coefficient ranged from 0.6451 to 0.7119, indicating that some scales are more reliable than others. In addition, it is clear that dropping any item from the constructed scales would not improve the reliability of these scales.

*Table 4.5 Section five reliability tests*

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**RELIABILITY ANALYSIS - SCALE (ALPHA)**

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	<i>Scale Mean if Item Deleted</i>	<i>Scale Variance if Item Deleted</i>	<i>Corrected-item- Total Correlation</i>	<i>Alpha if item deleted</i>
1 STRA_51	9.3072	8.7447	0.3856	0.6973
2 QUA_55	8.6111	8.4811	0.3396	0.7119
3 BUD_56	8.5850	7.7714	0.4143	0.6929
4 CON_511	9.1144	7.9574	0.5163	0.6604
5 EXC_512	8.9085	7.6637	0.5628	0.6451
6 SELF_513	8.7582	7.5151	0.504	0.6616

*Reliability Coefficients*

*Number of Cases = 306.0*

*Number of Items = 6*

*Alpha = 0.7176*

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*Source: The Author*

The researcher performed separately an internal consistency analysis of the interrelated questions for sections two and five and a full analysis of the items in sections three and four of the critical quality factors of TQM in the UAEPsi. Table (4.3) reports the sets of measurement items associated with the twenty-seven factors in section three and with

the measurements of items in section four (Table 4.4). The end result of the reliability test provides strong evidence indicating that the scales developed are arbitrated.

Furthermore, they indicate that some scales are more reliable than others. It is clear that dropping any lowest correlated factor from the constructed scales would not improve the reliability of these scales. The reliability coefficients indicating that some scales were more reliable than others. It was obvious that all items had relatively high correlations with the scales to which they were originally assigned, compared with all the other scales. Therefore, it was concluded that all items were appropriately assigned to scales. Accordingly, the construct development of the proposed QAM to be used as a self assessment tool for the UAEPSI was judged to be reliable.

Following the extensive process of piloting the set of questions of the research survey questionnaire, then making essential modifications and amendments, and finally supporting it by testing its reliability, allowed the researcher to be confident that final draft of the questionnaire appropriately developed. And therefore, the questionnaire could be used for the large-scale survey and the full survey to be launched as planned.

### **4.3 POPULATION AND SAMPLE**

This section deals with the research practical fieldwork carried out in which the survey questionnaires were sent out for gathering information from the potential respondents in the UAEPSI. Hence it contains three subdivisions, the sampling criteria, the sampling techniques and the population size. They are discussed in further details as following.

#### **4.3.1 Sampling Criteria**

The survey questionnaire sampling criteria involves gathering data about the employee's perceptions as related to the TQM implementation practices in the UAEPSI since they are directly involved in the process and have firsthand knowledge of quality implementation practices in their institutions. The target respondents for the survey questionnaire were a comprehensive sample according to the taxonomy of the U.A.E. civil servants hierarchal structure:

*Managers:* this category comprises all managerial positions such as: middle managers, assistant managers, and departmental sections managers.

*Officers:* this category comprises all positions from the low level management to the high supervisory jobs such as: senior, assistant and trainee officers

*Supervisors:* this category comprises positions, such as: operators and technicians.

*Clerics:* this category comprises all types of clerical positions such as: secretaries, accountants, and book-keepers....etc.

The semi-structured interview sample had also classified, according to the taxonomy of the U.A.E. civil servants, its hierarchal structure. The interviewees constituted a total of ten top management officers in different UAEPSI. They were selected on the basis of their leadership positions, as well as their role in implementing the TQM policies in their institutions. The selected interviewee's positions include: one undersecretary, two assistant undersecretaries, and seven managing directors. The following briefly describes the interviewee's role in promoting quality implementation practices in their institutions:

*Undersecretary:* the second highest and most senior position in the UAEPSI; he is responsible for the entire institution. All policies and procedures related to the TQM initiation and implementation should first be authorized by him.

*Assistant Undersecretary:* the next most senior position in the UAEPSI. He, by virtue of his responsibilities, comes directly after the undersecretary; he is ultimately responsible for putting policies and strategies related to TQM implementation into action. He directs the senior managers and delegates some of the authorities to them. However, he is fully accountable to the undersecretary for the progress of the work processes in their institutions.

*Managing Director:* the third most top management position in the UAEPSI; he was chosen to be interviewed in this study mainly because he is in reality responsible person for running the whole institution including its branches in different locations in the U.A.E. He is directly engaged with the employees in maintaining and controlling all aspects and stages of quality implementation.

### 4.3.2 Sampling Techniques

In order to achieve a higher response rate from the research respondents' sample, explicit techniques were employed:

The first technique was to identify the relevant population of the research subjects. The term "population" refers to all the employees working in the UAEPSI. A broad definition is adopted; it covers all civil servants whose occupations are below the top management and who are currently working in the UAEPSI. The major advantage this category has is that it does not provoke any problems to the subjects of the research since almost all its members classify themselves in this broad category of employees.

The second technique was to determine the number of the questionnaires that needs to be distributed in all government institutions in order to figure out first how many are willing to participate.

The third technique was to insure that the sample had a broad coverage of five decisive elements as it is presented in section one of the questionnaire layouts (see Appendix 2):

- *Age*
- *Gender*
- *Occupation*
- *Educational qualifications*
- *Years of service in the current position*

The respondents' profiles are illustrated in further detail in Appendix 2, whereas the results are analyzed in Chapter 5, section 5.1.

The fourth technique addressed the organization representativeness as it is presented in section two of the questionnaire layout, four elements were applied:

- *The UAEPSI legal entity*
- *The UAEPSI service sector they operate*
- *The Number of employees*
- *The Current quality model adopted*

As evident from the institutional profile illustrated in further detail in Appendix 3, the researcher managed to select several government institutions, in diverse service sectors and with different quality implementation backgrounds. The results are discussed in further detail in Chapter 5, section 5.2.

### **4.3.3 Population Size**

The target population for the survey were chosen from the government institutional directory, as well as from the U.A.E. government official website. The participants in the research empirical fieldwork were the employees who were working in the U.A.E. government institutions, local departments and public sector authorities. Only those involved in public services were selected since the final objective of this research is to develop a quality appraisal model and to test its compatibleness for this sector.

The researcher randomly selected one hundred (100) government institutions as potential participants in the study. Public relations managers, managing directors and undersecretaries were contacted individually in every single institution requesting their support and participation. Telephone calls were made to confirm the UAEPSI addresses, locations, contact details of the key personal and their willingness in taking part in the research empirical fieldwork.

Consequently some institutions refused straightaway with no reason, and some were reluctant to participate or were not interested, others did not respond to the researcher although they initially agreed to participate, still other organizations regretted; they were mainly federal institutions as they claimed that they had no experience and they had not yet adopted or applied any quality programme. Few institutions apologised to participate as they were small branches with limited authorities and resource capacities to adopt the TQM. Table (4.6) illustrates in details the number of the initial government institutions that participated and those did not participate. Whereas, table (4.7) clarifies the reasons, that some UAEPSI point towards, not participating.

This information about the participating institutions had forced the researcher to refine the initial participating institutions and to develop a schedule of the existing institutions that already expressed their interest in getting involved in the research fieldwork survey. After all, a total of sixty (60) institutions agreed to participate in the study. Hence, the

number of participating institutions was relatively large. The researcher decided to distribute equally ten (10) copies of the questionnaire in each institution with grand total of six hundred (600) copies. The researcher requested every participating institution to distribute randomly the given ten (10) copies of the questionnaires among people in the different managerial and administrative positions.

This ensures that distributing of the questionnaires would include a wider range involvement of respondents from different occupational levels. The concept behind this was to enable employees in the UAEPSI to present their perception on the quality implementation practices in their institutions. This would also enrich the outcomes in a way it considers the diversity views of the different occupational levels and not just only the management perceptions.

**Table 4.6 Description of the participant and non-participant UAEPSI in the survey**

<i>Government Institutions</i>	<i>Anticipated Institutions</i>	<i>Not Participated</i>	<i>Participated</i>
<i>Local Departments</i>	<i>45</i>	<i>20</i>	<i>25</i>
<i>Government Agencies</i>	<i>26</i>	<i>8</i>	<i>18</i>
<i>Government Authority</i>	<i>29</i>	<i>12</i>	<i>17</i>
<i>Total</i>	<i>100</i>	<i>40</i>	<i>60</i>

*Source: The Author*

**Table 4.7 Description of the reasons for not participating in the survey**

<i>Reasons for not participating</i>	<i>Government Institutions</i>			<i>Total</i>
	<i>Local Departments</i>	<i>Government Agencies</i>	<i>Government Authority</i>	
<i>No reason</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>14</i>
<i>Not interested</i>	<i>5</i>	<i>6</i>	<i>5</i>	<i>16</i>
<i>Small Branch</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>4</i>
<i>No quality experience</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>
<i>Insufficient resources</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>5</i>
<i>Total</i>	<i>13</i>	<i>15</i>	<i>12</i>	<i>40</i>

*Source: The Author*



## **4.4 THE FIELDWORK**

Following the four techniques underlying the distribution of the questionnaires described in the previous section. As planned the researcher managed to distribute six hundred (600) copies of the questionnaire among sixty (60) PSI in the U.A.E. on average of ten (10) copies to be distributed in each participating institutions, (the results are demonstrated in more detail in Chapter 5, sections 5.2 and Table 5.5) conversely this section explains the process of distribution and collection of the survey questionnaires and conducting the interviews.

### **4.4.1 Questionnaire Distribution and Collection**

The fieldwork distribution and collection of the questionnaire was a very complex and time consuming task. Along with the questionnaire booklet, two official cover letters were included, (as mentioned earlier in section 4.1) with a prepaid stamped envelope. The first letter was issued by the researcher's employer; its content was discussed earlier.

Whereas the second letter was issued by the researcher and the researcher's director of studies; it includes two main paragraphs. Paragraph one explains the purpose of the survey and assures the confidentiality of respondent's data. Paragraph two gives detailed instruction on how to answer the questions and what to do upon completion. Both letters were written in Arabic. The initial idea was to distribute the questionnaires personally; this is because the researcher included a clear instruction in the letter attached with the questionnaires requesting the respondents to forward the completed questionnaires by despatching them in a prepaid postage envelope provided with every single questionnaire leaflet, with clearly printed detail of the researcher address in the U.A.E. on its front face. Unfortunately, from the early days of distribution, this process did not work as the researcher anticipated. This drawback is caused by two main facts.

First, the management of the UAEPSI do not allow any kind of surveys to be carried out in their institutions unless its fall through official channels i.e. approaching the public relations office. The responsible office first task is to ensure the confidentiality of all data aimed to be collected from their institution. Once the public relations office was confident the researcher obeys their regulations, then they issue their final authorisation.

Second, hand to hand distribution to people may cause some of them to be reluctant in completing the questionnaires.

This was very obvious despite several follow up actions in which the researcher urged them to accelerate the finishing of their responses. This hesitation alerted the researcher to find an alternative method of distribution in order to avoid wasting time while getting low response rate. The people in the UAEPSI are not very familiar with academic surveys; they presume that they spend unnecessary time in filling in the questionnaires instead of carrying out their own work duties. Therefore, the alternative decision was that the actual process of the survey fieldwork will be relying on the researcher's personal effort in distributing and collecting the survey questionnaires.

In the light of the above facts, the final decision was to proceed through official channel and approach the public relation offices in individual institution. Although this process seemed to be very routine work and time consuming but, it proved to be very fruitful.

Thus, the whole fieldwork operation was divided to three stages. The first stage was the distribution of the questionnaires, the second was collecting back the finished questionnaires and the third stage was the collection follow-up which is the most difficult and time consuming stage, as the researcher kept chasing every institution individually.

All possible means of follow-up were used: telephone calls, reminder letters and personal visits to the lagging institutions urging them to take prompt actions in completing and returning questionnaires. All these methods of communications were used in order to leverage the response rate of the returned questionnaires. This strategy resulted in a good management and control of the fieldwork stage and the data collection process by keeping notes of the participating institutions as well as making contacts with those in charge of distributing and collecting the questionnaires in each organization.

The researcher appointed either directly or indirectly (via the public relations manager) a voluntary person, most likely the public relations officer who works in the same institution was appointed to take the responsibility of distributing and collecting back

the questionnaires. His role was extremely crucial, as he became an intermediary between the researcher and the respondents. The daily communication with the public relations offices was the best way that enabled the researcher to keep tracing the progress of the questionnaires: checking where they have reached, how many have been returned, how many need further follow-up and when and how they are returned back. Each public relations officer was informed prior to the distribution of the questionnaires that he or she has almost two weeks to fill and return back the questionnaires.

However, the levels of responsiveness and commitment of respondents and/or the institutions varied from high to very poor. In some cases, it took less than two weeks to return the questionnaires but in most cases, it took a longer time; in certain rare cases, it took more than three months in order to return few or even no single copy of the questionnaires, despite several visits and reminders. The number of the returned, completed, and usable questionnaires together with the return rate is discussed in chapter 5, section 5.1 and Table (5.1)

#### **4.4.2 Conducting Interviews**

In an attempt to utilize time and effort more efficiently during the course of the questionnaires distribution stage, the researcher successfully arranged to conduct semi-structured interviews with key personal in ten (10) different UAEPSI. As mentioned earlier in this chapter, the interviews were carried out alongside with the distribution of the survey questionnaires. The interviewees were chosen from the list of the UAEPSI that participated in the questionnaire.

The objective was to observe the responses of the interviewees from top management perspectives in the UAEPSI; this will render the research fairer with respect to the employees' representatives, in that it does not only include people from middle and lower managerial and operational positions. It also, considered the views of the top management officers as they are the key players in the decisions relevant to quality and in drawing policies and plans for its implementation process.

A representative range of the interviewed participants was obtained by following three criteria in selecting them. The first criterion was that researcher was keen that the interviewees should represent several UAEPSI operating in different governmental

service sectors. The second criterion was that they entail a wide range of participants: undersecretary, assistant undersecretary, and managing directors. The third criterion was that the researcher wanted to ensure that all of interviewees were primarily involved in the initiation and implementation of the UAEGEP. Almost all interviews were prearranged: the place and time of the interviews were agreed upon in cooperation with their office directors<sup>3</sup>.

The estimated time for each interview was an hour; however, in some cases it last longer than what proposed. This depends on the individual's interest in the issues under discussion in the interview. All interviews were held in the interviewee's offices. The reason is that they regard this as part of their responsibility and official duty as senior managers. They also, feel that it is much more convenient for them since it bestows more respect upon them in accordance with the U.A.E. traditions when the researcher approached them seeking their perceptions. These traditions are obliges people to show respect and reverence to the seniors. The seniors are either elderly people, or people who occupy high social positions, such as the leaders, most senior government officials and those who have high educational qualifications.

Although the interviews were semi-structured, the questions for the interviews were the same as those in the questionnaires, but they were more formally presented. Very often, the open discussion with the interviewees on issues related quality practices and their role in deploying the implementation processes, centred on three important aspects. First, each interviewee got the opportunity to express his opinion in the way he wished. Second, the researcher better understood the people perceptions and attitudes towards issues related to regulations and formalities that need to be considered specifically with those in top managerial positions in the UAEPSI.

Following and fulfilling these regulations make them feel more comfortable and relaxed. Such atmosphere makes the researcher feel at ease with his interlocutors; he can easily shift the attention of the interviewees away from formalities and moving it towards more friendly and intimate discussions. This, in fact, proved to be a positive

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<sup>3</sup> In the UAEPSI, the protocol is that every top manager has a crew working in his office. The crew members are in charge of coordinating and arranging the top manger formal events. The researcher approached most senior members of the crew, briefed them about the purpose of the interview, and were requested to arrange the interviews at their convenience

tactic that makes the interviewees more enthusiastic and active. Furthermore, it allowed the researcher to share with them some of their experience on issues related to the quality implementation practices.

Third, it allowed the researcher to compare and contrast the responses of the interviewees and of the UAEPSI top management (quality initiators) with those of the supervisory and clerical positions (quality implementers) in the same institutions. The reasons for making a comparison between quality initiators and quality implementers was to check if there was any gaps and/or divergence between what was planned and what was implemented.

The second reason would be to utilize the responses of both groups to supplement and support each other; a technique which enhances the reliability of the research data analysis outcomes. The respondents' data analysis is presented in chapter. 5, section 5.2 and those of the research findings in Chapter 10, section 10.2.

## **SUMMARY**

This chapter explained the research empirical data collection methodology. Two instruments were used: the administered survey questionnaire and the semi-structured interviews. They were developed from primary and secondary sources of information.

The pilot testing was conducted in a way that would allow for the refinement of the language once it had been translated to Arabic and for the procedures as the testing proceeded. Subsequently, the developed survey questionnaire was, revised, and modified accordingly.

The Cronbach alpha test was used to test the questions reliability. The test of the main sections of the survey questionnaire revealed that the coefficient alpha was very good and that the questions were positively correlated. The target population across the U.A.E. aimed to explore the employees' perceptions of the TQM implementation practices in the UAEPSI with particular focus on the respondent's confidentiality. Table (4.8) outlines the fieldwork survey carried out for data gathering.

*Table: 4.8 Research data collection presentation*

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<i>Criteria</i>	<i>Methods of Data Collection</i>	
	<i>Survey Questionnaire</i>	<i>Semi-Structured Interviews</i>
<i>Sample Size</i>	<i>600</i>	<i>10</i>
<i>Population</i>	<i>Public Service Institutions Across the U.A.E.</i>	
<i>Potential Respondents</i>	<i>Management</i>	<i>Undersecretaries</i>
	<i>Officers</i>	<i>Assistant Undersecretaries</i>
	<i>Supervisors</i>	<i>Managing Directors</i>
	<i>Clerks</i>	

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*Source: The Author*

The process of sending out the questionnaires with the rigorous collections follow-up techniques resulted in optimal respondents' participation with the highest response rate. The semi-structured interviews with the top management officials in the UAepsi were officially arranged in compliance with the culture and the traditions of the U.A.E. The next chapter presents a systematic analysis of the data gathered along with a broader overview of the statistical approaches that produced the results of the research study.

## **CHAPTER FIVE**

### **DATA ANALYSIS**

#### **PREFACE**

In Chapter 4, the researcher explained the structural development of the research quantitative approach of the survey questionnaire supported with several semi structures interviews. Detailed description on how the fieldwork investigation was carried out was presented: to whom the survey questionnaires was sent out (the population and sample), what sort of data were gathered, when and how it was distributed and collected. The difficulties associated with the whole process of survey fieldwork were addressed.

Therefore, it is essential at this stage to present a general view of the most important elements of the research survey before moving on further in analyzing and manipulating the data obtained through the research fieldwork. The reader is guided to better understanding of the research analysis findings. This chapter displays the results of the empirical study that been carried out in order to explore the current TQM implementation practices in the UAEPSI. Thus, based on the data analysis, the research considered the need for developing an accustomed model which assists the UAEPSI in implementing the TQM practices. This enabled the researcher to attain the research objective and to answer question one.

The data analyzed in this research are presented in data matrix tables which include several dependent and independent variables and cases; the aim is to standardize the data collection techniques so that differences in responses can be documented reliably as the differences between the different respondents. The analysis of the surveyed data is presented by applying two broad techniques: descriptive analysis and comparative analysis.

The descriptive analysis described the range of responses of the individual variables and how often different values are attained whereas comparative analysis presented an explanation of the data results which compared the employees responses to their perceptions of quality implementation practices in the UAEPSI. The researcher considered the exploratory UNI-Variety data analysis where variables such as gender or

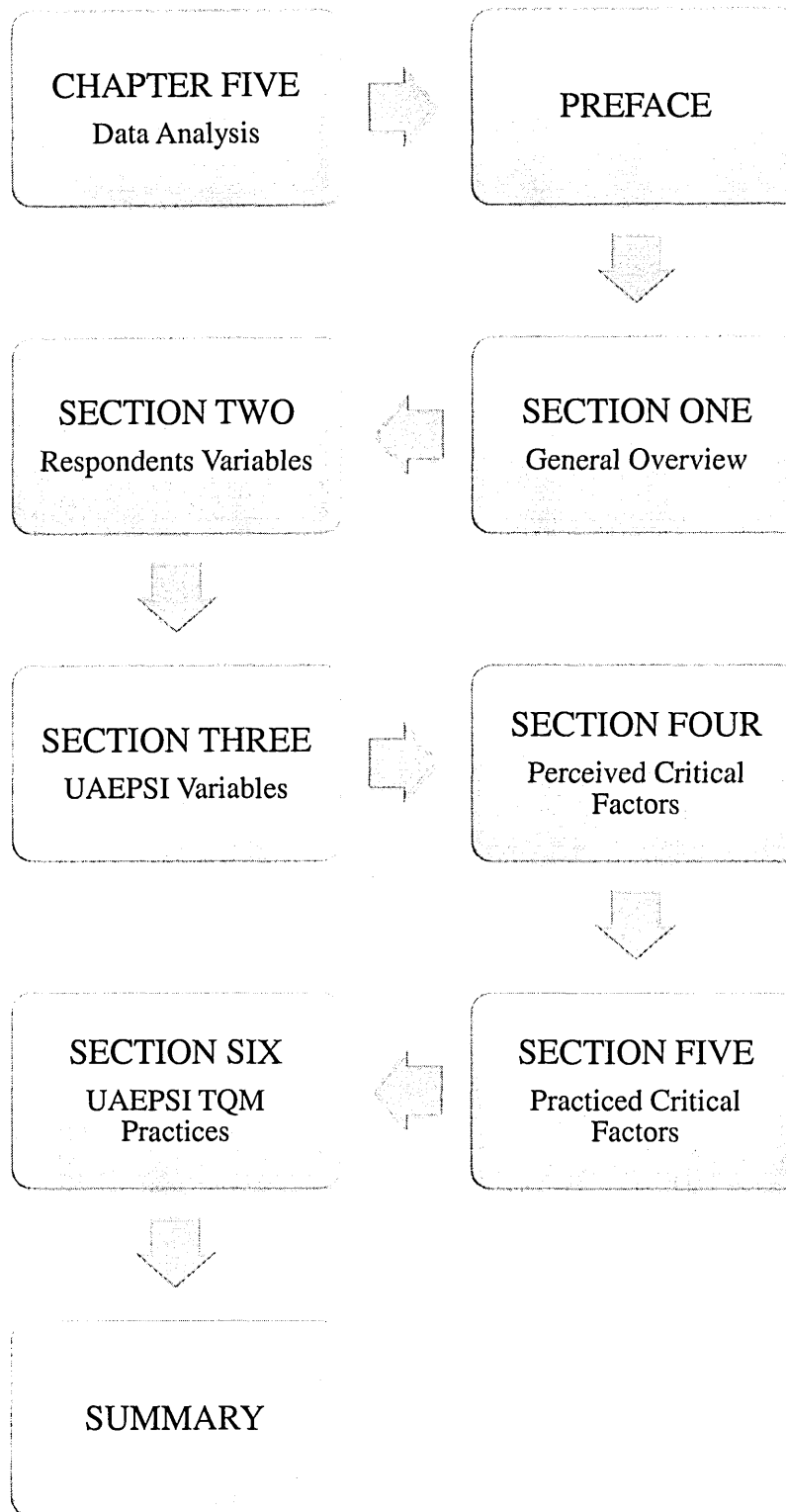
the educational qualifications of the respondents were considered in isolation. In BI-Variety analysis two or more variables were looked at simultaneously, for instance, the age group, gender and position. The data gathered by means of semi-structured interviews were clearly decoded so that they could be coded systematically in their entirety.

Two software packages of data manipulations were employed in the data analysis; the main tool was the statistical software SPSS and the supplementary tool was the Microsoft spreadsheet Excel version 2007, (SPSS, 2009; Robert, *et al.*, 2009; Hutcheson, and Sofroniou, 2009; Robert, 2008; Norusis, 2008; Frankfort-Nachmais, and Nachmais, 2007; Fielding, and Gilbert, 2006; Vaus, 2002; Kent, 2001; and Field, 2000).

The analysis of the gathered data in this chapter is divided according to the survey questionnaire classification sections which consist of five main sub-sections. The first section presents information on the respondent demographic background. The second section displays information about the institutions which the respondents work in. The third section addresses the respondent's view on how significant the quality critical factors are for the successful implementation of TQM. The fourth section presents the respondent perception on the extent to which these factors are currently practiced in their institutions. Finally, a general overview on the main driving and inhabiting forces of the current TQM implementation practices is observed in the UAEPSI. Figure (5.0) outlines the content of this chapter.



*Figure 5.0 Chapter five outline*



*Source: The Author*

Once the filtration process of the statistically valid and invalid questionnaires was completed, the statistical software of SPSS and Excel spreadsheet schedule preparations were applied for the response coding entry techniques for data analysis. Two extensive and delicate steps were followed. First, the response coding step: every question was coded by numbering it in accordance with the number of items and the independent variables. Thus, the responses were coded according to the number of items or options provided. The second step was based on the first one whereby several tables were created; each table represented the individual question, the response code and its frequency. Then, the responses were entered in tables for data manipulation and analysis.

The responses relating to the respondents' demographic variables (independent variables) were coded according to the number of items. The variables relating to the respondents' gender (male or female) were also coded; for instance (1) indicates (Male), (2) indicates (Female) and the additional code number (3) indicates (the Missing Values) respectively. The missing value represents the blank response: in case the respondent did not answer the question or the item and/or the option given. This ensures the researcher during the data analysis that the figure summations were correctly calculated. This coding option also enables the researcher to figure out how many items were left blank and why. Also, the responses relating to the type of the educational qualification were given the numbers of 1 to 5 respectively. The responses for the nationality variables (the U.A.E. citizens), (non U.A.E. citizens) and (the missing values) were coded as 1, 2 and 3 respectively. The variables relating to the respondents' age group were also coded as 1 to 5 respectively. Hence, the questions belong to the same pattern above; their coding techniques follow the same method.

## **5.1 GENERAL OVERVIEW**

As mentioned in Chapter 4, Section 4.4, the participated institutions were sixty (60) UAEPSI, thus, six hundred copies of the questionnaire were distributed by different means. The participating institutions consist of local departments, government agencies and government authorities. When the questionnaires received, more than (30%) items left blank; they were taken away and not included in the data set for analysis. A number of questionnaires were excluded due to the fact that the blank items statistically unusable were seventy three (73) questionnaires out of the three hundred eighty eight

(388) that were received. Thus, the total number of the analysed and statistically used questionnaires was three hundred fifteen (315). Based on the figures provided above, the actual return rate was (64.6%) but the percentage of the returned questionnaires were deemed usable; they were therefore analysed giving a response rate of (52.5%). Accordingly, it could be said that the actual response rate was high and that the percentage of the questionnaires analysed was adequate for concluding the results of the study. Table (5.1) provides a general overview of the participated institutions, the number of copies distributed and their level of participation as it is indicated in their return rate.

***Table 5.1 General overview of the distributed, returned questionnaire and return rate***

<i>Summary Distributed and Returned Questionnaires</i>	<i>Government Institutions</i>			<i>Total</i>
	<i>Local Departments</i>	<i>Government Agencies</i>	<i>Government Authority</i>	
<i>No. of Institutions</i>	<i>25</i>	<i>18</i>	<i>17</i>	<i>60</i>
<i>No. of Copies Distributed</i>	<i>250</i>	<i>180</i>	<i>170</i>	<i>600</i>
<i>No. of Unreturned/Missing Copies</i>	<i>97</i>	<i>62</i>	<i>53</i>	<i>212</i>
<i>No. of Returned Copies</i>	<i>154</i>	<i>118</i>	<i>116</i>	<i>388</i>
<i>Returned Copies Percentage (%)</i>	<i>(39.7%)</i>	<i>(30.4%)</i>	<i>(29.9%)</i>	<i>(64.6%)</i>
<i>No. of Invalid/Unusable Copies</i>	<i>43</i>	<i>11</i>	<i>19</i>	<i>73</i>
<i>No. of Valid/Usable Copies</i>	<i>111</i>	<i>107</i>	<i>97</i>	<i>315</i>
<i>Valid/Usable Copies Percentage (%)</i>	<i>(35.2%)</i>	<i>(34%)</i>	<i>(30.8%)</i>	<i>(52.5%)</i>

*Source: The Author*

The response rate represented a good cross-section of the U.A.E. local departments (35.2%), government agencies (34%), and government authorities (30.8%), Out of the aggregated response rate of (52.5%) of the response rate.

## **5.2 RESPONDENTS VARIABLES**

### *Respondents Demographic Variables Name*

The first question in section one was left optional; thus the respondents had the choice of closing or disclosing their names. This has given a sense of freedom and comfort. It encourages them to answer the successive questions with more confidence. It is

perceived that, almost all respondents preferred not to reveal their name. This could not affect at all the research final output.

### *Respondents Gender and Nationality*

The data analysis related to the respondent's gender was classified into male, female and missing values when the respondents did not indicate their gender. Concerning the respondent's nationality, respondents were classified into: U.A.E. citizens, non U.A.E. citizens and with missing values. According to the respondent's gender, the males represented 61.3% of the total and the female only 38.1% (see table 5.2).

**Table 5.2 Respondents gender**

<i>Gender</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>Male</i>	<i>193</i>	<i>61.3%</i>
<i>Female</i>	<i>120</i>	<i>38.1%</i>
<i>Missing Value</i>	<i>2</i>	<i>0.6%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

The data presented in Table (5.3) show that 49% of the total respondents were U.A.E. citizens, and almost 34% did not mark their nationality. This is because the U.A.E. government is the major employer of the U.A.E. citizens, and therefore it is obvious that the majority of the respondents will be U.A.E. citizens.

**Table 5.3 Respondents nationality**

<i>Nationality</i>	<i>Frequency</i>	<i>Percent%</i>
<i>U.A.E. Citizens</i>	<i>155</i>	<i>49%</i>
<i>Non U.A.E. Citizens</i>	<i>53</i>	<i>17%</i>
<i>Missing Value</i>	<i>107</i>	<i>34%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

By combining the respondent's nationality and gender, as the data indicated in Table (5.4), the number of responses of non U.A.E. citizens with the missing values respondents formed 51% of total respondents. This means that the non U.A.E. citizen employees both male and female respondents are more likely equal with the U.A.E. citizens.

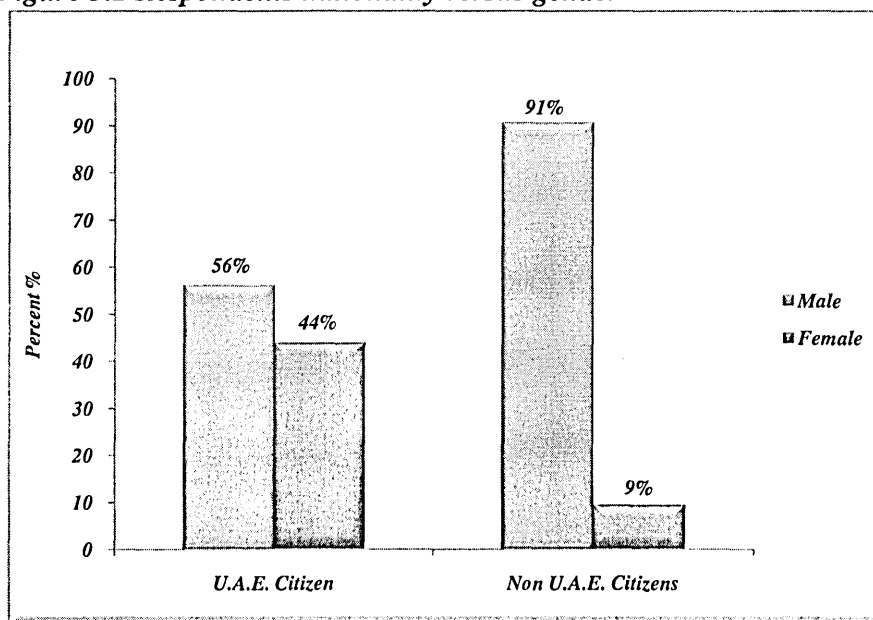
**Table 5.4 Respondents nationality versus gender**

Gender	Nationality			Total
	U.A.E. Citizen	Non U.A.E. Citizen	Missing Values	
Male (N)	87	48	58	193
(%)	56%	91%	54%	61.3%
Female (N)	68	5	47	120
(%)	44%	9%	44%	38.1%
Missing Values (N)	0	0	2	2
(%)	0%	0%	2%	0.6%
Total (N)	155	53	107	315
(%)	49%	17%	34%	100

Source: The Author

The sample showed that the male respondents exceed the female within the U.A.E. citizen and non U.A.E. citizen category. The male represented 91% of the non U.A.E. citizen employees, (see Figure 5.1) whereas, the percentage gap between the U.A.E. male citizens and the U.A.E. female citizens is considerably narrower. In addition by contrasting the responses of nationality with the respondent's gender, two aspects need to be explained. Almost all the respondents exposed their gender, and 34% of them left their nationality blank. This means that they were more sensitive to the issue of nationality.

**Figure 5.1 Respondents nationality versus gender**



Source: Author

## *Respondents Age Group*

In terms of the respondent's age, the classification of age group was according to the classification of U.A.E. civil servants that applies to all employees in the UAEPSI. The age grouping ranges between twenty years to sixty years old and over with a maximum of sixty five years of age. Table (5.5) shows that the respondent's age group between twenty and twenty nine (20-29) and the age group between thirty and thirty nine (30-39) had an equal percentage share of 34% with the overall percentage of 68% of all the respondents. 20% were in the age of forty to forty nine (40-49) and just eleven respondents were between the age of fifty and fifty nine (50-59). Surprisingly, only one respondent fits himself into the group age of sixty and over.

***Table 5.5 Respondents age group classification***

<i>Age Group</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>20-29</i>	<i>106</i>	<i>34%</i>
<i>30-39</i>	<i>108</i>	<i>34%</i>
<i>40-49</i>	<i>62</i>	<i>20%</i>
<i>50-59</i>	<i>11</i>	<i>3%</i>
<i>60+</i>	<i>1</i>	<i>0%</i>
<i>Missing Value</i>	<i>27</i>	<i>9%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: Author*

Table (5.6) illustrates that the average age of the U.A.E. citizen's male respondents is thirty two (32) years and for U.A.E. citizen's female respondents is thirty years (30). While the average age of non U.A.E. citizens male respondents is forty one (41) years, slightly higher than that of the none U.A.E. citizen's female respondents of thirty nine (39) years. Both non U.A.E. citizens male and female respondents average age are approximately ten (10) years higher than the average age of both U.A.E. citizens' male and female respondents.

***Table 5.6 Respondents average age by nationality***

<i>Average Age (Years)</i>	<i>U.A.E. Citizen</i>	<i>Non U.A.E. Citizen</i>
<i>Male</i>	<i>32</i>	<i>41</i>
<i>Female</i>	<i>30</i>	<i>39</i>

*Source: Author*

## *Respondents Academic Qualification*

The researcher classified the respondent's educational qualification level into five major groups. The categorisation begins with the lowest academic degree of high school certificate to the highest post graduate degrees. The data analyses are presented in Table (5.7). The figures show that only 12.4% of respondents have high school level of education; more likely equal to 13% had diploma degrees. The majority of respondents are bachelor degree holders representing 60% of respondents. The postgraduate master and PhD degree respondents were 8.3% and 2.9% respectively. The reason that the majority of the respondents are bachelor holders is due to the UAEPSI recruitment policy. In order to fulfil these conditions, the UAEPSI requires a minimum academic qualification of a bachelor degree for any placement above the clerical positions.

***Table 5.7 Respondents academic qualification***

<i>Academic Qualifications</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>High School</i>	<i>39</i>	<i>12.4%</i>
<i>Diploma</i>	<i>41</i>	<i>13.0%</i>
<i>Bachelor</i>	<i>189</i>	<i>60.0%</i>
<i>Master</i>	<i>26</i>	<i>8.3%</i>
<i>PhD</i>	<i>9</i>	<i>2.9%</i>
<i>Missing Value</i>	<i>11</i>	<i>3.5%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: Author*

In order to provide a broader view about the characteristics of human resources in the UAEPSI, Table (5.8) presents the particular BI-Variate analysis between the U.A.E. citizens and the non U.A.E. citizens on three variables of academic qualifications: nationality, and gender. The data analysis in term of the academic qualifications shows substantial difference between the U.A.E. citizen male and the female respondents. The prevailing percentage of 90.67% is U.A.E. citizen female, while the smallest is 64.18% for the U.A.E. citizen male respondents. Whilst it is an opposite case with the non U.A.E. citizen's male and female respondents; the largest percentage is 35.83% for non U.A.E. citizen male, while the smallest is 9.33% for the non U.A.E. citizens female. In addition the figures clearly indicate that 36.57% (the highest percentage) of the U.A.E. citizen male respondents hold a bachelor degree; 54.67% (the highest percentage) of the U.A.E. citizen female respondents hold a bachelor degree. In general, the U.A.E. female citizens are more academically qualified than the U.A.E. male citizens. The respondents

are generally well academically qualified, which implies that they were able to participate positively in the study.

**Table 5.8 Respondents gender, nationality and academic qualification**

Gender	Academic Qualification	Nationality		Total		
		U.A.E. Citizen	Non U.A.E. Citizen			
Male	High School	Count	22	4	26	
		% of Total	16.42%	2.99%	19.40%	
	Diploma	Count	7	4	11	
		% of Total	5.22%	2.99%	8.21%	
	Bachelor	Count	49	30	79	
		% of Total	36.57%	22.39%	58.96%	
	Master	Count	8	5	13	
		% of Total	5.97%	3.73%	9.70%	
	PhD	Count	0	5	5	
		% of Total	0%	3.73%	3.73%	
	Total	Count	86	48	134	
		% of Total	64.18%	35.83%	100%	
	Female	High School	Count	5	0	5
			% of Total	6.67%	0%	6.67%
Diploma		Count	17	1	18	
		% of Total	22.67%	1.33%	24.00%	
Bachelor		Count	41	2	43	
		% of Total	54.67%	2.67%	57.33%	
Master		Count	3	2	5	
		% of Total	4.00%	2.67%	6.67%	
PhD		Count	2	2	4	
		% of Total	2.67%	2.67%	5.33%	
Total		Count	68	7	75	
		% of Total	90.67%	9.33%	100%	

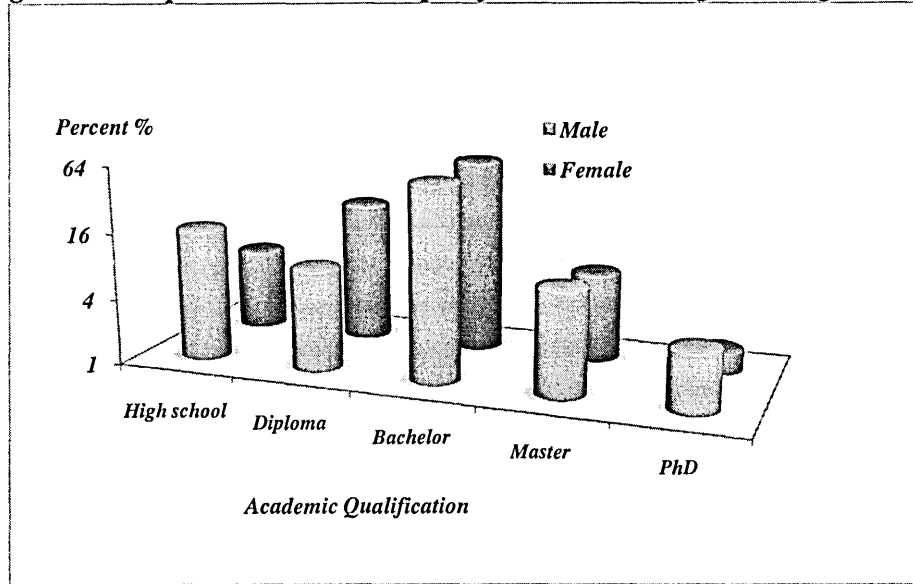
Source: The Author

From the data in Table (5.8), Figure (5.2) portrays that the percentage of males and females who hold the bachelor's degree are almost exactly the same. The degree with



the greatest difference between males and females is the high school degree. Whereas, the degree with the smallest difference between males and females in the PhD degree.

**Figure 5.2 Respondents academic qualification according to their gender**



Source: Author

**Respondents Current Position**

In terms of the respondents occupational level, 28 out of 315 respondents were in senior management posts with a percentage of 9%; out of this total; 45 respondents (14%) were officers; the highest occupational level was 133 supervisors corresponding to 42%; the rest of the respondents, 97 consists of 31%, in clerical positions, (see Table 5.9) below.

**Table 5.9 Respondents current position**

Current position	Frequency	Percent (%)
Senior Manager	28	9%
Officer	45	14%
Supervisor	133	42%
Cleric	97	31%
Missing	12	4%
Total	315	100

Source: The Author

### *Respondents Length of Service in the Current Position*

From Table (5.10), it is very clear that two thirds (61.9%) of the total respondents were between five and/or less than five years in their current job. On the other hand, by combining the people length of service for groups twenty six to thirty (26-30) and group thirty one to thirty five (31-35) years, the total is just four (4) respondents who have been in their current occupation for that length of period of time.

**Table 5.10 Respondents length of service in current position (years)**

<i>Length of service in the current position (Years)</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>0 - 5</i>	<i>195</i>	<i>61.9%</i>
<i>6 - 10</i>	<i>63</i>	<i>20.0%</i>
<i>11 - 15</i>	<i>22</i>	<i>7.0%</i>
<i>16 - 20</i>	<i>16</i>	<i>5.1%</i>
<i>21 - 25</i>	<i>6</i>	<i>1.9%</i>
<i>26 - 30</i>	<i>2</i>	<i>0.6%</i>
<i>31 - 35</i>	<i>2</i>	<i>0.6%</i>
<i>Missing Value</i>	<i>9</i>	<i>2.9%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

Thus, the gap is significantly wide between the respondents with five or less than five (0-5) years that have been in same position and the respondents of the rest group years working in their current position. The UAEPSI employee's length of service in their current position could be classified into two categories; the majority with 80% is those with ten years and less, and merely 15% are those served in their current positions for more than ten years.

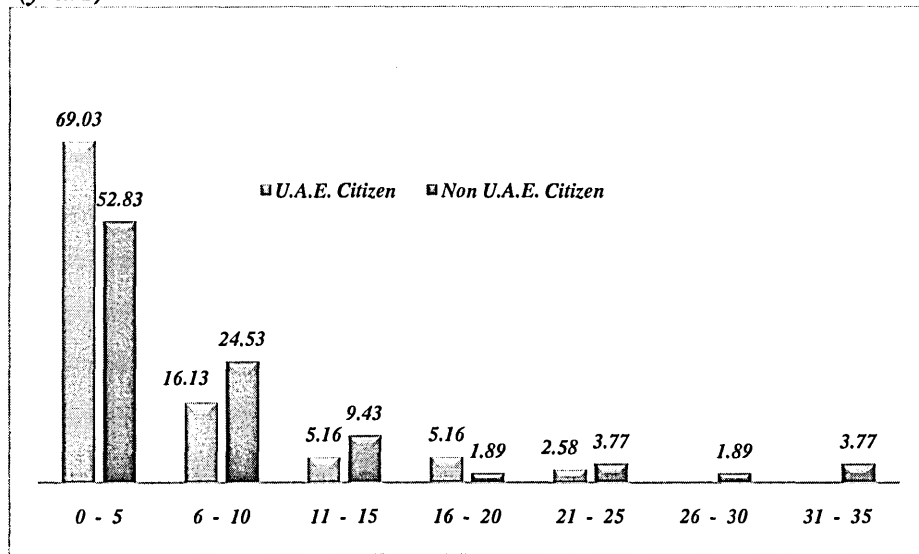
The analysis figures in Table (5.11) reveal the length of service in the current position according to the respondent's nationality. The (0-5) years of service group, the U.A.E. citizens are twice as many as the non U.A.E. citizens, whereas in the (16-20) groups, the U.A.E. citizens are far more than the non U.A.E. citizen. Over half of the non U.A.E. citizen were under the (0-5) group, and over two third of the U.A.E. citizen were under the same group. The missing values were considerably high as a large number of respondents did not respond to this question as illustrated in Figure (5.3)

**Table 5.11 Respondents nationality versus length of service in current position (years)**

Length of Service in Current Position (Years)	Nationality							
	U.A.E. Citizen		Non U.A.E. Citizen		Missing Values		Total	
	(N)	%	(N)	%	(N)	%	(N)	%
0 - 5	107	69.03%	28	52.83%	60	56.07%	195	61.9%
6 - 10	25	16.13%	13	24.53%	25	23.36%	63	20.0%
11 - 15	8	5.16%	5	9.43%	9	8.41%	22	7.0%
16 - 20	8	5.16%	1	1.89%	7	6.54%	16	5.1%
21 - 25	4	2.58%	2	3.77%	0	0.00%	6	1.9%
26 - 30	0	0.00%	1	1.89%	1	0.93%	2	0.6%
31 - 35	0	0.00%	2	3.77%	0	0.00%	2	0.6%
Missing Values	3	1.94%	1	1.89%	5	4.67%	9	2.9%
<b>Total</b>	<b>155</b>	<b>100</b>	<b>53</b>	<b>100</b>	<b>107</b>	<b>100</b>	<b>315</b>	<b>100</b>

Source: The Author

**Figure 5.3 Respondents nationality versus length of service in current position (years)**



Source: Author

By contrasting the respondent's current position with their length of service in the current position as shown in Table (5.12), the variables indicate that two third of the managerial, officer, supervisor, and clerical positions in the UAEPSI were between zero to five (0-5) years of service; 14% of the managers were between (16-20) years of service, whereas, less than 10% of the supervisors came under the (11-15) years of service group.

**Table 5.12 Respondents current position versus length of service in current position (years)**

Length of Service in Current Position (Years)	Current position											
	Manager		Officer		Supervisor		Clerical		Missing Values		Total	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
0 - 5	17	60.71%	27	60.00%	81	60.90%	66	68.04%	4	33.33%	195	61.9%
6 - 10	6	21.43%	11	24.44%	24	18.05%	22	22.68%	0	0.00%	63	20.0%
11 - 15	0	0.00%	2	4.44%	13	9.77%	4	4.12%	3	25.00%	22	7.0%
16 - 20	4	14.29%	3	6.68%	5	3.76%	4	4.12%	0	0.00%	16	5.1%
21 - 25	1	3.57%	1	2.22%	4	3.01%	0	0.00%	0	0.00%	6	1.9%
26 - 30	0	0.00%	1	2.22%	0	0.00%	1	1.04%	0	0.00%	2	0.6%
31 - 35	0	0.00%	0	0.00%	2	1.50%	0	0.00%	0	0.00%	2	0.6%
Missing Values	0	0.00%	0	0.00%	4	3.01%	0	0.00%	5	41.67%	9	2.9%
<b>Total</b>	<b>28</b>	<b>100</b>	<b>45</b>	<b>100</b>	<b>133</b>	<b>100</b>	<b>97</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>315</b>	<b>100</b>

Source: Author

From the previous tables, the level of the positions of respondents could be summarised (see Tables 5.9, 5.11 and 5.12). The figures interpretation shows clearly that the majority of respondents (41%) are employed at the supervisory level UAEPSI. Of the respondents, 9% stated that they serve at senior management level, while 14% stated that they serve at the officer's level and 31% at the clerical level. These statistics confirm that the respondents were from diversified occupational levels at the UAEPSI. This fact assures the researcher that the sampling population was perfectly distributed as it was proposed among different occupational levels and therefore the potential outcomes reflect the wider perspectives of different opinions.

### 5.3 UAEPSI VARIABLES

This section presents detailed information about the UAEPSI which were discussed earlier in Chapter Four (section 4.3.3). The data analysis is primarily concerned with the respondent's institutions where they work. The variables include the institutions legal entity, details on the number of employees, the core economic activity and various details on TQM implementation practices. The following tables and charts provide brief analysis.

## *The UAEPSI Legal Entity*

By examining the figures in Table (5.13), almost all three UAEPSI legal categories of government authorities, local departments and government agencies respondents were equally distributed among their group. Almost every institution form a third of the total respondents. Thus, this gives a good indication of the data analysis credibility whereby the respondents evenly represent the population sample of the research. What's more is that all respondents answered this question.

***Table 5.13 UAEPSI legal entity***

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<i>Legal Entity</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>Government Authority</i>	<i>114</i>	<i>36%</i>
<i>Local department</i>	<i>95</i>	<i>30%</i>
<i>Government Agency</i>	<i>106</i>	<i>34%</i>
<i>Others</i>	<i>0</i>	<i>0%</i>
<i>Missing Value</i>	<i>0</i>	<i>0%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

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*Source: The Author*

## *Number of Employees*

Table (5.14) displays data on seven group categories; almost half of the respondents did not respond to the question regarding the number of employees 46.35%. This is either due to the fact that they do not know precisely the number in their institutions. Or they are simply unaware about their institution total employees. The data shows that the majority of responses are from institutions which fall in category (1-1000) with a total of 86 respondents forming 27.30%. The figures show that the larger the UAEPSI in number of employees, the fewer the number respondents falling into these categories.

***Table 5.14 Number of employees in the institutions***

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<i>No. of Employees in the Entire Institution</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>1 - 1,000</i>	<i>86</i>	<i>27.30%</i>
<i>1,001 - 5,000</i>	<i>26</i>	<i>8.25%</i>
<i>5,001 - 10,000</i>	<i>24</i>	<i>7.62%</i>
<i>10,001 - 15,000</i>	<i>11</i>	<i>3.49%</i>
<i>15,001 - 20,000</i>	<i>10</i>	<i>3.17%</i>
<i>20,001 - 25,000</i>	<i>4</i>	<i>1.27%</i>

---

<i>More than 25,000</i>	8	2.54%
<i>Missing Value</i>	146	46.35%
<b>Total</b>	<b>315</b>	<b>100</b>

*Source: The Author*

It is obvious that the bigger the UAEPSI is in the number of employees, the larger the size is. No precise information could be obtained since these institutions encounter a high rate of employee's turnover. Therefore, details on such information in most cases are likely not available. The respondent's figures and percentages in Table (5.15) present two variables regarding the number of employees and the UAEPSI legal entity confirms this assumption.

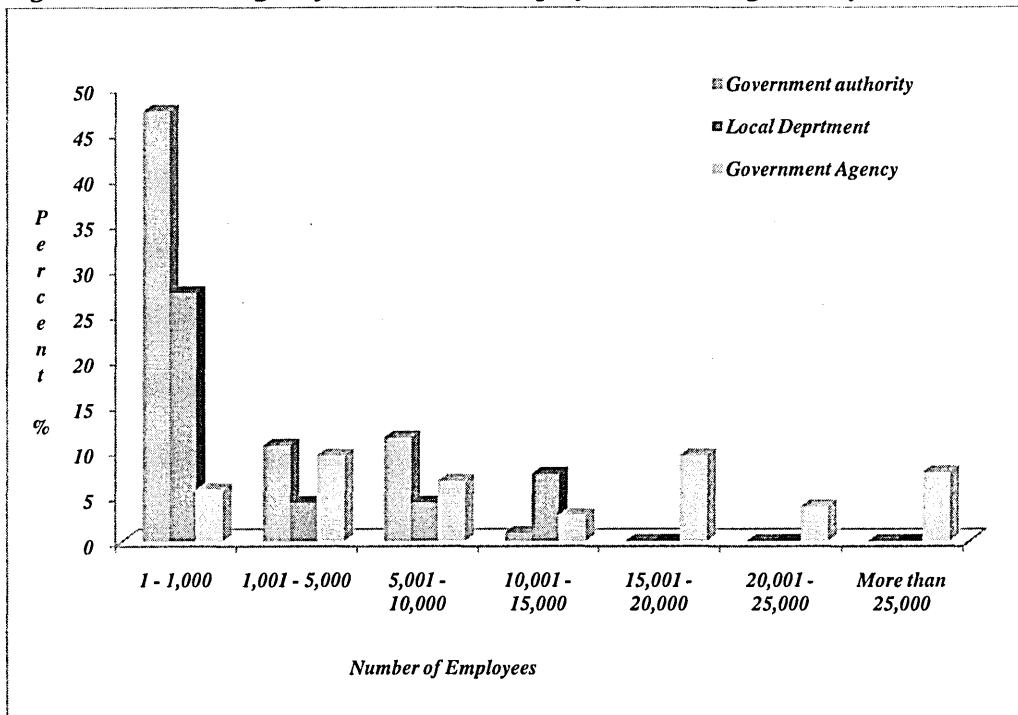
**Table 5.15 The UAEPSI number of employees versus legal entity**

<i>No of Employees</i>	<i>Legal Entity</i>							
	<i>Government Authority</i>		<i>Local Department</i>		<i>Government Agency</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>1 - 1,000</i>	54	47.37%	26	27.37%	6	5.66%	86	27.30%
<i>1,001 - 5,000</i>	12	10.53%	4	4.21%	10	9.43%	26	8.25%
<i>5,001 - 10,000</i>	13	11.40%	4	4.21%	7	6.60%	24	7.62%
<i>10,001 - 15,000</i>	1	0.88%	7	7.37%	3	2.83%	11	3.49%
<i>15,001 - 20,000</i>	0	0.00%	0	0.00%	10	9.43%	10	3.17%
<i>20,001 - 25,000</i>	0	0.00%	0	0.00%	4	3.77%	4	1.27%
<i>More than 25,000</i>	0	0.00%	0	0.00%	8	7.55%	8	2.54%
<i>Missing Value</i>	34	29.82%	54	56.84%	58	54.72%	146	46.35%
<b>Total</b>	<b>114</b>	<b>100%</b>	<b>95</b>	<b>100%</b>	<b>106</b>	<b>100%</b>	<b>315</b>	<b>100%</b>

*Source: The Author*

Almost half of the governmental authority employees were working for institutions from the category (1-1000) employee. 21% from the governmental agency employees were working for institutions of 15000 employees and above; they were distributed on the seven groups. These data are more clearly illustrated in Figure (5.4)

**Figure 5.4 Percentages of the UAEPSI employees versus legal entity**



Source: The Author

Two third of the governmental authorities and local departments employees were working for institutions from the category (1-1000) employee. Around half of the governmental agencies employees were working for institutions of 15001 employees and above.

*UAEPSI Main Service Sector*

A total of 315 employee’s in the UAEPSI respondent to the survey, giving a response rate of 52.5%. The responses represented a good cross-section of the public sector institutions. Of these, 25.7% were health service institutions respondents, with the next largest groups being police and security institutions 17.5% and civil services 13.7%. Table (5.16) presents the main service sector arranged in a descending order

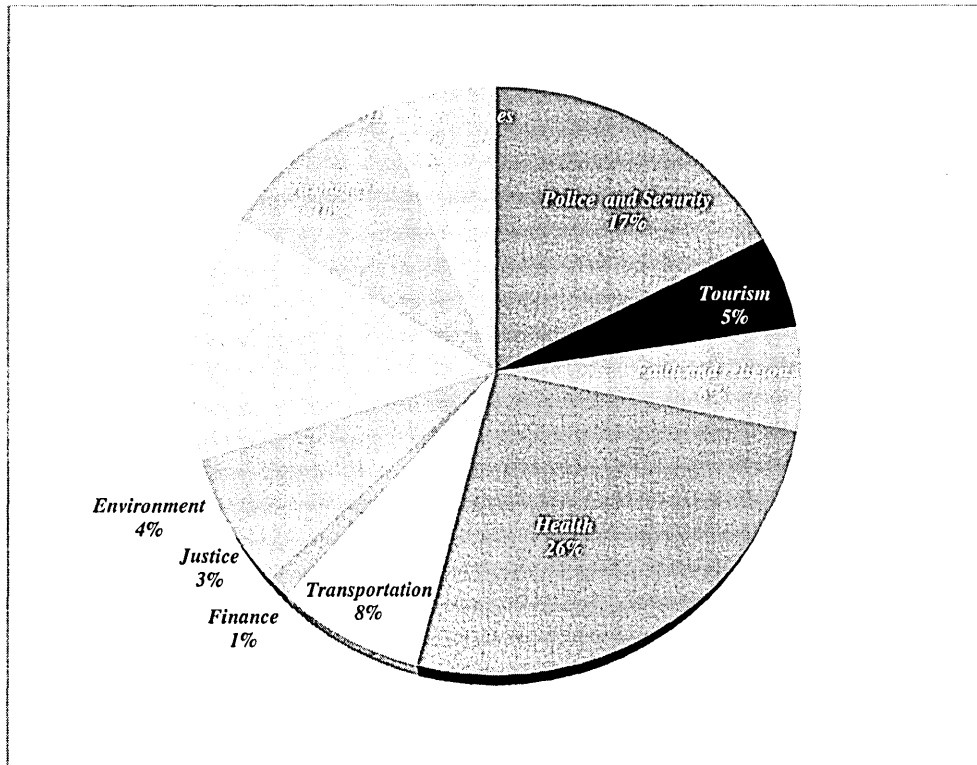
**Table 5.16 Distribution of the UAEPSI main service sector in a descending order**

<i>Service Sector</i>	<i>Frequency</i>	<i>Percent (%)</i>
<b>1 Health</b>	<b>81</b>	<b>25.7%</b>
<b>2 Police and Security</b>	<b>55</b>	<b>17.5%</b>
<b>3 Civil Services</b>	<b>43</b>	<b>13.7%</b>
<b>4 Economy</b>	<b>31</b>	<b>9.8%</b>
<b>5 Transportation</b>	<b>24</b>	<b>7.6%</b>
<b>6 Human Resources Development</b>	<b>20</b>	<b>6.3%</b>
<b>7 Faith and Religion</b>	<b>18</b>	<b>5.7%</b>
<b>8 Tourism</b>	<b>16</b>	<b>5.1%</b>
<b>9 Environment</b>	<b>13</b>	<b>4.1%</b>
<b>10 Justice</b>	<b>10</b>	<b>3.2%</b>
<b>11 Finance</b>	<b>4</b>	<b>1.3%</b>
<b>Total</b>	<b>315</b>	<b>100%</b>

Source: The Author

From the cross table above, it is apparent that the 100% of the public service institutions were from the local departments. Just 1.27% of the 315 respondents were from the financial services. As shown in Figure (5.5)

**Figure 5.5 Percentages of respondents of the UAEPSI according to their main service sector**



Source: The Author



The question is whether or not the UAEPSI were currently implemented TQM models or approaches other than the UAEGEP. The respondents were given an option of “Yes” or “No” to answer. If they respond No, then they were instructed to go direct to the next section of the questionnaire but if they respond yes, then two consecutive detailed questions were requested. The first question was a multiple choice in which the researcher provided the most widely adopted quality models and approaches. The second question was to gauge their perception behind the main reasons of adopting such scheme by their institutions. The aim of these questions was to explore the capabilities of the UAEPSI as well to identify reasons behind their adoption of dual TQM model or alongside with the UAEGEP. Table (5.17) provides the relevant details of the respondent’s insights.

**Table 5.17 Number of the UAEPSI currently adopting other quality and excellence models**

<i>Options</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>Yes</i>	<i>280</i>	<i>89%</i>
<i>No</i>	<i>26</i>	<i>8%</i>
<i>Missing Values</i>	<i>9</i>	<i>3%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

The data presented in Table (5.17) show that almost the majority of the UAEPSI (89%) adopted or currently adopted other quality models and approaches. However, the reason why they undertake such an act is presented in Table (5.20). Table (5.18) presents detailed information on predetermined TQM models and approaches adopted by the UAEPSI rather than by UAEGEP.

**Table 5.18 Distribution of the UAEPSI quality and excellence models currently adopted in a descending order**

<i>Quality and Excellence Programmes</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>ISO</i>	<i>147</i>	<i>46.7%</i>
<i>EFQM-EM</i>	<i>84</i>	<i>26.7%</i>
<i>Others</i>	<i>30</i>	<i>9.5%</i>
<i>SPC</i>	<i>5</i>	<i>1.6%</i>
<i>Benchmarking</i>	<i>1</i>	<i>0.3%</i>
<i>Baldrage</i>	<i>0</i>	<i>0.0%</i>
<i>Six Sigma</i>	<i>0</i>	<i>0.0%</i>
<i>Missing Values</i>	<i>48</i>	<i>15.2%</i>
<i>Total</i>	<i>315</i>	<i>100%</i>

*Source: The Author*

46.7% of all respondents indicated that they adopted the different ISO series as TQM approach was currently adopted in their institutions; with 26.7% indicating that the EFQM-EM was adopted as a TQM implementation approach in their institutions. 9.5% of respondents chose the option 'other' which represents those surveyed mainly from health service sector institutions. They indicated that they adopted other TQM and excellence model such as (JCI) in their institutions, which was not provided as a predetermined option (see Table 5.19). Those making the most use of ISO to drive quality appeared to be the government agencies 56.60%, local department 54.74% and the government authorities 30.70%. It appeared that there was very rare use of the 'Statistical Process Control (SPC)' and 'Benchmarking' as a quality tool in the UAEPSI, with zero use of 'Baldrige' and 'Six Sigma' as quality models adopted in the UAEPSI.

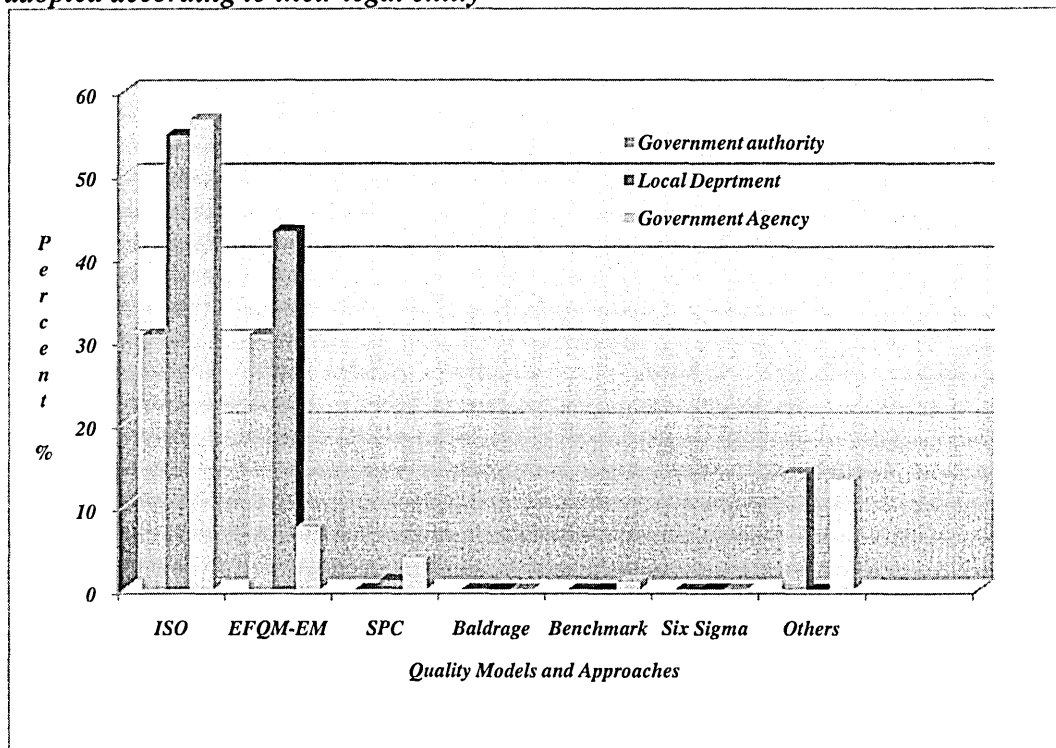
**Table 5.19 Distribution of the UAEPSI quality and excellence programmes currently adopted according to their legal entity**

<i>Quality and excellence programmes</i>	<i>Legal Entity</i>							
	<i>Government Authority</i>		<i>Local Department</i>		<i>Government Agency</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>ISO</i>	35	30.70	52	54.74	60	56.60	147	46.7
<i>EFQM-EM</i>	35	30.70	41	43.16	8	7.55	84	26.7
<i>SPC</i>	0	0.00	1	1.05	4	3.77	5	1.6
<i>Baldrige</i>	0	0.00	0	0.00	0	0.00	0	0.00
<i>Benchmarking</i>	0	0.00	0	0.00	1	0.94	1	0.3
<i>Six Sigma</i>	0	0.00	0	0.00	0	0.00	0	0.00
<i>Others</i>	16	14.03	0	0.00	14	13.21	30	9.5
<i>Missing Values</i>	28	24.56	1	1.05	19	17.92	48	15.2
<i>Total</i>	114	100%	95	100%	106	100%	315	100%

Source: The Author

In general, ISO 9000: 2000 were the most common in the three entities. Implementing ISO 9000: 2000 in government agencies and local departments was almost identical. The group with the largest difference between the three entities is the EFQM-EM. Using SPC and benchmark was very rare as presented in Figure (5.6).

**Figure 5.6 Percentages of respondents of the UAEPSI quality models and approaches adopted according to their legal entity**



Source: The Author

By examining the above chart (Figure 5.6), the bars evidently indicate that 46.7% of all respondents stated that they adopted or were currently adopting the ISO certification and its series as TQM implementation initiatives in their institutions; 56.6% of those respondents are working in government agencies, 26.7% indicated that EFQM-EM was adopted and was adapting TQM implementation approach. Those experienced the most use of EFQM-EM are to implement quality programmes to the local departments, 43.16% as it is a mandatory model for quality initiatives set by the UAEGEP. In addition, almost 15.2% of those surveyed have not responded, as it is believed that they are unaware of which quality programmes their institutions are implementing though there was a considerable variation between the local departments and the government authorities on which TQM model or approach they undergo; thus, attaining objective one of the research which is to investigate the current quality practices in the UAEPSI.

The figures in Table (5.16) with the presentation in the bar chart (5.6) clearly confirm that the UAEPSI still lacking behind adopting innovative TQM approaches and the statistical tools for performance measurement, as the figures indicated almost none

institutions adopt the TQM approaches such as: the six sigma, statistical process controls and benchmarking.

Based on the respondents' answers in Table (5.18), the researcher provided several options given to the respondents to indicate the main reasons behind adopting other quality models and approaches besides the UAEGEP model. The respondents were given an option to select more than one answer. The cross tabulation in Table (5.20) indicates that the number of responses and its percentage out of the entire research total respondents.

**Table 5.20 Percentage of the reasons of adapting other quality models or approaches by the UAEPsi in a descending order**

	<i>Options (Reason)s</i>	<i>Frequency</i>	<i>Percent (%)</i>
1	<i>Leads to achieve targeted objectives</i>	207	78.7%
2	<i>Address government quality initiatives</i>	182	69.2%
3	<i>Enhances productivity and performance</i>	161	61.2%
4	<i>To participate in the UAEGEP</i>	151	57.4%
5	<i>To win quality award</i>	111	42.2%
6	<i>Most widely adopted</i>	103	39.2%
7	<i>Increases competitiveness</i>	90	34.2%
8	<i>Simple to understand and implement</i>	78	29.7%
9	<i>Increases customer satisfaction</i>	70	26.6%
10	<i>Self assessment tool</i>	48	18.3%
11	<i>Reduces errors and reworks</i>	41	15.6%
12	<i>Maximizes revenues</i>	27	10.3%
13	<i>Others: please specify</i>	3	1.1%

*Source: The Author*

The data analysis reveals that the vast majority of respondent 78.70% rated 'Leads to achieve targeted objectives' as the reason for adopting other TQM models and approaches along with the UAEGEP in their institutions. Particularly 69.20% expressed the use of other quality and excellence approaches such as 'Address government quality initiatives. The 'Enhances productivity and performance' 61.20%, 'Assists in taking part in the UAEGEP' 57.4% and the 'Increases customer satisfaction' 42.2% consecutively, relatively rated as the prime reason for adopting other quality and

excellence approaches besides the adoption of the UAEGEP. The remaining subsequent reasons expressed by respondents varied considerably. These results support the researcher anticipation that the UAEPSI seldom considers the satisfaction of their internal and external customers; the improvement of their work process in order to eliminate mistakes and reworks comes at their last priorities for adopting quality and excellence in their institutions. They often emphasise issues concerning the adoption of other quality approaches as an aiding tool that enables them to address government quality initiative requirements which assist them to participate in the UAEGEP.

#### **5.4 PERCEIVED CRITICAL FACTORS**

This section attempts to answer the research question number one which is “*What are the quality critical factors, and to what extent they are significant for the successful implementation of TQM in the UAEPSI?*” as the respondents perception shapes the final identification of the quality critical factors that are crucial for the UAEPSI to consider in order to implement the successful TQM practices. Table (5.21) demonstrates the respondent’s perceptions frequency distribution regarding the extent of quality critical factors ranking from not significant to most significant as a vital prerequisite for the successful implementation of quality initiatives in their institutions. Unsurprisingly, the data analysis was in compliance with the research predetermined identified quality critical factors as they were listed according to their consistency with the universally common TQM literature and advocators (see chapter 4). The frequency distribution of the quality critical factors shows that the majority of the respondents perceived the listed quality critical factors as the ‘most significant’ and ‘significant’; very few respondents were ‘not sure’ about their responses.

A very mixed set of results was obtained (see Table 5.22) whereby the critical quality factors were listed in a percentage order; the survey showed that the respondents rated the impact of the quality factors as ‘most significant’ or ‘significant’ in the majority of cases. Exceptions to this were to the factor ‘recognition of employees’ rated as ‘not sure’ by 11.43% of the respondents, ‘adequate quality awareness’ rated as ‘not sure’ by only 7.30% of the respondents.

**Table 5.21 Respondents perceptions of critical factors significance (Frequency)**

Critical Factors	Options					Missing Values	Total
	Not Significant	Less Significant	Not Sure	Significant	Most Significant		
	(Frequency)						
1 Top management commitment	0	1	3	33	275	3	315
2 Leadership style & effective leader	0	1	2	54	257	1	315
3 Clear strategies and planning	0	6	10	97	198	4	315
4 Encouragement of talented people	4	4	7	80	219	1	315
5 Processes improvement	2	0	6	72	233	2	315
6 Speed of service delivery	2	2	11	86	211	3	315
7 Recognition of employees	1	5	36	104	167	2	315
8 Flexible and dynamic organization structure	0	2	13	90	208	2	315
9 Continuous improvement	0	4	13	100	196	2	315
10 Job satisfaction enhancement	1	1	14	124	173	2	315
11 People competence and skills	0	1	8	51	253	2	315
12 Employees involvement in setting plans and strategies	0	3	12	116	182	2	315
13 Use of latest technologies	0	2	10	123	179	1	315
14 Practicing effective performance management system	1	4	8	109	191	2	315
15 People & organization behaviour	0	5	14	77	217	2	315
16 Adequate quality awareness	1	2	23	110	177	2	315
17 Dialogue and communication	0	7	18	93	195	2	315
18 Best practices and benchmarking	1	2	5	78	227	2	315
19 Team working spirit	0	3	14	103	193	2	315
20 Staff suggestions scheme	0	3	10	85	216	1	315
21 Existence of appropriate facilities	0	5	14	111	182	3	315
22 Efficient recourse utilization	0	4	11	105	194	1	315
23 Emiratization careers scheme	0	0	7	81	225	2	315
24 Collaboration and partnership	0	4	11	120	178	2	315
25 Changing to an appropriate management system	0	5	29	125	155	1	315
26 Social & corporate responsibility	0	6	51	121	135	2	315
27 Environmental responsibility	4	13	36	84	178	0	315

Source: The Author

Table (5.22) demonstrates the respondent's perceptions distributed in percentage revealing the extent of the critical factors from not significant to most significant as a vital prerequisite for the successful implementation of quality initiatives in their institutions

**Table 5.22 Respondents perceptions of critical factors significance (Percentage %)**

Critical Factors	Options						Missing Values	Total
	Not Significant	Less Significant	Not Sure	Significant	Most Significant			
	Percent (%)							
1 Top management commitment	0.00	0.32	0.95	10.48	87.30	0.95	100	
2 Leadership style & effective leader	0.00	0.32	0.63	17.14	81.59	0.32	100	
3 Clear strategies and planning	0.00	1.91	3.17	30.79	62.86	1.27	100	
4 Encouragement of talented people	1.27	1.27	2.22	25.40	69.52	0.32	100	
5 Processes improvement	0.64	0.00	1.90	22.86	73.97	0.63	100	
6 Speed of service delivery	0.64	0.64	3.49	27.30	66.98	0.95	100	
7 Recognition of employees	0.31	1.59	11.43	33.02	53.02	0.63	100	
8 Flexible and dynamic organization structure	0.00	0.64	4.13	28.57	66.03	0.63	100	
9 Continuous improvement	0.00	1.27	4.13	31.75	62.22	0.63	100	
10 Job satisfaction enhancement	0.32	0.32	4.44	39.37	54.92	0.63	100	
11 People competence and skills	0.00	0.32	2.54	16.19	80.32	0.63	100	
12 Employees involvement in setting plans and strategies	0.00	0.95	3.81	36.83	57.78	0.63	100	
13 Use of latest technologies	0.00	0.63	3.17	39.05	56.83	0.32	100	
14 Practicing effective performance management system	0.32	1.27	2.54	34.60	60.63	0.64	100	
15 People & organization behaviour	0.00	1.59	4.44	24.44	68.89	0.64	100	
16 Adequate quality awareness	0.32	0.63	7.30	34.92	56.19	0.64	100	
17 Dialogue and communication	0.00	2.22	5.71	29.52	61.91	0.64	100	
18 Best practices and benchmarking	0.32	0.63	1.59	24.76	72.06	0.64	100	
19 Team working spirit	0.00	0.95	4.44	32.70	61.27	0.64	100	
20 Staff suggestions scheme	0.00	0.95	3.17	26.98	68.57	0.33	100	
21 Existence of appropriate facilities	0.00	1.59	4.44	35.24	57.78	0.95	100	
22 Efficient recourse utilization	0.00	1.27	3.49	33.33	61.59	0.32	100	
23 Emiratization careers scheme	0.00	0.00	2.22	25.71	71.43	0.64	100	
24 Collaboration and partnership	0.00	1.27	3.49	38.10	56.51	0.63	100	
25 Changing to an appropriate management system	0.00	1.59	9.21	39.67	49.21	0.32	100	
26 Social & corporate responsibility	0.00	1.91	16.19	38.41	42.86	0.63	100	
27 Environmental responsibility	1.27	4.13	11.42	26.67	56.51	0.00	100	

Source: The Author

From the above Table (5.22), it is evident that 87.30% of the respondents believe that top management commitment is the most significant for the successful implementation of TQM initiatives; 38.41% believe that the social and corporate responsibility factors are significant. Table (5.23) demonstrates the effect of the descriptive statistics of mean and standard deviation on the distribution of quality critical factors as perceived in the UAEPSI. The scattered figures reveal that almost all factors are within the close range.

The mean ranges from the highest 'Top management commitment' 4.87 with standard deviation of 0.39, to the lowest mean 'Environmental responsibility' 4.23 with standard deviation of 0.79

**Table 5.23 Mean and standard deviation distribution of the critical factors**

	<i>Critical Factors</i>	<i>Mean</i>	<i>Std. Deviation</i>
1	<i>Top management commitment</i>	<i>4.87</i>	<i>0.39</i>
2	<i>Leadership style &amp; effectiveness</i>	<i>4.81</i>	<i>0.43</i>
3	<i>Employees involvement</i>	<i>4.57</i>	<i>0.65</i>
4	<i>Employees recognition</i>	<i>4.61</i>	<i>0.72</i>
5	<i>People encouragement</i>	<i>4.71</i>	<i>0.57</i>
6	<i>Job satisfaction enhancement</i>	<i>4.61</i>	<i>0.65</i>
7	<i>Management systems</i>	<i>4.38</i>	<i>0.78</i>
8	<i>People competences and skills</i>	<i>4.61</i>	<i>0.60</i>
9	<i>Resource management (Man, Machine, Material...etc)</i>	<i>4.56</i>	<i>0.64</i>
10	<i>Partnership with customers and other stakeholders</i>	<i>4.49</i>	<i>0.63</i>
11	<i>Strategy and policy development</i>	<i>4.78</i>	<i>0.49</i>
12	<i>Team working spirit</i>	<i>4.52</i>	<i>0.62</i>
13	<i>Staff suggestions scheme</i>	<i>4.53</i>	<i>0.59</i>
14	<i>Communication and knowledge management</i>	<i>4.55</i>	<i>0.64</i>
15	<i>Flexible and dynamic organization structure</i>	<i>4.62</i>	<i>0.65</i>
16	<i>Recourse utilization</i>	<i>4.47</i>	<i>0.69</i>
17	<i>Performance management system</i>	<i>4.52</i>	<i>0.71</i>
18	<i>Processes design and management</i>	<i>4.69</i>	<i>0.57</i>
19	<i>Quality assurances</i>	<i>4.55</i>	<i>0.63</i>
20	<i>Continuous improvement</i>	<i>4.64</i>	<i>0.59</i>
21	<i>Benchmarking</i>	<i>4.51</i>	<i>0.66</i>
22	<i>Manpower planning and strategy</i>	<i>4.56</i>	<i>0.63</i>
23	<i>Product-Service design and delivery</i>	<i>4.70</i>	<i>0.51</i>
24	<i>Appropriate facilities</i>	<i>4.51</i>	<i>0.63</i>
25	<i>Social and corporate responsibility</i>	<i>4.37</i>	<i>0.72</i>
26	<i>Environmental responsibility</i>	<i>4.23</i>	<i>0.79</i>
27	<i>Emiratization careers scheme</i>	<i>4.33</i>	<i>0.92</i>

Source: The Author

Whereas, Table (5.24) demonstrates the foremost fifteen significant quality factors perceived by the respondents in the UAEPSI as distributed in their percentage descending order.



*Table 5.24 the perceived most significant critical factors in a descending order*

	<i>Most Significant critical factors</i>	<i>Descending order (% Responses)</i>
1	<i>Top management commitment</i>	87.30
2	<i>Leadership style &amp; effective leader</i>	81.59
3	<i>People competence and skills</i>	80.32
4	<i>Processes improvement</i>	73.97
5	<i>Best practices and benchmarking</i>	72.06
6	<i>Emiratization careers scheme</i>	71.43
7	<i>Encouragement of talented people</i>	69.52
8	<i>People &amp; organization behavior</i>	68.89
9	<i>Staff suggestions scheme</i>	68.57
10	<i>Speed of service delivery</i>	66.98
11	<i>Flexible and dynamic organization structure</i>	66.03
12	<i>Clear strategies and planning</i>	62.86
13	<i>Continuous improvement</i>	62.22
14	<i>Dialogue and communication</i>	61.9
15	<i>Efficient recourse utilization</i>	61.59

*Source: The Author*

It could be argued from the above table that, the analysis that the most significant factors are those related to the management and employees while the least significant factors are those related to the environmental, social and corporate responsibility. This gives us a good clue about the respondent's perspectives and how they categorize the quality factors in the UAEPSI.

## **5.5 PRACTICED CRITICAL FACTORS**

Responses to this section are based on the responses to the previous section (section 5.4), in which the respondents were requested to indicate the extent to which each factor is actually practiced in their institution. It attempts to form a data analysis of this section to answer research question number one. Also the outcomes of analysis should provide the researcher with an insight for formulating the research model. Table (5.25) displays the data obtained

**Table 5.25 Respondents perceptions on practiced critical factors (Frequency)**

<i>Actual Practiced Critical Factors</i>	<i>Options</i>					<i>Missing Values</i>	<i>Total</i>
	<i>Very Low</i>	<i>Low</i>	<i>Not Sure</i>	<i>High</i>	<i>Very High</i>		
	<i>(Frequency)</i>						
<i>1 Top management commitment</i>	5	9	48	135	111	7	315
<i>2 Leadership style &amp; effective leader</i>	10	18	54	142	84	7	315
<i>3 Clear strategies and planning</i>	17	50	70	128	42	8	315
<i>4 Encouragement of talented people</i>	20	69	80	97	40	9	315
<i>5 Processes improvement</i>	20	57	77	109	45	7	315
<i>6 Speed of service delivery</i>	25	68	68	101	45	8	315
<i>7 Recognition of employees</i>	16	44	79	119	48	9	315
<i>8 Flexible and dynamic organization structure</i>	5	20	76	139	67	8	315
<i>9 Continuous improvement</i>	4	8	57	145	94	7	315
<i>10 Job satisfaction enhancement</i>	4	24	85	127	67	8	315
<i>11 People competence and skills</i>	6	25	68	115	92	9	315
<i>12 Employees involvement in setting plans and strategies</i>	8	36	75	118	71	7	315
<i>13 Use of latest technologies</i>	10	28	82	134	52	9	315
<i>14 Practicing effective performance management system</i>	6	42	77	124	57	9	315
<i>15 People &amp; organization behaviour</i>	7	33	69	128	70	8	315
<i>16 Adequate quality awareness</i>	6	25	77	134	62	11	315
<i>17 Dialogue and communication</i>	10	30	73	130	63	9	315
<i>18 Best practices and benchmarking</i>	8	25	65	133	76	8	315
<i>19 Team working spirit</i>	8	27	64	134	72	10	315
<i>20 Staff suggestions scheme</i>	4	27	63	139	74	8	315
<i>21 Existence of appropriate facilities</i>	8	39	73	133	51	11	315
<i>22 Efficient recourse utilization</i>	3	23	70	147	64	8	315
<i>23 Emiratization careers scheme</i>	1	17	76	144	69	8	315
<i>24 Collaboration and partnership</i>	5	25	72	136	69	8	315
<i>25 Changing to an appropriate management system</i>	4	20	73	158	52	8	315
<i>26 Social &amp; corporate responsibility</i>	12	32	87	129	47	8	315
<i>27 Environmental responsibility</i>	5	27	80	143	50	10	315

*Source: The Author*

The analysis outcomes of the above table show that the respondents persistently believe that factors related to the top management commitment are mostly significant. They consider the managerial leadership as one that plays a significant role in their intuitions in order to promote the TQM implementation practices. Whereas, the data revealed the opposite indicating factors related to people and employees satisfaction.

**Table 5.26 Respondents perceptions on the practiced critical factors (Percentage %)**

Critical Factors	Options					Missing Values	Total
	Very Low	Low	Not Sure	High	Very High		
	Percent (%)						
1 Top management commitment	1.59	2.86	15.24	42.86	35.24	2.21	100
2 Leadership style & effective leader	3.17	5.71	17.14	45.08	26.67	2.23	100
3 Clear strategies and planning	5.41	15.87	22.22	40.63	13.33	2.54	100
4 Encouragement of talented people	6.35	21.90	25.40	30.79	12.70	2.86	100
5 Processes improvement	6.35	18.10	24.44	34.60	14.29	2.22	100
6 Speed of service delivery	7.94	21.59	21.59	32.05	14.29	2.54	100
7 Recognition of employees	5.07	13.97	25.08	37.78	15.24	2.86	100
8 Flexible and dynamic organization structure	1.59	6.35	24.12	44.13	21.27	2.54	100
9 Continuous improvement	1.27	2.54	18.10	46.03	29.84	2.22	100
10 Job satisfaction enhancement	1.27	7.62	26.98	40.32	21.27	2.54	100
11 People competence and skills	1.90	7.94	21.59	36.50	29.21	2.86	100
12 Employees involvement in setting plans and strategies	2.54	11.43	23.81	37.46	22.54	2.22	100
13 Use of latest technologies	3.17	8.89	26.03	42.54	16.51	2.86	100
14 Practicing effective performance management system	1.91	13.33	24.44	39.37	18.10	2.86	100
15 People & organization behaviour	2.22	10.48	21.90	40.63	22.22	2.55	100
16 Adequate quality awareness	1.91	7.94	24.44	42.54	19.68	3.49	100
17 Dialogue and communication	3.17	9.52	23.17	41.27	20.01	2.86	100
18 Best practices and benchmarking	2.54	7.94	20.63	42.22	24.13	2.54	100
19 Team working spirit	2.54	8.57	20.32	42.54	22.86	3.17	100
20 Staff suggestions scheme	1.27	8.57	20.00	44.13	23.49	2.54	100
21 Existence of appropriate facilities	2.55	12.38	23.17	42.22	16.19	3.49	100
22 Efficient recourse utilization	0.95	7.30	22.22	46.67	20.32	2.54	100
23 Emiratization careers scheme	0.32	5.40	24.13	45.71	21.90	2.54	100
24 Collaboration and partnership	1.59	7.94	22.86	43.17	21.90	2.54	100
25 Changing to an appropriate management system	1.27	6.35	23.17	50.16	16.51	2.54	100
26 Social & corporate responsibility	3.81	10.16	27.62	40.95	14.92	2.54	100
27 Environmental responsibility	1.59	8.57	25.40	45.40	15.87	3.17	100

Source: The Author

In a percentage distribution, Table (5.26) illustrated that 36% of the respondents believe that the top management commitment is 100% deployed across their organizations while 13% believe that Recognition of employees is 13% deployed across their institutions. However, Table (5.27) demonstrates the descriptive statistics of the mean and standard deviation of the actual practiced critical factors distribution perceived by the respondents in the UAEPSI. The items are positively correlated among themselves

whereby the mean range and the scattered standard deviation confirm the results of the previous tables.

***Table 5.27 Mean and standard deviation distribution of the practiced critical factors***

	<i>Actual Practiced Critical Factors</i>	<i>Mean</i>	<i>Std. Deviation</i>
1	<i>Top management commitment</i>	<i>4.11</i>	<i>0.86</i>
2	<i>Leadership style &amp; effectiveness</i>	<i>3.90</i>	<i>0.97</i>
3	<i>Employees involvement</i>	<i>3.43</i>	<i>1.08</i>
4	<i>Employees recognition</i>	<i>3.22</i>	<i>1.13</i>
5	<i>People encouragement</i>	<i>3.32</i>	<i>1.13</i>
6	<i>Job satisfaction enhancement</i>	<i>3.25</i>	<i>1.19</i>
7	<i>Management systems</i>	<i>3.47</i>	<i>1.07</i>
8	<i>People competences and skills</i>	<i>3.80</i>	<i>0.91</i>
9	<i>Resource management (Man, Machine, Material...etc)</i>	<i>4.04</i>	<i>0.84</i>
10	<i>Partnership with customers and other stakeholders</i>	<i>3.76</i>	<i>0.93</i>
11	<i>Strategy and policy development</i>	<i>3.87</i>	<i>0.99</i>
12	<i>Team working spirit</i>	<i>3.70</i>	<i>1.03</i>
13	<i>Staff suggestions scheme</i>	<i>3.61</i>	<i>0.96</i>
14	<i>Communication and knowledge management</i>	<i>3.61</i>	<i>1.00</i>
15	<i>Flexible and dynamic organization structure</i>	<i>3.74</i>	<i>1.00</i>
16	<i>Recourse utilization</i>	<i>3.73</i>	<i>0.95</i>
17	<i>Performance management system</i>	<i>3.69</i>	<i>1.01</i>
18	<i>Processes design and management</i>	<i>3.80</i>	<i>0.98</i>
19	<i>Quality assurances</i>	<i>3.78</i>	<i>0.99</i>
20	<i>Continuous improvement</i>	<i>3.82</i>	<i>0.93</i>
21	<i>Benchmarking</i>	<i>3.60</i>	<i>0.99</i>
22	<i>Manpower planning and strategy</i>	<i>3.80</i>	<i>0.88</i>
23	<i>Product-Service design and delivery</i>	<i>3.86</i>	<i>0.84</i>
24	<i>Appropriate facilities</i>	<i>3.79</i>	<i>0.94</i>
25	<i>Social and corporate responsibility</i>	<i>3.77</i>	<i>0.85</i>
26	<i>Environmental responsibility</i>	<i>3.54</i>	<i>0.99</i>
27	<i>Emiratization careers scheme</i>	<i>3.68</i>	<i>0.89</i>

*Source: The Author*

Table (5.28) demonstrates the very high level actual practiced critical factors perceived by the respondents in the UAEPSI; they are distributed in a descending order

**Table 5.28 Perceived very high practiced critical factors in a descending order**

	<i>Very High Practiced critical factors</i>	<i>Descending order (% Responses)</i>
1	<i>Top management commitment</i>	35.24
2	<i>Continuous improvement</i>	29.84
3	<i>People competence and skills</i>	29.21
4	<i>Leadership style &amp; effective leader</i>	26.67
5	<i>Best practices and benchmarking</i>	24.13
6	<i>Staff suggestions scheme</i>	23.49
7	<i>Team working spirit</i>	22.86
8	<i>Employees involvement in setting plans and strategies</i>	22.54
9	<i>People &amp; organization behaviour</i>	22.22
10	<i>Emiratization careers scheme</i>	21.90
11	<i>Collaboration and partnership</i>	21.90
12	<i>Flexible and dynamic organization structure</i>	21.27
13	<i>Job satisfaction enhancement</i>	21.27
14	<i>Efficient recourse utilization</i>	20.32
15	<i>Dialogue and communication</i>	20.01

*Source: The Author*

In short, the figures in the earlier tables of this section conclude the highest percent for the statement of top management commitment, whilst, the smallest percent is for the recognition of employees. This evidence proves the research assumption of lack of understanding of quality concepts and techniques with regard to their impact on the performance of the UAEPSI. It also, presents the fact that UAEPSI management is highly committed in practice to the TQM principle in their institutions. However, these principles neither are nor properly transformed into actual practice. Eventually, if the internal customers are not satisfied with the level of improvement they perceive, meeting the expectation are far from being attained; ultimately UAEPSI falls short in realising the benefits of quality. This consequently has an impact on the satisfaction level of their external customers.

## 5.6 UAEPSI TQM PRACTICES

Most of the questions in this section are general, but some of them are specific and are particularly directed to the UAEPSI that implemented the UAEGEP. The researcher endeavours to determine the reasons for success and the constraints, as well as the impact of the results obtained during and after the implementation of the model. The data analysis obtained from the responses answer the research question number three which is '*What problems and/or obstacles are associated with TQM implementation practices in the UAEPSI?*'. The presentation of the proceeding tables and figures should allow the researcher to explore the elements that evolve in the development of the research proposed model.

The question of exploring the UAEPSI strives for their service improvements was inevitable as believed without a clear strategy; the UAEPSI will end up to no where in their journey to deliver quality services to their clients. Table (5.29) indicates the number of UAEPSI that has strategies for service delivery improvement

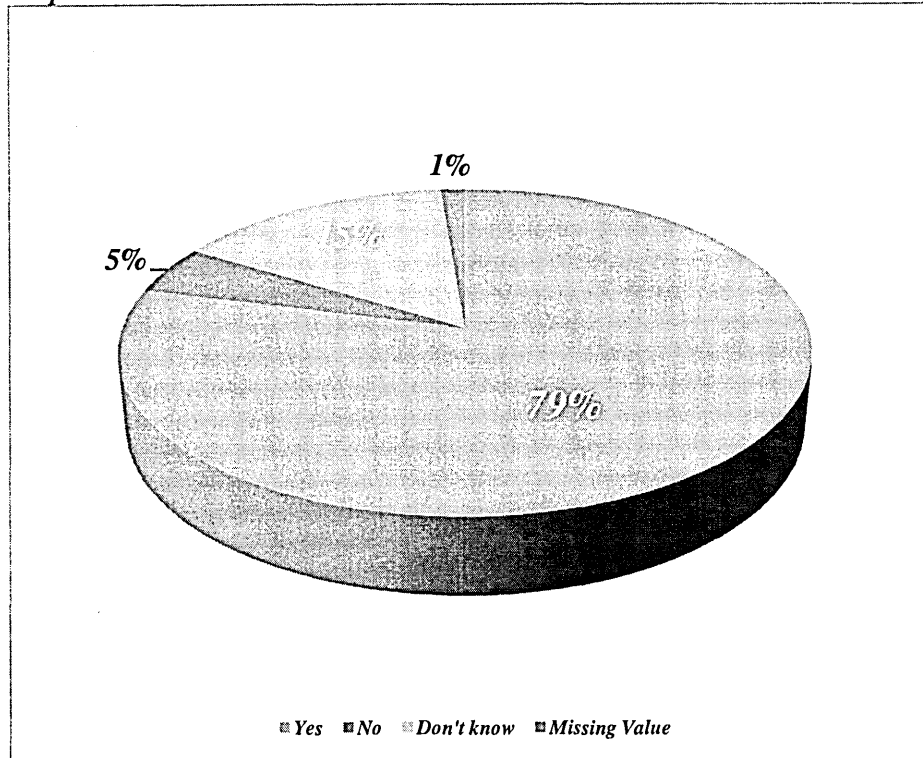
***Table 5.29 Number of UAEPSI that has strategies for service improvement***

<i>Options</i>	<i>Respondents Count</i>	<i>Respondents %</i>
<i>Yes</i>	<i>249</i>	<i>79%</i>
<i>No</i>	<i>15</i>	<i>5%</i>
<i>Don't know</i>	<i>47</i>	<i>15%</i>
<i>Missing Value</i>	<i>4</i>	<i>1%</i>
<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

As the above table displays, the vast majority of the respondents (79%) believe that their institutions have quality strategies for service improvements. but (15%) of the total respondents don't know if their institutions have any strategy. Figure (5.7) shows the percentage of UAEPSI with strategies for service delivery improvement

**Figure 5.7 Percentage of the UAEPSI with strategies for services delivery improvement**



Source: The Author

Figure (5.8) illustrates the percentage distribution according to the service sector of the UAEPSI that places the strategies for service delivery improvement. It is noticeable that the respondents of the human resource development institutions were more realistic in their responses, unlike the rest of the respondents from the other service sector whereby the majority were in favour of the fact that their institutions apply strategies for service improvement. Out of the (20) respondents of the human resource development institutions, (45%) agreed that their institution follow strategies for services improvement, (20%) were against putting any strategy in place, (25%) were unsure if there are any strategy, and (10%) preferred not to respond to this question.

**Table 5.30 Distribution of the UAEPSI with strategies for services improvement ranked according to their service sector**

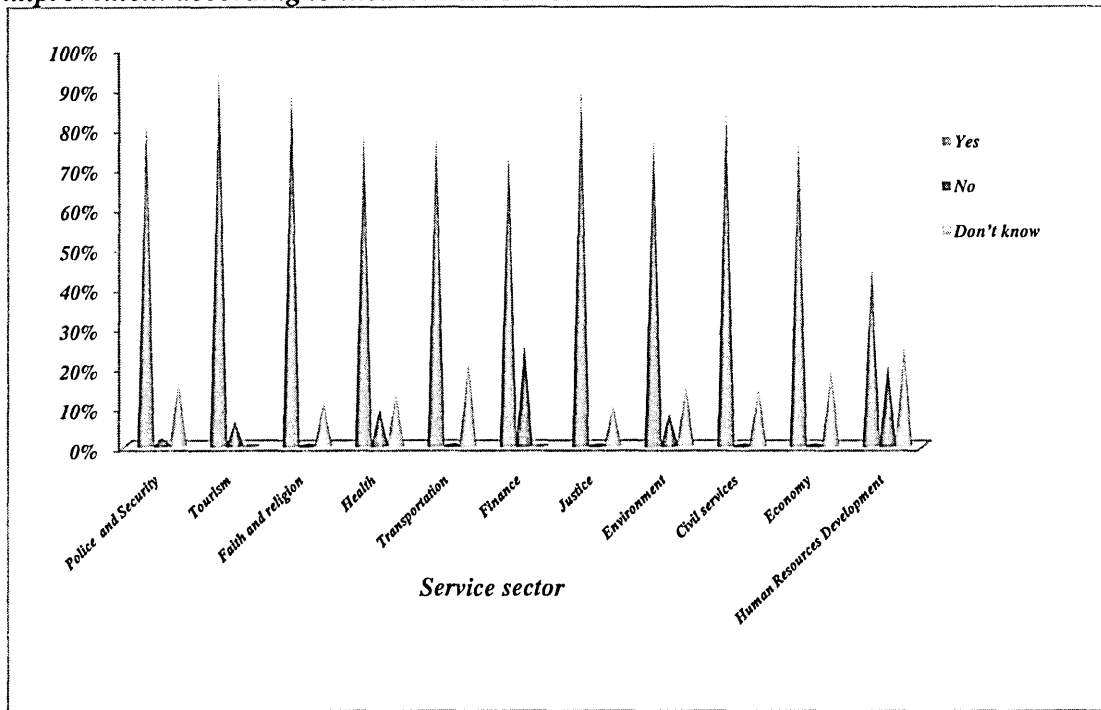
Main service sector	Options									
	Yes		No		Don't know		Missing Values		Total	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
1 Police and Security	45	18.07	1	6.67	9	19.15	0	0	55	17.46
2 Tourism	15	6.02	1	6.67	0	0.00	0	0	16	5.08
3 Faith and religion	16	6.43	0	0.00	2	4.26	0	0	18	5.71
4 Health	63	25.30	7	46.67	11	23.40	0	0	81	25.71
5 Transportation	19	7.63	0	0.00	5	10.64	0	0	24	7.62
6 Finance	3	1.20	1	6.67	0	0.00	0	0	4	1.27
7 Justice	9	3.61	0	0.00	1	2.13	0	0	10	3.17
8 Environment	10	4.02	1	6.67	2	4.26	0	0	13	4.13
9 Civil services	36	14.46	0	0.00	6	12.77	1	25	43	13.65
10 Economy	24	9.64	0	0.00	6	12.77	1	25	31	9.84
11 Human Resources Development	9	3.61	4	26.67	5	10.64	2	50	20	6.35
<b>Total</b>	<b>249</b>	<b>100</b>	<b>15</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>315</b>	<b>100</b>

Source: The Author

In total, 79% of respondents said that they had a strategy in place for service improvement. This very positive response was consistent across all types of surveyed UAEPSI. The health services, in particular, appeared to have the highest proportion of agreed strategies in place. But the figures contradict reality, as UAEPSI mainly in the health and education sector, pointed to the perceived level of service improvement which could hardly reach the minimal expectations of their customers.



**Figure 5.8 Percentage distribution of the UAEPSI with strategies for service improvement according to their service sector**



Source: The Author

*The Driving Forces for Quality Improvement in the UAEPSI*

This question attempted to explore what the main driving forces for quality improvement in the UAEPSI were. The difference between this question and the listed critical factors in sections three and four are: the question seeks the perception of the respondents in UAEPSI on aspects that drive for quality improvement. With respect to the earlier mentioned factors in section three and four, the researcher aimed to identify the most critical factors that are significant for the success of quality implementation and the scale of their application in their institutions.

Table (5.31) explores the main driving forces behind the adoption of quality implementation initiatives in the UAEPSI. The data reveals that the managerial leadership and the government policy were almost the two dominant forces with more than 80% of the total responses. Respondents commonly agreed that these are the main forcing factors that promote the quality implementation in the UAEPSI. Unsurprisingly, the people initiatives, indicative strategies and customer’s feedbacks were the least driving forces for quality, with percentages of 7.3%, 3.2% and 0.6% respectively. This result clearly indicates that the government quality policies and the managers that are

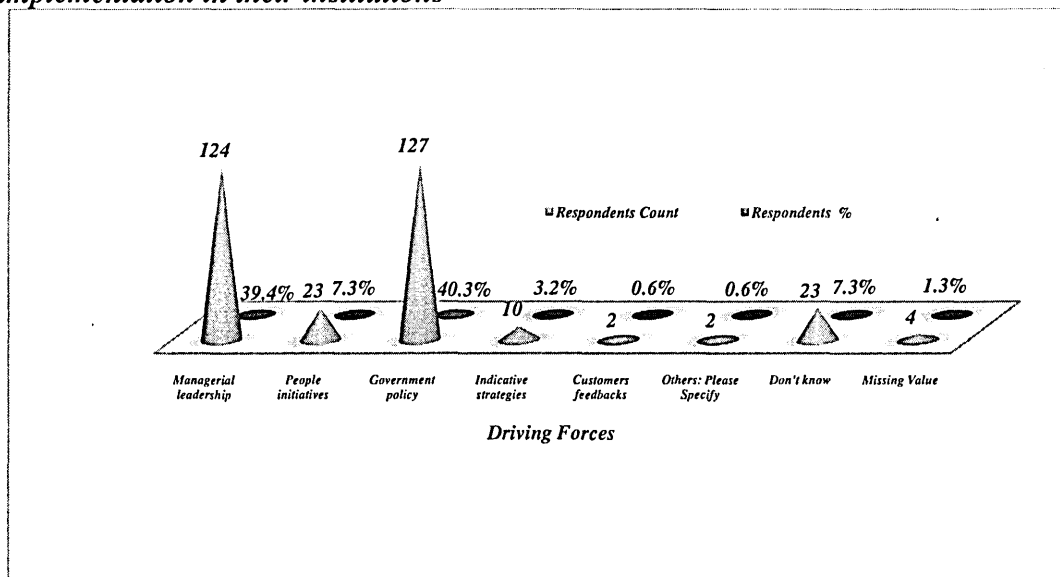
responsible for enforcing these policies are the main driving forces. This supports the researcher assumption that the quality implementation practices in the UAEPSI are profoundly driven by the government obligation and are not derived from fulfilling the internal and external customer's demands and expectations, (see Figure 5.9).

**Table 5.31 Respondents views on the driving forces for quality improvement in their Institutions**

	<i>Driving Forces</i>	<i>Frequency</i>	<i>Percent (%)</i>
1	<i>Managerial leadership</i>	124	39.4
2	<i>People initiatives</i>	23	7.3
3	<i>Government policy</i>	127	40.3
4	<i>Indicative strategies</i>	10	3.2
5	<i>Customers feedback</i>	2	0.6
6	<i>Others: Please Specify</i>	2	0.6
7	<i>Don't know</i>	23	7.3
8	<i>Missing Value</i>	4	1.3
	<i>Total</i>	315	100

Source: The Author

**Figure 5.9 Respondents views on forces principally responsible for driving quality implementation in their institutions**



Source: The Author

To provide a broader picture to the above driving forces, Table (5.32) illustrates in a matrix analysis two variables of the driving forces which were distributed according to UAEPSI legal entities. Almost all three categories (government authorities, local departments and government agencies) of the UAEPSI legal entities presented similar responses with slight differences.

**Table 5.32 Respondents view on forces principally responsible for the driving quality improvement in their institutions distributed according to their legal entities**

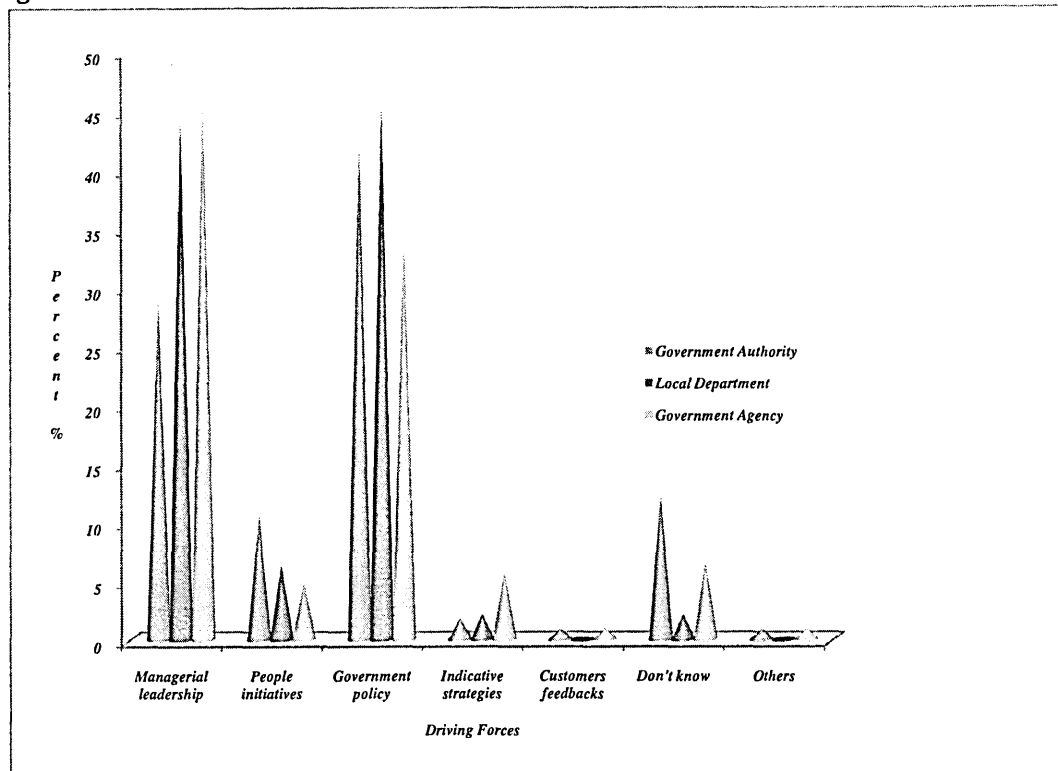
Driving Forces	Legal Entity							
	Government Authority		Local Department		Government Agency		Total	
	(N)	%	(N)	%	(N)	%	(N)	%
1 Managerial leadership	33	28.95	42	44.21	49	46.23	124	39.4
2 People initiatives	12	10.53	6	6.32	5	4.72	23	7.3
3 Government policy	48	42.11	43	45.26	36	33.96	127	40.3
4 Indicative strategies	2	1.75	2	2.11	6	5.66	10	3.2
5 Customers feedback	1	0.88	0	0.00	1	0.94	2	0.6
6 Don't know	14	12.28	2	2.11	7	6.60	23	7.3
7 Others	1	0.88	0	0.00	1	0.94	2	0.6
8 Missing Value	3	2.63	0	0.00	1	0.94	4	1.3
<b>Total</b>	<b>114</b>	<b>100</b>	<b>95</b>	<b>100</b>	<b>106</b>	<b>100</b>	<b>315</b>	<b>100</b>

Source: The Author

The survey sought respondents, views on a range of driving forces mainly responsible for the quality improvement and the successful deployment of the UAEGEP. Figure (5.10) presents the managerial leadership and governmental policies with the two major forces for driving quality in the three government entities. The results showed that they were very conventional; the respondents' view in all UAEPSI regarding the main quality driving forces could be summarized in a descending order as follows:

- *Government policy*
- *Managerial leadership*
- *People initiatives*

**Figure 5.10 Percentage distribution of respondents view on forces principally responsible for driving quality improvement in their institutions according to their legal entities**



Source: The Author

By reviewing Tables (5.31 and 5.32) and Figures (5.9 and 5.10), it becomes obvious that the respondents in the survey had mixed views concerning the forces driving improvement in their institutions. 40.3% of all respondents indicated that the ‘government policy’ was the principle force driving improvement, although there was a trivial variation between the government institutions of this (from 33.96% for the government agency to 45.26% for the local departments). The ‘Government policy’ was felt to be a principle driver for change by 39.4% of the respondents, with a surprisingly low 0.6% referring to ‘customer feedback’ as a driver. The variation for the later was again marked; however, with the lowest reference to the customer’s feedback as a driver being given by the government authorities (0.88%). The data analysis supports the researcher assumption that the ‘managerial leadership’ was the second significant driving force for the quality improvements in the UAEPSI. As it is clearly perceived, the senior management in all government institutions mirrors the government policy towards quality improvement; hence, they complement the government quality initiatives and ensure that these policies and strategies are enforced and are effective. The UAEPSI quality improvement is thus primarily driven by the U.A.E. government

quality policy and not by the need to fulfill the customers' demands or to meet their expectations and satisfaction. It is very lucid that senior management in the UAEPSI undertakes quality implementation practices as a strategic policy for their service improvement committed to this without the government enforcements.

*The Importance of the UAEGEP as an Approach for Quality Improvement in Their Institutions*

The survey asked if the respondents were able to identify the importance of implementing UAEGEP on a scale of quality improvement within their institutions. The overall majority of those surveyed indicated that there is a 'very important' relation between the two factors. Table (5.33) indicates the respondents' general view regarding the importance level of the UAEGEP as an approach for service improvement in their institution

**Table 5.33 Respondents' views on the importance of the UAEGEP as an approach for quality improvement in their institutions**

	<i>Options</i>	<i>Frequency</i>	<i>Percent (%)</i>
<i>1</i>	<i>Very important</i>	<i>181</i>	<i>57.46</i>
<i>2</i>	<i>Important</i>	<i>90</i>	<i>28.57</i>
<i>3</i>	<i>Not important</i>	<i>4</i>	<i>1.27</i>
<i>4</i>	<i>Not important at all</i>	<i>1</i>	<i>0.32</i>
<i>5</i>	<i>Don't know</i>	<i>34</i>	<i>10.79</i>
<i>6</i>	<i>Missing Value</i>	<i>5</i>	<i>1.59</i>
	<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

In portraying the figures in the above table, again the results were not very much surprising; they are as the researcher expected them. As the majority of respondents think that the UAEGEP approach of quality is (very important, important) in the total percentage of 86.03%; just 10.79% of the respondents indicated that they did not know. This again proves the dominant role of the U.A.E. government being the topmost motive for the TQM implementation in the UAEPSI.

Table (5.34) presents the percentage distribution of the respondent's views on the importance of the UAEGEP as an approach for quality and excellence improvement according to the service sectors

**Table 5.34 Percentage distribution of the respondents views on the importance of the UAEGEP as an approach for quality improvement according to their service sectors**

Service Sectors	Options									
	Very important		Important		Not important		Not important at all		Don't know	
	Count	%	Count	%	Count	%	Count	%	Count	%
<i>Police and Security</i>	34	61.82	19	34.55	0	0.00	0	0	2	3.64
<i>Tourism</i>	11	68.75	4	25.00	0	0.00	0	0	1	6.25
<i>Faith and religion</i>	13	72.22	5	27.78	0	0.00	0	0	0	0.00
<i>Health</i>	52	64.20	20	24.69	1	1.23	0	0	8	9.88
<i>Transportation</i>	12	50.00	10	41.67	1	4.17	0	0	1	4.17
<i>Finance</i>	0	0.00	4	100	0	0.00	0	0	0	0.00
<i>Justice</i>	5	50.00	3	30.00	0	0.00	0	0	2	20.00
<i>Environment</i>	7	53.85	3	23.08	0	0.00	0	0	3	23.08
<i>Civil services</i>	30	69.77	5	11.63	1	2.33	0	0	6	13.95
<i>Economy</i>	14	45.16	11	35.48	0	0.00	0	0	6	19.35
<i>Human Resources Development</i>	3	15.00	6	30.00	1	5.00	1	5	5	25.00
<b>Total</b>	<b>181</b>	<b>57.46</b>	<b>90</b>	<b>28.57</b>	<b>4</b>	<b>1.27</b>	<b>1</b>	<b>0.32</b>	<b>34</b>	<b>10.79</b>

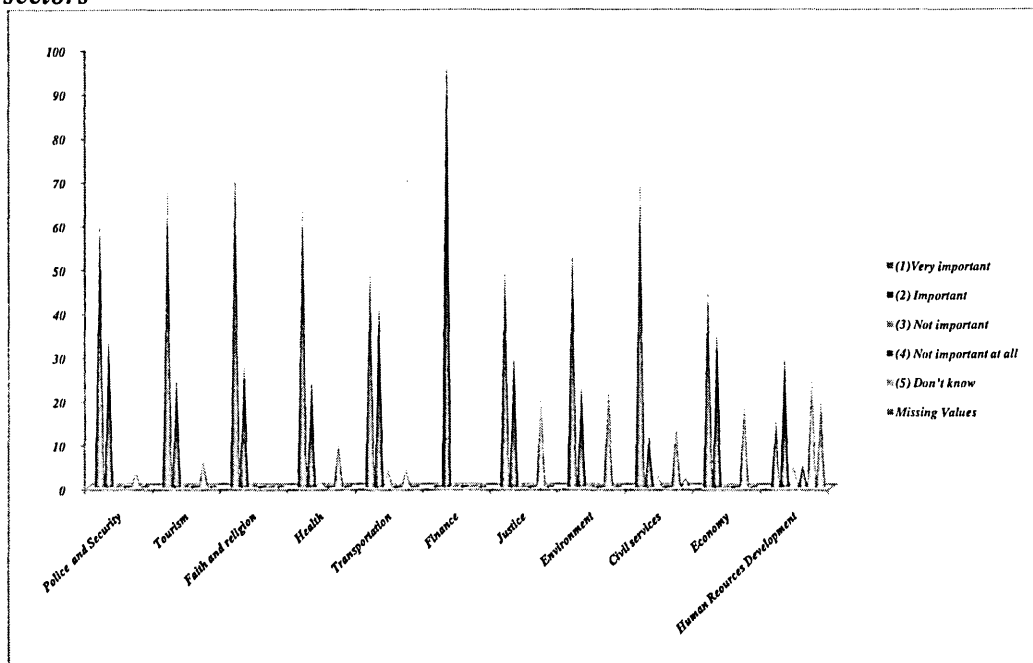
Source: The Author

The analysis of the data of Table (5.34) reveals the following facts:

- *The relative importance of the scale; very important was the highest in most of the UAEPSI except the human resource development and finance*
- *10% of the institutions in the human resource development sector perceived that UAEGEP is not important for service improvement*
- *There is a lack of understanding concerning the importance of UAEGEP as a system for service improvement especially in the UAEPSI human resource development and environment sectors.*

In overall terms, the data analysis of the survey results showed that the vast majority of respondents (57.46%) and (28.57%) believed that UAEGEP is ‘very important’ and ‘important’ in the driving service improvement in their institutions. Figure (5.11) shows the percentage distribution of the respondent’s views as regards the importance of the UAEGEP as an approach for quality and excellence improvement as related to the service sectors. Faith and religion sectors are the most highly rated (72.22%) indicating that they are very important, with the lowest ratings coming from the economy sector institutions (45.16%) and the human resources development institutions (15%).

**Figure 5.11 Percentage distributions of the respondent’s views on the importance of the UAEGEP as an approach for quality improvement according to their service sectors**



Source: The Author

In investigating the effect of UAEGEP on the improvement of the UAEPSI services. The views of the respondents were unpredictable as the majority of them (67.94%) either did not perceive any improvement at all or they not sure. One can conclude that the quality programme impact on services was very limited. The justification is that quality implementation payoffs are more tangible in the long run, and because the UAEGEP was recently introduced in some institutions, the employees or customers' perceptions to service improvement are much unforeseen in the short run. Table (5.35) describes the extent to which the implementation of the UAEGEP improved services in their institution. Table (5.36) presents the percentage distribution according to the

institutions legal entities regarding the extent of UAEGEP implementation for the institutions services improvement.

**Table 5.35 Respondents view on the extent to which the UAEGEP improved their institutions services**

<i>Options</i>		<i>Frequency</i>	<i>Percent %</i>
<i>1</i>	<i>Totally</i>	<i>3</i>	<i>0.95</i>
<i>2</i>	<i>Partially</i>	<i>31</i>	<i>9.84</i>
<i>3</i>	<i>Barely</i>	<i>61</i>	<i>19.37</i>
<i>4</i>	<i>Not at all</i>	<i>98</i>	<i>31.11</i>
<i>5</i>	<i>Not sure</i>	<i>116</i>	<i>36.83</i>
<i>6</i>	<i>Missing Value</i>	<i>6</i>	<i>1.90</i>
<i>Total</i>		<i>315</i>	<i>100</i>

*Source: The Author*

As evident from their responses, around one third of the employee in all the three groups (legal entity) of the UAEPSI were unsure of the UAEGEP impact on their institutions services improvement. □□□employees in government authorities had the highest percentage (38.60%) of the responses; they were not sure about the extent of the UAEGEP on the service improvement of their institutions. These facts are also illustrated in Figure (5.12).

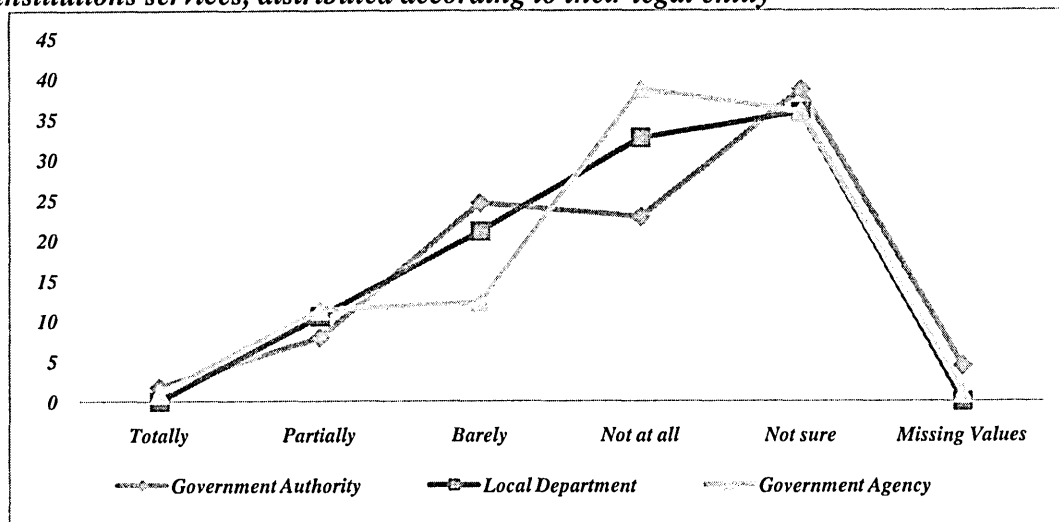
**Table 5.36 Distribution of the respondents view on the extent that the UAEGEP improved their institutions services according to their legal entity**

<i>Options</i>	<i>Legal Entity</i>								
	<i>Government Authority</i>		<i>Local Department</i>		<i>Government Agency</i>		<i>Total</i>		
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	
<i>1</i>	<i>Totally</i>	<i>2</i>	<i>1.75</i>	<i>0</i>	<i>0.00</i>	<i>1</i>	<i>0.94</i>	<i>3</i>	<i>0.95</i>
<i>2</i>	<i>Partially</i>	<i>9</i>	<i>7.89</i>	<i>10</i>	<i>10.53</i>	<i>12</i>	<i>11.32</i>	<i>31</i>	<i>9.84</i>
<i>3</i>	<i>Barely</i>	<i>28</i>	<i>24.56</i>	<i>20</i>	<i>21.05</i>	<i>13</i>	<i>12.26</i>	<i>61</i>	<i>19.37</i>
<i>4</i>	<i>Not at all</i>	<i>26</i>	<i>22.81</i>	<i>31</i>	<i>32.63</i>	<i>41</i>	<i>38.68</i>	<i>98</i>	<i>31.11</i>
<i>5</i>	<i>Not sure</i>	<i>44</i>	<i>38.60</i>	<i>34</i>	<i>35.79</i>	<i>38</i>	<i>35.85</i>	<i>116</i>	<i>36.83</i>
<i>6</i>	<i>Missing Values</i>	<i>5</i>	<i>4.39</i>	<i>0</i>	<i>0.00</i>	<i>1</i>	<i>0.94</i>	<i>6</i>	<i>1.90</i>
<i>Total</i>		<i>114</i>	<i>100</i>	<i>95</i>	<i>100</i>	<i>106</i>	<i>100</i>	<i>315</i>	<i>100</i>

*Source: The Author*



**Figure 5.12 Respondents view on the extent that the UAEGEP improved their institutions services, distributed according to their legal entity**



Source: The Author

The respondents were asked a question related to whether the UAEGEP criteria were difficult to adopt. By scrutinizing the data, it becomes obvious that almost 39% of the respondents don't know. This is because either the employees in the UAEPSI are ignorant of the criteria and its adoption or they were not sure of their responses as they were unable to give a precise answer. Table (5.37) reveals the respondents responses in terms of frequencies and relative percentage. 34% of the respondents indicated that they had encountered difficulties in understanding or adopting the criteria of the UAEGEP.

**Table 5.37 Respondents found the UAEGEP criteria difficult to adopt**

Options	Frequency	Percent %
1 Yes	108	34
2 No	79	25
3 Don't Know	122	39
4 Missing Value	6	2
<b>Total</b>	<b>315</b>	<b>100</b>

Source: The Author

To be more precise with regards to the percentage of data analysis identifying which service sector was the most familiar in adopting the UAEGEP criteria in their institutions, one should examine Table (5.38) and Figure (5.13). All respondents in the finance sector found out that the adoption of the UAEGEP criteria was not difficult.

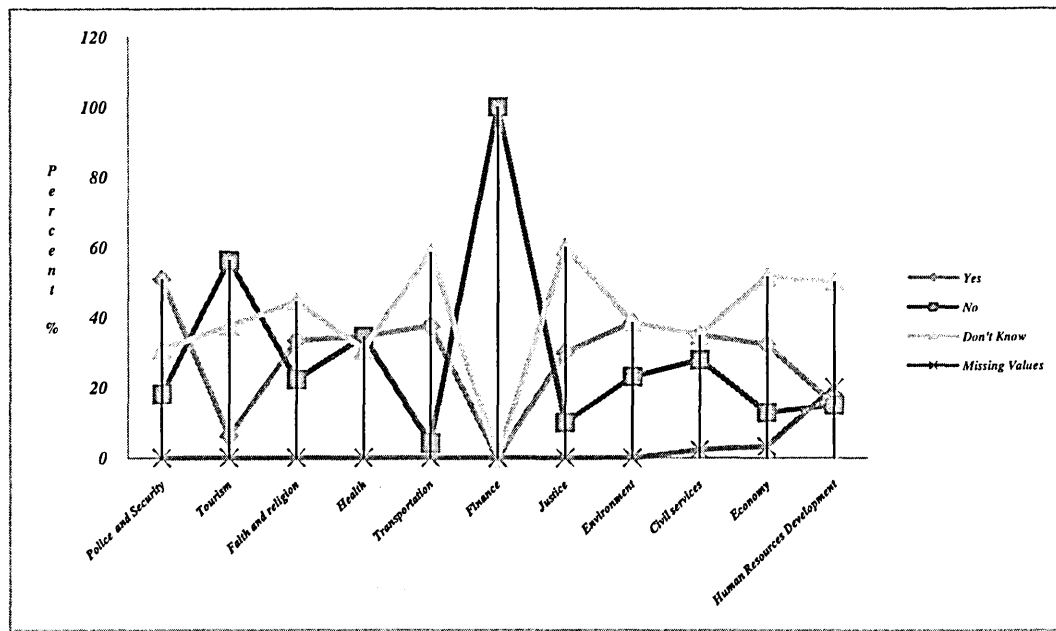
Slightly above 50% of the respondents in the police and security sector found out that the adoption of the UAEGEP criteria was difficult. Around two thirds of the respondents from the transportation and justice sector don't know whether the adoption of the UAEGEP criteria were difficult. Alternatively, half of the respondents from the human resource development and the economy sectors don't know if the adoption of UAEGEP criteria were difficult

**Table 5.38 Respondents found out that the UAEGEP criteria were difficult to adopt; they are distributed according to service sector**

<i>Service Sectors</i>	<i>Options</i>						<i>Missing Values</i>		<i>Total</i>	
	<i>Yes</i>		<i>No</i>		<i>Don't Know</i>		<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>				
<i>1 Police and Security</i>	28	50.91	10	18.18	17	30.91	0	0.00	55	17.46
<i>2 Tourism</i>	1	6.25	9	56.25	6	37.50	0	0.00	16	5.08
<i>3 Faith and religion</i>	6	33.33	4	22.22	8	44.44	0	0.00	18	5.71
<i>4 Health</i>	28	34.57	28	34.57	25	30.86	0	0.00	81	25.72
<i>5 Transportation</i>	9	37.50	1	4.17	14	58.33	0	0.00	24	7.62
<i>6 Finance</i>	0	0.00	4	100.00	0	0.00	0	0.00	4	1.27
<i>7 Justice</i>	3	30.00	1	10.00	6	60.00	0	0.00	10	3.17
<i>8 Environment</i>	5	38.46	3	23.08	5	38.46	0	0.00	13	4.13
<i>9 Civil services</i>	15	34.88	12	27.91	15	34.88	1	2.33	43	13.65
<i>10 Economy</i>	10	32.26	4	12.90	16	51.61	1	3.23	31	9.84
<i>11 Human Resources Development</i>	3	15.00	3	15.00	10	50.00	4	20.00	20	6.35
<b><i>Total</i></b>	<b>108</b>	<b>34.29</b>	<b>79</b>	<b>25.08</b>	<b>122</b>	<b>38.73</b>	<b>6</b>	<b>1.90</b>	<b>315</b>	<b>100</b>

*Source: The Author*

**Figure 5.13 Respondents found out that the UAEGEP criteria were difficult to adopt; they were distributed according to service sector**



Source: the Author

The researcher attempted to explore the level of employees training as related to the UAEGEP criteria. The data from this question would enable the research to ensure the extent to which people in the UAEPSI were trained on how to apply the UAEGEP criteria's. By examining Table (5.39), the figures undoubtedly ascertain the researcher expectancy. More than half of total respondents (50.16%) don't know how many people were tainted on the UAEGEP criteria.

**Table 5.39 Responses on number of staff trained on the UAEGEP criteria**

Options	Frequency	Percent %
1 None	16	5.08
2 1 to 50	47	14.92
3 51 to 100	56	17.78
4 101 to 150	18	5.71
5 More than 150	15	4.76
6 Don't Know	158	50.16
7 Missing Value	5	1.59
<b>Total</b>	<b>315</b>	<b>100</b>

Source: The Author

Table (5.40) reveals that on average, 50% of the respondents from all service sector institutions don't know how many people have been trained on the UAEGEP criteria whereas, 50% of respondents in the finance sector institutions claimed that none of staff in their institutions were trained on the UAEGEP criteria. In general, there was no consensus among the respondents within each service sector in terms of the number of people who have been trained on the UAEGEP criteria. See Figure (5.14)

**Table 5.40 Distribution of responses on the number of staff that have been trained on the UAEGEP criteria according to service sector**

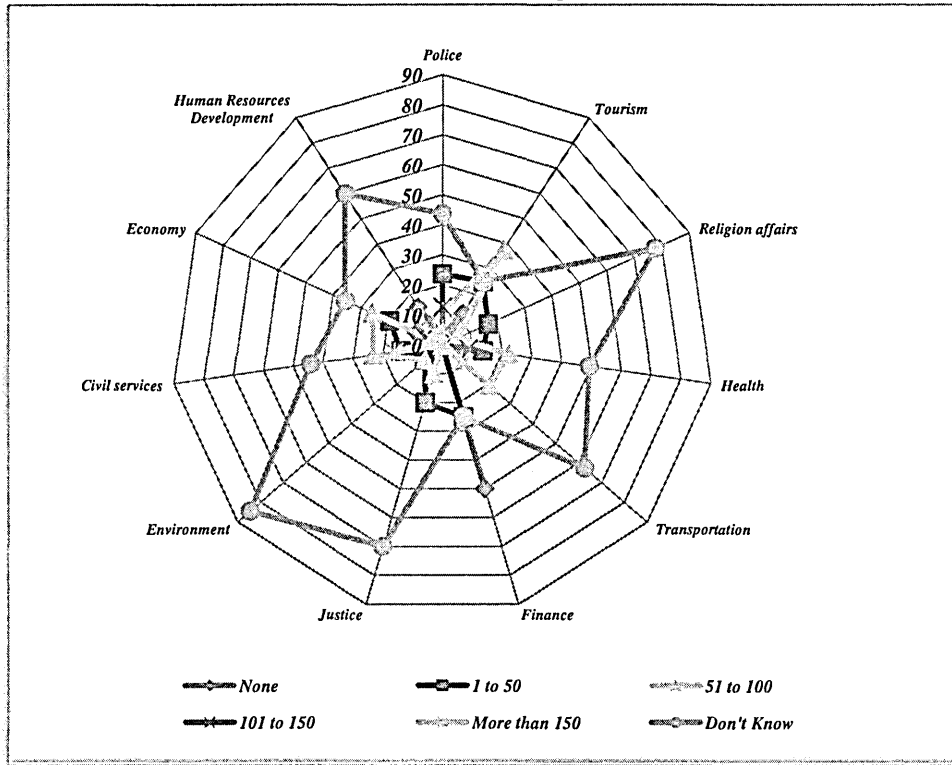
service sector	Options											
	None		1 to 50		51 to 100		101 to 150		More than 150		Don't Know	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
1 Police	2	3.64	13	23.64	6	10.91	7	12.73	3	5.45	24	43.64
2 Tourism	2	12.50	4	25.00	6	37.50	0	0.00	0	0.00	4	25.00
3 Religion affairs	0	0.00	3	16.67	1	5.56	0	0.00	0	0.00	14	77.78
4 Health	4	4.94	11	13.58	18	22.22	7	8.64	1	1.23	40	49.38
5 Transportation	0	0.00	0	0.00	5	20.83	2	8.33	2	8.33	15	62.50
6 Finance	2	50.00	1	25.00	0	0.00	0	0.00	0	0.00	1	25.00
7 Justice	0	0.00	2	20.00	1	10.00	0	0.00	0	0.00	7	70.00
8 Environment	0	0.00	1	7.69	1	7.69	0	0.00	0	0.00	11	84.62
9 Civil services	0	0.00	6	13.95	10	23.26	0	0.00	7	16.28	19	44.19
10 Economy	3	9.68	6	19.35	8	25.81	2	6.45	1	3.23	11	35.48
11 Human Resources Development	3	15.00	0	0.00	0	0.00	0	0.00	1	5.00	12	60.00
<b>Total</b>	<b>16</b>	<b>5.08</b>	<b>47</b>	<b>14.92</b>	<b>56</b>	<b>17.78</b>	<b>18</b>	<b>5.71</b>	<b>15</b>	<b>4.76</b>	<b>158</b>	<b>50.16</b>

Source: The Author

The survey results suggested that there is a considerable variation in the number of staff that the institutions have trained on the UAEGEP criteria. Much of this could be explained of course by the size of the institutions involved. By looking to Table (5.40) and Figure (5.14), the majority of UAEPSI falls under category group (51-100) in which the employees were trained on the criteria of the UAEGEP. (49.38%) respondents from the health service institutions indicated that they don't know how many people were trained whereas (5.08%) of the respondents suggested that they had nil trained staff. In over all terms, (4.76%) of those surveyed appeared to have 150 or more staff trained for

the UAEGEP criteria, including (16.28%) of all the civil service respondents. Figure (5.14) portrays concisely the percentage of employees according to the UAEPSI service sector.

**Figure 5.14 Distribution of responses on the number of staff that have been trained on the UAEGEP criteria according to the service sector**



Source: The Author

The results of data analysis are related to the ratio of the quality awareness in the UAEPSI. Table (5.41) presents the percentage ratio ranging from (0%) to (100%) awareness. Although the research respondent population sample was UAEPSI who were engaged with UAEGEP, still few abnormal responses appeared where 8 respondents representing (2.54%) indicated nil percent quality awareness in their institutions. However, the majority of the respondents (39.37%) 'Don't know' the percentage of quality awareness among employees in their institutions.

**Table 5.41 Respondents rating quality awareness of employees in their institutions (%)**

	<i>Options</i>	<i>Frequency</i>	<i>Percent %</i>
1	0%	8	2.54
2	25%	79	25.07
3	50%	45	14.29
4	75%	41	13.02
5	100%	11	3.49
6	Don't Know	124	39.37
7	Missing Value	7	2.22
	<b>Total</b>	<b>315</b>	<b>100</b>

*Source: The Author*

Most of institutions surveyed indicated that (25%) or less of their employees had received quality awareness training in the implementation of the UAEGEP. Only (3.49%) of the respondents provided (100%) of their employees with adequate quality awareness training.

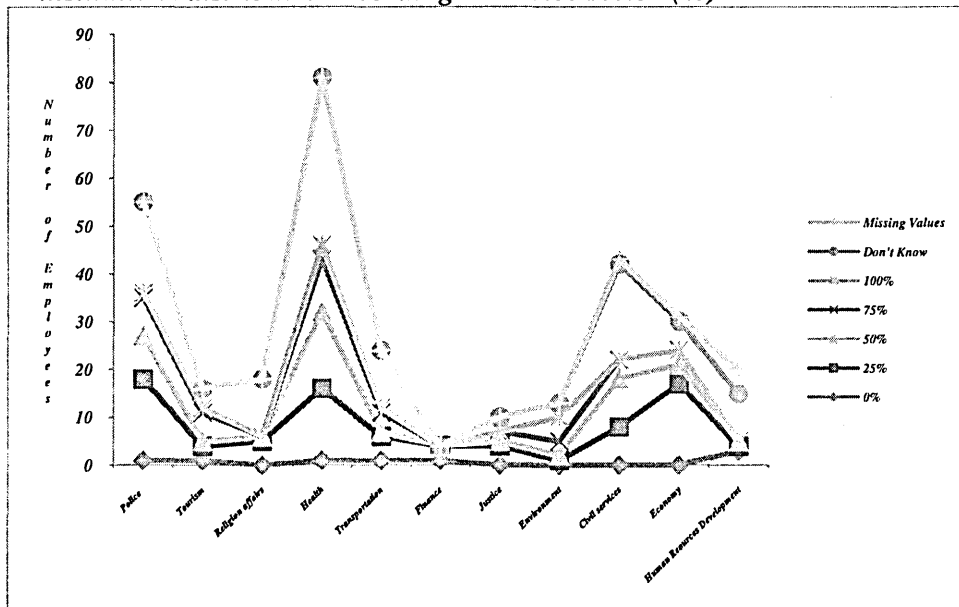
In Table (5.42), the figures were distributed according to UAEPSI service sector, in which the respondents (38.46%) in the environment sector (100%) indicated their quality awareness. (25%) of respondents in the finance sector indicated (0%) their quality awareness which is the highest rate among the rest in the service sector institutions. While (66.67%) of the respondents in the religious affairs represent the highest percentage rate of 'don't know'; they do not know whether the employees in their institutions had any quality awareness. These facts are properly presented in Figure (5.15).

**Table 5.42 Respondents rating quality awareness of employees in their institutions distributed according to service sector (%)**

service sector	Options in percentage (%)											
	0%		25%		50%		75%		100%		Don't Know	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
1 Police	1	1.82	17	30.91	9	16.36	8	14.55	1	1.82	19	34.55
2 Tourism	1	6.25	3	18.75	1	6.25	6	37.50	1	6.25	4	25.00
3 Religion affairs	0	0.00	5	27.78	1	5.56	0	0.00	0	0.00	12	66.67
4 Health	1	1.23	15	18.52	16	19.75	11	13.58	3	3.70	35	43.21
5 Transportation	1	4.17	5	20.83	1	4.17	4	16.67	1	4.17	12	50.00
6 Finance	1	25.00	3	75.00	0	0.00	0	0.00	0	0.00	0	0.00
7 Justice	0	0.00	4	40.00	1	10.00	2	20.00	0	0.00	3	30.00
8 Environment	0	0.00	1	7.69	1	7.69	3	23.08	5	38.46	3	23.08
9 Civil services	0	0.00	8	18.60	10	23.26	4	9.30	0	0.00	20	46.51
10 Economy	0	0.00	17	54.84	4	12.90	3	9.68	0	0.00	6	19.35
11 Human Resources Development	3	15.00	1	5.00	1	5.00	0	0.00	0	0.00	10	50.00
<b>Total</b>	<b>8</b>	<b>2.54</b>	<b>79</b>	<b>25.07</b>	<b>45</b>	<b>14.29</b>	<b>41</b>	<b>13.02</b>	<b>11</b>	<b>3.49</b>	<b>124</b>	<b>39.37</b>

Source: The Author

**Figure 5.15 Respondents rating quality awareness of employees in their institutions distributed according to service sector (%)**



Source: The Author

Table (5.43) indicates that (64.44%) of the respondents affirmed that quality is not a continuous process in their institutions. Equally important, (19.05%) of the respondents did not know if TQM was as a process in their institutions. The data signals to the scale the employee's involvement in the whole process of quality implementation in their institutions. Figure (5.16) displays the respondent's perception of quality as a continuous process in their institutions according to the service sector.

**Table 5.43 Respondents perception on quality as a continuous process in their institutions**

	<i>Options</i>	<i>Frequency</i>	<i>Percent %</i>
1	<i>Yes</i>	<i>46</i>	<i>14.60</i>
2	<i>No</i>	<i>203</i>	<i>64.44</i>
3	<i>Don't Know</i>	<i>60</i>	<i>19.05</i>
4	<i>Missing Value</i>	<i>6</i>	<i>1.91</i>
	<i>Total</i>	<i>315</i>	<i>100</i>

*Source: The Author*

In classifying the respondent's perception of the continuity process of TQM practices in their institutions, the responses were distributed according to the UAEPSI service sector. Table (5.44) evidently addresses the institutions in the justice sector (90%), the police sector (80%), and the transportation sector (79.17%); they were among the highest responses asserting that quality is not a continuous process whereas (50%) of respondents in the human resource sector 'don't know' if TQM is continuously practiced in their institutions.



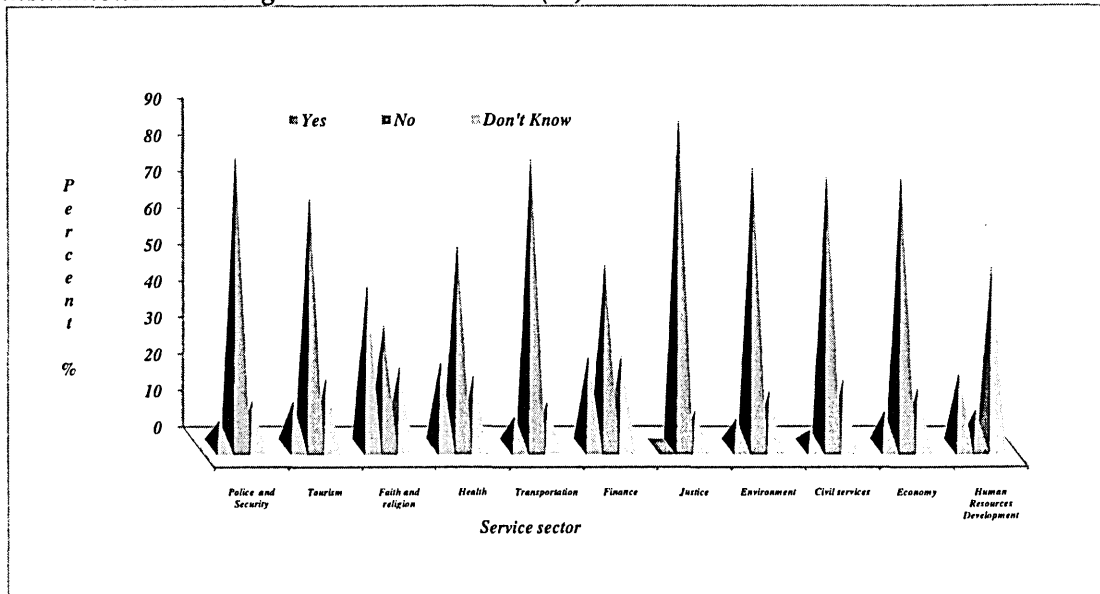
**Table 5.44 Distribution of respondent's perception on quality as continuous process in their institutions according to the service sector**

Service Sectors	Options						Missing Values		Total	
	Yes		No		Don't Know		(N)	(%)	(N)	(%)
	(N)	(%)	(N)	(%)	(N)	(%)				
1 Police and Security	4	7.27	44	80.00	7	12.73	0	0.00	55	17.46
2 Tourism	2	12.50	11	68.75	3	18.75	0	0.00	16	5.08
3 Faith and religion	8	44.44	6	33.33	4	22.22	0	0.00	18	5.72
4 Health	19	23.46	45	55.56	16	19.75	1	1.23	81	25.71
5 Transportation	2	8.33	19	79.17	3	12.50	0	0.00	24	7.62
6 Finance	1	25.00	2	50.00	1	25.00	0	0.00	4	1.27
7 Justice	0	0.00	9	90.00	1	10.00	0	0.00	10	3.17
8 Environment	1	7.69	10	76.92	2	15.38	0	0.00	13	4.13
9 Civil services	2	4.65	32	74.42	8	18.60	1	2.33	43	13.65
10 Economy	3	9.68	23	74.19	5	16.13	0	0.00	31	9.84
11 Human Resources Development	4	20.00	2	10.00	10	50.00	4	20.00	20	6.35
<b>Total</b>	<b>46</b>	<b>14.60</b>	<b>203</b>	<b>64.44</b>	<b>60</b>	<b>19.05</b>	<b>6</b>	<b>1.91</b>	<b>315</b>	<b>100</b>

Source: The Author

Alternatively, (44.44%) of the total responses of the institutions in the faith and religion sector were very positive about their responses, as they said 'yes'. However, the responses of the justice sectors were (0%) as none of respondents exercises TQM practices as a continuous process. These finding are accurately displayed in Figure (5.16).

**Figure 5.16 Respondent's perception on quality as a continuous process in their institutions according to the service sector (%)**



Source: The Author

Perceptions of the extent the UAEGEP criteria were implemented in the entire UAEPSI; the total responses (49.21%) were positive; (24.44%) responded 'No, and (24.13%) responded 'Don't know'. These responses are presented below in Table (5.45).

**Table 5.45 Respondents perception of the implementation of the UAEGEP in their entire institution**

Options	Frequency	Percent %
1 Yes	155	49.21
2 No	77	24.44
3 Don't Know	76	24.13
4 Missing Value	7	2.22
<b>Total</b>	<b>315</b>	<b>100</b>

Source: The Author

However, to present concise details, Table (5.46) presents the data according to the UAEPSI service sector. The highest percentage rates of the respondents who think the UAEGEP criteria are implemented in their entire institutions are: the economic sector (77.42%), followed by the environment sector (76.92%), and the tourism sector (75%). Conversely the highest percentage rates of respondents who reckon that the UAEGEP criteria are not implemented entirely in their institutions are: faith and religion sector

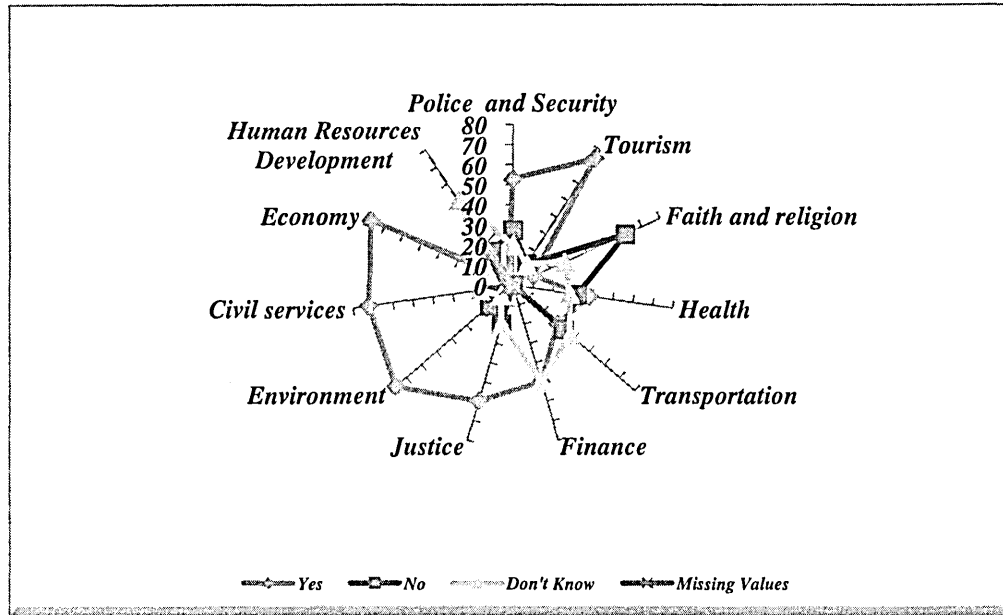
(61.11%), followed by the transportation sector (33.33%), and then the health sector (32.10%). Figure (5.17) shows the percentage rate of the UAEPSI categorised according to their service sector.

**Table 5.46 Distribution of respondent's perception on the implementation of the UAEGEP in their entire institution according to service sector**

Service Sectors	Options						Missing Values		Total	
	Yes		No		Don't Know		(N)	%	(N)	%
	(N)	%	(N)	%	(N)	%				
1 Police and Security	29	52.73	15	27.27	11	20.00	0	0.00	55	17.46
2 Tourism	12	75.00	2	12.50	2	12.50	0	0.00	16	5.08
3 Faith and religion	2	11.11	11	61.11	5	27.78	0	0.00	18	5.71
4 Health	31	38.27	26	32.10	23	28.40	1	1.23	81	25.71
5 Transportation	7	29.17	8	33.33	9	37.50	0	0.00	24	7.62
6 Finance	2	50.00	0	0.00	2	50.00	0	0.00	4	1.27
7 Justice	6	60.00	2	20.00	2	20.00	0	0.00	10	3.17
8 Environment	10	76.92	2	15.38	1	7.69	0	0.00	13	4.13
9 Civil services	31	72.09	4	9.30	7	16.28	1	2.33	43	13.65
10 Economy	24	77.42	3	9.68	4	12.90	0	0.00	31	9.84
11 Human Resources Development	1	5.00	4	20.00	10	50.00	5	25.00	20	6.35
<b>Total</b>	<b>155</b>	<b>49.21</b>	<b>77</b>	<b>24.44</b>	<b>76</b>	<b>24.13</b>	<b>7</b>	<b>2.22</b>	<b>315</b>	<b>100</b>

Source: The Author

**Figure 5.17 Distribution of respondent's perception on the implementation of the UAEGEP in their entire institution according to service sector (%)**



Source: The Author

The Institution conducted self assessment against the UAEGEP performance measurements

Table (5.47) demonstrates that (48%) of the survey respondents indicated that they had not undertaken any self assessment against the UAEGEP criteria. In addition, (37%) of the respondent don't know whether their institutions carried out any self assessment performance measurement. Thus, a total of (85%) of the responses significantly indicated a lack of assessment instruments in the majority of UAEPsi.

**Table 5.47 Respondents perception on their institutions conducted self assessment against the UAEGEP criteria**

Options	Frequency	Percent %
1 Yes	41	13
2 No	151	48
3 Don't Know	118	37
4 Missing Value	5	2
<b>Total</b>	<b>315</b>	<b>100</b>

Source: The Author

The responses ranged from (69.23%) of the environment sector to (15%) of the human resources development sector as described in Table (5.48). The figures provide viable evidence that all respondents regardless of their service sectors institution perceive the nonexistence of such self assessment experimentation against the UAEGEP criteria. Figure (5.18) exhibits the figures in Table (5.48) in a simpler mode.

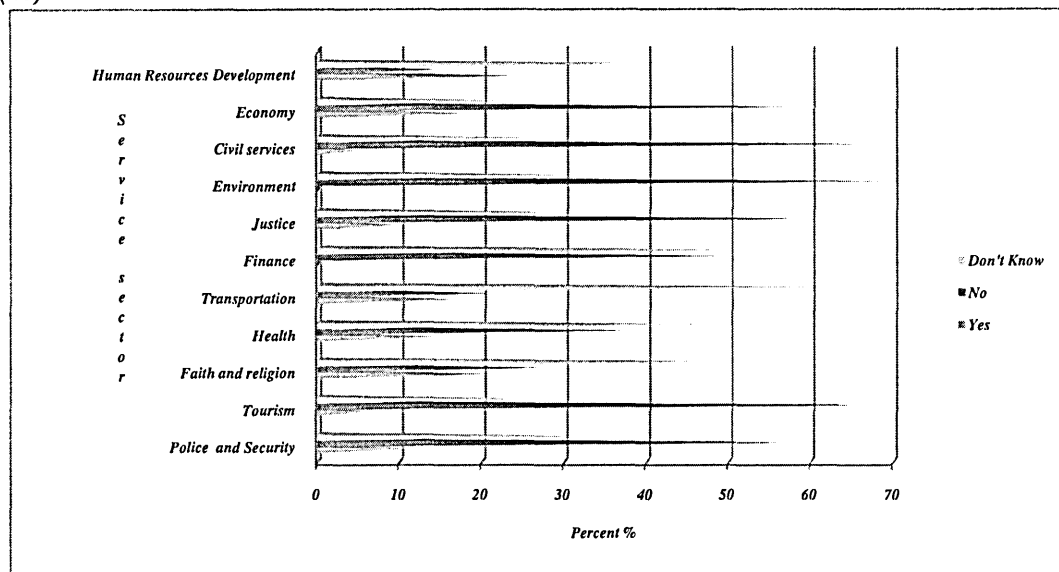
***Table 5.48 Respondents perception on their institutions conducted self assessment against the UAEGEP criteria distributed according to service sector***

<i>Service Sectors</i>	<i>Options</i>						<i>Missing Values</i>		<i>Total</i>	
	<i>Yes</i>		<i>No</i>		<i>Don't Know</i>		<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>				
<i>1 Police and Security</i>	6	10.91	32	58.18	17	30.91	0	0.00	55	17.46
<i>2 Tourism</i>	1	6.25	11	68.75	4	25.00	0	0.00	16	5.08
<i>3 Faith and religion</i>	4	22.22	5	27.78	9	50.00	0	0.00	18	5.71
<i>4 Health</i>	12	14.81	31	38.27	38	46.91	0	0.00	81	25.71
<i>5 Transportation</i>	4	16.67	5	20.83	15	62.50	0	0.00	24	7.62
<i>6 Finance</i>	0	0.00	2	50.00	2	50.00	0	0.00	4	1.27
<i>7 Justice</i>	1	10.00	6	60.00	3	30.00	0	0.00	10	3.17
<i>8 Environment</i>	0	0.00	9	69.23	4	30.77	0	0.00	13	4.13
<i>9 Civil services</i>	2	4.65	29	67.44	11	25.58	1	2.33	43	13.65
<i>10 Economy</i>	6	19.35	18	58.06	7	22.58	0	0.00	31	9.84
<i>11 Human Resources Development</i>	5	25.00	3	15.00	8	40.00	4	20.00	20	6.35
<i>Total</i>	41	13	151	48	118	37	5	2	315	100

*Source: The Author*

Based on the figures in the above tables, it could be argued that the UAEPSI modest performance improvement is perhaps due to the ineffective use of self assessment instruments; they either lack experience on how to perform appropriately, or encounter difficulties in measuring themselves against the UAEGEP criteria.

**Figure 5.18 Distribution of the respondent's perception on their institutions conducted self assessment against the UAEGEP criteria according to service sector (%)**



Source: The Author

*Methods of self assessment has been undertaken*

Of those institutions that had used the UAEGEP, the survey asked respondents to indicate what type of self assessment had been carried out. By viewing Table (5.49), most institutions appeared to have conducted more than one approach. The results showed that the highest proportion of respondents had used the 'customer's feedback' method (27.6%), with (23.2%) indicating that they 'don't know' if any assessment approach was conducted in their institutions.

**Table 5.49 Respondents view on self assessment methods conducted in their institution**

Options	Frequency	Percent %
1 Customers feedback	87	27.6
2 Internal assessment	18	5.7
3 Staff performance assessment	53	16.8
4 Current evidence based	15	4.8
5 External assessment	54	17.1
6 Don't know	73	23.2
7 Others	4	1.3
8 Missing Value	11	3.5
<b>Total</b>	<b>315</b>	<b>100</b>

Source: The Author

**Table 5.50 Respondents view on self assessment methods conducted in their institution distributed according to service sector**

Service Sectors		Options (Frequencies)								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	<i>Police and Security</i>	(N)	16	3	11	4	5	12	2	2
		(%)	29.09	5.45	20.00	7.27	9.09	21.82	3.64	3.64
2	<i>Tourism</i>	(N)	4	0	0	1	8	3	0	0
		(%)	25.00	0.00	0.00	6.25	50.00	18.75	0.00	0.00
3	<i>Faith and religion</i>	(N)	1	2	7	3	3	2	0	0
		(%)	5.55	11.11	38.89	16.67	16.67	11.11	0.00	0.00
4	<i>Health</i>	(N)	19	7	10	5	16	22	1	1
		(%)	23.46	8.64	12.35	6.17	19.75	27.16	1.23	1.23
5	<i>Transportation</i>	(N)	4	2	5	0	2	11	0	0
		(%)	16.67	8.33	20.83	0.00	8.33	45.83	0.00	0.00
6	<i>Finance</i>	(N)	0	0	1	0	0	3	0	0
		(%)	0.00	0.00	25.00	0.00	0.00	75.00	0.00	0.00
7	<i>Justice</i>	(N)	3	0	3	0	0	3	0	1
		(%)	30.00	0.00	30.00	0.00	0.00	30.00	0.00	10.00
8	<i>Environment</i>	(N)	3	2	1	0	5	2	0	0
		(%)	23.08	15.38	7.69	0.00	38.46	15.38	0.00	0.00
9	<i>Civil services</i>	(N)	20	2	6	0	6	7	1	1
		(%)	46.51	4.65	13.95	0.00	13.95	16.28	2.33	2.33
10	<i>Economy</i>	(N)	16	0	9	1	2	3	0	0
		(%)	51.61	0.00	29.03	3.23	6.45	9.68	0.00	0.00
11	<i>Human Resources Development</i>	(N)	1	0	0	1	7	5	0	6
		(%)	5.00	0.00	0.00	5.00	35.00	25.00	0.00	30.00

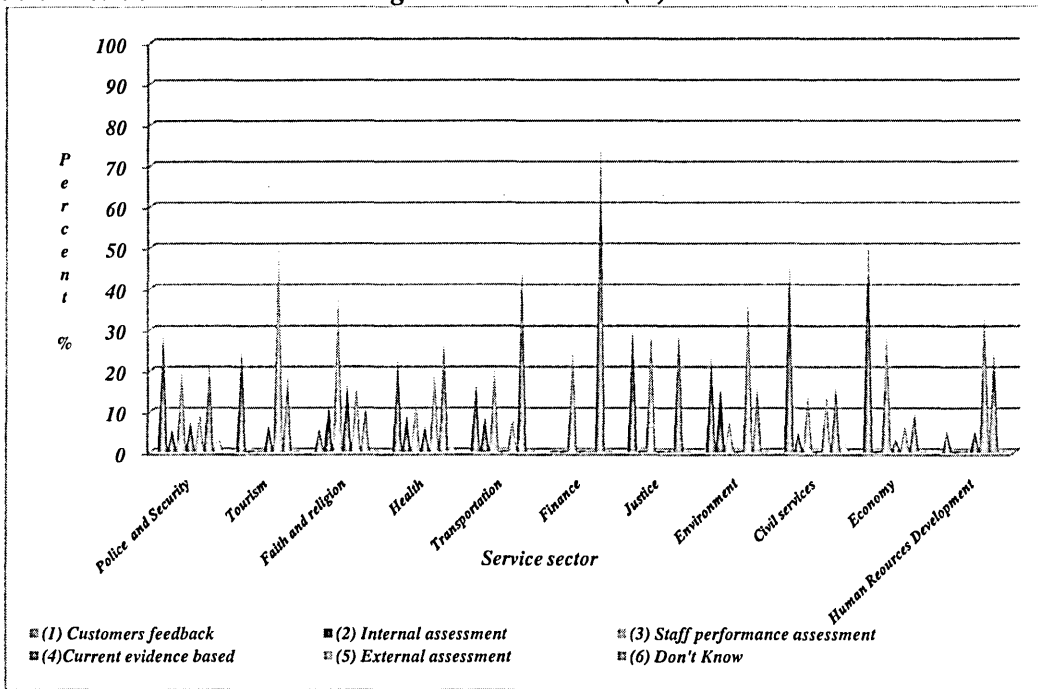
Source: The Author

Keys:	(1) Customers feedback	(5) External assessment
	(2) Internal assessment	(6) Don't Know
	(3) Staff performance assessment	(7) Others
	(4) Current evidence based	(8) Missing Value

While Table (5.50) displays a wider explanation on the data presented in Table (5.49), in which the data were distributed according to the UAEPSI service sector. The response options were predetermined by the researcher; they were the most widely used methods of self assessment in the UAEPSI. The economic sector institutions were amongst the uppermost users of the customer's feedback method (51.61%) as a self

assessment instrument for service improvement, followed by civil service institutions (46.51%), justice (30%) and police and security (29.09%). The second most popular self assessment method is the external assessment. The UAEPSI primarily appoint an external TQM agent to investigate the TQM implementation progress and to execute inclusive self assessment performance measurement. The figures tell us that some UAEPSI virtually depended on the external assessors in measuring their performance such as the tourism sector institution respondents (50%) followed by the environment sector institutions (38.46%), and lastly the human resources development (35%). Figure (5.19) provides a transparent picture to the figures in the above table.

**Figure 5.19 Respondents view on self assessment methods conducted in their institution distributed according to service sector (%)**



Source: The Author

At the end of this section, the researcher would like to point out that question number twelve in section five of the survey questionnaire was excluded due to the very poor responses (just 7 responses out of the total 315 respondents) and more importantly because most of the responses were irrelevant to the nature of the question. This suggests that the people in the U.A.E. and particularly in the UAEPSI more likely do not prefer open questions.



## SUMMARY

The outcomes of this chapter allowed the researcher to accomplish objective two. Also, this chapter attempted to answer research questions one and two (see Chapter One, sections 1.2 and 1.3). In relation to TQM concepts and methods, the data analysis revealed that there is inadequate awareness of TQM and its concepts amongst the respondents of the UAEPSI, and that several TQM concepts have never been implemented in the UAEPSI. Additionally, the data revealed that there are gaps between the perceived quality critical factors and the extent of their actual practice as significant to the successful implementation of TQM in the UAEPSI. The data analysis related the quality critical factors perceived to their actual practice in sections (5.4 and 5.5). Factors related to employee recognition and reward need to be reconsidered. Teamwork needs to be used extensively. The employee training and continuous skill development must be institutionalized in order to address subjects such as the use of TQM approaches and the acquisition of profound knowledge. Benchmarking also needs to be institutionalised through a continuous process of measuring performance and service improvement and practices against the leading institutions in the same business. The self assessment tools should be used on a regular basis to monitor and measure progress and performance.

Generally, the results obtained together with the empirical evidences support the researcher proposal on the need for quality model that considers all the TQM implementation and its practices. This suggests that the data analysis would be employed to formulate the basic ingredients of the proposed model (Chapter Seven). Chapter Six aims to present a detailed background on the U.A.E. characteristics. The chapter conveys quality movement in the U.A.E., draws attention to the U.A.E. government quality initiatives and various quality practices undertaken by the individual UAEPSI. Thus, it serves as a workshop where the research proposed model was validated for its potential implementation in the UAEPSI.

## CHAPTER SIX

### QUALITY IN THE U.A.E.

#### PREFACE

TQM has been introduced in U.A.E. since 1997. In order to encourage private as well as public institutions to implement TQM, great efforts have been exerted by the U.A.E. government. As a result, an increasing number of organizations have implemented TQM since then. However, current quality practices, pointing to the effectiveness of the deployment of TQM in the UAEPSI are still vague. How effective the implementation truly is may be another issue. The researcher perceives from his position as a senior manager in one of the leading public service institutions in the U.A.E. that effective TQM systems are still behind; they are not fully applied at all institutional levels. Some basic quality principles and modern quality management methods are not widely used by UAEPSI. Based on the results of the researcher preliminary study on the level of quality practices and the barriers associated with TQM implementation in the UAEPSI, the researcher concludes that systematic quality implementation procedures in the UAEPSI as a whole are still at a relatively low level.

An empirical investigation conducted by Djerdjouri and Aleter, (2007) to appraise the TQM readiness level, as perceived by top management as well as employees in the federal governments of the three federal ministries in the U.A.E.; namely the Ministry of Environment and Water, the Ministry of Finance and Industry, and the Ministry of Public Works. The institutions selection criteria were based on their excellent initiatives in introducing quality management systems and successfully obtaining ISO 9000 certification. The EFQM-EM criteria were incorporated in a set of questionnaire to test the TQM readiness level in each ministry. The main findings of their study revealed that none of the three federal ministries has reached an adequate level of readiness to implement a TQM system. Additionally, they found out no significant difference between the perception of TQM readiness of top management and that of the employees in the three ministries.

What does TQM implementation really mean in The UAEPSI? According to the researcher's investigation and based on his knowledge of studies of its kind, none of the

empirical research dealing with TQM practices and their effects on the overall business performance in UAEPSI has been systematically carried out. In order to bridge this gap, an investigation into TQM implementation practices in the UAEPSI is truly needed. Such a study can explore the degree of the impact of the principles of TQM implementation practices on the overall performance improvement in UAEPSI and can help in identifying problem areas and possible remedies.

The previous chapter delegated the research fieldwork data analysis. An attentive detail of the outcomes was drawn upon, which contributes to the development of the research model. However, the purpose of this chapter is to provide a general overview of the quality practices in the U.A.E. and in the government sector in particular. By writing this chapter, the researcher intends to provide to the readers a sufficient background about the U.A.E., as it is considered the arena where the research theoretical elements (aim and objectives) meet with the practical elements (empirical investigation and the model validation). The chapter layout is divided into three main sections.

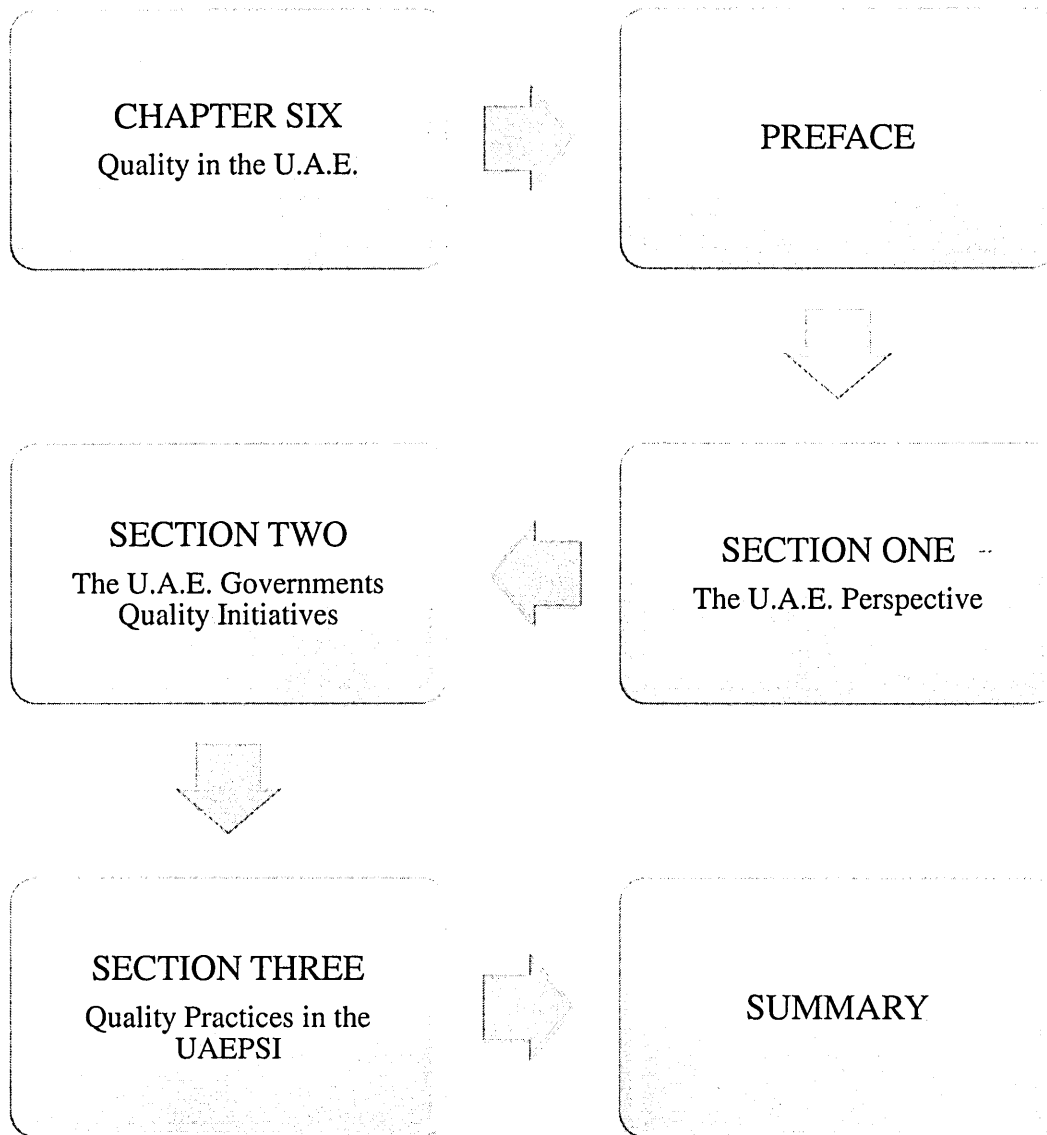
The first section introduces a general perspective on the U.A.E., a historical background to the development of the U.A.E. government institutions and the economic sectors.

The second section discusses the U.A.E. government's (federal and local) quality initiatives, followed by a brief outline of the existing government quality awards and excellence programmes.

The third section presents quality practices in the public sector, and then investigates the quality implementation practices of the three different cases in the UAEPSI.

The chapter concludes with a discussion of some emerging trends in the UAEPSI. Figure (6.1) outlines the content of this chapter.

*Figure 6.1 Chapter six outline*



*Source: The Author*

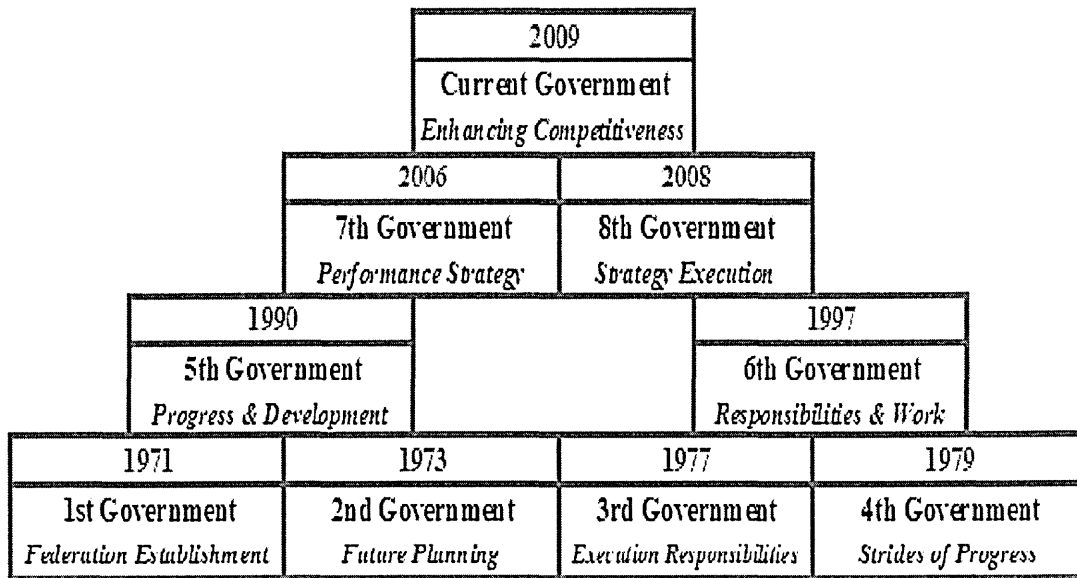
## 6.1 THE U.A.E. PERSPECTIVE

The United Arab Emirates (U.A.E.) was formerly known as the Trucial States or Trucial Coast. From 1820 until 1971, Britain occupied the region signing several treaties including a maritime truce, which gave the area its name. On December 2<sup>nd</sup>, 1971 the flag of the U.A.E. was raised for the first time, marking the beginning of a new era of prosperity. The first federal government of the U.A.E. was formed and the late Sheikh Zayed Al Nahyan, was the Ruler of Abu Dhabi and later the first President of the U.A.E. The federation consists of seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Qaiwain, Ras Al Khaimah and Fujairah.

The capital and the largest city of the federation, is Abu Dhabi; it is located in the emirate and carries its name. The U.A.E. occupies a strategic position along the southern approaches to the Straits of Hormuz with coastlines of 500 km located in the south-eastern corner of the Arabian Peninsula. It is bordered by the Sultanate of Oman and the Gulf of Oman to the east, Saudi Arabia to the south and west, and the Arabian Gulf to the north; the total land area, including twenty islands, is 83,600 sq km. The estimated population of the U.A.E. is 5.06 million. Arabic is the official language and Islam is the state religion. The currency is the Arab Emirates Dirham (AED); the \$1 U.S.A. is equivalent to around 3.6 Dirham's. The U.A.E. has one of the world's highest standards of living (U.A.E. Interact, 2009a; Ministry of Planning, 2009).

The highest political authority in the federal government is the Supreme Council of the U.A.E. Federation (SCUAEF), which is made up of the seven rulers of the emirates. In addition to creating U.A.E. policy, the SCUAEF elects a president, who serves a five-year term (there is no limit to the number of terms a president may serve). Since 2004, H.H. Sheikh Khalifa bin Zayed Al Nahyan has been elected as a second president of the U.A.E. The prime minister is responsible for selecting the government's cabinet ministers. Figure (6.2) displays the successive governments of the U.A.E. cabinet ministers. Since the first of the two nowadays governments was formed, the strategies were drawn taking into consideration the impending changes and challenges that ensure the continuous prosperity of its people.

**Figure 6.2 The U.A.E. government strategies (1971-2009)**



*Source: The Author*

The U.A.E. has also a Federal National Council (FNC), which consists of forty members; each represents one of the seven emirates. The FNC upholds the political tradition of consultation, which has been a feature of the emirates' leadership throughout its history. The Federal Judiciary is an independent body, as outlined in the U.A.E. Constitution. It consists of the Federal Supreme Court (five judges appointed by the SCUAEF) and the courts of the first instance. Each emirate has its own local government consisting of local departments, authorities and agencies; hence each one retains a good deal of political and financial autonomy, a fact that has contributed greatly to the remarkable success of the federation.

The U.A.E. is the sixth oil producing country in world. Oil is the major source of income for the U.A.E. with Abu Dhabi leading the emirates in oil production. The country's proven oil reserves make up about one-tenth of the world's total oil reserves. As a result, the U.A.E. major industries are primarily the petroleum and petrochemical products. Therefore, since oil exploration, the U.A.E. leadership has had a clear vision not to rely on one scarce and depleting commodity as a source of economic income. It began to utilize the oil revenues to diversify the economy by gradually decreasing its dependence on oil exports and investing in other industries which have grown rapidly,

including aluminium production, food processing and readymade garments. The U.A.E. other exported crops include fish and dates as it holds more than ten million palm trees, with annual total production of three million tons. In 2007, the hierarchy of non-oil economic sectors was as follows: (starting with the largest), manufacturing (12%); wholesale, retail and maintenance (10%); construction and real estate (each 8%); government services (7%); financial enterprises, transport, storage and communications (6%). The agriculture, electricity and water, restaurants and hotels, together with social and private services, accounted for around 6% of the total GDP, (the Ministry of Environment, 2009; Ministry of Economy, 2009 and U.A.E. at glance, 2007).

Since the foundation of its federation, the U.A.E. government has believed that the real wealth of the country belongs to its people and in particular to the younger generation. Thus, sustained social development and economic growth can only be achieved by investing in the development of local human resources. There is deep awareness among U.A.E. political leadership that the continuous investment in health, education, social services, and the provisions of creating equal employment opportunities for all, can guarantee a sustained long term development. Despite the modest number of U.A.E. citizens 0.8 million in its early foundation in 1971, the philosophy of the U.A.E. leadership is that the resources and the wealth of the country should be fully used for the benefit of its people; alternatively, all citizens have responsibility towards the nation development, so do the expatriates including the other Arabs, south-eastern, southern Asians, and westerners. After the discovery of oil in the U.A.E. more than 40 years ago, the country experienced a profound transformation from small impoverished desert principalities to a modern state with a high standard of living. Initially, the U.A.E. government sought international corporation to develop the oilfields and then to provide the infrastructure for the country's modern metropolises. The lack of experience of the limited local capacities drove the U.A.E. government as well as the private companies to import enormous workforce. They contributed to putting in place public services, and the social and business infrastructure of the modern state. The increasing oil exporting revenues left the country in a constant need for the expatriate workers to participate in the construction and development of all the economic and social aspects. The high wages and the earned income attracted waves of expatriate migration seeking better career opportunities in the U.A.E. As a result, the population has increased enormously. The U.A.E.'s strong economy, healthy social development and its political stability have continued to support a steady rise in the population over the past few decades.

The population census figures carried out by the Ministry of Economy showed that the U.A.E. population had increased from 1995 to 2005 by 74.8% which is one of the highest rates in the world; it is estimated to grow at the rate of 6.1% annually by 2010. Table (6.1) illustrates the growing number of the U.A.E. population according to age and gender groups between 2005 and 2007. As a result of this, it significantly changed the U.A.E. social web to a cosmopolitan culture, with a population of approximately 95% expatriates from more than 115 nationalities and ethnic groups all over the world (U.A.E. Interact, 2009a and Ministry of Economy, 2005).

**Table: 6.1 The U.A.E. population by age and gender groups**

Years	2005			2006			2007		
	Gender			Gender			Gender		
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 15	416,317	384,254	800,571	427,779	393,746	821,525	450,233	413,658	863,891
15 - 39	1,753,709	714,819	2,468,528	1,810,437	733,797	2,544,234	1,935,658	772,203	2,707,861
40 - 59	595,832	177,218	773,050	615,451	181,949	797,400	654,709	191,607	846,316
Over 60	40,249	23,984	64,278	41,333	24,508	65,841	43,300	25,532	68,832
<b>Total</b>	<b>2,806,152</b>	<b>1,300,275</b>	<b>4,106,427</b>	<b>2,895,000</b>	<b>1,334,000</b>	<b>4,229,000</b>	<b>3,083,900</b>	<b>1,403,000</b>	<b>4,486,900</b>

Source: U.A.E. Interact, (2009a)

The increasing social and economic challenge urged the U.A.E. federal as well as local governments to change their strategies and to re-consider their emphasis on quality and excellence performance in the UAEPSI focusing on the best benchmarking practices that ensure the delivery of all aspects of social and human development in the U.A.E., with a vision of being one among the best five governments in the world by year 2030, (U.A.E. Interact, 2009a; U.A.E. Interact, 2009b; U.A.E. Interact, 2008; and U.A.E. Interact, 2007).



The U.A.E. government has drawn a policy agenda to attain this vision by widening the range of human investment and providing a world class services for its people, where individuals are valued on the bases of their unique skills and the contribution they can make. The ultimate aim is achieving a better quality life for all in terms of happiness, health and satisfaction, (U.A.E. Interact, 2009b).

The U.A.E. government is remarkably striving to do better in the area of human development. The U.A.E. is considered as one of the nations that are marked with high human development, ranking 35 among 182 countries according to the human development report of 2009 released by the United Nations Development Programme (UNDP). The Human Development Index (HDI) measures human development on the bases of three aspects: “Living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and gross enrolment in education) and having a decent standard of living (measured by the purchasing power parity, PPP, income),” (United Nations Development Programme, 2009). The report takes into account statistics figures between 1980 and 2007. The figures indicate that the U.A.E.’s HDI had increased from 0.743 to 0.903. Life expectancy had significantly improved from 65 years in 80’s to 77.3 years in 2007, while the adult literacy rate remained at 90%; these figures are clearly illustrated in Figure (6.3).

The Human Development Report also includes the Gender Empowerment Measure (GEM) which reveals whether women take an active role in the economic and political life of the country. These measures track the share of seats in parliament held by women, the number of female legislators, senior officials and managers, the female professional and the gender disparity in earned income reflecting the financial independence. The U.A.E. is considered a very conservative country which is significantly influenced by the tribal traditions and the Islamic customs but in spite of these influences and social values, it occupies the highest ranks among the countries within the region with respect to gender equality. The U.A.E., ranks the 25th in a list of 109 countries in the GEM, with a value of 0.691, (United Nations Development Programme, 2009; and Abdulla, 2008).

**Figure 6.3 The U.A.E. Human Development Index (1980 - 2007)**

VERY HIGH HUMAN DEVELOPMENT	
World Rank 2009	Country Name
35	United Arab Emirates

Years	HDI rank	Average annual growth rates (%)				
		Rank	Change in rank	Long-term (1980-2007)	Medium-term (1990-2007)	Short-term (2000-2007)
1980	0.743					
1985	0.806					
1990	0.834					
1995	0.845					
2000	0.848					
2005	0.896					
2006	0.896					
2007	0.903					
		37	2	0.72	0.47	0.91

HDI = Human Development Index

Source: United Nations Development Programme (UNDP), (2009)

## 6.2 THE U.A.E. GOVERNMENT QUALITY INITIATIVES

As it has been stated in the earlier section, the economy of the U.A.E. since its formation in late 1971 has enjoyed massive oil revenues. At that time, the government most priorities were to boost the development of social and economic infrastructure projects for the welfare of its people. This has led the U.A.E. economy to achieve a significant degree of socioeconomic development in a limited period of time from 1973 to 1990. This policy has led the UAEPSI to fulfil the needs and meet the ever increasing demand for its services. From mid 1991 to 1995, the U.A.E. government realized that this policy was no longer suitable to the current economic situation as the oil revenues were declining year after year. The situation of other emirates within the U.A.E. federation was even worse as they had exploited most of their oil reserves. The governments of the local emirates underwent momentous policy reforms and institutional restructuring. The aims were to encourage partnership with the private sector organisation, to become a financial hub in the region and to attract foreign private investments to set up their businesses in the U.A.E.

In order to attain these aims, the UAEPSI was forced to adjust its policies and systems to cope with the needs and requirements of its external clients. Phrases such as,

delivering better services, seeking customer's satisfaction, and improving the quality of services, were used for the first time by the PSI in the U.A.E. This policy had a positive impact on the U.A.E. economy; the non-oil sector accounted for % 64 of the U.A.E. nominal GDP in 2007 when the projects were invested by the private sector. The key successful economic performance is realized by developing the public joint stock companies, enlarging the private economic free zones, and launching several mega development projects (U.A.E. Interact, 2009a; U.A.E. Interact, 2009b; U.A.E. Interact, 2007 and Shihab, 2001).

Hence, this section portrays the recent evidences relevant to the U.A.E. (federal and local) government initiatives towards establishing and endorsing the TQM in the PSI. The concept of quality i.e., increasing performance, improving productivity and cost effectiveness is not a new phenomenon in the UAEPSI, but what is different is the realization that there is a need for commitment not merely to the quality of services but also to the systematic management of the UAEPSI. One of the key remedies to the pitfalls in the U.A.E. government recent restructuring and reforms in the public service institutions is to create a sense of accountability in the UAEPSI which is aimed to boost the improvements of services along with the cost saving effectiveness. This is often attained by furthering the government decentralization and delegating authorities. This shift encouraged individual institutions to operate as a self managing entity rather than as institutions controlled by the central government. As a result of this, the UAEPSI objectives would be to foster the development of quality policies that enable them to provide the utmost services to the highest standards, and to be prepared for future challenges and ever increasing competitions. This ultimately plunges the UAEPSI from being service led to being customer led and from focusing on input to enhancing the outputs.

Hence, the U.A.E. government has clearly set these objectives that it intends to accomplish; however, putting them into practice was the real contest. Adopting the TQM and excellence concepts and approaches was the best available alternative for the U.A.E. governments to apply as a vehicle that drives UAEPSI towards realizing their mission successfully. But this vehicle needs to be run and managed by somebody, which ensures that the government set objectives are heading in the right direction. In view of that, the U.A.E. federal as well as local governments had established their own local excellence performance programmes and awards. These quality and excellence

programmes are independent government institutions, which basically pledge to perform important roles and functions as they are the solitary government entity within the local government districts boundary responsible for formulating policies, motivating and facilitating the TQM and the quality implementation processes in the PSI, and helping them in initiating their quality schemes. They also monitor, evaluate and conduct annual inspection visits to the individual institutions. Based on the visit results and the documentation assessments of the best PSI that maintains the highest scoring, they announce the awarded institution of the year that wins the excellence award.

### **6.2.1 The U.A.E. Government Quality Programmes and Awards**

In this section, the researcher highlights the list of almost all quality programmes and excellence awards already existing in the federal as well as the local governments of the U.A.E. (UAEGEP). The aim of this section is to demonstrate the tendency of quality and performance enhancement in the U.A.E. as a strategic target for the U.A.E. governments during the period of three years, between the researcher preliminary investigations and his visits to the UAEPSI and to several quality and excellence programmes and awards in which it aimed to explore the quality initiatives and their implementation practices in the U.A.E. These visits had enabled the researcher to comprehend the concepts had evolved and then developed (refer to Chapters Three and Four for further clarification) and to make a contrast with the research fieldwork carried out in UAEPSI.

Two noteworthy observations need to be addressed. First, without exaggeration as mentioned in the three year's time, the number of quality and excellence programmes and awards launched all over the U.A.E. are indispensable. Some are for the domestic emirates; others for the federal one and still others for both. Some are regional and others are international; some are for the private organizations, others for the public and still others for both. These quality programmes and awards include almost all economic and social sectors, for instance: economic, industry, environment, education, health, municipal services, academic researches...etc. Second, due to the difficulties in mentioning them all, this research focuses on those that are well-established, precisely those that are pertinent to the public sector institutions and related to the research topic. The investigation of the quality programmes and awards revealed that almost all of the seven emirates except one initiated their local quality programme and award that bear

their name. In addition, the U.A.E. federal government initiated its quality excellence programme, mainly for the federal ministries, authorities and agencies. It is worthwhile mentioning that prior to recounting these quality programmes, it is necessary to clarify that the terms used in this research relate to government institutional system in the U.A.E.

The government institutions in the federal government are called ministries, whereas, in the local governments, they are called departments. However both federal and local governments have their own authorities and agencies which are the institutions of the federal ministries and local departments. These authorities and agencies are typically headed by the ministers of the federal ministries and the chairmen of the local departments, but they are financially and administratively independent. In most occasions, it is quite hard to distinguish between them as they are seldom mentioned in the research. To clarify matters to the readers, they are synonymous to the government institutions and the UAEPSI in this research. These quality and excellence programmes are listed below in a chronological order.

#### *(1) Dubai Quality Award (DQA)*

The award is mainly for the private sector organisations; its aim was to encourage the private organisations to enhance their contribution to the domestic economy and to create challenge among them for providing improved quality service to their clients. Since its inception in 1995, the DQA has contributed to developing the concept of total quality management and organizational excellence among private institutions in the U.A.E. The key roles of the DQA are: to raise the awareness of quality as an increasingly important element in competitiveness, to understand the requirements for quality excellence in the U.A.E. and to share the best successful quality practices and the benefits derived from implementing these strategies.

The award has many benefits, one of which is that it offers the private sector organisations based in the U.A.E. the opportunity to benchmark themselves against the internationally recognised criteria by the fully trained assessors of the award. The applicant organisations benefit from the strategy and the teamwork involved in preparing the submission document. The applicants also receive an independent feedback report on the strengths and the areas for improvement. The success of DQA

had encouraged the U.A.E. government to introduce its criteria to be adopted in the government sector institutions.

The winners of the award prizes are categorised according to their business economic activity, for instance: Finance, Professional, Services, Tourism, Education, Manufacturing, Trade and Construction. Then, in 1996, the DQA underwent a slight adjustment whereby a new category of the award was introduced: the Dubai Quality Appreciation Programme (DQAP) along with the existing one the DQA. The DQAP was designed for the organisations that have good quality practices and approaches, for example, a company which obtained an ISO certificate is eligible to apply for the DQAP. Yet, again in 1998, the Gold category was added to the awards, targeting organisations that have been through sustained quality improvement activities benchmarked on national and international basis.

A remarkable new version of the award winning criteria was introduced in 2000 when the award was affiliated with the European Foundation for quality Management, the Excellence Model (EFQM-EM). The DQA awarding criteria is based on the EFQM-EM. This improvement has given more credibility to the DQA and to its evaluation and assessment of the award winners than ever. The DQA further pursues its quest towards quality and excellence progress. It launched the Dubai Human Development Award (DHDA) in 2002 to recognise and reward individual business organizations towards providing the work opportunities for the U.A.E. young generation job seekers. The DHDA also, aims to develop their abilities and emphasize their role in the future of this country through intensive training and guidance.

Indeed, it provides a quality and excellence framework for the award candidates; however, the award has become more sophisticated than it used to be. The candidates mainly for the gold category must fulfil the nine criteria of the EFQM-EM and sustain constant quality improvements. The advantage of this modification is that it allows the organisations in the U.A.E. to benchmark their quality quest against those outside the national boundaries. It also provides them with more confidence in that they implement a successful internationally recognised excellence model with clear objectives and guidance (Dubai Quality Award, 2010; Dubai Quality Award, 2009; Department of Economic Development, 2009 and Dubai Quality Award, 2008).

## ***(2) Dubai Government Excellence Programme (DGEP)***

On the contrary, the government of Dubai introduced the Dubai Government Excellence Programme (DGEP) as a government entity in 1998. Its principal function is to emphasize quality and excellence performance primarily for the public sector institutions in the emirate of Dubai. The purpose of the programme is to improve the performance of its local departments so as to empower the entire public service sector institutions. This should allow local departments to comply with the latest developments in all fields, and to equip them for impending challenges; furthermore, to enhance their capacities to implement modern administrative principles which are based on TQM principles such as, customer satisfaction, resource development, procedure simplification, processes and systems documentation, creativity, encouragement and capability building. Since its foundation, the DGEP has continuously played a major role in the development of Dubai's local departments, authorities and agencies in order to excel in government performance and in delivering its services.

The DGEP affiliation with EFQM which is privileged for the adoption of its excellence model and its approach of RADAR, as a readymade instrument for self-assessment, had a significant advantage that contributed to the improvement of the programme criteria, and to the benchmark local departments with their counterparts in developed countries. The DGEP processes of excellence award starts from evaluating and assessing local departments to awarding prizes (Dubai Government Excellence Programme Award) and up to the highest scoring departments; this process is exactly similar to the EFQM principles. However, the awarding procedures take place every two years. The DGEP success inspired other local governments in the U.A.E. to follow its path, as it represents an effective integrated tool for improving PSI performance (Dubai Government Excellence Programme, 2010; Dubai Government Excellence Programme, 2009 and Dubai Government Excellence Programme, 2007).

## ***(3) Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance***

This annual award was first introduced in 1998 to promote and encourage the quality and excellence performance of the U.A.E. education sector. Two prominent characteristics distinguish this award from other quality and excellence programmes in

the U.A.E. First, the award is granted for the solely independent non government organization. This means the award does not represent either the U.A.E. federal government or any other emirates local governments. Second, it is the only quality award whose criteria and assessment processes are based on the Malcolm Baldrige National Quality Award (MBNQA).

The jury committees are academic expertise from the U.A.E. University and from the U.A.E. Ministry of Education. However, the MBNQA criteria have been reviewed and modified by the jury committees. The result was the development of the customized criteria that conform to the educational standards of the curriculum and the educational condition in U.A.E. The ongoing revisions, amendments and frequent rectifications enabled the award to gain accreditation and creditworthiness in building up a reputation as every year more and more academic institutions apply for the award even from neighbouring countries. This recognition encouraged the award board of trustee to expand participation to set up branches in other countries in the region. Also, the benefit from revision had led the award to further expand to include an exceptional prize for the individual households.

In 2009 the award became internationally recognised by being affiliated with the United Nations Educational, Scientific and Cultural Organization (UNESCO). It jointly launched the UNESCO-Hamdan bin Rashid Al-Maktoum prize for outstanding practice and performance. Its objective is to enhance the effectiveness of teachers and to improve the educational practices around the world, with priority given to developing countries, as well as to marginalized and disadvantaged communities from the wider global context (Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance, 2009).

#### ***(4) Sharjha Government Excellence Award***

The government of Sharjah initiated its local excellence award in 2000; its main purpose is to honour the local government departments in Sharjah. The award aims to extend distinctive services and to upgrade the public sector performance. Improvements were undertaken by the award committee in 2002 as to progress the award general and sub-criteria and to the assessments procedures. The new version of the award went through minor changes so as to make it different from the EFQM-EM. It is designed to



echo the government quality strategies and to reflect the national identity of the UAEPSI. Enormous emphasis was placed by the award on the departments' commitments to quality achievement a set of targets for the department's performance and service improvements as were set for steering their transactions and reinforcing their relations with their external customers. The award, nowadays, has become a symbol that embodies the appreciation of Sharjah government quality initiatives and enhances the creativity of the elite government institutions (General secretariat of Executive Council, Government of Sharjah, 2009).

#### ***(5) Sheikh Saqr Programme for Government Excellence***

Likewise, other local governments in the U.A.E., the government of Ras Al khaimah, launched its quality programme in 2004. The Sheikh Saqr Programme for Government Excellence (SSPGE) is identical to the DGEP in that it espouses the EFQM-EM as a quality model for the local department's performance assessment. The programme supports the overall development in the emirate of Ras Al Khaimah through the preparation of future leaders and by building of institutional capacity that enables the government authorities to implement the global standards of excellence. Nonetheless, the reality contradicts with the SSPGE vision. This was clearly observed during the research fieldwork stage, while the researcher interviewed the managing director in one of the leading local departments in the government of Ras Al Khaimah. He affirmed that one of the obstacles that inhibit local departments in the emirate of Ras Al Khaimah from fully implementing the requirements of the SSPGE is the limited financial budgets. Therefore, for that reason, he deems that the optimization of quality and excellence performance of the local departments in the government of Ras Al Khaimah to reach the global standards is far to attain in the short term (Sheikh Saqr Programme for Government Excellence, 2010)

#### ***(6) Sheikh Khalifa Government Excellence Programme***

On the federal government level, the U.A.E. federal government initiated in 2006 the Sheikh Khalifa Government Excellence Programme (SKGEP). The programme seeks to motivate and build the elements of excellence in the federal ministries. Also to ensure the implementation of innovative TQM concepts that leads to superior performances. For unknown reasons, the SKGEP was suspended after a very short period of its

initiation. However, it was re-launched in June, 2009. It appeared to the public in a modified version under new management. The SKGEP went through critical reconstruction of its core aims and values. Extreme emphases were put on improving the performances of the federal government capacities and building their skills. It set a target to the federal institutions to achieve annually not less seventy percent (70%) of employee's satisfaction by making the federal ministries more attractive working environment for their employees. The SKGEP visionary aims and values are following:

1. *Awareness of the principles of excellence and of the importance accorded to modern governments*
2. *Capacity development needed to advance excellence in all institutions of the federal government*
3. *Contributing to the implementation of government excellence through the provision of information methodologies and expertise required to provide extension support*
4. *providing a platform for the development of the administrative state through promoting the transfer of knowledge and applying the best quality practices*
5. *Installing creative thinking and knowledge in the federal government through the acquisition of knowledge and the implementation of projects and innovative initiatives*
6. *Evaluating and following up the evolution of government excellence through rigorous methodology, and independent organization to enrich the experience of excellence in the federal government*

In fact, and according to the data analysis of the research fieldwork showed that, since it was re-launched the SKGEP has not made any noticeable progress in terms of assessing performance and services improvement of the federal government institutions.

#### ***(7) Abu Dhabi Award for Excellence in Government Performance***

Later in 2007, the government of Abu Dhabi launched the Abu Dhabi Award for Excellence in Government Performance (ADAEGP). The award promotes understanding of the requirements for excellence in government and the competitiveness for improvement throughout the government service, sharing of information and knowledge of successful improvement strategies. The ADAEGP

seemed have minor impact on the local departments in the emirate of Abu Dhabi, as these departments to have undergone enormous governmental reforms and managerial changes. These reforms and changes did not allow the local departments to gain modest short term tangible benefits of the objectives that the ADAEGP were set to achieve (Abu Dhabi Award for Excellence in Government Performance, 2010).

#### ***(8) Ajman Excellence Programme***

The government of Ajman initiated in 2008 Ajman Excellence Programme (AEP). The programme was established for the sake of promoting competition among all the government departments and public institutions, and non-profit organizations in order to improve their performance. The long term objective of AEP leads the local government institutions to exert the utmost effort to achieve greater efficiency and cost effectiveness, to exploit their own resources, and to keep up with the highest standards of quality, culture and excellence. The AEP announced its first award winner on the same year of its foundation. However, evidences show that the AEP had a minor impact on promoting the quality and excellence culture in local departments in the emirate of Ajman. And more importantly in working on services improvements and customers satisfactions aspects. (Ajman Excellence Programme, 2010)

#### ***Review of the Government Excellence Programmes***

The above presentation highlights the government of the U.A.E. (federal and local) efforts to introduce quality and excellence principles in UAEPSI. The researcher would like to shed light on the following remarks which are addressed in further detail in the recommendations section of chapter ten.

*The government relentlessness to quality and excellence:* by looking into the number of quality and excellence programmes initiated almost in every emirate, it becomes apparent that the U.A.E. government's leadership did not spare any effort to promote and support endeavours to change the prevailing perceptions of the U.A.E. citizens about the deficiency of UAEPSI in delivering their services.

*Compulsory participation:* It is noticed from reading through the terms and regulations of all governments' quality and excellence programmes, that participation in the quality programmes is mandatory for all UAEPSI without exception.

*Adoption of the sole quality model:* it is observed from all of the preceding quality and excellence programmes that they adopted only one model which is the EFQM-EM criteria and used its RADAR methodology as an instrument for self assessment to measure performance improvement against the EFQM-EM criteria. During the research fieldwork, the researcher interviewed some of the directors of quality and excellence programmes in different local emirates. At that time, the researcher asked them one specific question, which was why they adopted only EFQM-EM whilst there are other quality and excellence models which are widely adopted. Almost all of them gave similar answers. They stated that the model is the most sophisticated and broadly adopted by other countries. In addition, they acknowledged that the model is obligatory. It has been enforced on the UAEPSI as it is aimed to unify the quality practices and performance measurements among the UAEPSI during the award evaluation process.

*Measurement and competitiveness:* the research fieldwork scrutinized the ultimate objective of all quality and excellence programmes that are more or less similar. The objective is to provide a kind of judgmental instrument that is used by the decision makers in the U.A.E. to gauge and measure the efficiency level and the services improvement of the UAEPSI. Besides that, it creates a competitive climate among the UAEPSI in striving for better performance and ultimately for the quality and excellence award.

After reviewing almost all the UAEGEP and awards, it becomes evident that the government's quality rush, with the aim of adopting sole quality model has created confusion and sometimes resistance among some of the UAEPSI in understanding the UAEGEP criteria and its decisive objectives. This had led to creation of a vague atmosphere in applying the UAEGEP criteria. The obligatory participation in the UAEGEP award, in addition to the limited time given to the UAEPSI in order to prepare themselves for submitting the award documentation reports. All these facts had created an arbitrary and lag of commitment from UAEPSI in adopting the UAEGEP criteria in a full scale.

### 6.3 QUALITY PRACTICES IN UAEPSI

This section highlights on the previous and existing quality initiatives in which is, based on the current available studies related to the quality and excellence implementation practices undertaken by individual efforts of the UAEPSI. Three case studies were presented. The aim of this section is to demonstrate each case study individually, of each institution humble quality implementation attempts, their journey for quality, excellence performance and services improvement.

#### *Institution (A)*

Institution (A) is one of the sovereign federal ministries in the U.A.E. Its aim in implementing quality principles was driven by providing better services and care to its customers. The challenge for institution (A) was how to put quality principles into action. The management were convinced that by adopting quality principles, the institution can effectively manage and regulate the labour market in the U.A.E. As mentioned earlier in section (6.1), the labour market in the U.A.E. is dominated by foreign workers whereby they entail more than 95% of the total work force population in the U.A.E. The top management of institution (A) have realised that managing a labour market of such nature is not an easy task, particularly when delivering high quality government services in a complex environment without compromising between the supply and the demand of the labour force.

The management of institution (A) were very keen to ensure that the implementation of quality should be also aligned with the U.A.E. federal government efforts to regulate the labour market in a way it would be beneficiary to all stakeholders, and thus to serve the national interest in the first place. The difficulties associated with such project were because institution (A) is the sole authority in the entire U.A.E. controlling the issuing permits for private businesses to bring into country foreign skilled and non skilled workers from all corners of the world. This has forced institution (A) to work promptly to meet its customer's demands and also to cope with international standards according to the International Labour Organisation (ILO) conventions. What's more, the issue of delivering continuously and on a daily basis swift and perfect services to thousands of its customers at once in its seven branches all over the U.A.E., was persistently agonizing the management. It's with new approach to TQM, it means shifting the

existing routine work process which employees were used to, to almost a new process and the system of TQM which most of the employees in institution (A) were not quite familiar with. The new process of work involves a huge amount of legal transactions and document authentication that make it almost impossible to have an error free and that possibly jeopardizes the flow of the work process which affects on the speed of delivering services to customers. The risk of slowing down the services will remain even with the use of the latest technologies and instruments that would aid the employees in performing their tasks swiftly and accurately.

The prime reason for implementing quality principle in institution (A) was to improve its services. One of the service improvement proposals was to deliver most of its services online. The electronic public services project was aimed in providing 24/7 services. This would enable its customers to do business after the official working hours, more comfortably and at their convenient time. As it was the case with the mega project that needed specialized expertise and skilled talents not available in institution (A).

A partnership with a private organization was sought to provide assistance. For this partnership, to work effectively and efficiently and to make it successful was not an easy task. Very carefully planned, managed and executed processes and documentations are required to be considered, without causing any interruption to the progress service. Furthermore, the full engagement and high level of commitment from all management, and the involvement of people in all quality implementation stages were essential. The change management programme was a key factor for the success of the transformation process. The successful implementation of the project has an advantage that enabled the customers to benefit from the effective and efficient online services (Moustafa, 2007).

### ***Institution (B)***

Institution (B) is a local government authority; it is considered as one of the foremost port operation and management authority in the U.A.E. as well as in the region. Although institution (B) had enjoyed a remarkable success and gained a reputation of competitive advantage in delivering superior services in the past years, it was not just enough for its management to unwind. They realised that this success will not last for long due to the growing competitions from competitors within the U.A.E. and in the

region. This had forced the management in institution (*B*) to draw strategies and action plans to meet the subsequent prospective growth challenges. The inevitability of the ongoing evaluation of performance measurement needed a higher degree of advance planning to maintain existing customers and to attract new businesses. To cope with future challenges, institution (*B*) began adopting TQM approaches as it was proposed by appointing external consultant agent. The new quality service strategy basically focused on three core values:

1. *Working to provide world-class services*
2. *Providing high quality services at an economical cost*
3. *Dealing efficiently with the intense competition*

To overcome challenges and to put these core values into practice, a series of measurements were taken by the management, such as: giving a great deal of attention to process flexibility, and focusing on the customers needs, so as to provide them with a quality range of alternatives and options. The systems and procedures applied for handling services ought to meet the requirements swiftly and efficiently. Therefore, to ensure the success of its quality initiative, institution (*B*) balanced between the quality of services offered and the associated costs. It constantly reviewed the path of the core values, in order to make sure that they were aligned with the requirements of quality implementation approaches. In this regard, institution (*B*) took many steps; for example, making detailed analysis of the work process, reconsidering the methods of technological support for the assignments and duties, identifying service improvement techniques, document processing, and carrying out self assessment performance tests. The self assessment tests revealed the need for conducting frequent performance measurement instruments that involve the entire institution.

As a result, several objectives were achieved through the adoption of the quality approaches. Institution (*B*) was the first ISO 9000 certified government authority in the U.A.E. This resulted in adopting reduction procedures for issuing official consent forms in general which led to a reduction in the required time and in the documents supplied by the customer to obtain the necessary service. Moreover, the customer's satisfaction surveys confirmed that 98% of the customers expressed their satisfaction with the services delivered to them. Through accumulated experience with high quality and

excellence, institution (B) acquired an invaluable reputation that left its impact on the global expansion, (Arab Organisation for Administrative Development, 2007).

### *Institution (C)*

Institution (C) is a federal ministry which has two major functions: to allocate annual spending budgets of other ministries and to be responsible for regulating the U.A.E. fiscal system. In 2005, it was entitled by the U.A.E. prime minister cabinet, to implement all-embracing reforms within the federal government institutions. This project was carried out in coordination with the United Nations Development Programme (UNDP). The primary aim of the governmental reforms was to prepare the UAEPSI for the U.A.E. government economic strategy agenda to be the first sought destination in the region for foreign direct investment to settle in the U.A.E. The partnership between institution (C) as a client and the UNDP as a consultancy agent was to work together to facilitate resources and to lay the milestones and mechanisms for the project execution process that guarantees smooth transformation and implementation of the U.A.E. government reforms project.

Adopting the TQM principles and introducing its concepts to the federal ministries was proposed by the UNDP consultants, as the only approach that ensures the success of the project during its implementation phase, and therefore meets the U.A.E. government economic agenda. The federal government reforms project focused on three eminent features which were supposed to be accomplished at the end of the project. First, services improvements initiatives. Second, these services improvements initiatives must be in line with the efforts to the ISO 9000 certified. Third, the feature was to improve the human resource capacity building within the UAEPSI.

The two partners expounded the general mechanism of how the UAEPSI service improvements re-engineering process would be structured. All individuals within the UAEPSI were requested to perform their tasks through a well defined process, and by utilizing the employees' utmost competencies. This was done to ensure a smooth flow of information and clear outputs.

In order to achieve the project targets, a framework consisting of nine factors was developed and two implementation stages were proposed: the first stage was



implemented in institution (C). Based on the implementation outcomes and the success of the first stage, the second stage would commence and it would be benchmarked by other UAEPSI. Three years after the first stage commenced, institution (C) was able to achieve its first aim, which was to obtain the ISO 9000 certification. However, the second stage did not go well as it was planned. The project encountered many obstacles such as, lack of cooperation from other ministries and the UAEPSI, particularly lack of commitment from the top management who simply were not convinced about the benefits of the project. This lagging, with the passage of time, resulted in a slow down in the implementation of the following stage and subsequently it led to the termination of the whole project (Ministry of Cabinet Affairs, 2009 and Ministry of Cabinet Affairs, 2008)

## **SUMMARY**

In the past five years, evidences from the U.A.E. government quality initiatives display that quality with its practices has become a major strategy for most UAEPSI. This study aims to highlight the current quality practices in the UAEPSI. There are several quality and excellence programmes for the UAEPSI, with a considerable number of the quality excellence awards in the U.A.E. However, the data analysis was presented in Chapter Five, in which the outcomes led to diverse conclusions mainly when comparing quality factors and implementation practices; both are vital for the quality and services improvements in the UAEPSI: actual quality practices were perceived by the employees.

The chapter demonstrates clearly the role of quality programmes and awards in enhancing performance and service improvements in the UAEPSI. Because of the vagueness in implementation, the researcher was inspired to empirically investigate the gaps between quality concepts and quality practices in the UAEPSI. This has resulted in developing the research model of quality appraisal to be used by the UAEPSI as a self assessment tool that assesses them to evaluate their current quality standpoint. The next chapter revises recent studies and literature that tackled the quality implementation models and those that contributed to the development of the research model.

# CHAPTER SEVEN

## THE MODEL DEVELOPMENT

### PREFACE

The previous chapter provided general background to the empirical research study. It covered the economic, political and social aspects of the United Arab Emirates. Then, the chapter examined the U.A.E. government's quality initiatives reviewing the UAEGEP roles in advocating the quality practices in the UAEPSI. Afterwards, three individual cases of diverse UAEPSI together with their quality implementation attempts were highlighted.

The aim was to acquaint the readers with the development movement of quality and also with the current quality practices in the U.A.E. and to provide a platform for further discussion in the succeeding chapters. However, this chapter aims to give further explanations about the theoretical background for the research-anticipated model. The theoretical development was basically derived from two distinct sources. The first source is the literature review and the studies related to the quality critical factors and to the development of quality implementation framework models. The researcher surveyed the literature review that spanned over fifteen years from 1993 to 2008. The second source is the results of the research data analysis outcomes.

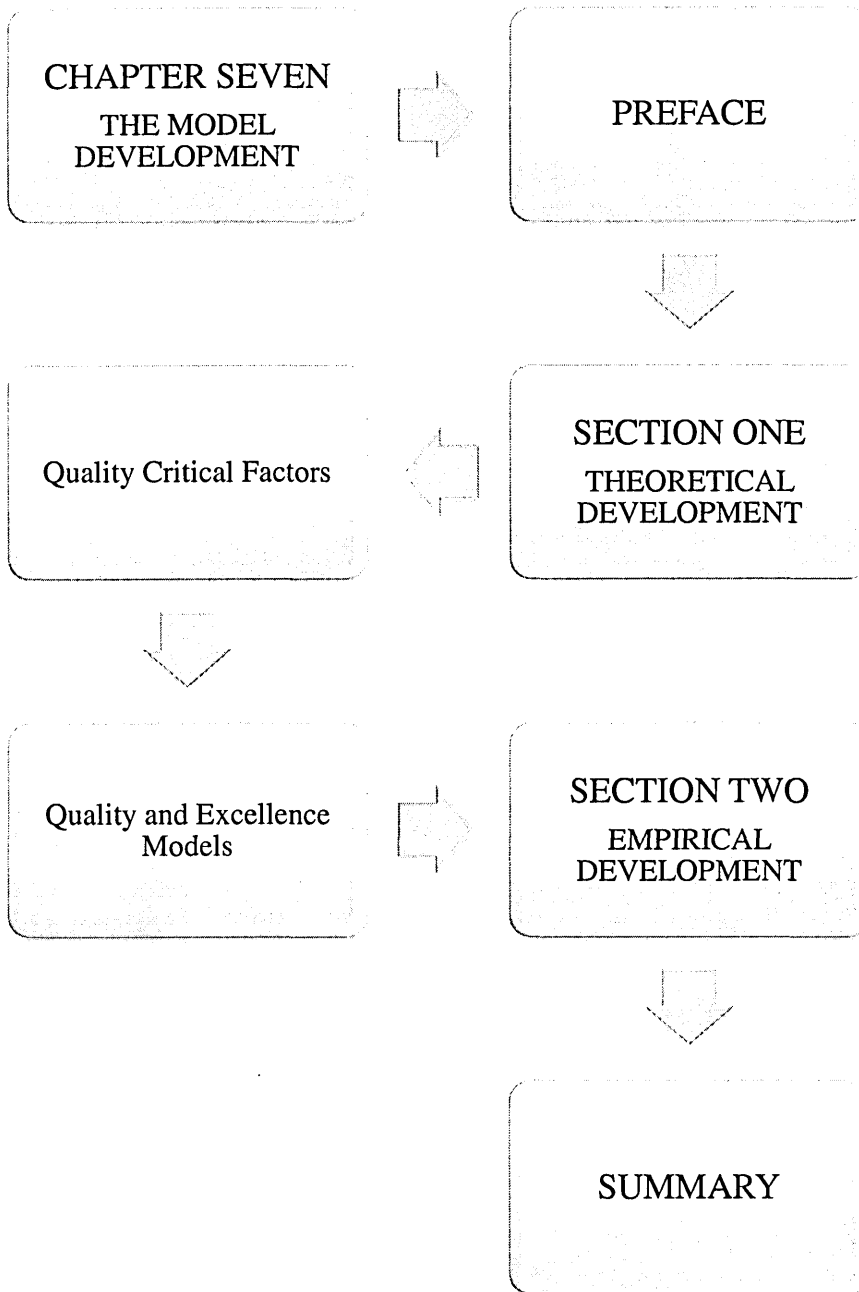
Hence, the chapter is split into two main sections. Section one is divided into three subdivisions that explore the development of the theoretical part of the research model. The first division scrutinizes the literature related to the most influential and Quality Critical Factors (QCF) that are vital to the successful implementation of quality.

The researcher judges the common agreed existing QCF in the literature against those that were identified in this research and that the employees in the UAEPSI basically perceived as significant. The second division explores and expands the most current and extensively adopted quality and excellence models. In addition to these models, the researcher further touches upon the relevant research studies that empirically investigated and developed the quality implementation models and/or frameworks that were developed and adopted in general in the governmental and public service

institutions in particular. This would enable the researcher to benefit from their investigation and study experiences; therefore, the researcher exploits it to cement the academic groundwork for the theoretical and conceptual development of the model. The model conceptions are discussed in further detail in chapter eight.

Section two is the source of the empirical development of the model. The aim of this section is to explain in further detail the practical conception of the model that was gained from the results of the research data analysis. The data analysis was exposed in Chapter 5, section 5.5. These results actually formed the fundamental structural pillars of the practical part of the model, and in a way, they assisted the researcher to shape the core factors and sub-factors of the model. Figure (7.1) outlines the content of this chapter.

*Figure 7.1 Chapter seven outline*



*Source: The Author*

## **7.1 THE THEORETICAL DEVELOPMENT**

As stated above, this section is divided into two eminent divisions; the aim is to construct the theoretical development of the proposed research model through reviewing the current literature related to the QCF, the quality models and the frameworks. The first division reviews the empirical studies and investigates the most influential and critical factors that the organizations need to attain the successful implementation of quality. Based on these factors, the researcher contrasted the research-identified factors with those furnished by the literature to point out any similarities or differences among them. The second division presents the most apparent and universal quality models adopted by the organizations. The models which the researcher reviews are the Deming model, the Baldrige, the EFQM-EM and the Toyota Production System (TPS), Six Sigma and other quality models and frameworks not often adopted.

The aim of reviewing these models is to analyze their structure, their assessment methodology and the aspects that are crucial for restraining any of them. Accordingly, the researcher scans the contribution of these models to the development of the theoretical part of the research model. At the end of this section, the researcher presents the general outlook regarding the similarities and differences between the literature investigation and the extent to which it plays a part in the development of the research model.

### **7.1.1 Quality Success Factors**

Through interpreting and scrutinizing the literature and the studies of the QCF, the researcher identified the foremost factors that the literature and TQM gurus' empirically investigated, and that had a substantial impact on the success of TQM implementation. Therefore, a considerable attention was paid to them, as these factors were compared for their significance and consistency with the research identified critical factors; thus, the core factors of the research model was drafted.

The quality gurus Deming, Juran, Crosby, and Garvin and their perception on the QCF were illustrated in Chapter One; however, the researcher would like to point out that they had a common ground with respect to the vital role certain factors play such as: top management and commitment to quality, employee training and rewarding and

customer satisfactions which are the most important factors that enhance quality management in service organizations.

The following studies are mainly focused on large manufacturing organizations mostly carried out in developing countries. Authors such as (Das, *et al.*, 2008; Shrivastava, *et al.*, 2006; Yoo, 2003; Thiagaragan, *et al.*, 2001; Martinez, *et al.*, 1998; and Mersha, 1997) recounted in their studies that there is a lack of empirical studies concerning the critical factors affecting the effectiveness of TQM implementation in developed countries. They concluded that in developing countries, the circumstances of TQM implementation are far more complex, due to many factors that hinder implementation. On the other hand, other researchers like Salaheldin, (2003) found out that these factors could be practical for all developing countries. He argued that the forces that promote or prohibit TQM implementation in a developing country might be generalized to other less developed countries.

However, Thiagarajan *et al.*, (2001) claimed that most of these factors have an academic background; he comprehended the various quality factors identified by the various writers and experts based on their own experiences in working as consultants, managers or researches. Sureshchandar, *et al.*, (2001) reviewed over one hundred articles, perspectives, conceptual frameworks, practitioner and empirical literature on the TQM and the total quality service. They came up with twelve common critical factors mainly in the service organizations. Management commitment and human resource management were among the topmost critical factors.

Oakland, (2001 and 2000) examined the key elements of TQM and the critical factors that influence the TQM implementation process. The study signalled eight critical factors, the most important of which is the management behaviour. He concluded that the eight factors can be arranged in a hierarchy of criticality. He realized the increasing awareness of the top management who recognized that quality is an important strategic issue at all levels of the organization. He then, identified the factors responsible for the success of quality initiatives in the organization. He differentiated the factors in order to classify the organization maximum output into two categories: soft and hard. The soft aspects of the management include factors such as top management commitment and

involvement, the employee's empowerment and culture. The hard aspects include factors like performance measurements, improvement tools, techniques and systems.

Likewise, Lau and Idris, (2001) investigated the Malaysian manufacturing companies and attempted to specify which of the identified soft elements (culture, trust, teamwork, employment continuity, education and training, top management leadership for quality and continuous improvement, employee involvement and customer satisfaction and involvement) has a significant effect on the TQM tangible effects (growth, profitability, productivity, quality, finished product inspection, user demerit, user merit, market competitiveness, cost, production inventory, delivery date, safety, human resource development, development capability and market strength). They adopted two research methods for developing a TQM soft model: a postal questionnaire survey and a structured interview for the practical implementation of the model. With the eight main soft factors identified, the study outcomes showed a relationship between the identified soft elements and the TQM tangible effects; they also found out that these factors have an effect on the tangible effects. They identified the soft factors.

Table (7.1) illustrates the identified soft and hard elements of TQM. They are arranged according to their importance: culture, trust, teamwork, employment continuity, education and training, managerial leadership, employee involvement and customer satisfaction. Furthermore, they addressed the organizations lack of understanding or ignorance of the significance of the QCF.

This lack of understanding is considered as an obstacle in implementing quality effectively and successfully. They affirmed the need for more research studies on the QCF of TQM implementation, due to the wide variations in TQM as they describe the results and benefits. Their study investigated the measurement of the relationship between the soft QCF and the intangible TQM effects on the hard factors and the tangible effects of TQM on the organization quality implantation quest and service improvements.

*Table 7.1 The soft CSF or the intangible effects and the hard CSF or tangible effects*

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<i>The Soft CSF or Intangible effects</i>	<i>The Hard CSF or Tangible effects</i>
1 <i>Culture</i>	<i>Growth</i>
2 <i>Trusts</i>	<i>Profitability</i>
3 <i>Teamwork</i>	<i>Productivity</i>
4 <i>Employment continuity</i>	<i>Quality (in-process defectives/ process control)</i>
5 <i>Education and training</i>	<i>Finished product inspection</i>
6 <i>Top management, leadership for quality and continuous improvement</i>	<i>User demerit</i>
7 <i>Employee involvements</i>	<i>User merit</i>
8 <i>Customer satisfaction/ involvement</i>	<i>Market competitiveness</i>
9	<i>Cost (cost reduction)</i>
10	<i>Production</i>
11	<i>Inventory</i>
12	<i>Delivery date</i>
13	<i>Safety</i>
14	<i>Human resource development</i>
15	<i>Development capability</i>
16	<i>Marketing strength</i>

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*Source: Lau, and Idris, (2001)*

Their empirical investigation revealed a strong relationship between the soft and the hard factors that interrelated to each other. They concluded that the soft elements are critical compared to the hard and tangible elements (Lau and Idris, 2001).

Similarly, Najeh, and Zaitri, (2007) in their study of the comparative analysis of the critical quality success factors compared and contrasted the quality visions and practices in five countries: Malaysia, Palestine, Saudi Arabia, Kuwait and Libya. On the basis of such comparison, they found out that the factors that determine success and/or failure in TQM have attracted the attention of many scholars. They referred to these as 'hard and soft factors' and pointed out the difficulty involved in distinguishing between them. Differentiating between 'soft' and 'hard' quality factors is difficult and unnecessary; and an issue, such as leadership, can contain both 'soft' and 'hard' aspects. It is argued that the 'soft' quality factors may best be seen as issues discussed under leadership, internal stakeholders management and policy, and strategy. They developed the quality implementation framework: an international benchmarking as a tool for representing the basic set of QCF essential for the successful implementation of TQM in all or almost all developing countries taking into consideration the most nineteen significant quality factors that they observe. These are: top management commitment, visible involvement



of top management in quality and customer satisfactions, clear mission statement, quality planning, effective communication between employees and management, organizing for quality, supplier-customer chain, employee commitment and enthusiasm and continuous improvement through managers and supervisors.

Quazi, *et al.*, (1998), in his Singapore case study of QCF, examined the level of quality practices in Singapore and compared them with those of the U.A.E. manufacturing firms. He found out that they were much higher in Singapore than in the U.A.E. The reason was primarily due to the fact that the sample firms were selected from among those which were already firmly well established in the quality management practices. Quazi, was unrealistic when he compared quality practices among firms in the U.A.E. with those in Singapore. It is obvious that the quality practices in Singapore are well ahead and more developed than those in the U.A.E.

However, Badri and Davis, (1996) observed the absence of rationale for selecting quality factors, and the minimal reliability and validity of instruments and methods applied by the previous literature in relation to his study topic. Their aim was to organize and synthesize the various sets of the critical factors identified by the different authors in more broadly based samples of an international environment. The Saraph's framework of eight scale factors comprising the sixty six items was used to measure quality factors and quality performance. A survey questionnaire conducted in the U.A.E. by manufacturing and services industries, requested participants to assess the degree or extent of quality management practices use in their business.

The study outcome revealed high reliability coefficient measure offering strong evidence that the instrument is reliable and that it is a correlated measure of the critical factors of quality management, consistent with the other literature on quality factors. Although this study is considered one of the few imperative empirical investigations aimed to identify the QCF in the U.A.E., the researcher perceives two important observations related to this study. First, the identified QCF were prolonged; they might cause a sort of confusion for understanding their significance properly. Second, most of the survey population sample was sought after the opinion of senior management who primarily work in the private manufacturing organizations. Indeed, they are the key players in quality implementation in their organizations; however, their perceptions are limited to their position and inevitably they do not represent their entire organizations

even though this study inspires the researcher of the significance of QCF in the U.A.E. They, on the contrary, are unluckily embodying the distinctive ideology of the UAEPSI.

Baidoun (2003, 2004) and Baidoun, and Zairi, (2003) observed that the top management, customer satisfaction, and employee involvement were important variables in terms of their effect on the organizational performance. He also found out that these factors are consistent with the TQM pioneers literatures. Thirty-one quality factors were included in his survey questionnaire that was handed to the Palestinian companies, aiming to identify the quality factors regarding the level of perceived importance and to stratify the identified factors in a hierarchical structure and in a descending order of criticality. The result of his study revealed that seventeen factors out of the nineteen very critical factors share most of the values and aspects covered by the earlier studies and the literature related to his research topic. However, the study confirms that there are different degrees of emphasis placed on these factors. Moreover, Hasan and Kerr, (2003) demonstrated how the critical factors relate to the operational and financial performance of the companies. They observed that top management, customer satisfaction and employee involvement were the important variables in terms of their effect on the organizational performance. They also found out that these factors are consistent with the TQM pioneers literature. The results of the empirical examination showed how the organizational performance affected the different quality factors.

Lakhal, *et al.*, (2006) identified the key quality factors for the successful implementation of TQM in selected manufacturing industries in Pakistan and investigated the relationship between the critical quality management implementation factors and business performance. They concluded that the consideration of a limited set of critical quality factors can help organizations avoid quality implementation failure; they further suggest providing a set of factors for the different sectors of the manufacturing activities. Correspondingly, Seth and Tripathi, (2005) attempted to extract the significant factors from integrating the principles of TQM and TPM (Total Productivity Maintenance) in business performance with the empirical investigation of the Indian manufacturing firms. The research identifies two sets of factors which are critical for the effectiveness of TQM and TPM: universally significant factors for all the three approaches: leadership, process management, strategic planning; and approach-specific factors like equipment management focusing on the customers` satisfaction.

They recommended that the framework justifies the lack and the well designed performance indicators at various organizational levels. To support policies and cross-functional processes, TQM and TPM allows organizations to strive towards accomplishing corporate goals. Zhang, *et al.*, (2000), identified eleven QCF crucial for quality implementation; an instrument was developed based on the identified factors to measure the success of quality implementation initiatives in the Chinese manufacturing organizations. The author tested the reliability and validity of the instrument and compared it with other three instruments developed by quality experts. The findings showed that the instrument is viable and applicable to use in different organization activity.

Nonetheless, Chapman and Al-Khawaldeh, (2002) aimed in their study to measure the link between TQM and labour productivity in the Jordanian manufacturing industry. Eight core factors identified in other literatures were used as parameters of the measurement tool. The empirical investigation showed a positive relationship between TQM principles and labour productivity, with a major variation in the level of labour productivity among organizations with ISO certification and organizations without. Houston, and McKean, (2002), and Venkateswarlu and Nilakant, (2005) identified factors that assist the organization with means to persist and sustain continuous quality implementation programmes by conducting five case studies on private manufacturing firms in New Zealand. The study exposed the five firms; three of them terminated their quality programmes and two persisted on their quality programmes. The failure was due to several factors. Their study identified some of these factors: compulsions for change; core philosophy; commitment of senior management; capability, experience and fit of the TQM champion; collateral changes; and continuity of leadership. Mann and Kehoe, (1995) introduced the quality critical organizational characteristics (QCOC) to describe the characteristics that influence the effectiveness of quality initiatives. They observed the critical factors which were responsible for the effective and successful implementation of TQM. Their investigation revealed a complex relationship between the organizational factors and the quality activities. They concluded that the organizations must be aware of the importance of these factors that are changing with time. These factors vary for each quality activity and this variation depends on the TQM implementation stage.

Alternatively, studies focused on the QCF in the service organization, such as those of Saravanan and Rao, (2006) affirmed that the purpose of their study was to measure the Total Quality Services (TQS) implementation in service industries rather than in manufacturing industries and to test them. A survey was conducted in the automotive service stations to draw the critical dimensions of quality from the management perspectives. Twelve critical quality factors were identified as crucial dimensions of the successful implementation of quality in service industries. Based on an extensive literature survey of quality management, they came up with the following categories of quality factors; the critical dimensions of TQS can be broadly classified into five groups as follows:

1. *Management oriented dimensions: top management commitment, leadership and benchmarking.*
2. *Customer oriented dimensions: customer focus and satisfaction, service marketing and social responsibility.*
3. *Employee oriented dimensions: human resource management and employee satisfaction.*
4. *Organization oriented dimensions: service culture, services cape, and continuous improvement.*
5. *Technology oriented dimensions: technical system and information analysis.*

In addition to that, Sirvanci (2004: 5) raised the issue of the increasing costs of higher education services which are not efficient. The educational authorities lagged behind other service institutions in adopting and implementing the TQM principles in their organizations. He focused on several critical factors that are unique for the higher education institutions such as leadership, cultural and organizational transformation, and the customer identification and students role. He finally concluded that the implementation of quality in higher education is different from other service industries depending on how the customers are identified and how much the performance measure for the organization and the processes understudy are affected. The critical factors for the higher education organizations identified by Sirvanci, are leadership, customer identification, cultural and organizational transformation (such as, teamwork), customer and market focus, employee involvement and participation, and process management.

Tang, and Zairi, (1998a and 1998b) examined the enabler's criteria of the European quality award which were used in benchmarking quality implementation in a service in the context the comparative analysis of the financial services and institutions of higher education, they observed that there are similarities in the areas of adopting the best quality practices with considerable emphasis on the quality factors during the implementation and evaluation of quality in the service organizations. In the first part of their study on benchmarking quality implementation in a service in the context of the comparative analysis of the financial services, they pointed out that the key factors are the indicated drivers of performance: reward, recognition, supervision and training.

Mellahi and Eyuboglu (2001) also identified the key factors that influence the success of TQM implementation in the Turkish banking sector. In carrying out an extensive case study, they noted that the QCF was the management's unwavering commitment to TQM and enthusiasm. Therefore, they recommended the founding of a formal national institution responsible for introducing organizations to TQM and for providing assistance during and after TQM implementation.

Sureshchandar, *et al.*, (2001) conceived from the previous TQM literature that most of the researchers focused on the manufacturing organization rather than the service organization with respect to developing a conceptual model for TQM implementation in service organizations. They reviewed over 100 articles, perspectives, conceptual frameworks, practitioner, and empirical literature on TQM and on the total quality service. They came up with twelve common critical factors for the effective implementation of quality management in service organizations. Management commitment and human resources management were the most critical factors.

Other studies focused in identifying QCF in Small and Medium Enterprises (SME's). Researchers such as Yusof, and Aspinwall (2000a), stated that the purpose of their study was to identify the similarities and difference of the CSF between large size organizations and SME's. A postal questionnaire was sent to the SME's in amative industry in the UK, to test the level of importance and the practices of TQM in organizations certified with quality standards and in others, not certified. Questionnaires were distributed. With eleven CSF identified by the survey, the findings showed that those for SME's were not the same as those for large companies. Furthermore, Khamalah and Lingaraj (2007) empirically investigated a survey of managerial

perceptions for the implementation of TQM in small service businesses in the US. The study addresses the employment of TQM, the tools used, successes, failures, benefits, and problems encountered in small firms. The results showed that top management commitment was the major success factor, but this commitment was not translated into action whereas the employees' training, recognition and rewarding the employee's factors were accorded minor importance with regard to the TQM implementation. The conclusion seemed to be in the line with the other related literature, that the majority of SME's hindered the initiation of such quality project.

Teamwork focusing, lack of long term commitment, and communications gap are also hindering obstacles. Another study carried out by Wong (2005) reviewed and compared the different literature related to quality implementation and QCF. He argued that all the literature derived empirical results from the large organizations. As a result, he tends to find out a suitable CSF for the SME's from the empirical and literature investigations. He suggested a more comprehensive model of eleven factors for implementing KM in SME's. The identified factors were consistent with other literature. On the contrary, Eng and Yusof (2003) argued that most of the quality initiatives of large and SME's enterprises pursued the ISO 9000 certification, and very few of them implemented quality approaches. Therefore, they examined the extent of the practices on TQM elements and identified the most QCF in SME's perceived in the Malaysian electrical manufacturing industries. The survey analysis revealed a significant difference in terms of quality practices among large and SME's firms.

Other authors perceived the QCF from different perspectives. Ciptono (2007) investigated the perception of the managerial level, i.e., top, middle, and low in a large manufacturing organization, the relationship between the critical factors of quality management practices and the company financial performance. The research findings revealed a positive correlation concerning the impact of the critical factors of quality management practices on the company financial performance; in addition, the empirical results demonstrated that there is a positive and significant relationship between the company non-financial performance and the company financial performance. Other scholars like Denis, *et al.*, (2007), Gal, (2004), Warwood, and Roberts, (2004), and Tamimi, (1998) reviewed the different literature related to QCF, by carrying out two surveys on the winners of quality awards of MBNQA and EQA; one hundred organizations in the UK revealed the importance of effective leadership, the impact of

other quality-related programmes, measurement systems, organizational culture, education and training, the use of teams, efficient communication, active empowerment of the workforce, a system infrastructure for the business, and the focus on the customer and processes. Based on the results of the field survey, a self assessment test was developed to assist the organization to predict their future success or to review the current quality practices and improve performance.

A comprehensive study carried out by Sila and Ebrahimpour, (2003) empirically validated the TQM QCF and their impact on the various performance measures across seventy six countries around the world. The survey-based TQM studies and the literature review spanned over eleven years from 1989 to 2000. They identified three factors, most commonly extracted from the MBNQA criterion. They were: top management commitment and leadership followed by customer focus, information and analysis; these factors could be considered the most universally applied TQM factors. Surprisingly, they argued that in some studies across countries the factors and the results were similar. Similarly, Karuppusami, and Gandhinathan, (2006) acknowledged a list of QCF for TQM literature. The objective of this literature review is to investigate and list the QCFs of TQM in a descending order of frequencies of occurrence and to determine the effects on the performance measurements. The examination of thirty seven studies on quality QCF resulted in fifty six critical factors identified by using pareto analysis.

To some extent, the researcher quite agrees with Stupak and Garrity (1993) and Dingwall, and Strangleman, (2007) who believe that, until recently, there has been allegation that TQM is not compatible with the public sector and that there is no wide spread movement to implement the TQM philosophy in the public sector. Much of the reluctance is due to the belief that the public and the academic cultures are incompatible with TQM. This may have resulted from misunderstanding the key elements in these cultures or the more important sub-cultures that prevail in the large, often diverse public sectors. They have emphasized the key characteristics of TQM in relation to the public sector as the following factors:

1. *Focus on improving the process*
2. *Quality defined by the customers*
3. *People empowered to make decisions*

4. *Decisions based on facts*

5. *Long term leadership and commitment to TQM*

From what preceded, it has become obvious that almost all of the QCF which were identified or explored by gurus and by the literature and empirical studies are identical. Regardless of the organization type (manufacturing or service; private or public), size (Large or SME's) and origin (developed or developing countries), all comply to the most common factors; for example, leadership and management commitment, employee's involvement, reward and their satisfaction, process and work systems management, customers and suppliers satisfaction, adequate resources and facilities, continuous goods and services improvement. Since these QCF are alike, the research identified factors; therefore, the research proposed model considered these factors as the core factors and the sub-factors that form the model framework. Further details on these core factors and the structure of the model is presented in Chapter Eight.

### **7.1.2 Quality and Excellence Models**

This section presents the most universal commonly adopted quality framework models. The purpose is to highlight every model by providing brief explanation on its main function and how the researcher had extracted the basic conceptions in drafting the research model.

#### **7.1.2.1 Deming Model**

Deming introduced a mechanism model for quality management. He recommended a systemic procedure known as Plan-Do-Check-Act Cycle. The cycle is the foremost quality approach that proved to be a successful method for organizational quality performance improvement. The purpose of the model is to award organizations that continually apply Company-Wide Quality Control (CWQC) which is basically a statistical quality control tool. The basic theme of the cycle is that the organization plans a change or an improvement process, implements it, and checks the results. Depending on the results, action is taken either to standardize the change or to begin the cycle of improvement again with new information, (Rungtusanatham, *et al.*, 1998; and Bush and Dooley, 1989). The Deming Prize for Quality Control was established in Japan



(DPQC). Evans and Lindsay (1993) stated that the Deming award criteria consist of ten major categories:

- 1- Policy and objectives,*
- 2- Organization and operations*
- 3- Education and dissemination*
- 4- Assembly and disseminating information*
- 5- Analysis*
- 6- Standardization*
- 7- Control*
- 8- Quality assurance*
- 9- Results*
- 10-Future plans*

Deming model had inspired other quality and excellence models to develop their approaches. In the U.A.E., the Deming model and mainly his cycle is used by quite few UAEPSI as a performance measurement tool. However, the Deming model itself is rarely adopted.

#### **7.1.2.2 Baldrige Model**

In the early and mid-1980s, many industry and government leaders observed that a renewed emphasis on quality was no longer an option for the American organisations but a necessity for doing business in an ever expanding, and more demanding, competitive world market. However, many American businesses either did not believe that quality mattered for them or did not know where to begin. In 1987, the Malcolm Baldrige National Quality Award (MBNQA) founded in the United States was launched as a standard of excellence that would help organizations achieve excellent quality (Brown, 2008). The Baldrige award criteria are an important tool that defines the elements of an effective, customer-focused management system based upon the quality principles. It is widely used for educational and assessment purposes, (Brown, 2006).

The Baldrige performance criteria are a framework that any organization can use to improve the overall performance. Seven categories make up the award criteria:

1. *Leadership*: it examines how senior executives guide the organization and how the organization addresses its responsibilities to the public together with the practices good citizenship.
2. *Strategic planning*: it examines how the organization sets strategic directions and how it determines key action plans.
3. *Customer and market focus*: it examines how the organization determines the requirements and expectations of the customers and markets; builds relationships with customers; and acquires, satisfies, and retains customers.
4. *Measurement, analysis, and knowledge management*: it examines the management, effective use, analysis, and improvement of data and information to support key organization processes and the organization's performance management system.
5. *Human resource focus*: it examines how the organization enables its workforce to develop its full potential and how the workforce aligns with the organization's objectives.
6. *Process management*: it examines aspects of how key production/delivery and support processes are designed, managed, and improved.
7. *Business results*: it examines the organization's performance and improvement in its key business areas: customer satisfaction, financial and marketplace performance, human resources, supplier and partner performance, operational performance, and governance and social responsibility. The category also examines how the organization performs relative to the competitors, (<http://www.nist.gov>).

As mentioned in Chapter Six, section 6.3, the quality model is not adopted in the UAEPS, neither by private sector or public organizations. The Baldrige model is adopted by only one quality award body; it's primarily established for evaluating the educational sector in the U.A.E.

### 7.1.2.3 The EFQM Excellence Model (EFQM-EM)

The European Foundation for Quality Management (EFQM) was founded in 1988. Its purpose is to assist the development of quality management, an independent body which implements the basic principles of quality management. The EFQM does offer the European Quality award which provides quality initiatives and assistance to organizations within the European Union Nations. In 1992, the EFQM launched its excellence model, the EFQM-EM. The model is more like a new modified version of the Deming and Baldrige quality models; it is very similar to them in its form and structure. It provides the European private and public sector organizations with an application tool to benchmarking and self-assessment performance. The EFQM-EM framework consists of nine criteria, equally weighted between Enablers and Results. The enablers comprise five criteria: leadership, people, policy and society, partnership, resources and processes. The enablers constitute the organization existing performance. The results consist of four criteria: people results, customer results, society results, and key performance results. The results indicate the organization potential achievement. Each criterion has a number of sub-criteria with different scoring points, ([www.efqm.org](http://www.efqm.org)).

The basic missions of the EFQM-EM are:

- To stimulate and assist the organizations throughout Europe to participate in improvement activities leading ultimately to excellence in customer satisfaction, in the impact on society and in the business results.
  
- To support the managers of the European organizations in accelerating the process of making TQM a decisive factor for achieving global competitive advantage,

The EFQM-EM with its self assessment performance measurement method of RADAR proved to be the most suitable quality approach that responds to the special needs of organizations in order to pursue their strive to excellence. The model was mainly developed for private manufacturing organizations; it was later adopted by service organizations. In the last decade, the EFQM-EM was used by public sector institutions. This model is officially recognized by all UAEGEP, (Chapter Six explains the reasons for adopting such model in the UAEPSI).

#### 7.1.2.4 Toyota Production System (Lean Production)

Today, Toyota is the world's largest manufacturer of automobiles. It is by far the largest Japanese automotive manufacturer, producing nearly ten million vehicles per year; one every three seconds. This remarkable success is due to the Toyota Production System (TPS) or the lean production which was initiated in the late 1970s. The TPS is basically based on the ancient Japanese philosophy of Just in time (JIT). (Toyota Motor Manufacturing, 2009)

Toyota Corporation built a global trade mark that serves as a model of quality vehicles. Through TPS, it has managed to cut costs, reduce time to market, and dramatically improve quality. This has resulted in producing versatile, reliable, efficient vehicles and affordable spare parts and maintenance services. These key successes have influenced not just auto making, but the manufacturing standards for many other products all over the world.

The adaptation of TPS allows Toyota to be one of the few companies that is able to compete simultaneously as a premium and as a low cost producer. Lean, as a management philosophy, is also focused on creating a better workplace through the Toyota principle of respect for humanity. Lean production is a methodology that focuses on making the product flow through a value-adding process without interruption (Coffey, 2007; Morgan, 2006; Glauser, 2005; Liker, 2004 and Nave, 2002)

There are several important aspects of TPS. These relate to either cost reduction, or quality improvement, or both. The underlying philosophy of TPS is a relentless desire to continually find and remove waste i.e. time, cost, and material. This attitude results in continual improvement of quality and efficiency. One of the mechanisms for this improvement is the JIT-TPS. The JIT-TPS main function is to reduce the amount of inventory in a system to its minimum. The material is only provided when needed. This is opposed to having large amounts of inventory piled up waiting to be processed. The JIT-TPS has many advantages over the conventional systems: it eliminates inventory results and reduces costs. The JIT-TPS also improves quality as it allows for quick detection of quality problems. Because units are only produced as needed, there will not be a situation in which large amounts of defects are reworked. The five core concepts of TPS-JIT are:

1. *Specifying value in the eyes of the customer*
2. *Identifying the value stream and eliminate waste*
3. *Making value flow at the pull of the customer*
4. *Involving and empowering employees*
5. *Continuously improving the pursuit of perfection*

The strategies that underlie the TPS can be summarized into four basic rules. These rules guide the design, operation and improvement of every process of work; the rules are as follows: all work should be highly specified as to content, sequence, timing and outcome. Every customer, supplier connection must be direct. The pathway of every product and service must be simple and direct. Any improvement must be made in accordance with a scientific method. The TPS is merely for the mainly public sector institutions, the manufacturing organizations; it is not properly applicable for service organizations. However, its core rules and principles are believed to be very useful in shaping the conceptual part of the research proposed model.

#### **7.1.2.5 Six Sigma**

Six Sigma means in business and industry a statistical measure and a management philosophy. It focuses on eliminating mistakes, waste, and rework. It is defined by Truscott, as the "*focuses on establishing world-class business-performance benchmarks and on providing an organizational structure and road-map by which these can be realized. This is achieved mainly on project by project team basis, using workforce trained in performance enhancement methodology, within a receptive company culture and perpetuating infrastructure*", (Truscott, 2003: 3). Six sigma works best when everyone in the organization is involved, and when it combines people power with process.

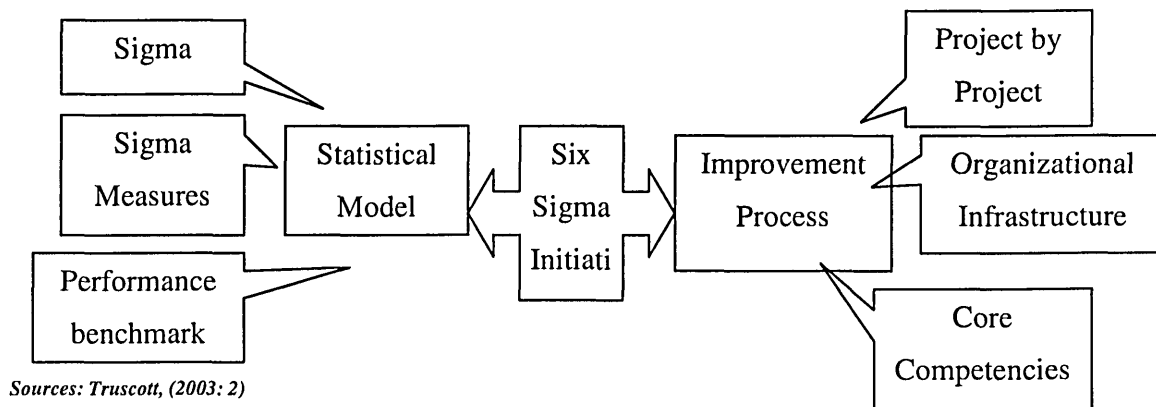
It is a programme that establishes a measurable status to achieve and embody a strategic problem solving methodology that increases the customer satisfaction. It instructs employees on how to function scientifically in order to augment their new performance level to the maximum. It is based on statistical measures that provide discipline, structure, and foundation for a better decision making. It also increases the organization return with regard to financial and people investment. Chowdhury (2001) presented his perception of the six sigma goal simply to make the customer happier by considering

the customers feedback on problems that need to be solved. When they are correctly solved, the cost will be reduced and the profit will increase. Whereas, Truscott stated that the six sigma concept has a dual function: characteristics and structures. These two functions provide a benchmark and process parameters that enable the organizations to achieve a perfect output for products and services. The higher is the scale of sigma, the better is the standards; it ranges from one to six which is considered a world class standard (Truscott, 2003). He affirmed that it is essential for an organization to better understand six sigma as they should be in order to remove confusion. He introduced two principles of the “six sigma”; the first one is the statistical model and the second is the improvement process. Figure (7.2) illustrates the Truscott's six sigma principles. He further explained that the statistical model provides universal performance measurements that can be applied to any business activity regardless of its complexity. It consists of three elements:

- *Sigma statistic which refers to the international statistical measure of product variability*
- *Sigma measure which provides a performance measuring scale*
- *Performance benchmark which indicates the sigma value of six as it is called a world class performance standard (Truscott, 2003).*

The improvement process recognizes every stage, function and activity within the organization which can be used to control and improve performance such as monitoring which has an impact on the output of each stage of process functioning, (Truscott, 2003).

**Figure 7.2 The Truscott's principal of six sigma business initiatives**



The six sigma method is considered as a measurement that it is used to reduce product and process variations. It indicates how badly or how good the organization performance of a process is, i.e. how many mistakes or errors are made regardless of the amount of business conducted. However six sigma is presented in a numeric way to the organizations; one must know where it stands, what it wants to attain, and how it is done. One should be aware of the end goal of implementing the six sigma principles, which is to improve quality so that it goes parallel with the customer satisfaction, (Chowdhury, 2003).

Truscott (2003: 9) introduced an extended version of the DMAIC (Define-Measure-Analyse-Implement-Control) approach which he called the six sigma generic approach and to which he added three further steps: (Identify, Develop, and Communicate) as illustrated below:

*1- Identify the project*

*2- Define the project*

*3- Measure the current process performance*

*4- Analyze the current process*

*5- Develop the improvements (pilot and verify)*

*6- Implement the changes (achieve breakthrough in performance)*

*7- Control at new level (institutionalize to hold the gains)*

*8- Communicate (the new knowledge gained and transfer the solution to similar areas),*

Truscott (2003) justified his approach on the bases of three main reasons. First, the additional three elements (Identify-Develop-Communicate) which were introduced in order to differentiate the six sigma approach from the quality circle approach. Second, the way he has developed; it represents, indeed, the best practices. Third, and most importantly, its applicability to the project nature, i.e. each project has its own unique problem solving and process improvement methodology.

This approach is well known and it is adopted by private large size manufacturing organizations. However, to the best of the researcher's knowledge, this approach does not exist in the UAEPSI. Though, it is believed to some extent, that the six sigma statistical measures are used much frequently as a tool for self assessment and quality performance improvements in the UAEPSI.

In the light of the above models and the quality approaches, it is believed that these models do not focus solely on product, service perfection or traditional quality management methods, but rather they consider a wide range of management activities, behaviour and processes. They provide a useful audit framework against which organizations can evaluate their TQM implementation practices, seek improvement opportunities, and end results. They remind the researcher that the proposed model should contain a systematic methodology in translating these theories into practice. Thus a self assessment measurement tool needs to be developed for this purpose. This instrument enables the UAEPSI to determine the appreciation level and to initiate quality programme. More explanations and details related to the model methodology are presented in Chapter eight.

#### **7.1.2.6 Other Quality Framework Approaches**

This section reviews the other quality framework approaches that were developed by different TQM literature. Their major characteristic is that they are non generic as they are developed by individual quality practitioners and that they are seldom practically applied. It is perceived that the majority of them are mainly theories that have never been broadly experimented with. But, by reviewing them, the researcher would get an idea about how they were developed.

As the researcher outlines the different quality framework approaches, it becomes apparent that most of the studies focused on private manufacturing organizations and on developing frameworks and self assessment instruments to validate their assumptions. There is also lack of studies in undertaking the issue relevant to the U.A.E. Al-Tamimi, and Al-Amiri (2003) attempted to measure the level of service quality, to analyze the service quality of the Islamic banks in the U.A.E. and to compare differences in service quality provided by two semi-owned state Islamic banks. A survey questionnaire that aims to examine the level of service in terms of the customers` age, gender, nationality, education, and the number of years of banking is applied. It also aims to identify the probability of differences in the service level according to the customers` expectations of both banks. By applying the techniques of the SERVQUAL method to analyze the data gathered, the study results showed that there was no significant difference between the levels of overall service quality in both banks based on the customer`s genders and nationality. On the other hand, it indicated significant differences based on the



customer's age, education, and number of years of banking. However, what weakens the study results was the fact that it was carried out in only two organizations, which do not necessarily reflect the wide Islamic banking industry in the U.A.E. or the private sector organizations. On the contrary, Leonard, *et al.*, (2002) carried out an investigation on the lack of current excellence models to evaluate two critical aspects of organizations; they examined the self assessment, the performance measurements and the dynamic of TQM influence on organizations. They reported the results of their fifty two case studies on the American firms from different economic sectors and sizes applying the Leonard grounded theory for TQM strategic dynamics. They considered each model separately as the picture of the TQM dynamics and its relationship with the organization strategy became clearer. They developed five models of quality: the TQM applications model, the TQM strategic drivers' model, the TQM drivers' model, the TQM environment model and the TQM lifecycle model. The combination of these models resulted in the development of a new TQM framework called the strategic dynamics of TQM. The aim of the framework was to demonstrate both the dynamic and the strategic perspectives of TQM.

They affirmed that by using this model, the organizations can portray a comprehensive past, present and future status of TQM. They strongly proposed that the framework used in their study provides useful and more meaningful insights into the complexity and dynamics associated with TQM in the organizations. The end result was that TQM is much more dynamic and it goes beyond the static assessment. Conversely, Radin, and Coffee (1993) reviewed the experience in the federal government; they proposed a framework for quality implementation consisting of six elements which should be considered before a TQM effort is made: 1) the type of organization; 2) the interest group dominance and policy agreement; 3) the leadership longevity and tenacity; 4) the crisis or external motivation for change; 5) the size; and 6) the competency of the organization members. The authors specified the five significant factors that the government should bear in mind. In order to assess the landscape of TQM and the management reforms, the government organization should learn (and benchmark to the private sector, the organization quality initiatives), that quality is a never ending process and that the top management officials are the main drives for quality; they should criticise and address the organization problems.

Whereas Quazi, *at el.*, (2002) attempted to corroborate the results of their studies with the previous ones in the same field by applying the Saraph's instrument on thirty three manufacturing and service firms in Singapore. The aim was to compare the outcomes in their study with the two other replicating studies covering larger samples in many countries to establish the robustness of the instrument. A self assessment approach was suggested to measure the performance and quality practices in the selected organizations. The end result of the study revealed that the instrument used was reliable and valid for measuring quality practices in both the service and manufacturing organizations. It also presented the similarities and difference of quality factors and implementation practices in comparison with other studies. They recommended that the instrument could be used as a continuous monitoring quality performance tool serving as an indicator for the organization decision makers to identify quality gaps and problems and to solve them. Interestingly, Montes, *at el.*, (2003) conducted a study which is quite similar to this research, but targeted private manufacturing organization. They developed a TQM implementation framework that takes into consideration the content, elements and the needs of the organizations. The framework provides a guideline for the organization, prior to and after initiating quality approaches regarding questions such as: what, when, why and how to do it focusing on the characteristics of the internal and external factors. They argued that in this way they could analyse the factors regardless of the organizations themselves: whether they are in the manufacturing or the service sector, and their sizes. However, the framework development depends on the previous literature which is related to the research issue; therefore, it couldn't be viable unless an empirical study supports their assumptions.

Likewise, Alsadhan, et al., (2008) investigated the QCF that affects the success of Knowledge Management (KM) and identified thirty two factors from various the literature that contribute to the successful KM project implementation. Survey questionnaires were sent to the organizations that implement quality across the world; the respondents came from various countries and industry sectors. An integrated framework model for the effective implementation of the KM projects based on the best practiced perspectives was proposed to investigate the organizations that already implemented quality approaches and to learn from their experiences. The study findings show that all the factors are interrelated and are strongly dependent on each other; the framework developed is adaptable and applicable to the different organizations regardless of the size and nature of business. It provides an insight for the

organizations that are on their way to commence the quality initiatives considering the factors identified to achieve better results. Claver, *et al.*, (2003) study based on reviewing the literature related to QCF, and on the empirical investigation of 106 multiple sector organizations in Spain identified eight critical factors and three results of TQM. The identified factors were used to develop a scale of TQM measurement, the critical factors are: leadership, quality planning, training, specialized training, supplier management, process management, continuous improvement and learning, and the results factors are: customer satisfaction, social impact, and business results. Based on the empirical results, a framework was developed. It enables managers understand better quality practices and TQM, evaluate and measure the factors and results identified in their organizations. The author recommends the model as a tool for quality improvement particularly for large size organizations. It allows them to observe the strength and weakness and to perform the necessary improvements.

Discrete studies underlined the people contribution to private organizations. Pun and Gill, (2002) examined the prerequisites of the employees' involvement in the process of TQM implementation that safeguards the organizations efforts in service improvement processes. They proposed a generic implementation model that was able to integrate the employee's involvement, to assist the organization to implement efficient quality practices and to facilitate their change towards quality. The model also provides the organization with self assessment criteria for performance improvement. The proposed framework was initially based on the Baldrige Award criteria. The framework was tested and it proved to be valid in measuring performance and quality improvements. More to the point, focusing on three elements of performance management: knowing the requirements, regular appraisal and review feedback and fair and appropriate individual performance reward. The aim of the personal performance guide framework is to get people involved in the TQM process; it helped everyone in the organization to know what to do and how to do it in order to achieve the overall organizations goals. The same issue was tackled by Poulymenakou and Tsironis, (2003) who explored the relationship between electronic commerce and quality management, how to integrate and use the TQM approach, the tools required to develop the process of the organization and the service industries. The findings of the study indicated that TQM approach and its implementation in electronic commerce is significant for their service improvement and customers' satisfactions.

Several noticeable studies on developing the systematic TQM model were encountered; for instance, Silvestro, (1997) attempted to develop a generic TQM model that comprises six precepts to ensure the comprehensive, widespread and balanced implementation of TQM across service organizations; the idea behind this model is to facilitate the audit of management practices that measure achievements or results. He argues that it enables managers to identify areas of TQM; the areas with a partial implementation level are compared with those, widely and systematically implemented. The emphasis on two measurements was derived from services and from the literature on the customer's satisfaction and the process operation, Silvestro, (1998). Equally important, Johnson (2004) reviewed the existing quality models developed by other practitioners and proposed a model based on the previous models that were tailored to the specific needs of the organizations called the Quality Standard Registration Performance Outcome Model. The reason for developing such model is that it supports the relationship between the organizational variables, the organizational change models, and the quality management system implementation. He focused on expanding the body of knowledge linking grounded theory associated with the organizational change models and quality standard registration mandated by the customer. He recommends that the model could be applied to the implementation of other customer-mandated initiatives and that it is not strictly limited to quality standard practices.

Several quality frameworks were developed for the SME's. Yusof and Aspinwall, (2000b, 2000c, 2000d) examined the various TQM implementation issues particularly in SME's. The investigation contended that SME's are not capable of initiating quality project in the whole organization at once; instead it needs to focus and implement it with gradual adoption due to their limited human and financial resources. They perceived the different TQM practices of the large and SME's organizations. They noted that some TQM implementation frameworks were not suitable as they were developed mainly for large size organization rather than for SME's ones. They aim to provide a different perspective and to illustrate the similarities and differences in the frameworks developed in the literature. They perceive that simple frameworks are better for SME's.

Based on their research outcomes, they proposed a TQM conceptual implementation framework for small businesses that help and guide them on how to initiate a successful TQM implementation project that enables them to sustain continuous product and

service improvement. Furthermore, Ghobadian and Gallear, (2000, 1997 and 1996) explored the difference of quality implementation characteristics between large and SME's organizations in order to determine whether size significantly affects the appropriateness of TQM. They used three factors in the selection of the case study: size, geographic distribution, and effective use of TQM. The study revealed that the basic concepts of TQM were equally applicable in the SME's context. However, the size of the organization differs between large and small so are the influences in terms of communication, nature of leadership and the extent of organizational cross functional integration. Based on the study outcomes, they developed a model for the implementation of TQM in SME's and consideration recognition for specific requirements and needs for the crucial factors for the successful quality implementation in SME's.

Whereas Spencer and Loomba, (2001) carried out a fieldwork survey on the TQM practices employed by the small manufacturing firms in the American industries. Out of the thirty nine general characteristics of quality in the small firms, they found out that the small size enterprises could implement TQM as their large counterparts; they then, proposed a benchmark of TQM practice framework, to be used by other firms in the same industry.

Hafeez, *et al.*, (2006) conducted a comparative study on ten TQM gurus, on their quality conceptual development as an instrument for organizational success. They carried out a survey organization that implemented quality to indentify and authenticate the theoretical concepts of the practitioners' points of view. The survey revealed the theoretical concepts that scored higher than the practitioners' experience; however, when it comes to implementation, the results showed that the organizations experience major difficulties in translating TQM theories into practices.

They suggested that the organizations need to pay due consideration to issues related to people as well as the TQM traits. They developed a framework (technological and organizational, involving people and management) by using a balance score card as a tool for performance measurement that enables organisations to concentrate their efforts on technology. The organisational and people management instruments provide indicators for financial and non financial aspects of quality implementation.

However, Escrig-Tena (2004) presented a theoretical and empirical analysis considering TQM as a competitive factor and TQM influence on organizations performance. The analysis results led to developing a model of relationship between TQM and the organizations performance improvement. A series of hypotheses were formulated and tested to support the empirical investigation. The results of the data analysis revealed that the hypotheses test the relationship of TQM to the organization performance on the suppliers, customer care, and the relationships with the staff which were positive and consistent with the preceding literature related to this issue.

Correspondingly, Baxter, and MacLeod (2008); Idris, and Zairi, (2006), Yeh, (2003), McAuley, (2001), and Selen, and Schepers, (2001) perceived that TQM is simple and easy to implement once the organizations gave their internal and external customers their top priority with a proposed framework of steps to TQM journey to recognition and success in business. They emphasized the short and long term intangible benefits of TQM, as they explained that the organization should focus on them rather than on using TQM tools as a future prediction of cash flow and financial profits. They reviewed the quality frameworks and approaches that provide a universal framework for evaluating aspects of TQM practices in organizations.

They also provide a framework for identifying a range of intangible and tangible processes that influence the organizations TQM implementation and the end results. Although each quality framework and approach has its own unique categories and emphasis, there are some common areas. First, each quality framework and approach has two parts: the first is the TQM implementation and the second is the overall business results. TQM implementation makes the overall business results happen. Second, all the models emphasize the importance of leadership, human resource management, employee participation, employee education and training, process management, strategy and policy, information, supplier quality management, and customer focus. In addition, quite few quality frameworks and approaches provide the organizations with a means to measure their performance improvement against a set of universal criteria, and to identify their strengths and weaknesses in the areas of quality management practices and business results.

These models provide insight into the practical way of applying quality, as well as a solid foundation for this research, and give the researcher a better understanding of the

concept of quality. Additionally, most of the above mentioned quality frameworks and approaches are similar in their main concepts. However, in some cases they differ in the minor details that are related to the sequential priorities of certain criteria or factors. Some of these frameworks need to gain more credibility, as they are still theoretical assumptions and have not been empirically tested. Other approaches are based on the existing models, but they were very rarely applied by the different organizations and countries. What's more, it is observed that several framework models do not explain or do not develop a methodology of self assessment tool.

What is surprising is that according to the researcher's knowledge and from the revision of the preceding literature, just one study proposed a framework model for the public sector organization. These observations enabled the researcher to overcome the drawbacks noted in the reviewed quality models. Accordingly, it inspires the researcher to develop a model that is well structured, that has clear mechanisms and that fits the purpose and responds to the UAEPSI quality requirements. Further details and clarifications are presented in Chapter Eight as it mainly discusses the development of the research model.

## **7.2 EMPIRICAL DEVELOPMENT**

This section explains the empirical development part of the research model from the outcomes of the data analysis already discussed in Chapter Five. The actual data obtained from the research fieldwork, the literature and the relevant studies were used as basic sources for the development of the conceptual proposal of the research model.

The outcomes of data analysis as displayed in Table (7.2) weigh against the relative importance mean of every single factor which the employees in the UAEPSI consider vital to the success of TQM in their institutions. The factors were ranked in a descending order according to the relative mean importance. The data revealed that the factors relevant to the management leadership and people were among the highest significant factors in all UAEPSI; they, thus, need to be carefully considered.

**Table 7.2 Distribution of perceived factors according to their Mean importance**

<i>Serial</i>	<i>Number</i>	<i>Factors</i>	<i>Mean</i>
1	1	Top management commitment	4.87
2	2	Leadership style & effectiveness	4.81
3	11	Strategy and policy development	4.78
4	5	People encouragement	4.71
5	23	Product-Service design and delivery	4.70
6	18	Processes design and management	4.69
7	20	Continuous improvement	4.64
8	15	Flexible and dynamic organization structure	4.62
9	4	Employees recognition	4.61
10	8	People competences and skills	4.61
11	6	Job satisfaction enhancement	4.61
12	3	Employees involvement	4.57
13	9	Resource management (Man, Machine, Material...etc)	4.56
14	22	Manpower planning and strategy	4.56
15	19	Quality assurances	4.55
16	14	Communication and knowledge management	4.55
17	13	Staff suggestions scheme	4.53
18	12	Team working spirit	4.52
19	17	Performance management system	4.52
20	24	Appropriate facilities	4.51
21	21	Benchmarking	4.51
22	10	Partnership with customers and other stakeholders	4.49
23	16	Recourse utilization	4.47
24	7	Management systems	4.38
25	25	Social and corporate responsibility	4.37
26	27	Emiratization careers scheme	4.33
27	26	Environmental responsibility	4.23

Source: The Author

The data analysis showed a considerable divergence between what people anticipate as pivotal factors and what is practiced in reality and this helps the researcher to understand the coverage of good quality practices in the UAEPSI. Table (7.3) displays



the relative mean importance for the intensity of actual practices of quality factors in the UAEPSI. The factors associated with people such as their encouragement, their career satisfaction and their involvement in management, in setting quality policies and in implementing processes were ranked as least significant practiced factors.

**Table 7.3 Distribution of the actual practiced factors according to the Mean importance**

<i>Serial</i>	<i>Number</i>	<i>Factors</i>	<i>Mean</i>
1	1	Top management commitment	4.10
2	9	Resource management (Man, Machine, Material...etc)	4.03
3	2	Leadership style & effectiveness	3.88
4	11	Strategy and policy development	3.86
5	23	Product-Service design and delivery	3.86
6	20	Continuous improvement	3.82
7	22	Manpower planning and strategy	3.80
8	8	People competences and skills	3.79
9	18	Processes design and management	3.79
10	24	Appropriate facilities	3.78
11	19	Quality assurances	3.77
12	25	Social and corporate responsibility	3.76
13	10	Partnership with customers and other stakeholders	3.75
14	16	Recourse utilization	3.73
15	15	Flexible and dynamic organization structure	3.72
16	12	Team working spirit	3.68
17	27	Emiratization careers scheme	3.68
18	17	Performance management system	3.67
19	13	Staff suggestions scheme	3.62
20	14	Communication and knowledge management	3.60
21	21	Benchmarking	3.59
22	26	Environmental responsibility	3.54
23	7	Management systems	3.45
24	3	Employees involvement	3.42
25	5	People encouragement	3.33
26	6	Job satisfaction enhancement	3.24
27	4	Employees recognition	3.22

Source: The Author

Share and Zairi (1996) touched upon an important issue which is considered one of the most difficulties that the researchers face in studying the ranking of the QCF. They suggested guidelines on how the researcher could group the QCF according to their significance, and the methodologies to be used in order to define and measure them before they become critical. However, the researcher had overcome this problem in identifying the QCF by arbitrating the perceptions of the employees from various managerial and low level positions in the UAEPSI; (Chapter Four discusses the methodology employed to eliminate this setback). The end result of the survey (Chapters Four and five) proves that all the dimensions were independent and that there was a good degree of correlation among the various QCF. An example on the QCF that were identified and that were perhaps the most significant for the success of the quality implementation programmes in the UAEPSI and is given below:

1. *Top management commitment*
2. *Leadership style & effectiveness*
3. *Management systems*
4. *People competences and skills*
5. *Employees involvement*
6. *Employees recognition*
7. *Job satisfaction enhancement*
8. *People encouragement*
9. *Communication and knowledge management*
10. *Recourse utilization*
11. *Appropriate facilities*
12. *Resource management (Man, Machine, Material...etc)*
13. *Strategy and policy development*
14. *Partnership with customers and other stakeholders*

These findings inspired the researcher to develop a model that integrates the illustrated outcomes in Tables (7.2 and 7.3) into four major factors. The demonstration and the further explanation of the development process of the model and its framework structure are presented in Chapter Seven.

## SUMMARY

The chapter addressed the theoretical and empirical development of the research model. Conclusions were drawn from revising studies and literature related to QCF as well as to the quality implantation framework model. A significant emphasis on certain QCF (mentioned above) organizations and particularly the UAEPSI need to be placed.

In Addition, the researcher spotted from the outcomes of the previous chapters that the prime cause that drove him to develop an exclusive self assessment model for the UAEPSI is to eliminate the complexity of the currently adopted quality programmes and to simplify the UAEPSI quality implementation processes. The model stresses the importance of QCF that links quality implementation, people aspects, leadership management, processes, systems, resources and facilities to each other since these are the parameters that constitute the core elements of the proposed model.

The basic elements of the model along with the self assessment performance measurement method function as an aiding tool for the UAEPSI to overcome the difficulties they encounter along their quality process. The following chapter presents in more detail the model structure, its measurement method and how it differs from the other existing quality models.

# CHAPTER EIGHT

## THE MODEL EMERGENCE

### PREFACE

Based on the theoretical and empirical outcomes that shaped the conceptual development of the research model (see Chapter Seven), this chapter explains how the research Quality Appraisal Model (QAM) emerges, what it contains, how it works and its prime purpose. Therefore, this chapter is divided into four sections.

In section one, the researcher enlightens how the outcomes of Chapter Seven were integrated, utilized, ultimately developed and emerged into the QAM.

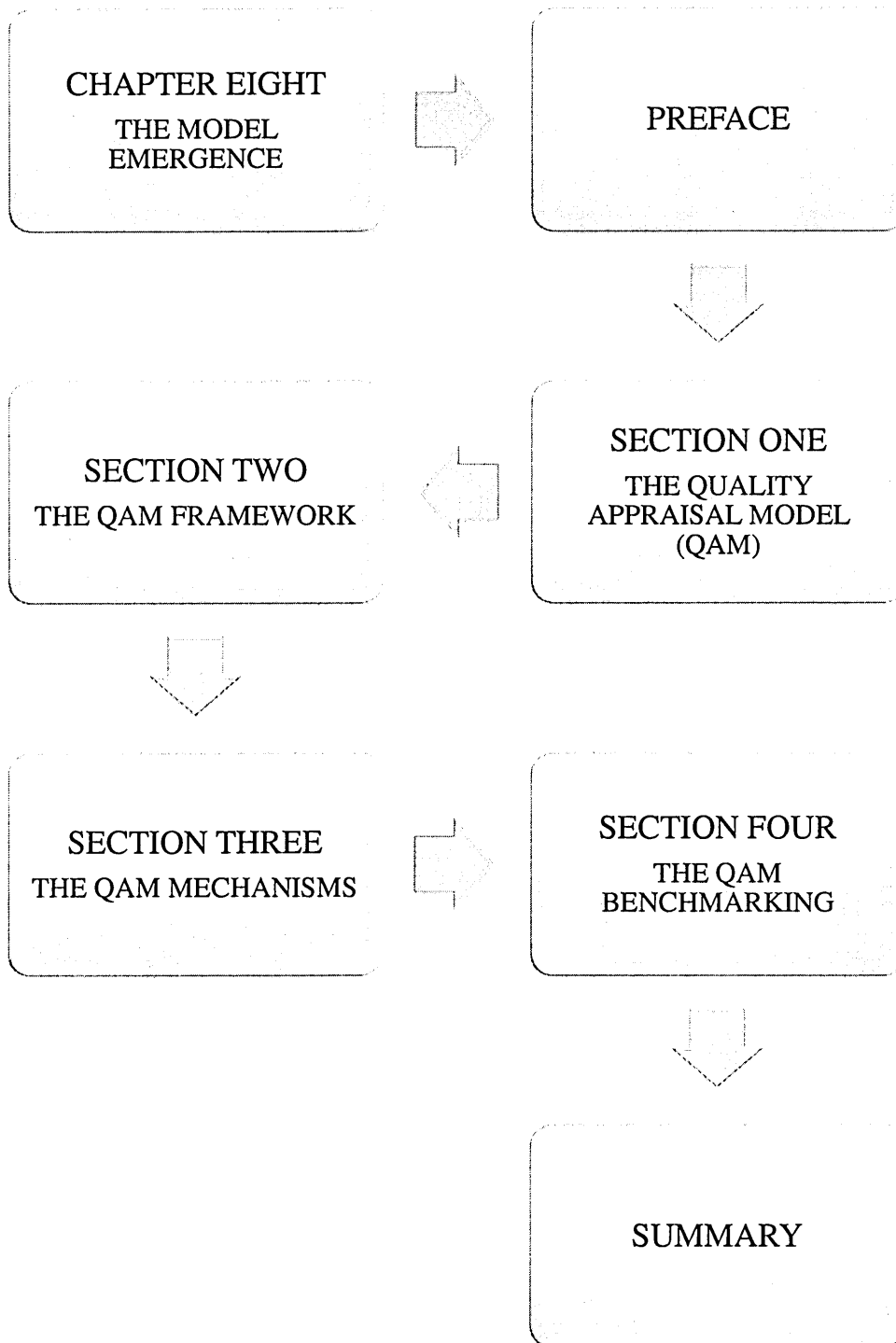
Section two provides detailed explanation on the QAM framework structure, what core factors and sub-factors were considered in order to eliminate the existing gaps between what is perceived and what is actually practiced in the QCF and in the UAEPSI.

Section three clarifies the QAM mechanisms, how the model functions and how the method of self assessment instrument operates for evaluating the UAEPSI quality standpoint.

Section four benchmarks the QAM with other existing universally adopted models, which they were highlighted in Chapter Seven, section (7.1.2) to point out similarities and differences.

Finally a brief summary of that chapter is presented. Figure (8.1) outlines the content of this chapter.

*Figure 8.1 Chapter eight outline*



*Source: The Author*

## 8.1 THE QUALITY APPRAISAL MODEL (QAM)

This section aims to ascertain from the reviewed current quality practices in the UAEPSI (see Chapter Six), that there is a serious need for the development of an accustomed quality model for the UAEPSI based on a comprehensive QCF. This prerequisite becomes apparent when the outcomes of Chapters Five and Six revealed that there is a lack of acknowledged quality factors and measures that assure successful implementation of quality in the UAEPSI. Furthermore, the outcomes revealed the struggle in implementing their quality scheme projects professionally. This is because the majority of the UAEPSI simultaneously adopt a combination of different quality approaches and assessment tools in conjunction with the UAEGEP criteria and its assessment method. This veracity is related primarily to the way the UAEPSI management think and their efforts to win the UAEGEP excellence award. They deny recognizing the complexity and confusion that have been created among the employees; yet, the contradicting results of using two or more assessment tools for measurement were that their institutions performance was improved. Conversely, the main dilemma is that most of the UAEPSI are not well prepared or capable to adopt or implement successfully the quality criteria specified by the UAEGEP.

Thus, the primary purpose of developing a QAM is to assist the management in the UAEPSI to assess their institutions capabilities against the model core factors and sub-factors prior to the initiation of their quality programmes. Sekeran, (2003) clarified that the conceptual development of a model is based on how the researcher makes logical sense of the relationship of the several factors that have been identified as important to the research problem. The researcher had largely reviewed the empirical studies and the literature relevant to QCF (see Chapter Seven).

The intention was to determine the most common and influential QCF that have attained and maintained by the UAEPSI. This shall enable them to be appropriately equipped for embarking on their journey to quality excellence. Additionally, the researcher had also reviewed a number of the most recent and commonly adopted quality and excellence framework models (see Chapter Seven). This was done with the intention of developing the most suitable quality model in term of determining what aspects and components best fit and exclusively tailored for the UAEPSI. Therefore, developing a model is not an easy task. Enormous revisions, great effort and careful attentions are required in order

to mould a presentable, acceptable, and credible model that contributes significantly to the development of the knowledge. At the same time, it ensures that the model has avoided the drawbacks of the existing models; the model must be viable, practical and straightforward.

In the light of the current situation, the researcher came up with the idea of emerging the theoretical and empirical findings obtained from Chapter Seven. Hence, the development of a conceptual structure for the QAM emerged from the findings of the previous literature and from the research data analysis and outcomes, (see Chapter 5, Sections 5.3 and 5.4 for further details) which were based on the results of the perceived factors from the employees' perspectives compared with the results of the actual quality practices. The researcher classified them according to their relative importance and their contribution to the success of the TQM implementation in the UAEPSI. The model assists the UAEPSI in evaluating the strengths and weaknesses of their TQM implementation, targeting their improvement areas and setting up an action plan for improvement. Moreover, from its prime function in terms of appraisal, it was used during the stage for selecting a unique name for the model that eventually reflects its main purpose.

Gatchalian, (1997) examined the literature and the previous surveys of the organizations that implemented TQM in their organization. The results revealed that twenty to thirty-five percent of them have had a considerable change in the performance improvement. The author perceived the TQM practices and the approach that needs to be reviewed and reconsidered with the investigation of the basis of improvement which are either identified or redesigned. The research focused on customizing the model that responds to the needs of the individual UAEPSI. As a result of this, every institution can amend and alter the model according to their changing requirements, see Table (8.1) which presents the core factors and sub-factors that consist of the contents of the QAM.

In relation to the quality models adopted broadly in the public sector, the researcher aims to benefit from their experiences. Kattan, (2005) for instance, applied the TQM model on the financial institutes in the U.A.E. He divided the main findings of the research into three main themes: quality initiatives implementation, staff perception and the implementation pitfalls.

*Quality initiatives implementations: (Input)*

- *focusing on concepts, policy and objectives that increase the quality awareness*
- *Lack of proper quality future plans and communications*
- *Lack of staff involvement and teamwork*

*The staff quality perceptions: (Process)*

- *Need to embrace the quality culture*
- *Negative impact on performance*
- *Deficient communication system and teamwork spirits*

*Quality implementation pitfalls: (Output)*

- *Lack of proper planning*
- *Management by objectives*
- *Lack of effective communication*
- *Lack of resources*
- *Unprofessional work environment*

The investigations outcomes of Syed-Ikhsan, and Rowland (2004a) Syed-Ikhsan, and Rowland (2004b), and Warwood, and Antony (2003), are more likely similar to the Kattan's findings. However, they identified an additional element: the 'political directives'. The resource constraints that are politically imposed by the central government within the public sector have a significant impact on the public sector of the employee abilities that enable them to transfer knowledge and skills due to the ever-increasing workloads and time constraints Other key issues, such as the public sector embodiment of the social processes of institutionalized practices, traditions, attitudes, behaviour and rewards have not been systematically studied in relation to improving knowledge transfer within the public.

Other scholars like Clark and Appleby (1997), explored the three different case studies of the local government councils in their attempt to implement quality programmes in all areas of the organizations using different quality frameworks. They explored the similarities and differences in their attempts; they attempted to find out why differences occurred in each approach. The discussions considered the government entities; the difficulties involved in transferring quality concepts from the private organizations and the possibility of adopting these principles in the government service institutions. The



findings showed that the government agencies are able to deploy different quality approaches regardless of whether they are designed mainly for the private manufacturing organizations; however the key points the approach should consider to implement quality are:

Be sensitive to the culture and values of the authority;

- 1 Be capable of being adapted across a range of different services areas;*
- 2 Be congruent with the current business/policy planning activity;*
- 3 Be supported by mechanisms for effecting change and coordinating activity*

Whereas, McAdam and Reid (2000); Weeks and Bruns (2005), and Smith and Gal (1993), observed that the government institutions are facing the same challenges as those of the private sector, i.e. cut costs, increased productivity and improved services. They perceive that the government institutions could use tools similar to those used by the private organizations to overcome these challenges. The case study of the government financial organization using these tools revealed that the government organizations will be able to leverage the process management to create better outcome at lower public costs (Weeks, and Bruns, 2005; Bollinger and Smith, 2001).

The structure of the model was developed from the research data analysis (see Chapter 5 Section 5.5 for further details), which demonstrates the results of the perceived factors from the employees` s perspectives. As it has been mentioned in Chapter One, the objective of the research is to explore the gaps in the perceived and actual quality practices in the UAEPSI. The outcomes of the empirical investigation revealed that there are significant gaps between the employee`s expectations and what is actually practiced on the ground. The researcher identified and classified them and called them the QCF. They need to be tackled by the UAEPSI in order to fill these gaps.

However, the researcher had observed the source of these gaps. The management of UAEPSI frankly expressed their concern that there are quality gaps, but they cannot measure them unless they are based on empirical investigations. They claim that they exercise the UAEGEP performance measurement method, but the method does not recognize the details and the specific quality issues of individual institutions. In

addition, the UAEGEP declare success in the implementation of quality management in the public service institutions. The research data analysis results show that there are distinct divergence between the government announcements and the amount of actual practices of quality and its success. The employee's perceptions of the two main areas were obtained. First, their views on the impact of TQM on their job satisfaction, work encouragement and recognition, and the level of their involvement in the quality implementation processes. Second, the research concentrated on the employee's views on the capabilities of the existing implemented quality programme to improve the institutional and employee's performance.

The research data analysis outcomes revealed the following current quality situation in the UAEPSI:

- 1 Management of UAEPSI is fully aware of the TQM principles; however they are unconfident in determining and then prioritizing the factors that are vital to the successful implementation. On some occasions, they simply do not pay enough attention to these factors and specially to those related to the employees satisfactions
- 2 Although the UAEPSI effortlessly worked to provide the cutting edge technologies and equipments that accelerate and improve the level and the time needed to deliver their services, they are still unable to transform the most perquisite factors correctly. Less emphasis was put on the human side of the quality processes. Factors such as the employee's participation, involvement, recognition and their satisfaction were at their lowest importance
- 3 TQM benefits are considered intangible; certainly, extra cost and efforts are required since UAEPSI has limited budgets and human capacities particularly in the early stages of quality implementation. This causes reluctance and impatient temperament among the management staff as well as the employees as they consider the long term benefits of TQM. Therefore, it is very often that some UAEPSI over time pass their dedication to quality which falls dramatically
- 4 Very few UAEPSI are committed to TQM, but they lack the adequate experiences of the methodologies and mechanisms of implementing and the required criteria of

the UAEGEP. Also, they lack understanding of how they properly benefit from the performance measurement tools. As a result of inexperience, shortfalls, mistakes and errors are very frequent, thus the lessons need to be learned to eliminate mistakes in later stages of TQM

- 5 Due to unclear strategies of the related quality implementation processes, the UAEPSI does not know precisely what criteria are required by the UAEGEP and how they should put them in action. This ultimately leads to not knowing what performance measurements need to be tested, which leads to ambiguous situations and frustration for not achieving the TQM set goals
- 6 Yet again the obligatory participation in the UAEGEP, had led some UAEPSI to be not fully convinced and ultimately committed to implement TQM. Therefore, the management and equally the employees apply the UAEGEP criteria not because they realize the importance of TQM to their institutions but because they merely practice quality to fulfill the government duty
- 7 A small number of the UAEPSI management, still believe that cutting their current and overheads expenses is an effective method in improving their institutions performances and services. They assume that this strategy privileges them in getting higher scores and win the UAEGEP excellence award. By reviewing the UAEGEP criteria, none of them cited that the UAEPSI were evaluated upon their annual budgets savings. In fact, this strategy proved to turn against those who applied it; it resulted in the decline of their service standards and the intensity of their employees and customers satisfactions.

These current situations added significantly to the development of the research model. The researcher bears in mind tackling these issues during the course of drafting the final version of the model. This should strengthen the model propositions so as to make it a supporting module for the UAEPSI and to enable them to predict their priorities and to work professionally in alignment with the UAEGEP criteria. Thus, this implies that they are more likely heading towards achieving their excellence goals and the U.A.E. government quality strategy.

## 8.2 THE QAM FRAMEWORK

The main idea behind developing the Quality Appraisal Model (QAM) is to enable the UAEPSI and particularly the top management to prioritize the core factors and sub-factors that contribute positively towards the successful implementation of quality in their institutions, in other words, the QAM allows them to differentiate the vital factors from the minor ones as a institutional assessment method to assess their preparedness prior to embarking their quality scheme project. Therefore, they appraise and reassess their accessible resources and facilities accordingly. This enables the UAEPSI to evaluate themselves against the core factors and sub-factors of the QAM; this should allow them to discover their strengths and weaknesses. It is wise to articulate that the QAM is developed to be in alignment with the UAEGEP criteria, which the UAEPSI will adopt as a superlative method that eventually facilitates meeting the U.A.E. government quality strategy.

This section also describes the mechanisms of integrating the findings of the literature reviewed in the first section with the results of data analysis presented in the second section of Chapter Seven; thus, shaping the final version of the accustomed quality implementation model for the UAEPSI. The purpose of the model was to provide insight in the management which most fit the quality approaches that were appropriate mainly for service organization. McAuley, *et al.*, (2006) and Castka, *et al.* (2003) foresee the organizations as social entities designed to achieve economic or other purposes, while at the same time, fulfil the members' needs. The effectiveness of the organizational design must be judged by its fit for the social structure and processes with the individuals being recruited and the environment being served. The following four organizational components must be determined:

- 1 People: what the abilities, needs, values and expectations of the employees are
- 2 Process: what behavioral patterns, attitudes, and interactions exist within the organization at the individual, group and intergroup levels?
- 3 Structure: which formal mechanisms and systems of the organization that are designed to channel behavior toward the organizational goals and fulfill the

members` needs such as organization structure, performance appraisal, policies and systems exist

- 4 Environment: what external conditions the organization must deal with, including its market, customers, stakeholders, government regulations social culture and values (Beer, 1980: 151).

The researcher has the same conviction; he strongly agrees with Beer the four components consideration. However, he disagrees with what he perceives as the components that are interrelated with the people aspects. This means that in order for the organizations to attain their mission and progress, they have to seriously focus on the humanity dimensions of people. Hence, the organization cannot function without the systematic work process, the availability of resources and facilities, and the managerial leadership; all these components do not function unless an employee component exists. This is the focal point that the QAM stresses on.

A good example of a simple quality model is developed by Tan (1997). In his perception of the best result of TQM philosophy, he observed that managers need to market their principles and elements to their customers and employees. They could strategically implement them through employee training and teamwork concept schemes to get the best results. He believes that the best results could be achieved if every organization continuously examines and measures the five strategic building blocks of TQM for business excellence. With this model, the organizations detect inefficient operational processes and improve productivity. Product, process, organization, leadership, and commitment are elements of TQM. In illustrating the model, an emphasis was placed on the blocks as they are interrelated and dependent on each other. Teamwork is the best tool for putting the model into practice with continuous review of the current performance capabilities. Considering the organizations needs and the obstacles they encounter, they could choose the appropriate tactics to their current performance, needs, and resources; he concluded that the key excellence successes are the employees. He further displayed some of these obstacles: the large size, diversity, the locations of the organizations, the resistance to changes in behaviour, habits and relationship between leaders and employees, the weak organizational performance, ethics and challenges. Individuals rather than teams should be rewarded by the organizations and intrinsic preference for individuality should

precede group accountability. On top of that, most organizations do not understand what quality means or how it could be measured.

These factors were integrated into the four inevitable core factors and a total of twenty sub-factors in which each core factor consists of equally five sub-factors, as they form the main framework structure of the QAM. The purpose of focusing on just four core factors is due to the outcomes of Chapter Seven; it aims more importantly to simplify the model as much as possible. The researcher could profoundly develop a model that is very sophisticated and that only quality experts could comprehend. But the researcher's aim is to present a model of self assessment that is versatile and generic and that could fit the UAEPSI requirements and avoid causing any confusion or mystery in the course of its practical application. It is all about the simplicity of the QAM, and this simplicity makes the model distinctively unique in its function; otherwise, it won't be different in its purpose from the other currently adapted existing quality models and approaches.

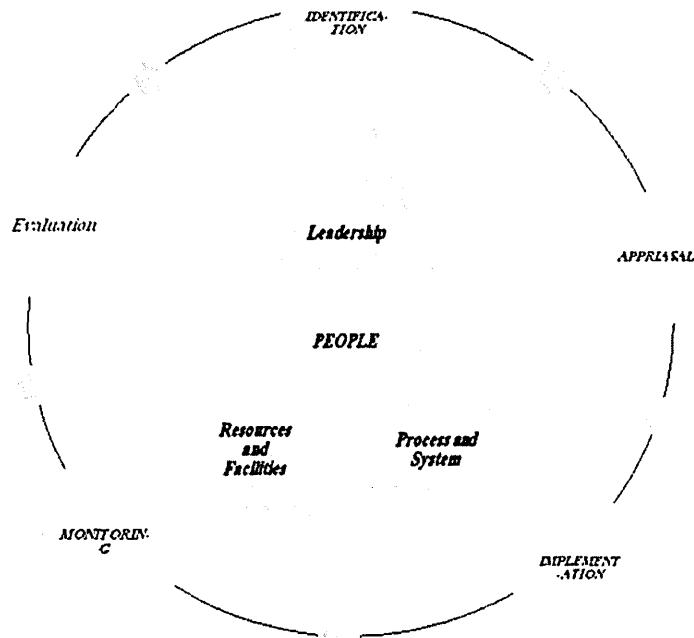
The use of the triangle figure that shaped the QAM indicates the importance of each core factor, see Figure (8.2). The leadership management factor position indicates that this factor represents the head as in the human skeleton. The processes, systems, resources and facilities with their position at the right and at the left side of the model, are both representing the two arms of the human being. Whereas the most crucial core factor, is believed the people (employees), as their role and position in the centre of the model indicates that they the heart of any organization, and ultimately the body collapses without a healthy heart. The core factors are outlined below:

- 1 *People*
- 2 *Leadership management*
- 3 *Process and System*
- 4 *Resources and facilities*

The rationale for sequencing the QAM is to provide general guidelines for placing core factors and sub-factors in a criteria set, for the implementation of the model in the UAEPSI. However, such a sequence is not a prerequisite for the use of the QAM for the purpose of performance self assessment of the UAEPSI. The core factors and sub-factors can be assessed in any sequence. However, their relationship must always be considered. The implementation of factors in a logical sequence is mandatory for the

implementation models only. The implementation sequence demands some prerequisite conditions for the core factors and sub-factors which are related to others.

**Figure 8.2 The QAM conceptual framework**



*Source: The Author*

The QAM core factors and the sub-factors are illustrated in Table (8.1). However, the conceptual framework of the QAM is explained as follows:

**People:** they are the core of the whole issue related to TQM implementation, the emphasis should be placed on how the people in the organization are encouraged, receive recognition, really get involved in the quality implementation process and are enabled to make an individually satisfying contribution to achieving the organization goals and objectives. In this study, as mentioned earlier in Chapter Five, where the factors related to people are ranked as the lowest: they were in the bottom of the UAEPSI, (*employee's involvement, people encouragement, job satisfaction enhancement employee's recognition*); they received the lowest relative mean importance. Therefore, people are believed to be the heart and the dynamo of the organizations. People in organizations are the leaders and managers who set policies

and plans, who run the organization and draw policies and plans. The processes and systems of work were created to be performed by people. The organizations are endowed with adequate facilities and resources to be used by people; without people, they are simply useless. As a result, the focal factor of the QAM core factors is people i.e. the employees. Therefore, the QAM addresses the five most crucial sub-factors which are: encouragement and recognition of employee, employee involvement and staff suggestion scheme, team working spirit, people competence and skills, and manpower planning and job satisfaction enhancement strategy.

Abu Naba'a (2008) presents a very clear picture about the Arab management attitudes with respect to their employees. In his "Arabian Management Theory", he argues that the Arab countries must participate in the development of a management theory. They must think for themselves rather than simply apply the Western theories, which may not be applicable to their business environment. Abu Naba'a aim was to develop a theory that is derived from the Arab and Islamic heritage and that conforms to the Arab culture. Abu Naba'a proposed theory was based on three pillars or concepts. The first is service, which means that the manager should respect his employees as he respects his guests, in order to gain their cooperation and increase their productivity. The second is counselling which means that the manager should consult his employees before taking decisions. This is necessary in order to direct people successfully and to motivate them to work. This practice is also important to enable the manager to make the right and wisest decision. The third pillar is justice which means that the manager should consider fear of God before taking any decision, thus being fair with all his employees. Finally, Abu Naba'a hoped that the proposed theory would be implemented in the Arab world, alongside the other theories, in a way that is commensurate with the Arab mentality and culture.

Empirical studies carried out by Matzler and Renzl, (2006, 2007) investigated the employees' satisfaction, particularly the element of trust i.e. trust in management and peers required in the field of the energy sector to measure their level of satisfaction and loyalty. They argue that trust motivates employees and encourages them to have a good moral at work and to perform their tasks more efficiently. The empirical investigation revealed a strong and significant linkage between trust in management and peers and the increasing level of satisfaction and loyalty among employees. They further empirically investigated the impact of the employee satisfaction on the affective commitment to an



organization. The results showed that people satisfaction has a significant impact on the effective commitment, performance, and output improvement; they argued that there are strong links between personality traits and employees satisfaction. They concluded in their empirical analysis that the level of satisfaction varies from one employee to another.

On the other hand, Ooi, *et al.*, (2007) contended that management should not ignore the employee's attitude and should handle problems properly; some actions need to be taken at every stage of quality implementation. The aim was to indentify the gaps perceived by the employees before, during, and after launching a quality programme. The large gaps should receive the higher priority. In their conclusion, they placed greater emphasis on human resources as they are by far the most important assets of most organizations.

Another survey conducted by Kuvaas, (2008) in one of the largest Australia banks, to examine the relationships between the perceptions of the organizational quality efforts and the affective reactions of the employees. They assumed that the employees' perceptions in terms of satisfaction, commitment and turnover intentions are significantly affected by organizations quality initiatives. The survey results concluded that supporting the assumptions underlying the employees' perceptions of quality efforts was significantly related to each of the affective reactions.

McNary, (2008) and Gatchalian, (1997) believe that people empowerment is the only way that helps organizations maintain the continuous process of service improvement. However, McNary, investigation was more detailed regarding the quality management structure in the government agency through the development and implementation of one particular project team working on an issue related to work assessment. The purpose was to analyze the data by using quality improvement tools such as teamwork, employee training and restructuring the process of work. The results of using the techniques were shown by leveraging the level of customer's satisfactions and saving in resource utilizations.

**Table 8.1 The QAM conceptual framework structure**

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*Factor 1: People*

	1	<i>Encouragement and recognition of employee</i>
	2	<i>Employee involvement and staff suggestion scheme</i>
<i>Sub-Factors</i>	3	<i>Team working spirit</i>
	4	<i>People competence and skills</i>
	5	<i>Manpower planning and job satisfaction enhancement strategy</i>

*Factor 2: Leadership management*

	1	<i>Top management commitment</i>
	2	<i>Leadership style and effectiveness</i>
<i>Sub-Factors</i>	3	<i>Partnership with customers and other stakeholders</i>
	4	<i>Management system</i>
	5	<i>Strategy and policy development</i>

*Factor 3: Process and system*

	1	<i>Performance management system</i>
	2	<i>Processes design and service delivery management</i>
<i>Sub-Factors</i>	3	<i>Quality assurance</i>
	4	<i>Continuous improvement</i>
	5	<i>Benchmarking</i>

*Factor 4: Resources and facilities*

	1	<i>Resource management (Man, Machine, Material,...etc.)</i>
	2	<i>Communication and knowledge management</i>
<i>Sub-Factors</i>	3	<i>Flexible and dynamic organization structure</i>
	4	<i>Resource utilization</i>
	5	<i>Appropriate facilities</i>

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*Source: The Author*

**Leadership Management:** This factor is positioned on the top of the QAM pyramid as it indicates the significant role of the managerial leadership in organizations. It is perceived that effective and visionary leadership is required, with a clear set of attainable strategy and policy development along with the managerial system that facilitates greater institutional performance, the coordination with the organization internal and external customers and with other stakeholders involved in the process of quality implementation. The sub-factors consist of five crucial elements, the top management commitment to quality, effective leadership, partnership with stakeholders, management system, and strategy and policy development. It is believed that every single manager in the UAEPSI should attain and recognize these sub-factors. Their

continuous support to quality as a strategic issue together with their active involvement in the TQM implementation process plays a noteworthy part in stimulating quality consciousness in the UAEPSI.

A very recent study conducted by one of the leading research institutes in the U.A.E., on the impact of the managers' attitudes in terms of recognition, assessment and motivation to their employees. The survey results analysis showed that 55% of the employees in the U.A.E. perceive that their managers are influential and effective. The survey focused on the staff managers' personal skills and capabilities, administrative efficiency, and more interestingly on assessing whether the employees perceived them as leaders. The results indicate that the employees look to their direct manager who has a major impact on the level of participation and on their view of the company in general. Also, the study revealed that people in the U.A.E. perceive their bosses as an effective manager, a chief who is fair in dealing with the staff and who evaluates their performance, benefit from the ideas of the staff, and has the ability to solve problems quickly and to keep the door open for interaction and dialogue. The study also indicates that good managers have a major impact on the level of the participation of the staff, as the employees' involvement signals the extent to which they are willing to contribute to the success of the organization, and the incentive to make an effort to accomplish tasks to achieve the mission objectives. Also, the involvement of the staff makes them feel proud of their organization as an ideal location to work and to achieve career satisfaction. On the contrary, the employees who are dissatisfied with their manager expressed their intention to quit once they found a better friendly organization, (Al emrat Al-youm 2010).

Soltani, *et al.*, (2008) criticism is that there are ambiguities in defining TQM in the different literature and the same thing applies to quality models and implementation frameworks. They perceived that according to quality experts and studies, the prime barriers to successful implementation are due to low commitment on the part of senior management towards quality. Furthermore, Gatchalian, (1997) and Masters, (1996) associated the lack of understanding of TQM with the lack of leadership commitment. Thus, this is exactly what Al Zaabi, (2008) emphasizes on with regard to the leadership role in the U.A.E. in relation to the major important decision needed to undertaken such as, quality implementation within the organization. Where to begin? This is the first question that needs to be answered by the leadership.

Several organizations never get beyond this point. The leadership's commitment is evident by answering this question. In other words, the commitment of the leadership is the vital foundation for the whole programme to be implemented effectively. Service organization has to demonstrate the quality leadership to be recognized by outstanding service quality. To keep customers satisfied, employees need to be empowered to handle any customer complaint. The managerial leadership in service organization has to set strategies of high levels for employee training and empowerment to make decisions on the spot to satisfy the customer needs.

*Process and system:* indicate the design and improvement of the services delivered, making sure that these services undergone adequate quality awareness and constant improvement in the work process with appropriate mechanisms. The organization may measure the improvement of their processes in benchmarking their performance with the management system that leads to an improved and enhanced service delivery.

Guimaraes, (1996) investigated the impact on employee's attitudes before and after the implementation of TQM in terms of job satisfactions and the employee's retention and turnover. The first empirical study investigated the employees' attitude before initiating the TQM project; the main findings were a high job ambiguity and dissatisfaction, and a high intention of employee's turnover. After two years of TQM project implementation, the second empirical investigation was carried out in the same organization with the same employees to test their perception of the quality impacts, the results indicated significant improvement in the role of job ambiguity, job satisfaction, involvement, management commitment to quality, and reduction in the number of the employee's turnover. On the contrary, the study showed no significant impact on changes in role conflict, task characteristics, and career satisfaction (Guimaraes, 1996). The situation in the UAEPSI is not far from what Guimaraes found out in his first investigation attempt; the lack of job descriptions manuals and job specification and duties documentation creates a sense of frustration and intersection conflicts among employees. As a result, this situation ends up with uninterested and deprived people joining the organizations. Therefore, the QAM sub-factors emphasize factors such as; performance management system, processes design and service delivery management, quality assurance, continuous improvement, and benchmarking. Although there are other important factors that need to be addressed, these are presumed to be the most significant to consider during their quality appraisal.

**Resources and facilities:** the services will not get improved unless appropriate resources and facilities are available alongside the proper management of resource utilizations. These facilities (tools) and resources (people) include effective communication with different organization structure, the existence of adequate capacities, machine and material, *etc.* The use of the latest technology enhances productivity and efficiency. The QAM sub-factors comprise five eminent factors that need to be addressed. They are resource management of man, machine and material *etc.*, communication and knowledge management, flexible and dynamic organization structure, resource utilization, and appropriate facilities

The researcher visualized the essence of employing the QAM which is to contribute significantly to its beneficiaries by placing the QAM core factors and sub-factors in an execution process. Just a set of identified factors that are believed to be significant to the success of quality implementation programmes for the UAEPSI is insufficient. There is a need for a systematic method in putting them into practice. Thus, the researcher recognized that in order to overcome the typical turmoil that the UAEPSI frequently faces while applying the UAEGEP criteria in evaluating its tangible benefits. Also, they need a simplified methodology whereby they can practice those criteria, a methodology that does not necessitate skillful quality expertise. As a result of this, the researcher thought of introducing a new method of performance assessment. The new method integrates the QAM core factors and sub-factors into a simple practical mechanism process. Hence, any development quality model from its conception to its completion passes through several stages along with the programme progression and subsequently turns into the recognition of finding an approach that links all various stages into a sequential mode. The QAM cycle is designed in a cyclical structure that aims to integrate the QAM core factors and sub-factors with the development of the QAM implementation progression stages. The researcher named the mechanisms of QAM implementation in the UAEPSI, the QAM cycle. The purpose of the cycle is to demonstrate phase by phase the entire process of quality implementation programme of the QAM in the UAEPSI; this mechanism is described as a 'cycle' because the lessons learned from past experiences in the UAEPSI are that they lack the provisional mechanisms of the systematic implementation of their quality schemes project. For this reason, the QAM cycle was well thought-out to comprise five various sequential phases as follow:

- 1 **Identification:** the UAEPSI needs to focus on the viability of the quality scheme project in undertaking, and on whether the set of the QAM core factors and sub-factor and objectives are attainable.
- 2 **Appraisal:** it is based on the feasibility of the identification phase. The UAEPSI should carry out a fieldwork assessment of the current situation (what QAM core existing factors and sub-factor are and which one needs to be attained ) that would enable it to commence its quality scheme project
- 3 **Implementation:** to execute the terms of QAM core factors and sub-factor and objectives that are verified and already set during the first two phases
- 4 **Monitoring:** the UAEPSI needs to audit which QAM core factors and sub-factor and the set of objectives are heading to the right direction, and whether the quality scheme project may eventually lead to accomplishing its targets
- 5 **Evaluation:** it functions the same as other quality models, which reviews and audits the effect of TQM benefits and pitfalls on the UAEPSI, ensuring that the objectives are met. If the evaluation outcomes indicated that some QAM core factors and sub-factor or objectives were not met properly, then the whole process of the cycle loops again

The development the structure of the QAM cycle consists of several sequential phases from conception to completion. In addition, each phase consists of consequential chains of stages, activities and procedures that are interrelated and cohesive in a manner that ultimately aims to converse QAM from an inspiration to existence. As the QAM proceeds through its life cycle, it passes through an identifiable sequence of phases, distinguished from each other by the type of tasks characteristic of each phase and frequently by formal decision points at which it is determined if the adoption of the QAM has been successful in the earlier phase in order to continue into the next.

Moreover, the researcher considered that each phase involves different management consideration of individual UAEPSI and presents different tasks to be performed. The idea of comprising various phases when applying the QAM is to focus on the significance of the appraisal phase, as this phase distinguishes the QAM cycle from

other quality models mostly adopted. Appraisal is generally a procedure for assessment, and in the field investigation of the current situation. The QAM cycle draws attention to appraisal within the model as one of the most significant phase which indicates the decisive current quality standpoint of the individual UAEPSI, and thus pursuing to next phase is based upon it. The QAM presented appraisal as a connecting link between the previous phase that is well prepared and identified and the following phases that witness the existence of adequate preparations and arrangements for quality implementation.

Appraisal is the ultimate sequence of the identification phase. The researcher glimpse that once the identification of the core QAM factors and sub-factors have been fulfilled, a significant appraisal of the quality preparation is practical. Therefore, people involved with quality scheme project are having a better chance to make a correct decision to determine whether or not the project is fulfilling the criteria of attaining the objectives they have set. The purpose of this phase is to test the UAEPSI quality capabilities on a small scale that provides information about the viability of an eventual execution on a larger scale; this should provide an essential element in appraising the quality schemes project risks, uncertainties, and its implications on the whole UAEPSI.

The QAM contribution and benefits to the improvement of quality implementation practices in the UAEPSI are:

- 1 Allowing the identification of the critical factors needed to address in the early stage of TQM implementation*
- 2 Providing precise guidance on areas of weaknesses and gaps between perceived and actual practices of quality implementation process*
- 3 Having no specific start and end date that this model is an ongoing process along with the progress of the quality programme*
- 4 Responding to the individuals and specific UAEPSI quality situation*
- 5 Being flexible and modifiable whereby every single organization can change the factors and sub-factors according to their current quality practices*

6 *Being basic in its concept, and simple to be adopted even in organization with no quality experience*

7 *Could be adopted in any organization regardless of its size and business nature.*

The development of the model also takes into account the flexibility and responsiveness to the individual needs of the UAEPSI, which allow them to amend and modify the model accordingly.

### **8.3 THE QAM MECHANISMS**

The definition, application and nature of the model are clarified in order to eliminate any complexity and confusion when it is applied. By doing this, the necessary pillars of the model assessment were completed. The following section explains the scoring scheme.

Statistical quality tools such as: quality inspection, quality control, and descriptive statistics have been widely used in manufacturing organizations for quite some time (an extensive detail of these tools is already explained in Chapter Two (Section 2.2). Unfortunately, service organizations and specifically public service sector have lagged behind manufacturing firms in their use of statistical quality tools. The primary reason is that statistical quality tools require measurement, and it is difficult to measure the quality of a service. Service organizations often provide an intangible product and that perception of quality is often highly subjective. For example, the quality of a service is often judged by such factors as friendliness and courtesy of the staff and promptness in resolving complaints. A way to measure the quality of services is to devise quantifiable measurements of the important dimensions of a particular service. For example, the number of complaints received per month, or customer waiting time can be quantified. Another issue that complicates quality control in service organizations is that the service is often consumed during the production process. The customer is often present during service delivery, and there is little time to improve quality. The workforce that interfaces with the customers is part of the service delivery. The way to manage this issue is to provide a high level of workforce training and to empower workers to make decisions that satisfy customer.



Sinclair, and Zairi, (2001) conducted a study on the implementation of the total quality based performance measurement in the context of service organizations. They examined six service oriented organizations and identified five distinct elements of performance measurements, strategy development, process management, performance appraisal, performance assessment and reward and recognition. They concluded that the successful use of performance measurement organizations should integrate key elements to the total quality management with the organizations strategic and operational management. Performance measurement is considered one of the most powerful tools for public service institutions that allow them to measure their performance and to compare their current status with their set of aims and objectives. Nonetheless, very few organizations were able to understand how to use the tool properly and to measure their performance accordingly, (Al Khaleej, 2010).

One of the broadly used performance measurement tools is the SERVQUAL which examines five dimensions that have been consistently ranked by the customers to be most important for service quality, regardless of the service industry. The five dimensions of service are:

- 1 *Reliability: the ability to perform the promised service dependably and accurately*
- 2 *Tangibles: the appearance of the physical facilities, equipment, personnel and communication materials*
- 3 *Responsiveness: willingness to help customers and provide prompt services*
- 4 *Assurance: knowledge and courtesy of the employees and their ability to convey trust and confidence*
- 5 *Empathy: the level of caring and individualized attention the firm provides for its customers, Saraph`s, et al., (1989.)*

It is foreseen that the SERVQUAL approach is broadly adopted by quality practitioners and service organizations as a performance measurement tool. Though this approach was applied by few UAEPSI, however, this approach is perceived quite complex and needs professional quality skills in quantifying the improvement results. This makes it

feasible for the UAEPSI to adopt. For this reason the researcher did consider its five dimensions but not its use as a measurement tool for the research QAM.

From the researcher experience, he believes that quality has to be implemented internally within the organization first. Various studies show that if best practices are implemented within the organization, the results are bound to be good internally as well as externally. In organizations where results are good, people are highly motivated, as the achievements of the people are recognized and rewarded. Where the leadership philosophy is supportive, with clear demonstration of 100% personal involvement, organizational excellence is bound to be evident in all results.

The absence of documentation and performance measurement in the public service institutions is the most important obstacle that most public service institutions suffered from in the past years, and they probably will continue to suffer. It is necessary for them to realize the importance of these aspects to take a decisive step towards addressing the current position and proceeding with the project performance measurement system. It could be argued that a number of UAEPSI today have already begun to harness human and material resources needed to start the processes of establishing this system and to design a set of benchmarks and indicators in consultation and cooperation with the relevant departments and sections.

One should go through a trial period of calibration to ensure the group's ability to understand the standards and indicators that replicate the real image of comprehensive improvement of services in the overall work activities and processes. Yet, the majority of the UAEPSI have vagueness in the concept of performance measurement, its fundamental objective, its relation to the excellence voyage and its role in improving the efficiency and effectiveness in their organizations. Public service institutions need to tackle the causes of confusion between performance measurement and the principles of the adopted excellence model.

The purpose of the scoring scheme is to provide scores and weighting systems for the main factors and sub-factors of the model. The assessment of the UAEPSI current quality implementation practices against the QAM is based on the objective of the scoring and weighting system. The initial input to the scoring and weighting system is based on the individual perception of the people in the UAEPSI. The score in

percentage signifies the factors; it is based on the relative importance of the value of a particular factor or sub-factors in the QAM. The relative importance of the weights was allotted through a valuation method which varies from one UAEPSI to another. The quantitative scoring and the weighting system used in this model is similar to those used for assessment in the existing quality and excellence model (Abu Dhabi Award for Excellence in Government Performance, 2010; Ajman Excellence Programme, 2010; Sheikh Saqr Programme for Government Excellence, 2010; Sheikh Khalifa Government Excellence Programme, 2010; Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance, 2009; EFQM, 2009; Dubai Government Excellence Programme, 2009).

The model scoring technique devise weights the measurement of the QAM set of core factors and sub-factors then a framework in a tabulated format is developed to show the correlation between the core factors and sub-factors and their overall effect. The assessment of the UAEPSI against the QAM is based on the objective of scoring techniques. The initial input to the scoring technique is based on the individual justification of the researcher. The score in percentage, allotted to a core factors and sub-factors, is based on the relative importance of the value of the concept, indicated by the QAM. This relative weighting is allotted through a justified means which can vary from one institution to another. The scoring technique adjusts the individual justification into quantifiable means. This quantitative scoring technique has also been adopted for performance assessment in existing quality models, of the UAEGEP and EFQM-EM. The researcher has set the relative weight allotted to every core factor and sub-factor based on his justification and knowledge of the research topic. The core factors are taken as a reference with a specific score and the remaining of the sub-factors are scored relative to this. The relative importance of each core factor and sub-factor are distributed according to their significance in the overall QAM. For instance: the process and system core factor reference score took twenty, (weight 20%) and each sub-factor reference score took different scoring according to their relative significance, for instance the benchmarking weights took five (weight 5%) of the overall model weighting. Table (8.2) presents the summarized scoring technique format for the QAM core factors and sub-factors. In considering very rare and extreme cases of the UAEPSI, the score in percent is allotted to the core factor because it is possible that either a sub-factor or a core factor may not be broadly applicable to individual UAEPSI.

In such cases the scores that do not exist are evenly distributed among the other core factors and sub-factors. In elaborating the scoring technique, the researcher reconsidered the current UAEGEP scoring process, then worked his way to make it as close as possible to the UAEGEP emphasizing the scoring technique that is easy to understand and eventually adaptable.

**Table 8.2 The QAM scoring and weighting system**

<i>core factors and sub-factors</i>		<i>Scoring</i>	<i>Percentage (%)</i>
<b>Core Factor 1: People (40%)</b>		<b>4.0</b>	<b>40</b>
<i>Sub-Factors</i>	1 <i>Encouragement and recognition of employee</i>	1.5	15
	2 <i>Employee involvement and staff suggestion scheme</i>	1.0	10
	3 <i>Team working spirit</i>	0.5	5
	4 <i>People competence and skills</i>	0.5	5
	5 <i>Manpower planning and job satisfaction enhancement strategy</i>	0.5	5
<b>Factor 2: Leadership management (30%)</b>		<b>3.0</b>	<b>30</b>
<i>Sub-Factors</i>	1 <i>Top management commitment</i>	1.0	10
	2 <i>Leadership style and effectiveness</i>	0.5	5
	3 <i>Partnership with customers and other stakeholders</i>	0.5	5
	4 <i>Management system</i>	0.5	5
	5 <i>Strategy and policy development</i>	0.5	5
<b>Factor 3: Process and system (20%)</b>		<b>2.0</b>	<b>20</b>
<i>Sub-Factors</i>	1 <i>Performance management system</i>	0.5	5
	2 <i>Processes design and service delivery management</i>	0.25	2.5
	3 <i>Quality assurance</i>	0.25	2.5
	4 <i>Continuous improvement</i>	0.5	5
	5 <i>Benchmarking</i>	0.5	5
<b>Factor 4: Resources and facilities (10%)</b>		<b>1.0</b>	<b>10</b>
<i>Sub-Factors</i>	1 <i>Resource management (Man, Machine, Material,...etc.)</i>	0.2	2.0
	2 <i>Communication and knowledge management</i>	0.2	2.0
	3 <i>Flexible and dynamic organization structure</i>	0.2	2.0
	4 <i>Resource utilization</i>	0.2	2.0
	5 <i>Appropriate facilities</i>	0.2	2.0
<b>Total Scores</b>		<b>10</b>	<b>100</b>

Source: The Author

The UAEPSI must also use statistical tools to measure their processes and monitor performance. For example, to regularly collect data in the form of surveys. The collected data are stored in a large database and are continually examined for patterns, such as trends and changes in their quality performance preferences. Due to the simplicity of the scoring techniques of the QAM, the researcher has itemized the most common statistical techniques used to analyze the data and to provide important information (see Chapter Two, section 2.4).

Using these tools along with the QAM scoring techniques should facilitate the UAEPSI to identify areas that have the highest impact on performance, and areas that need improvement. This information allows UAEPSI to exercise a superior level of quality practices, anticipate employee's perceptions, and put resources in service features most important to the success of their quality implementation process. One of the key issues that the UAEPSI should recognize in order to benefit from the model is that the UAEPSI should primarily focus on the employee's satisfaction as a priority. Once this is attained, it is inevitably reflected on their customers' satisfactions.

#### **8.4 THE QAM BENCHMARKING**

In this section, the researcher provides concise discussion on the similarities and differences between the QAM and the list of models reviewed in Chapter Seven. The researcher aims to discuss the characteristics of the QAM and to point out how they differ from the Deming Model, Baldrige Model, EFQM Excellence Model, Toyota Production System Characteristics and six sigma. A summary of the QAM benchmarking matrix is illustrated in Table (8.3).

The model is based on the number of interrelated variables, with a format formed from the addressed perception requirements specified by the people in the UAEPSI. It is also, based on a well established literature and approaches to the quality implementation criteria which are derived from a number of currently common quality models and frameworks. Furthermore, the model is much detailed and simplified than the other common models. The dimensions of the critical factors in this model differ in terms of their degree of significance, influence and the quality practices and performance in different UAEPSI.

On the other hand, the model as well as other common models had predetermined set of critical factors and criteria that were necessary for determining the quality implementation and performance; however, the prime difference between the research model and the other models is that the core concepts of each individual factor are very flexible and amendable, which every single institution of the department in the UAEPSI can observe by measuring the critical factors according to their level of practice and performance at all stages of the quality implementation process. Whereas in other common models, the relationship between the critical factors are rigid, and do not reflect the particular situation of the individual organization quality situation.

The model components indicate that the components synthesize those critical factors for quality implementation prescribed by eminent quality literature and studies. These factors in other common models are considered to be indicative, while they are regarded in the research as an improvement. The purpose of the model is to draw the UAEPSI decision makers' attention to the key factors and areas that need to be effectively managed prior or even during the course of quality deployment. This should provide them with a self assessment tool that enables them to continuously improve their performance.

The model allows the UAEPSI to carry out a pre-visibility study on their current situation, to determine the significance of the core factors and sub-factors, as they were identified within their institutions. That should provide the essential elements that contribute successfully toward initiating quality programmes. In addition, the QAM provides them with a road map of areas they need to focus on. As a result, they have full understanding of how to start their quality implementation programme right from the early stages.

In contrast, other common models do not consider the issue of pre-visibility study and prevention; they simply anticipate that the organization had sufficient quality experience in order to initiate their quality implementation programme successfully.

**Table 8.3 The QAM benchmarking matrix**

<b>Characteristics</b>	<b>Quality Models</b>					
	<b>Deming</b>	<b>Baldrige</b>	<b>EFQM-EM</b>	<b>TPS</b>	<b>Six Sigma</b>	<b>The QAM</b>
<b>Origin</b>	Japan	USA	Europe	Japan	USA	U.A.E.
<b>Focus</b>	Organization and individual quality control	Customers and human resources	Customer satisfaction	Flow of production processes	Statistical measurement	Public sector quality implementation practices
<b>Purpose</b>	Recognizing excelled organizations in quality control	Encouraging organizations competitiveness and responding to market needs	assisting the development of quality management basic principles	Removing organization production wastes	Eliminating mistakes, waste, and rework	Recognizing the vital factors prior to quality implementation
<b>Criterion</b>	14 Points	7 categories	9 criteria	5 steps	8 generic approach	4 core factors 27 sub-factors
<b>Strengths</b>	Create constancy of purpose to the continuous focuses on long range needs	Strong history utilized successfully by many organizations	Simple concept to utilize Simple entry into self-assessment	less variation and uniform output  less inventory	measures the performance of processes  provide a discipline, structure, and foundation for a better decision making	Indication on significant success factors  Respond to individual needs  Flexible and amendable  Self Assessment tool
<b>Drawbacks</b>	Dissemination of information is voluntary and minimal	Follows a complex pattern of assessment - Fails to reflect outstanding good product service quality	strict scoring mechanism to benchmark results,	Statistical and system analysis not valued	dependent on competent senior management leadership, mentoring established quality infrastructure	Very basic  Do not consider organizations external customers

Source: The Author

## SUMMARY

The UAEGEP criteria are very comprehensive as they are merely based on the EFQM-EM criteria. Therefore, there is no doubt about the UAEGEP applicability. However, the associated implementation complexity of the UAEGEP is mainly due to the inaccurate adoption methods as perceived by the UAEPSI (Chapter Five). As a result, gaps exist between what is perceived and what is actually on the ground. Thus, the QAM function is to appraise these gaps and to enable the UAEPSI to determine their quality status and realize how far they are from the set standards of the UAEGEP.

Accordingly, QAM emerged as an aiding tool for the UAEPSI quality practices. The model core factors and sub-factors with the sequential appraisal phases illustrate the mechanism of implementing the model; the scoring techniques that enable the UAEPSI to appraise their quality quest by benchmarking them against the UAEGEP requirements. In benchmarking the model with the broad universally quality approaches, the model conceptually proved to be providing indicative and directive characteristics that the organization needs to appraise their quality capacities prior to their initiation of the quality process. The QAM unique characteristic is its simplicity which facilitates understanding its main function. The UAEPSI can significantly benefit from this approach, thus, to empirically prove the applicability of the model. The following chapter validates the QAM by employing a qualitative research method that focuses on groups whose observations and feedback outcomes are significant for testing the viability of the model.



# CHAPTER NINE

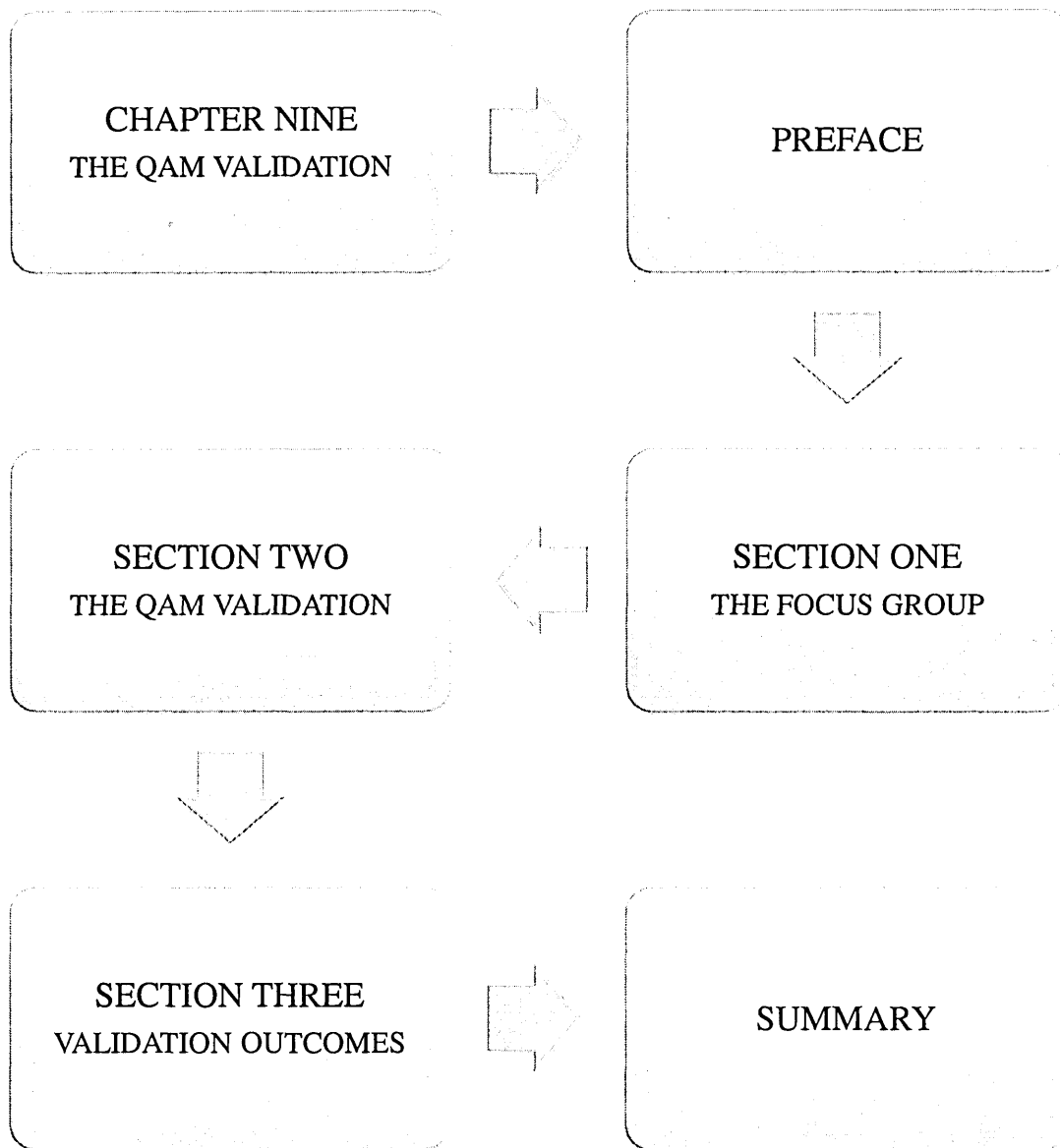
## THE QAM VALIDATION

### PREFACE

The previous chapter (Chapter Eight) confirmed the development process of the QAM. Accordingly a comprehensive systematic implementation framework with an assessment instrument was expounded. Subsequently this chapter demonstrates the practical validation of emerged QAM. In order to evaluate the applicability and credibility of the QAM, the researcher needs to present pragmatic demonstration on the viability of the QAM and to determine its appropriateness to the UAEPSI requirements. The aim is to put the QAM (core factors and sub-factors, the model cycle and the model assessment tool) under full scale examination. Such aim could be attained by employing a qualitative research method of the focus groups.

The formation of focus groups comprises a number of key personnel working in a designated UAEPSI. They critically assess the QAM, as an innovative quality approach expected to work as an assessment tool which assists the UAEPSI to appraise their quality conditions. The chapter is divided into two main sections. In section one, the researcher sets out to provide a framework which enables the management and/or decision makers in UAEPSI to make an assessment of their quality standpoint prior to the initiation of the quality implementation programme and its related provisions, whereby the applicability of such model is examined. Details of the preparation of the focus groups formation characteristics are verified. The process of meeting arrangements along with the issues need to be discussed. In section two, the researcher illustrates the effect of the process of formulating the focus group perceptions and feedback on the adoption of the QAM in a format which could be practiced in the UAEPSI. The section also, presents the set of developed questions which the research study acknowledges; the set of outcomes is based on the perceptions and feedback of the focus groups. The meeting outcomes shall inspire the researcher to apply the QAM and to consider the needs for further improvements in response to the UAEPSI specific needs. A brief summary that rounds up the chapter is presented at the end of this chapter. Figure (9.1) outlines the content of this chapter.

*Figure 9.1 Chapter nine outline*



*Source: The Author*

## 9.1 THE FOCUS GROUP

The aim of this section is to present the results of the theoretical development of the QAM, which are broadly explained in Chapter Seven and to verify its applicability to the quality practices in the UAEPSI. Thus, to attain this aim the researcher formulated a focus group by interviewing the most influential people such as: Top and Senior Management in a number of UAEPSI. The top management are those people occupying the top positions for instance: the chairpersons, the undersecretary and the assistant undersecretaries.

Whereas, the senior management are those people in the executive position such as: the general directors, chief executives and advisors responsible for the different divisions of the institution. It is perceived by the researcher that using a qualitative research method of focus group is the most suitable research methodology that suits the nature of this study and precisely this chapter, and also the particular characteristics of the people in the UAEPSI. The focus group is the most useful means of listening to the perspectives and experiences of the sampled people (Tremblay, *et al.*, 2010; Halcomb, *et al.*, 2007; Stewart, *et al.*, 2007; Barbour, 2007; Freeman, 2006; Barbour, 2005; Edmunds, 2000; Krueger, and Casey, 2000).

The researcher decided to apply the focus group principles and to design and conduct clustered interviews in order to evaluate and validate the research QAM. Bowling (2002), defined the focus groups '*as unstructured interviews with small groups of people who interact with each other and with group leader. They have the advantage of making use of group dynamics to stimulate discussion, gain insights and generate ideas in order to pursue a topic in a greater depth*' (Bowling, 2002: 349). The reasons for using group interviews as a research method for this part of the research study are already explained and justified in Chapter Three (sections 3.3.1 and 3.5.2) and Chapter Four (section 4.4.2).

The process of conducting focus groups interviews comprises two groups. Group one is the top management of a single UAEPSI. Group two were representatives merely senior management from various UAEPSI. The purpose was to divide the focus groups into two different managerial groups as that would be easier for the researcher to administer the sessions. Also, this segregation allows each group members more freedom to

discuss the applicability and appropriateness of the developed model to their institution quality implementation programme. Furthermore, due to the culture and traditions of the U.A.E. society, it is unpleasant to gather most senior people with their subordinates in one place. As a result, the researcher has to separate the two groups in order to overcome this social barrier. This also, allows the researcher to differentiate the responses of the top management as they are the policy makers and the planners of the senior management who put policies into practice and make sure that they are on the right track. The most difficult task was arranging the venues and time that was convenient for both groups; it actually took a very long time of formal and informal process arrangements in order to convince them to take part in the focus groups. The researcher's advantage in a way he was able to share with them their quality implementation experience and the perceptions that were relevant to the QAM feasibility.

The involved candidates were assured that the outcomes of these sessions and the results of this work presented in this study, are confidential and purely for academic purposes; no individual's identity or their insinuations entity will be exposed by any mean to the public. However, the researcher would like to state that the discussions, outcomes and results reached were obtained from senior officials representing major and dominant public service institutions un the U.A.E.. The researcher carried out the work plan of the focus group with manageable limits within the available resources. This was because this research study was conducted solely by the researcher and it had to be within his resource limitation and manageable capacity. Aspects such as confidentiality and convenience were considered, as these were also favoured by the focus group members and by the previous studies of its kind.

### **9.1.1 Group Formation**

As previously pointed out, the researcher formed two categories of people who were involved in the focus group. Table (9.1) summarizes the detailed content of each group together with their occupation. The researcher sought four top and senior management officials in the UAEPSI who expressed willingness to adopt the new approach that would enable them to understand their institutions quality prerequisite success factors prior to commencing their quality and excellence implementation. Additionally, to inform top and senior management that it is difficult to envisage the sort of proposal

which directly aims at changing their institution quality practices. In order to stimulate the validation and the objectivity of the QAM, the researcher decided to choose the participants of the group sample from different government official perspectives and backgrounds; two groups were formed. The procedures and the preparation for conducting both interviews, with the scheduled dates, time and duration of each interview predetermined in advance and each member of groups was informed in due time. Therefore, the researcher was prepared for any contingencies or unforeseen disruptions that may cause delay or postponement of the set interviews.

*Group one:* it consists of six people in top and senior managerial positions working in one of the most influential government institutions in the U.A.E., its main activities are to promote and develop the economic policies and business activities in the U.A.E. The formation of this group came at a time when a lot of efforts are exerted in order to persuade the group sample to participate. Another obstacle was gathering the majority of the senior management of the institution at a certain time. Therefore, setting the meeting date was not an easy task. The preparation and selection of the people involved in group one went through a long procedure of formal and informal requests and personal talks with each member of the group one. However, it is obvious to point out that the meeting venue took place in the executive board room located within the premises of the institution. The reasons for holding the meeting venue at group one institution was that it was easier for the researcher and group one members to be gathered in a particular well known place. Besides, the meeting time was set during the office working business hour so as to make it more convenient and accessible for group one members to be as near to their offices as possible. They may also leave the meeting board in case of an unprecedented situation.

*Group two:* it consists of eight members; the formation of the sample group was a very challenging task that faced the researcher. The members were the same as those of the first group in that they descended from top and senior managerial positions and worked in the influential government institutions in the U.A.E., but they were formed from different service institutions. The sample of this group was gathered when the researcher attended a training programme for the public service senior officials organised by the U.A.E. centre of the government leadership in the conference hall of a leading hotel in the U.A.E. There were twenty five participants in that programme. This batch represented a good sample of group two because all of them were serving in the

public service for ten years and they were in senior management positions. An exhaustive clarification is first presented by every single member of the training programme about the research purpose and their kind support in participating in the research QAM validation. They then were assured about the confidentiality of their personal details and their institutional identity. The researcher succeeded to engage eight of them to take part in forming group two. While the time available for this group was limited, the opportunity to gain access to such diverse group of senior managers and executives was seized. Group two interviews were held in the same place in which the researcher met them for the first time. The duration of both meetings was estimated to be two hours; however, the group two meeting lasted approximately more than three hours, as some participative were more constructive in sharing their experience and their observations and making propositions of minor amendments to the QAM. The interview outcomes are further explained in section 9.2.1.

**Table 9.1 Focus groups formation details**

<i>Group One (single institution)</i>			<i>Group Two (diverse institutions)</i>		
<i>Positions</i>	<i>Top Management</i>	<i>No.</i>	<i>Positions</i>	<i>Senior Management</i>	<i>No.</i>
		<u>5</u>			<u>3</u>
<u><i>Directors/Executives</i></u>			<u><i>Directors/Executives</i></u>		
<i>1</i>	<i>Finance</i>	<i>1</i>	<i>1</i>	<i>Municipal affairs</i>	<i>1</i>
<i>2</i>	<i>Human Resources</i>	<i>1</i>	<i>2</i>	<i>Tourism development</i>	<i>1</i>
<i>3</i>	<i>Public Relations</i>	<i>1</i>	<i>3</i>	<i>Education</i>	<i>1</i>
<i>4</i>	<i>Statistics</i>	<i>1</i>			
<i>5</i>	<i>Trade</i>	<i>1</i>			
			<u><i>Senior Management</i></u>		
		<u>1</u>	<i>1</i>	<i>Quality development</i>	<i>1</i>
<u><i>Senior Management</i></u>			<i>2</i>	<i>Logistics</i>	<i>1</i>
<i>1</i>	<i>Advisor Quality and Excellence</i>	<i>1</i>	<i>3</i>	<i>Exports Promotion</i>	<i>1</i>
			<u><i>Advisors</i></u>		
			<i>1</i>	<i>Policy and planning</i>	<i>1</i>
			<i>2</i>	<i>Economic</i>	<i>1</i>
<i>Total</i>	<i>Group One</i>	<u>6</u>	<i>Total</i>	<i>Group Two</i>	<u>8</u>

Source: the Author

The rationale behind forming two focus groups is that in group one all members are from same institution whereas in group two, the members were selected from different government institutions. This enabled the researcher to overcome the vulnerabilities that might surface when examining the QAM legitimacy. It is the researcher's conviction that the solitary testing of the model by basically recording the perceptions of the people working in same organisation is not valid. Therefore, the idea behind composing a

second group was to consider diverse collective opinions and to gather feedback from a mixture of officials in the UAEPSI who were involved in quality policy making and implementation processes. The diversification of perspectives should enrich the testing and the validation of the QAM and avert any bias of the private opinions. Furthermore, it seemed reasonable to assume that the viewpoints of such group would provide good insights to the QAM potential modification. Hence, these people have sufficient experience of quality practices and are extensively aware of the UAEGEP criteria: they are also familiar with the implication of their institutions quality programme.

One of the fundamental issues the researcher attempted to explain to the people involved in the focus groups is to know how to identify and then change their current quality implementation practices and align them with the UAEGEP and eventually with the TQM practices. The researcher's view was to point out the importance of QAM as a tool to be used before initiating and implementing their quality programmes. The QAM is more concerned with matching the UAEGEP with TQM principles to their actual quality condition. If the appraisal analysis is conducted, with a particular emphasis on the model mechanisms and its core factors and sub-factors, then the management would be more likely aware of what and how to do it. It is therefore important to understand before setting out on the TQM implementation programme what the likelihood and the current state of UAEPSI quality status are.

## **9.2 THE QAM VALIDATION**

The aim of this section is to confirm the validation and to discuss with both groups the QAM major contribution towards improving the quality practices in their institutions. Also, to clarify the potential benefits they could gain if they attempt to undertake such model. Each focus group was briefed about the purpose of the meeting, what the researcher aims to arrive at, and how they could contribute to the enhancement of the QAM. Following the briefing, a presentation on QAM was performed and the following points were discussed during the meeting sessions with the members of the focus group:

- 1- Theoretical development:* the development of the QAM is based on the TQM criteria set which was developed as a result of the outcomes of the research data analysis (Chapter Five). The concepts, principles and philosophies (Chapter Seven), were included in the theoretical development section of the QAM core

factors and sub-factors set (Chapter Eight). They were favoured or used by a number of quality researchers, advocates and gurus. Thus, the QAM is based on empirically investigation identified by the QCF set and perceived by the employees in the UAEPSI: it also encompasses factors and elements of TQM tenets. It can be argued that QAM stands valid against the required attributes of the other quality and excellence models which have an accepted criteria set.

- 2- *Empirical investigation:* the QAM has a systematic framework based on the cyclical sequential phases that should be gone through. This process is discussed and described to both focus groups to obtain their perceptions, (see Chapter 8, Section 8.3).
- 3- *Comprehensive validation:* the QAM theoretical development is based on comprehensive literature review and in depth fieldwork analysis. The comprehensive synthesis confirms the content validity of the model. The core factors and sub-factors included have been critically reviewed in order to attribute major quality and TQM models.
- 4- *Performance assessment:* The QAM developed scoring technique. The allotted weighting technique assists its users to benchmark their QCF against the model factors. It also facilitates to address particular QCF which are significant to their quality improvements.
- 5- *Simplicity and flexibility:* the QAM provides a generic process for the QAM users. The simplicity of the model concept enables the UAEPSI to amend and adjust the model according to their changing needs. The model assessment technique provides for its users, a kind of appraisal study that enables them to vision their current quality practices and their performance improvement processes.
- 6- *Benchmark-ability:* the QAM enables the top management of the UAEPSI to evaluate and benchmark their current quality situation against the requirements of the UAEGEP criteria. As the model unique attribute is that it provides a prevention mechanism of what QCF needs to obtain, it thus, provides further



reconciliation to the management prior to their actual engagement in the process of quality implementation.

- 7- *Indication conditions*: the researcher also explained to the focus group members that by adopting the QAM in their institution or at a departmental level and by working forward systematically following the sequential phases of the model cycle with emphases on the appraisal phase, they would be able to establish a primary manifestation of their current quality condition. That will also, allow them to identify their QCF strengths and weaknesses.
  
- 8- *The Human factor*: this significant issue was brought to the attention of the focus group since it was observed by the researcher, and then supported by the data analysis results of the research fieldwork empirical investigation. Concerning the importance of the human factor to the success of their institutions quality initiatives, the results of data analysis made it clear that they significantly need to recognise and work for the satisfaction of their employee as this is the most critical factor for their success in winning the U.A.E. government excellence award. The employees have to be involved in the quality in all its process and phases. Furthermore working on the continuous improvement and career development are the most prior aspects that the management should reconsider.

However, the key questions that the researcher needs to address and discuss during the interview sessions are:

- 1- How the QAM is perceived in terms of its usefulness when compared with other quality models and self assessment methods they currently adopt?
  
- 2- To what extent the adoption of QAM could improve the quality implementation practices and the performance assessment techniques?
  
- 3- Does the application of the QAM approach enable its users to identify their current quality situation and areas of improvement?

### 9.3 VALIDATION OUTCOMES

This section presents the outcomes of testing and validating the QAM. Basically, the outcomes are based on the perceptions of both focus groups. The outcomes are a combination of mixed opinions, suggestions and feedback that were observed, coded and then analysed accordingly. Additionally, the outcomes analysis implications were cited in meaningful manner and the information typically is used to evaluate the QAM for possible modifications.

The members of the focus group initially carried out the review and the validation of the QAM structure (the core factors and sub-factors). The discussion session was held in which each participant was asked to present his views on the QAM and to raise any scepticism. Although the selected sample of the focus groups did not necessarily represent the entire UAEPSI perceptions, the views and feedback presented provided a general perspective on the UAEPSI professional experience of the top and senior management who had gone through the quality planning and execution of the UAEGEP since its inception. Throughout their discussion of the UAEPSI, one common particular characteristic was noted. It was that both the focus group members were highly educated and had a considerable managerial experience in the UAEPSI. Furthermore, the majority of the focus group members claimed to have been directly or indirectly involved in the actual implementation of quality in their respective institutions. From the results of both focus group meeting, a number of conclusions were drawn with regard to the aims and the key questions posed in the previous section. The following points summarise the main feedback and the suggestion made:

1. Responses to question one, which was about how the QAM is perceived in terms of usefulness when compared with other quality self assessment models. The analysis of the discussion showed a clear preference amongst the group candidates for applying the QAM in their institutions as an aiding tool that facilitates the UAEPSI to properly understand their quality strategy and the sequential steps of their quality implementation processes. They felt that the QAM principles are coherent with the UAEGEP criteria and improves their performances and services delivery. Other candidates also considered QAM a helpful self-assessment tool for steadily measurement of quality performance improvements. They observed that the simplicity of the model was an overall

integrative quality implementation approach. They believed that the QAM provides a practical indication about the institutional standpoint, prior to commencing their quality process. They also believed that this type of quality approach (the QAM cycle) is found to be convenient in the UAEPSI context as it integrates several phases of quality implementation practices. Furthermore, they perceived that the QAM needs to incorporate a more comprehensive set of quality factors and measures, such as a scope in service improvements and customers care schemes.

2. Responses and feedback related to question two on the extent application of the QAM should lead to improved quality implementation practices. Within the limitation of the focus group scope, the conclusion arrived at, is that the QAM to some extent improves the levels of quality practices. They admitted that more emphasis should be placed on enhancing the role of the employees' involvement in the all stages of quality implementation according to the sequential phases of the QAM cycle. In fact, the researcher clearly demonstrated that the general effects of the QAM application are promptly noticeable. Thus, the mechanisms of the core factors and the sub-factors of the model as they were recognised in all phases of the QAM embedded a sustained successful quality implementation practices in the UAEPSI.
3. Responses and feedback related to question three, which deals with the application of the QAM approach that enables its users to identify areas of improvement by analysing their current quality situation. Several respondents emphasised that the implementation strategy of the QAM must be developed in collaboration with the UAEGEP requirements and standards. Hence, the optimal aspect of the model is that it simply enables the UAEPSI, to precisely position them-selves on where they stand, on their quest to excellence. Therefore, the respondents were in favour provided that they gain the required benefits from such model. However, they were uncertain on what mechanisms they need to apply in order to mutually merge the QAM with the UAEGEP.
4. Due to the unclear focus on the factors influencing the success quality implementation in the UAEPSI and in particular benefiting the people, the researcher together with the candidates outlined three aspects which the top and

senior management should consider on issues relevant to the employees in their organisations. First, they must accommodate people to plan, handle and implement improvement by offering them methodology and instructions on how to implement the necessary actions. Second, they must create a simple but thorough method of prioritising quality implementation improvement actions identified by the application of the QAM. Third, they must follow-up the improvement actions taken, included in the normal review routines monitored by the top management.

5. A suggestion was made by a number of focus group members to expand the number of the core factors and sub-factors to include more stakeholders such as customers and suppliers. That was a valuable point, but the research study did not include other stakeholder as to simplify the QAM for its users. Additionally, this suggestion was considered as mentioned in Chapter Ten a proposal for research studies that consider this aspect.
6. Redistributing the factors percentage scoring and the weighting system by increasing or decreasing the allotment of percentages of scoring to a number of sub-factors. This point is already explained in Chapter Eight, whereby scoring factors are allotted variable and flexible options to respond to the particular characteristics of individual UAEPSI needs.
7. Eliminating some of the sub-factors mainly factors one and four
8. Undoubtedly, most of the participants agreed on the important role of the human factor (the people) to the success of their quality programmes.
9. The issue of the employees` resistance to change has a significant impact on the attitudes of the people towards accepting new concepts
10. The sub-factor of people involvement in all quality processes went under extensive debate, as some of the participants responded negatively whereas others claimed that they faced difficulties in persuading people to take part in this process as they felt that additional tasks were required to perform.

11. Almost all the participants acknowledged that they did not attempt to conduct an appraisal assessment on their current quality practices, prior to their engagement with the UAEGEP
12. They perceived that the QAM to some extent enables them to identify the intervals that may arise during the quality implementation process.
13. The concept of practicing quality as a continuous process does not exist in the UAEPSI.
14. Most of the focus group members admitted that their current quality implementation practices need to be reviewed and reconsidered in order to fulfil the quality requirements and to get acquainted with the UAEGEP criteria
15. A comment was made to the senior management who did not eagerly commit themselves to implementing the anticipated quality proposals after joining the UAEGEP. Thus, little progress was made. They found out that they had underestimated the quality implementation difficulties and overestimated the organisational capabilities and the lack of empowered employees. They failed to recognise the importance of people involvement and participation in the all stages of quality implementation; these were the main obstacles facing the UAEPSI.

## **SUMMARY**

The QAM is mainly developed as an aiding tool for UAEPSI to evaluate the quality readiness which enables them to comply to the UAEGEP quality criteria standards. Hence, the model was based on accepted criteria clusters which encompass factors and sub-factors of the major TQM critical factors. A systematic framework and scoring mechanisms were also developed as to provide a comprehensive generic model that could respond to the UAEPSI quality practices demands. Therefore, a qualitative research method of focus groups was carried out to examine the validity of the model. The focus group of UAEPSI top management were formed to seek their perceptions and the possibility of the model adoption in their institutions. The outcomes were very promising as it can be claimed that QAM proved to be valid against the required traits

of the TQM implementation of the UAEGEP criteria. The conclusion is that the model is feasible and applicable and some of the group members showed enthusiasm in applying the QAM concept in their institutions. However, in order to attain the maximum advantage of the model, the UAEPSI needs to devote exceptional time and a lot of managerial and administrative efforts in order to change the quality cultures and the institutional work environment. This is what the following chapter demonstrates; a set of findings and general recommendations of the whole research study will be presented.

## CHAPTER TEN

### CONCLUSION

#### PREFACE

In the previous chapter, the researcher validated the formulated QAM. The results of the focus groups analysis revealed that the model is feasible, adoptable and flexible; it could respond to the individual quality circumstance of the UAEPSI. Thus, this objective is achieved. This chapter wraps up the whole research study as if realizes the aim and objectives. Since the aim of this research study was to investigate the quality implementation practices of the UAEPSI in order to develop a model which assists them to improve the quality implementation practices. In the course of research study, several processes were carried out. A review of TQM literature was conducted to manifest the quality philosophy, the evolution of quality theory and its principles, the approaches of the quality management gurus and practitioners together with the quality tools (Chapter Two).

A triangulation research methodology of quantitative and qualitative approaches were employed (Chapter Three), a fieldwork survey questionnaires was carried out to investigate the perceived and actual quality practices in order to identify the QCF that are vital for quality success in the UAEPSI (Chapter Four). The data analysis identified several quality critical factors that are vital for the betterment of TQM implementation practices. Also, the data analysis related to TQM practices in the UAEPSI revealed existing gaps between what is perceived and what is actually practiced (Chapter Five).

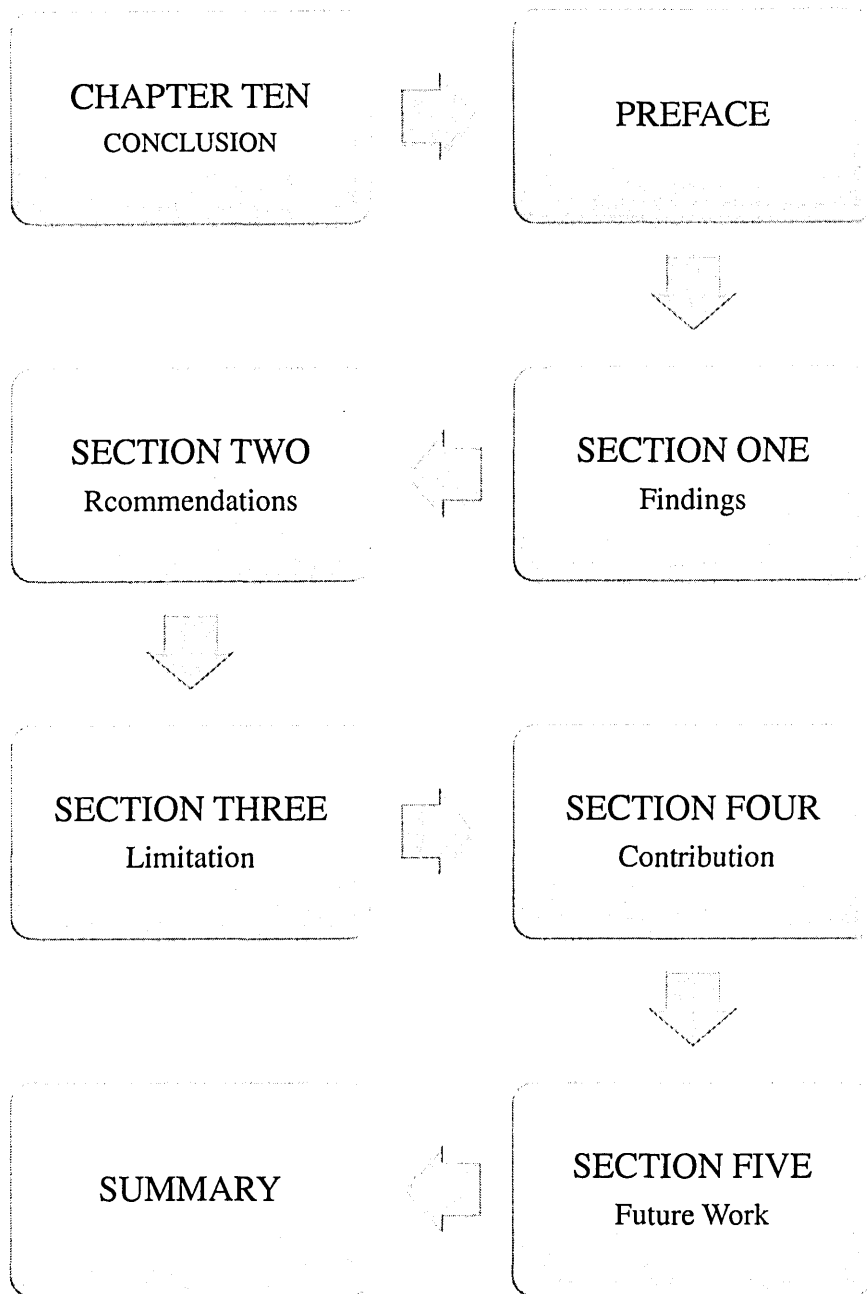
A background to the U.A.E. was provided to manifest the escalation of quality movement the UAEPSI and the initiatives of the UAEGEP to promote the quality culture (Chapter Six). Further literature revision on quality models and approaches were broadly implemented and demonstrated the development of the theoretical part of the research model. The outcomes of the data analysis obtained from Chapter Five are also employed to formulate the empirical part of the proposed model (Chapter Seven). Thus, a quality appraisal model has emerged based on the theoretical and empirical outcomes. The design of the QAM is confined to a set of core factors and sub-factors for building up its structure framework. Cyclical sequential phases are provided as an application mechanism which displays the TQM implementation stages. Additionally, a systematic

scoring system was evolved as a tool for quality appraisal; it enables the UAEPSI to assess them recognizing their quality condition and measuring their TQM performance simultaneously. The QAM elucidates its distinctive benchmarking characteristics against the broadly adopted quality models (Chapter Eight). The second research method of the qualitative approach that dealt with the focus groups was employed to test and validate the QAM. The results indicated that the QAM positively fits the TQM implementation requirement of the UAEPSI (Chapter Nine).

In this chapter, a number of findings and conclusions were drawn. Firstly, the chapter presents the findings obtained by means of data analysis, which include the findings related to the research study aim and objectives that have been accomplished and to the questions that have been resolved. Secondly, based on these findings, specifically those relating to the entire research study, a number of recommendations were made. Thirdly, the chapter highlights the research limitations. Fourthly, it exhibits the research contribution to the TQM practices in the U.A.E. and generally to knowledge. Finally, it concludes with a number of suggestions as to the areas requiring further prospective research work. Figure (10.1) outlines the content of this chapter.



*Figure 10.1 Chapter ten outline*



*Source: The Author*

## 10.1 FINDINGS

The lack of sufficient guidance to assist organizations in TQM implementation had led to a considerable number of unsuccessful TQM implementation practices in the UAEPSI. This is because the federal and local governments in the U.A.E. have recently realized the magnitude of TQM in boosting the institutional performance. In view of that, they began humble initiatives to introduce TQM principles in the UAEPSI. This lack refers mainly to TQM practices in the UAEPSI that are relatively newly introduced. Thus, inexperience in benchmarking had eventually resulted in hardly carrying out any research study related to TQM practices in the UAEPSI. Thus, the major aim and objectives of the research study are:

### *Aim*

*“To investigate current TQM practices in the United Arab Emirates public service institutions, in order to develop a generic quality appraisal model that assists in enhancing the quality performance and services”*

### *Objectives:*

- 1. To investigate the current TQM practices in UAEPSI*
- 2. To identify quality critical factors for the successful TQM implementation of UAEPSI*
- 3. To determine the appropriateness of the developed model to the UAEPSI.*

In order to achieve the research aim and objectives, three research questions were proposed as follows:

- 1. What are the quality critical factors, and to what extent they are significant for the successful implementation of TQM in the UAEPSI?*
- 2. What problems and/or obstacles are associated with TQM implementation practices in the UAEPSI?*

### *3. What are the UAEPSI anticipations of an accustomed quality appraisal model?*

This section displays the main findings of the data gained through the empirical investigation. More specifically, it considers the findings relating to the achievement of the above research aim, objectives and questions. They are preferentially demonstrated as they supplement and support each other in leading to the research foremost aim.

*Objective one: To investigate current TQM practices in the UAEPSI*

In order to attest the researcher proposition related to the ineffective and unsuccessful TQM implementation practices in the UAEPSI, a groundwork investigation was carried out to evaluate the current TQM implementation practices and pitfalls in the UAEPSI. The need for change was felt in the researcher institution as well as in other UAEPSI. A preliminary investigation in several UAEPSI was conducted in order to confirm the researcher assumptions, to review the previous experiences related to TQM implementation practices and to evaluate the likely difficulties that may be encountered. The major outcomes were realized (see Chapter One, section 1.1) where they are clearly presented. Thus, it could be regarded that the first objective was successfully attained with significant outcomes which were utilized for commencing the following research objectives.

*Objective two: to identify quality critical factors for successful TQM implementation in the UAEPSI,*

*Question one: What are the quality critical factors, and to what extent they are significant for the successful implementation of TQM in the UAEPSI?*

In order to attain objective two, it must be supported by a question. Therefore, question one was formed as an aiding instrument. By answering question one, the outcomes directly lead to attaining objective two, since they support each other. To achieve the objective, three research stages were executed. First, the researcher intensively reviewed the literature related to the QCF, alongside that with the UAEGEP criteria framework. Second, based on the theoretical revision, twenty seven QCF were identified relevant to

the UAEPSI (see Appendix 4). Third, an evaluation test was carried out to identify QCF relevant to the UAEPSI; a measurement instrument was exercised to measure their validity and reliability. The QCF reliability test revealed the positive correlation and consistency within the universal common QCF (see Chapter 3 and Chapter 4). Eventually the QCF constructed section three and four of the research survey questionnaire. The purpose was to examine their significance to the successful TQM implementation in the UAEPSI on the one hand. On the other hand, to examine the extent to which it was actually practiced by the UAEPSI. The aim was to find out if there are any gaps between the TQM implementation practices and the UAEPSI TQM implementation practices. The data analysis revealed that almost all QCF such as: top management commitment, encouragement and recognition of employees, strategy and policy deployment, and continuous improvements, etc., were significant and vital to the successful TQM implementation.

However, they were perceived that they were not fully practiced in reality, particularly the factors that are related to the employees' satisfaction. Therefore, there were momentous gaps between the theoretical and practical practices in the UAEPSI (see Chapter Five, sections 5.4 and 5.5). In the light of the earlier discussion, it could be claimed that both question one and ultimately objective two were certainly attained. The results prove the need for a quality model that is applicable to the UAEPSI nature (see Chapter Eight).

*Question two: What problems and/or obstacles are associated with TQM implementation practices in the UAEPSI?*

This question is rigorously answered in Chapter Five. The aim was to identify the reasons behind the unsuccessful quality implementation practices in the UAEPSI. One of the major obstacles which the UAEPSI experienced in their TQM implementation practices was the difficulties encountered in applying properly the UAEGEP criteria. Surprisingly, many institutions were the most vulnerable; they had serious TQM implementation problems. The data were analyzed, and then the outcomes were employed in developing the model framework (see Chapter Five, section 5.6).

*Objective three: to determine the appropriateness of the developed model to the UAEPSI.*

*Question three: What are the UAEPSI anticipations of an accustomed quality appraisal model?*

Both objectives three and question three are interrelated and consistent. The answer to question three directly leads to attaining objective three. In resolving question three, extreme literature revision were undertaken related to the most universally adopted TQM models and approaches (Chapter Seven). Critical analysis to the UAEPSI current TQM implementation practices were employed and to UAEGEP and were reviewed as well (see Chapter Six). This was done in order to develop the theoretical part of the QAM (Chapter Eight).

While the empirical part of the QAM was formulated from the data analysis (Chapter Five and Chapter Eight), the purpose of the QAM is to assist the UAEPSI to appraise their TQM status against the UAEGEP criteria. The simplicity and the flexibility of the model allow every individual UAEPSI to get used to the model according to their current TQM implementation practices and requirements (Chapter Eight and Nine).

This was done partially to achieve objective three and the overall research aim. Then, to confirm the *appropriateness* of the QAM (objective three) and the *people anticipations* (question three) related to the QAM, the second research method of qualitative approach was exercised (Chapter Nine). Two focus groups of top management in the UAEPSI were formed. The purpose of the focus groups was to test and validate the developed model. Based on their feedback and outcome analysis, the QAM could be practically and broadly applied in UAEPSI. As a final point, the research study has accomplished both objectives and question three effectively by considering all aspects that ensure the successful implementation of the QAM as an assessment instrument for better TQM implementation practices in the UAEPSI.

### ***General findings related to research data analysis***

In order to achieve the objective of the research, a number of variables were empirically tested. The first two variables involved the extent to which the quality models in the

UAEPSI were adopted and why they were adopted. The results of the research obtained through the empirical study, provided a number of findings in this regard. In relation to the extent to which the quality models were adopted, the data analysis revealed that the majority of respondents, from both the management and the employees' levels, exercised quality in their institutions. This finding suggests that the majority of UAEPSI adopted TQM and its methods simply to comply with the government quality initiatives. This finding supports the assumption that there is a lack of an appropriate understanding of TQM principles and implementation practices amongst UAEPSI.

In relation to the complexity of implementing the UAEGEP criteria, the findings of the research revealed that a significant portion of respondents admitted that they have encountered various difficulties in practicing these criteria, as both the managers and the employees were strongly in favour of the fact that they had inadequate awareness of how to effectively practice the UAEGEP criteria. This suggests that the quality factors have never concerned the UAEPSI management and that the proposed QAM, if implemented, would be the first step towards the endorsement of the systematic and simple method of quality implementation process. The inconclusive findings related to the impact of the TQM on the UAEPSI performance improvement and institutional output, demonstrated that there is a pending need to develop other effective performance measures, such as the customers perceived service quality.

#### *Findings revealed from research methodology*

The use of survey questionnaires was the best research method of gathering data and the most appropriate method of making people interact positively and respond accurately. Due to the cultural sensitivity of the U.A.E., people are obsessed when they are observed over a period of time in order to record their impressions or behaviour.

To sum up this section, the researcher is confident that the attainment of the above three research objectives was achieved and that the three questions were answered. They ultimately direct to the accomplishment of the overall research aim. In the light of the earlier discussion, the research study has successfully executed and completed its mission and therefore the research aim is declared accomplished.

## 10.2 RECOMMENDATIONS

Based on the objectives and outcomes of this research, the researcher recommends a strategy for quality to be developed and implemented by the UAEPSI to improve the total institutional performance and meet customer's expectations. This strategy may put focus on:

### *Improving quality process*

The top management in the UAEPSI should take into the consideration the fact that the service quality improvement process must be set up in a systematic way that incorporates all parts of the institution. Every section, unit, and department system should be aligned in such a way that could lead to improving quality making this goal the responsibility of every part and everyone in the institution. The service quality improvement process should be clear as to what it can achieve, how it can achieve it, and what the responsibilities of each employee in the improvement process are. There should be an effective upward and downward communication system so that information related to quality improvement can be transferred effectively and in coordination between the management and the employees and between the intersections. The information can then be utilized to reduce conflict and to realize the ultimate goals of quality improvement.

### *Effective use of benchmarking*

There is no doubt that the individual institutions in the U.A.E. lack the adoption of benchmarking as a tool of performance measurement. This is due to the lack of cooperation and coordination between UAEPSI to improve service quality with those institutions that have the advantage of experiencing quality. Such kind of inter-institutional relationships suggest some problems of TQM implementation practices that can be solved. Effective institutional cooperation between UAEPSI is missing and small institutions are falling behind large institutions. Small and low income UAEPSI in particular are weak, partially because they lack the quality expertise, quality training and proper precision related to TQM implementation obstacles.

There are new problems facing the UAEPSI in the area of self assessment and performance measurement which create new challenges. Performance measurement of quality practice methods to cope with service improvements is one such challenge which cannot be disregarded. Some difficult quality implementation practice problems have arisen as a result of the vagueness related to the appropriateness of the statistical tools in indicating the service improvements, equally true due to shortages of quality expertise, and to conventional quality measurements methods that need to be replaced by new tools of performance measurements. Even though there are many certified quality assessors in the UAEPSI, they are not very active in trying to use some of the advanced TQM methods such as regression and reliability analysis in order to advance the current status of TQM implementation practices to a further level.

*Developing distinct U.A.E. Quality-Excellence Model*

Based on the answers to question one and two, the U.A.E. has its own culture which is somewhat different from other countries in the region, and is much different from the rest of the world due to the UAEPSI quality culture uniqueness, and apart from the research developed model. So far, the UAEGEP did not attempt to develop from its past experience a quality-excellence model that respects the cultural traditions of the UAEPSI. This matter should be a critical issue in the UAEGEP since UAEPSI lacks the statistical tools for measuring performances effectively. Conventional quality practices may not be sufficient to cope with new trends of institutional challenges. The UAEPSI needs to be adapted to the QAM proposed in this research, as it is a very simple assessment method that allows the UAEPSI to understand their current quality situation. At the present time, employees in the UAEPSI do not seem to be well equipped with the advanced quality performance measurements and the self assessment methods and they are not, generally speaking or willing to use them to solve quality implementation problems. These barriers can be overcome by adopting the principles of QAM, alongside constant education and training and by the efforts of quality improvement teams strongly supported by the management.



### *Employee's management relations enhancement*

The isolation of employees from the quality planning stages and their involvement only in the implementation process could not help the UAEPSI to accomplish their quality targets. The UAEPSI should implement some measures to recognize the human and social values, to make the working atmospheres attractable and thereby, to increase the motivation of the employees and that what precisely the QAM main core factor emphasized on. Management skills such as delegation, empowerment and recognition schemes need to be really effectible. Career promotion schemes need to be based on the employee's actual performance away from the external influences and personnel interests.

### *Creating quality culture in the UAEPSI*

The UAEPSI, specifically the management, has failed to recognize the importance of people's attitudes and to encourage change. This is one of the primary reasons for the failure of the quality transformation and implementation process. The distinctive multicultural characteristics of the U.A.E. employees is the first factor that needs to be addressed when establishing a quality practice since it influences the planning stage of the implementation process. There is a rigid link between people culture particularly those descending from unlike backgrounds and the success of quality implementation. For that reason, top management need to pay more attention to problem areas related to quality cultural improvement issues within their institutions; thus ultimately averting failure and mismanagement.

### *Employee's empowerment*

Empowerment of all employees is necessary as a source of improved performance and participation. The employees form the core of any quality implementation process as they are involved in managing and improving processes and in serving customers. The management of UAEPSI demands the recognition of the employee involvement and motivation; the initiation and implementation of any quality approach would be difficult to put into practice. Empowerment is a crucial part of the UAEPSI cultural change that situates the decision-making process regarding solving problems in their work. On top of that, incentive schemes could reward the employees and result in upsurge in their

input to their institutional achievements. They must perceive themselves as having equal opportunities in terms of institutional aspiration.

#### *Effective employee's involvement*

This factor has to be thoroughly addressed. As the employees' involvement in their institutions quality scheme is purely narrowed down to the implementation phase, the management of the UAEPSI ought to seriously undertake the factor of the employee's involvement in the entire institutional quality implementation process. Wider involvement ought to be exercised, and management needs to transform TQM theories into practice. It is obvious that the employees who do the work make most of the decisions about how the work is done. Therefore, the development of appropriate involvement skills is prerequisite for optimizing the employee contributions to their institution's quality initiatives success. The management of the UAEPSI should give their employees the authority, responsibility, knowledge and skills they need to implement their quality involvement roles. The employees have to realize the essentiality of their involvement, and the management has to change their traditional views; they are the planners and the employee's implementers.

#### *Teamwork enhancement*

It is perceived from the research data analysis outcomes that this factor is not often practiced as a quality implementation practice. Obviously, teamwork is a major factor of TQM implementation because it enables employees in different parts of the institution to work together to meet the customer needs in ways that cannot be done through individual job performance alone. Unfortunately, the philosophy of teamwork in the UAEPSI is quite unpopular, as infrequently, people work as teams. People in the UAEPSI tend to work individually and get rewarded according to their particular performance. Undoubtedly, that collective output is virtually always superior to the individual output. The teamwork provides an opportunity for employees to work together in pursuing quality in ways they have not experienced before. The team and the individual should be recognized and rewarded equally. Through teams, employees are brought together with a common goal and quality improvement becomes easier to communicate over departmental or divisional sections. Teamwork is therefore a behavioural factor that must be made part of the UAEPSI quality culture. It is obvious

that the only efficient way to tackle process improvement or complex problems is through teamwork. Therefore, collective efforts are extremely crucial for UAEPSI in their quality success.

### *Elective participation in the UAEGEP*

Evidences from the research study showed that people particularly in the UAEPSI tend to be apprehensive when they undertake sudden shift from routine work to adopt TQM principles. Giving preference to adopting the UAEGEP is the best way to encourage them to positively contribute without being forced to do it. Actually, the UAEPSI displays how to initiate quality programmes, and actual involvement; the UAEGEP needs to change the policing role of the UAEPSI; they should build partnership relation with the UAEPSI particularly in institutions that lack experience and encounter difficulties in undertaking such initiatives. Particularly when assessed by the UAEGEP, the assessors considers the size (number of employees, number of branches), the service sector (health sector, for example, hospitals, clinics, and health service departments), the educational, background, for example, (schools, universities and education councils) etc., and the size of the community they serve.

### **10.3 LIMITATION**

Once the research study is completed, it is necessary to evaluate it with respect to its limitations as shown below.

The research QAM did not include factors related to the customer's satisfaction. This is deliberately left as the main concept of the model addressing the internal environment of UAEPSI quality implementation practices. In addition, the research survey was carried out to seek the perceptions of the employees in the UAEPSI; therefore, it is not sensible to ask participants to respond on behalf of their customers.

Also, the researcher did not aim to complicate the application of the QAM, but rather to keep it simple and straightforward. Therefore, customer related issues were left for future empirical studied. In addition, this research study involved major UAEPSI who were experienced in TQM practices in the past few years. This means that the findings of this study are understood within a certain context, that is, the people (top

management, senior management, supervisors, officers, and clerical staff) in the UAEPSI. The state owned organizations<sup>1</sup> were not included; hence, they were considered more likely private sector operating entities.

#### **10.4 CONTRIBUTION**

This research significantly makes constructive contribution to the development of quality theories and practices specifically to the U.A.E. institutional culture since it is exclusively focused on TQM implementation practices as related to the public sector institutions in the U.A.E. The research empirically investigates the critical factors affecting the success or the closure implementation of TQM. Following are the main contributions in the research view:

- 1. Create awareness and understanding of TQM concepts and implementation techniques, and their impacts on the performance for the UAEPSI.*
- 2. Encourage the U.A.E. government to set up a strategy for quality in alignment with the government corporate strategy.*
- 3. Encourage the public sector institutions to develop their quality strategy in alignment with their corporate strategy.*
- 4. Help employees of the UAEPSI to adopt a mind set of improving quality culture in their way of thinking and behaviour*

#### **10.5 FUTURE WORK**

The research topic is a source of literature for other researchers in the same field. Also, the findings of this study could offer a useful potential orientation to the quality practices of UAEPSI, being an independent fieldwork study with empirical investigations. The researcher considers the following topics that need to be addressed in further research:

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<sup>1</sup> The state owned organization are merely independent private sector oriented legal entities founded by the U.A.E. local as well federal governments to undertake commercial activities on behalf of the owner government

1. *further research and study for the development of distinct U.A.E. quality-excellence model*

Almost all countries developed their own quality and excellence models that meet their national criteria and culture. They have accepted the basic principles of quality and excellence principles originated by the Baldrage system and the EFQM excellence model and adopted these principles to conform to their cultural characteristics. The U.A.E. local governments have had experience in developing their own excellence model; however, no unique U.A.E. quality model or method has emerged. It may be true that no real effort has been made and up to now UAEPSI has been content with imitating the *ad hoc* methods copied from the advanced nations. As far as TQM and quality culture are concerned, some questions are often raised by the employees in the UAEPSI about whether the EFQM-EM is really suitable for the U.A.E. traditions and culture. This matter deserves to be a vital issue in UAEPSI quality implementation practices in future research perspectives.

2. *Expanding the QAM core factors that include the UAEPSI external customers*

3. *The effectiveness of people empowerment and their full involvement in the success of quality implementation in the UAEPSI*

## **SUMMARY**

In conclusion, the research study investigated the quality implementation practices in the UAEPSI. This is because most of UAEPSI lack of quality implementation strategy, thus they encounter difficulties in transforming the TQM concepts into practice. Therefore they hardly benefit from their quality initiatives in improving their institutional total business performance and ultimately meet their internal as well as external customer's expectations as they predict. A fieldwork was carried out in order to explore the current TQM implementation practice in the UAEPSI.

The data analysis showed that there is a divergent between the TQM principles and the actual quality implementation practice in the UAEPSI. As to overcome this quality appraisal model was developed. The main purpose of the model is to enable the

UAEPSI to assess their quality status and to set quality implementation strategies that consistent with the U.A.E. government strategy, and also to improve their performance. In short, the researcher hopes that this study provides insights and contribution to UAEPSI and TQM practitioners. For UAEPSI, the study provides solid evidence that certain quality critical factors of the QAM ought to be recognized and considered for the successful TQM implementation practices in order to yield substantial benefits in performance improvement.

While for TQM practitioners, the study has moved from theoretical TQM modelling to empirical testing and validation, integrating the conceptual TQM concepts with the empirical ones. Researchers as well as UAEPSI management can take advantage of the QAM for developing new proposals applicable to TQM implementation practices in the public sector institutions.

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## **APPENDIXES**

**APPENDIX (1) QUESTIONNAIRE LETTRES**

**APPENDIX (2) THE SURVEY QUESTIONNAIRE LEAFLET ✓**

**APPENDIX (3) RESPONDENTS PROFILE ✓**

**APPENDIX (4) THE TABLES SECTION THREE**

## APPENDIX (1) QUESTIONNAIRE LETTRES

### LETTER (1) QUESTIONNAIRE COVER LETTER (The Researcher/Arabic)

التاريخ:

السادة المحترمين، السلام عليكم

#### الموضوع: استبيان رسالة دكتوراة

أقدم لكم شكري وامتناني راجيا التكرم بملئ الاستبيان مرفق طيا مع هذه الرسالة حسب البيانات المطلوبة، املا ان لا يستغرق استيفاءها الا الوقت القليل.

اقوم حاليا بمصالة دراسي العليا لنيل درجة الدكتوراة في ادارة الجودة والتميز المؤسسي من جامعة شفيلد هالم بالمملكة المتحدة ومن ضمن متطلبات الدراسة القيام بالبحث الميداني الشامل والمتعمق في موضوع الرسالة والتي تتمحور حول ( تطوير الاليات والنظم المتبعة عند تطبيق مبادئ الجودة الشاملة والتميز المؤسسي: دراسة تجريبية للمؤسسات الخدمية الحكومية في دولة الامارات العربية المتحدة ).

ويهدف البحث الميداني الذي اقوم به الي التحقق من فرضية اطروحة البحث وذلك في ضوء اجاباتكم على الاسئلة المتضمنة في الاستبيان المذكور. وكما ذكرت ان الغرض من هذا البحث اكايمي بحت يهدف في النهاية الى اثراء البحث الاكاديمي في علم الادارة وتطوير برامج الاداء الحكومي المتميز في المؤسسات الخدمية الحكومية في دولة الامارات.

ولهذا اوأكد لجميع الاخوة الذين يشملهم الاستبيان ان البيانات والاجوبة الواردة سوف تعامل بسرية تامة وعليه ارجو منكم الاجابة بكل امانة ودقة واعادة ارسال الاستبيان بعد ملئه في الظرف المرفق الي العنوان المبين على نفس الظرف.

كما ارجو منكم اذا كان لديكم إي استفسار أو استيضاح الاتصال بي في اي وقت, مع جزيل الشكر والتقدير.

المخلص،

أيوب العوضي

Ayoob.Al-Awadi@student.shu.ac.uk

## APPENDIX (1) QUESTIONNAIRE LETTRES

### LETTER (2) QUESTIONNAIRE COVER LETTER (The Researcher Employer/ Arabic)

التاريخ:

#### الموضوع : اجراء استبيان رسالة دكتوراة

تشهد دائرة (---) أن السيد أيوب يوسف العوضي يعمل لدينا بوظيفة(---)، يواصل حالياً دراسة العليا للحصول على درجة الدكتوراة في تخصص ادارة الجودة والتميز المؤسسي من جامعة شفيهد هالم بالمملكة المتحدة.

ومن متطلبات هذه الدراسة القيام بالبحث الميداني الشامل والمتعمق في موضوع رسالة الدكتوراة والتي تتمحور حول (تطوير الاليات والنظم المتبعة عند تطبيق مبادئ ادارة الجودة الشاملة والتميز المؤسسي: دراسة تجريبية للمؤسسات الخدمية الحكومية في دولة الامارات العربية المتحدة).

يرجي التفضل بتسهيل مهمة الباحث في توزيع الاستبيان وتعبئته من قبل العاملين في مؤسستكم الموقرة، علما بأن المعلومات سوف تكون سرية وموجهة لغرض البحث الاكاديمي فقط.

مع الشكر والتقدير

## APPENDIX (1) QUESTIONNAIRE LETTRES

*LETTER (3) INTERVIEWS COVER LETTER (The Researcher Employer/Arabic)*

سعادته /

السلام عليكم

### الموضوع : اجراء لقاء شخصي

من منطلق حرص (---) على مد جسور التعاون وتبادل الخبرات بينها وبين مختلف مؤسسات الدولة وبما فيه مصلحة الوطن. تهيب الدائرة من سعادتكم بتمكين الموظف لدينا السيد أيوب العوضي باجراء لقاء شخصي وتعريفي مع سعادتكم وذلك بمرافقة المشرف العام علي رسالة الدكتوراة التي هو بصدد اكمالها. ويتمحور اللقاء عن مدي ملائمة انظمة التميز والجودة المتبعة وتأثيرها على مؤسسات القطاع العام. علما بأن الموضوعات التي سوف تتم مناقشتها خلال اللقاء ستكون سرية وهي لغرض البحث العلمي.

والسيد أيوب حاليا مبتعث من قبلنا لمواصلة دراسة العليا للحصول على درجة الدكتوراة في مجال بالمملكة المتحدة. ومن متطلبات Sheffield Hallam University الادارة من جامعة شيفلد هالم الدراسة هو القيام بالبحث الميداني الشامل والمتعمق في موضوع رسالة الدكتوراة والتي تتمحور حول ( تطوير الاليات والنظم المتبعة عند تطبيق مبادئ الجودة الشاملة والتميز المؤسسي. دراسة تجريبية للمؤسسات الحكومية في دولة الامارات العربية المتحدة ). حيث يتضح مدي علاقة وارتباط موضوع البحث مع صميم عمل وزارتك الموقرة.

وتأمل (---) من سعادتكم تحديد الموعد الذي ترونه مناسباً لكم علي ان يتم تحديد لاحقا وذلك بالتنسيق مع السيد أيوب ومكتب سعادتكم.

ولكم جزيل الشكر والامتنان

## APPENDIX (1) QUESTIONNAIRE LETTRES

*LETTER (4) QUESTIONNAIRE COVER LETTER (The Researcher/English)*

**Date:**

**Dear Sir or Madam**

**Sub: PhD. Research Questionnaire**

In relation to the above subject, I would like to thank you in advance for your kind effort and cooperation in taking part in responding effortlessly to my PhD. research questionnaire.

Currently, I am pursuing my higher education as a research student at Faculty of Organization and Management, Sheffield Hallam University in the UK. In partial fulfilment of the requirements of the research is to carry out a fieldwork study in (Developing a framework model for implementing Total Quality Management and Organizational Excellence: an empirical Study for the United Arab Emirates Public Service Sector).

In this regard, I am conducting a survey to test my research questions. The enclosed Questionnaire is a part of this effort.

The objective of this survey is purely academic, and for the development of the Quality concepts and Excellence practices in the U.A.E. Public Service Sector. The responded answers regarded with high confidentiality.

I will be grateful if you can respond to questions and return it in the enclosed self-addressed envelope. If you need further clarifications, please do not hesitate to contact me at any time.

I appreciate your full support and look forward to hearing from you in the near future.

Yours sincerely,

Ayoob Al Awadhi

✉ [Ayoob.Al-Awadi@student.shu.ac.uk](mailto:Ayoob.Al-Awadi@student.shu.ac.uk)

**Research Survey Questionnaire**

**Investigation of TQM Implementation to U.A.E. Public Sector  
Organisations**



**SECTION ONE**

**Personal Data**

Please  on appropriate answer

Please note: There are no right or wrong answers

\* indicates an optional answer

**1- Name\***

-----

**2- Nationality\***

1	U.A.E.	<input type="checkbox"/>	2	None U.A.E.	<input type="checkbox"/>
---	--------	--------------------------	---	-------------	--------------------------

**3- Gender**

1	Male	<input type="checkbox"/>	2	Female	<input type="checkbox"/>
---	------	--------------------------	---	--------	--------------------------

**4- What age group you are in?**

1	20-29	<input type="checkbox"/>	2	30-39	<input type="checkbox"/>
3	40-49	<input type="checkbox"/>	4	50-59	<input type="checkbox"/>
5	60 or over	<input type="checkbox"/>			

**5- What is your last academic qualification?**

1	High School	<input type="checkbox"/>	2	Diploma	<input type="checkbox"/>
3	Bachelor's Degree	<input type="checkbox"/>	4	Masters Degree	<input type="checkbox"/>
5	Doctoral Degree (PhD)	<input type="checkbox"/>			

**6- What is your current occupation?**

1	Senior Manager	<input type="checkbox"/>	2	Officer	<input type="checkbox"/>
3	Supervisor	<input type="checkbox"/>	4	Cleric	<input type="checkbox"/>
5	Others: Please Specify				
	-----				

<b>7- Length of service in the current position? (Years)</b>					
<b>1</b>	<b>0-5</b>	<input type="radio"/>	<b>2</b>	<b>6-10</b>	<input type="radio"/>
<b>3</b>	<b>11-15</b>	<input type="radio"/>	<b>4</b>	<b>16-20</b>	<input type="radio"/>
<b>5</b>	<b>21-25</b>	<input type="radio"/>	<b>6</b>	<b>26-30</b>	<input type="radio"/>
<b>7</b>	<b>31 and over</b>				<input type="radio"/>

**SECTION TWO**

*Your Institution data*

Please  on appropriate answer

\*indicates an optional answer

**1- Institution Name\***

-----
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**2- Legal Entity**

<b>1</b>	Government Authority	<input type="checkbox"/>	<b>2</b>	Local department	<input type="checkbox"/>
<b>3</b>	Government Agency	<input type="checkbox"/>			
<b>4</b>	Others: Please Specify -----				

**3- No. of employees in the entire institution?**

<b>1</b>	1 - 1,000	<input type="checkbox"/>	<b>2</b>	1,001 - 5,000	<input type="checkbox"/>
<b>3</b>	5,001 - 10,000	<input type="checkbox"/>	<b>4</b>	10,001 - 15,000	<input type="checkbox"/>
<b>5</b>	15,001 - 20,000	<input type="checkbox"/>	<b>6</b>	20,001 - 25,000	<input type="checkbox"/>
<b>7</b>	More than 25,000				<input type="checkbox"/>

**4- What is the Main Service Sector of your institution?**

<b>1</b>	Police and security	<input type="checkbox"/>	<b>2</b>	Tourism	<input type="checkbox"/>
<b>3</b>	Education	<input type="checkbox"/>	<b>4</b>	Religion affairs	<input type="checkbox"/>
<b>5</b>	Health	<input type="checkbox"/>	<b>6</b>	Industry	<input type="checkbox"/>
<b>7</b>	Transportation	<input type="checkbox"/>	<b>8</b>	Finance	<input type="checkbox"/>
<b>9</b>	Telecommunication	<input type="checkbox"/>	<b>10</b>	Commerce	<input type="checkbox"/>
<b>11</b>	Petroleum	<input type="checkbox"/>	<b>12</b>	Justice	<input type="checkbox"/>
<b>13</b>	Water and Electricity	<input type="checkbox"/>	<b>14</b>	Municipal	<input type="checkbox"/>
<b>15</b>	Agriculture	<input type="checkbox"/>	<b>16</b>	Public Works	<input type="checkbox"/>
<b>17</b>	Others: Please Specify -----				

**5- Does your institution currently adopting other quality and excellence models?**  
**Note: If your answer is No please go to section three**

1	Yes	<input type="radio"/>	2	No	<input type="radio"/>
---	-----	-----------------------	---	----	-----------------------

**6- Apart from UAEGEP Which of the following quality and excellence models or approaches currently adopted in your institution?**

1	ISO 9000:2000	<input type="radio"/>	2	EFQM Excellence Model	<input type="radio"/>
3	Statistical Process Control	<input type="radio"/>	4	Baldrage	<input type="radio"/>
5	Benchmarking	<input type="radio"/>	6	Six Sigma	<input type="radio"/>
7	Others: Please Specify -----				

**7- Based on the answer of question (6). In your opinion, what are the main reasons of adapting such scheme?**  
**Note: You may  more than one answer for each of the following statements**

1	Leads to achieve the targeted objectives	<input type="radio"/>	2	Self assessment tool	<input type="radio"/>
3	Enhances productivity and performance	<input type="radio"/>	4	To win quality award	<input type="radio"/>
5	Simple to understand and implement	<input type="radio"/>	6	Increases competitiveness	<input type="radio"/>
7	Increases customer satisfaction	<input type="radio"/>	8	Maximizes revenues	<input type="radio"/>
9	Reduces errors and reworks	<input type="radio"/>	10	Most widely adopted	<input type="radio"/>
11	Address government quality initiatives	<input type="radio"/>	12	To participate in the UAEGEP	<input type="radio"/>
13	Others: Please Specify -----				

### SECTION THREE

*In your opinion, to what extent would you identify the following factors are significant / not significant as a vital prerequisite for successful implementation of quality and excellence initiatives in your institution?*

*Please indicate  to only one appropriate answer whether you perceive the following statements (1) Not significant at all, (2) Less significant, (3) Not sure, (4) Significant and (5) Very significant.*

<i>Critical Factors</i>		<i>Significance perceived</i>				
		<i>(1) Not signi- ficant at all</i>	<i>(2) Less- signifi- cant</i>	<i>(3) Not Sure</i>	<i>(4) signi- ficant</i>	<i>(5) Very signi- ficant</i>
1	<i>Top management commitment</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<i>Leadership style &amp; effectiveness</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<i>Employees involvement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<i>Employees recognition</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<i>People encouragement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<i>Job satisfaction enhancement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<i>Management systems</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<i>People competences and skills</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<i>Resources management (Man, Machine, Material...etc)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	<i>Partnership with customers and other stakeholders</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	<i>Strategy and policy development</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	<i>Team working spirit</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13	<i>Staff suggestions scheme</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	<i>Communication and knowledge management</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	<i>Flexible and dynamic institution structure</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	<i>Recourse utilization</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	<i>Performance management system</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	<i>Processes design and management</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	<i>Quality assurances</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	<i>Continuous improvement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	<i>Benchmarking</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	<i>Manpower planning and strategy</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	<i>Product-Service design and delivery</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	<i>Appropriate facilities</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	<i>Social and corporate responsibility</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	<i>Environmental responsibility</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	<i>Emiratization careers scheme</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## SECTION FOUR

*Based on your responses in section Three, please indicate how widely each factor actually practiced across your institution?*

*Please indicate  to only one appropriate answer whether you perceive the following statements (1) Very Low, (2) Low, (3) Not Sure, (4) High and (5) Very High.*

<i>Critical Factors</i>		<i>Actual Practiced (Scale)</i>				
		<i>(1) Very Low</i>	<i>(2) Low</i>	<i>(3) Not Sure</i>	<i>(4) High</i>	<i>(5) Very High</i>
1	<i>Top management commitment</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<i>Leadership style &amp; effectiveness</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<i>Employees involvement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<i>Employees recognition</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<i>People encouragement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<i>Job satisfaction enhancement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<i>Management systems</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<i>People competences and skills</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<i>Resources management (Man, Machine, Material...etc)</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	<i>Partnership with customers and other stakeholders</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	<i>Strategy and policy development</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	<i>Team working spirit</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	<i>Staff suggestions scheme</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14	<i>Communication and knowledge management</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	<i>Flexible and dynamic institution structure</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	<i>Recourse utilization</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	<i>Performance management system</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	<i>Processes design and management</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	<i>Quality assurances</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	<i>Continuous improvement</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	<i>Benchmarking</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	<i>Manpower planning and strategy</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	<i>Product-Service design and delivery</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	<i>Appropriate facilities</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	<i>Social and corporate responsibility</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	<i>Environmental responsibility</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	<i>Emiratization careers scheme</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**SECTION FIVE**

*In this section the researcher aims to determine the reasons for success and constraints, as well as the impact of the benefits gained during and after the implementation of the UAEGEP in your institution?*

Please indicate  on appropriate answer

**1- Does your institution have strategies for services delivery improvement?**

1	Yes	<input type="checkbox"/>	2	No	<input type="checkbox"/>
3	Don't know				<input type="checkbox"/>

**2- What is principally responsible for driving quality excellence improvement in your Institution?**

1	Managerial leadership	<input type="checkbox"/>	2	People initiatives	<input type="checkbox"/>
3	Government policy	<input type="checkbox"/>	4	Innovations	<input type="checkbox"/>
5	Customers	<input type="checkbox"/>	6	Don't know	<input type="checkbox"/>
7	Others: Please Specify -----				

**3- Indicate how important is the UAEGEP as an approach for service improvement in your institution?**

1	Very important	<input type="checkbox"/>	2	Important	<input type="checkbox"/>
3	Not important	<input type="checkbox"/>	4	Not important at all	<input type="checkbox"/>
5	Don't know				<input type="checkbox"/>

**4- To what extent the implementation of the UAEGEP improved services and performances in your institution?**

1	Totally	<input type="checkbox"/>	2	Partially	<input type="checkbox"/>
3	Barely	<input type="checkbox"/>	4	Not at all	<input type="checkbox"/>
5	Not sure				<input type="checkbox"/>

**5- Were the UAEGEP criteria difficult to adopt?**

1	Yes	<input type="checkbox"/>	2	No	<input type="checkbox"/>
3	Don't know				<input type="checkbox"/>

6- How many staff had been trained on the UAEGEP criteria in your institution?					
1	None	<input type="radio"/>	2	1 to 50	<input type="radio"/>
3	51 to 100	<input type="radio"/>	4	101 to 150	<input type="radio"/>
5	More than 150	<input type="radio"/>	6	Don't know	<input type="radio"/>

7- How do you rate employee's quality awareness in your institution? (%)					
1	% 0	<input type="radio"/>	2	% 25	<input type="radio"/>
3	% 50	<input type="radio"/>	4	% 75	<input type="radio"/>
5	% 100	<input type="radio"/>	6	Don't know	<input type="radio"/>

8- Is quality continuous process in your institution?						
1	Yes	<input type="radio"/>	2	No	<input type="radio"/>	
3	Don't know					<input type="radio"/>

9- Is the UAEGEP criteria implemented appropriately entirely in your institution?						
1	Yes	<input type="radio"/>	2	No	<input type="radio"/>	
3	Don't know					<input type="radio"/>

10- Have your institution conducted self assessment against the UAEGEP performance measurements?						
1	Yes	<input type="radio"/>	2	No	<input type="radio"/>	
3	Don't know					<input type="radio"/>

11- What method of self assessment have your institution undertaken?					
1	Customers feedback	<input type="radio"/>	2	Internal assessment	<input type="radio"/>
3	Staff performance assessment	<input type="radio"/>	4	Current evidence based	<input type="radio"/>
5	External assessment	<input type="radio"/>	6	Don't know	<input type="radio"/>
7	Others: Please Specify -----				

**12- In your opinion what are the min constraints in implanting the UAEGEP in your institution?**

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**13- If you have further information you would like to add about your institution, or comments relevant to the research topic, please do so?**

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-----  
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*Thanks for your cooperation*

*Your responses will be treated in strict confidentiality*

*For further inquiries please contact:*

*Ayoob Al Awadhi*

*✉ [Ayoob.Al-Awadhi@student.shu.ac.uk](mailto:Ayoob.Al-Awadhi@student.shu.ac.uk)*

## APPENDIX (3) RESPONDENTS PROFILE

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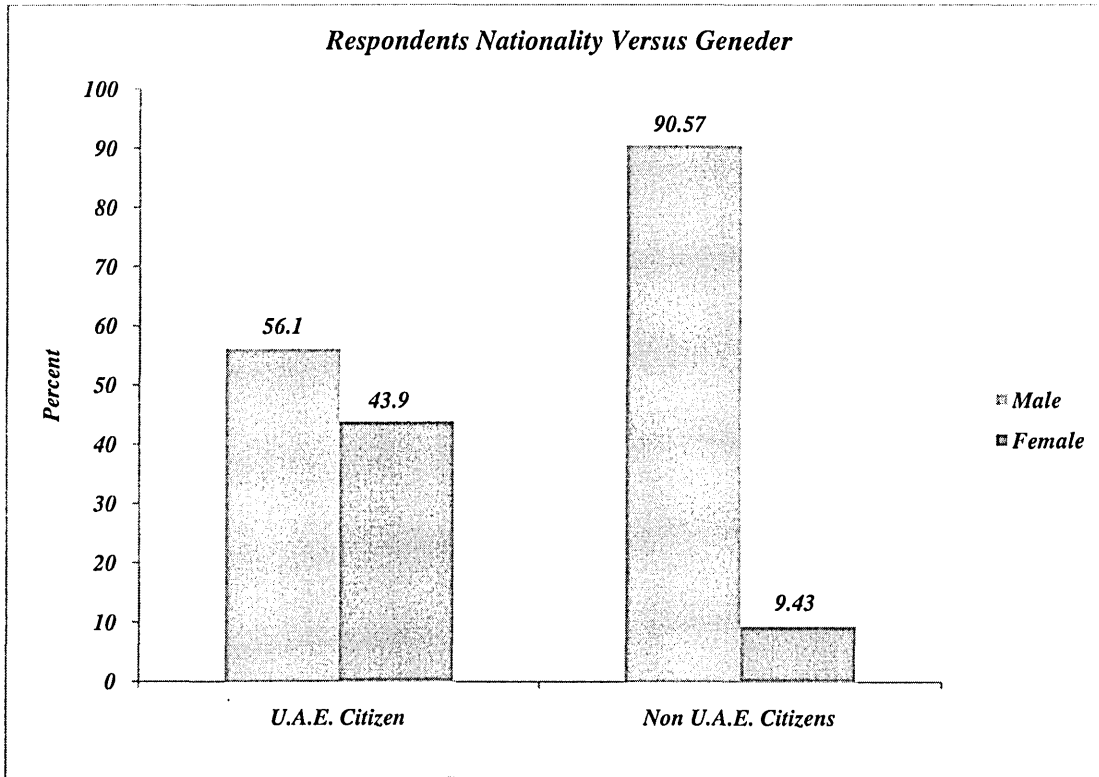
### *Returned Questionnaires According to Institutions Service Sector*

<i>Service Sector</i>	<i>Count</i>	<i>Percent (%)</i>
<i>Police and Security</i>	35	11.1
<i>Tourism</i>	16	5.1
<i>Education</i>	20	6.3
<i>Faith and religion</i>	18	5.7
<i>Health</i>	81	25.7
<i>Industry</i>	0	0.0
<i>Transportation</i>	24	7.6
<i>Finance</i>	4	1.3
<i>Telecommunication</i>	0	0.0
<i>Commerce</i>	0	0.0
<i>Petroleum</i>	0	0.0
<i>Justice</i>	10	3.2
<i>Water &amp; Electricity</i>	0	0.0
<i>Municipal</i>	19	6.0
<i>Agriculture</i>	0	0.0
<i>Public Works</i>	12	3.8
<i>Environment</i>	13	4.1
<i>Civil services</i>	32	10.2
<i>Economy</i>	31	9.8
<i>Total</i>	315	100

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**Respondents Nationality Versus Gender**

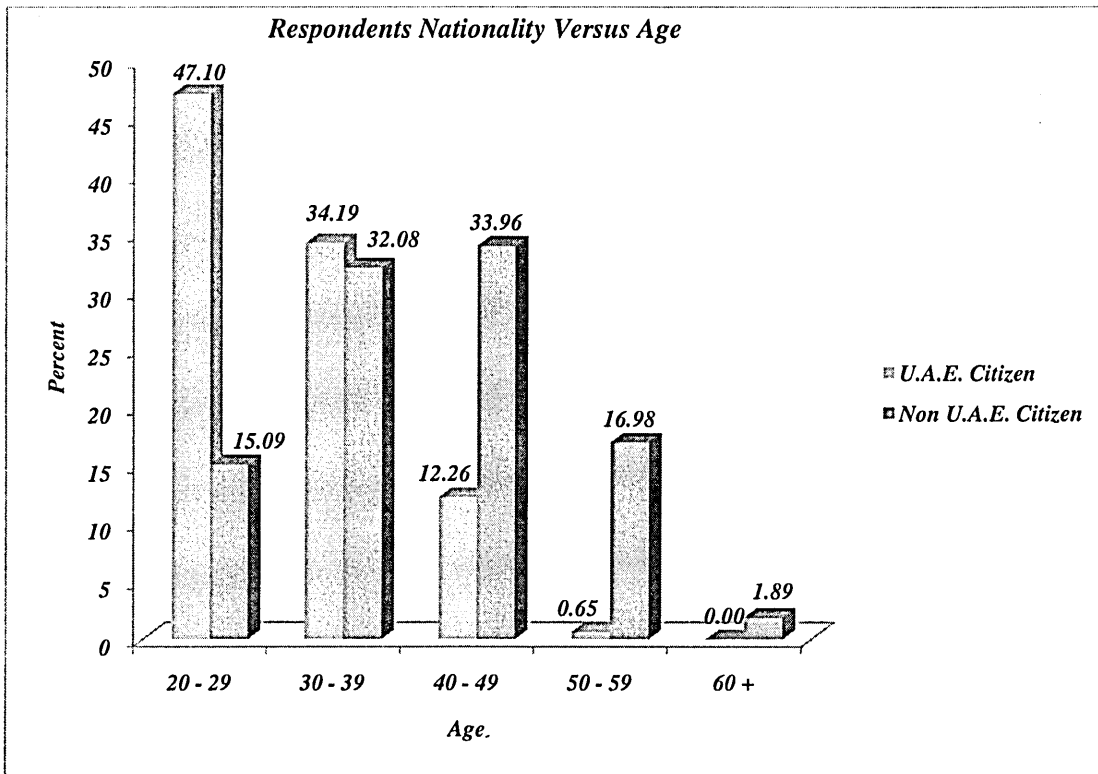
<b>Gender</b>	<b>Nationality</b>						<b>Total</b>	
	<b>U.A.E. Citizen</b>	<b>Non U.A.E. Citizens</b>	<b>Missing Values</b>		<b>U.A.E. Citizen</b>	<b>Non U.A.E. Citizens</b>	<b>(N)</b>	<b>%</b>
	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>
<b>Male</b>	87	56.1	48	90.57	58	54.2	193	61.3
<b>Female</b>	68	43.9	5	9.43	47	43.9	120	38.1
<b>Missing Values</b>	0	0	0	0	2	1.9	2	0.6
<b>Total</b>	155	100	53	100	107	100	315	100%



**Respondents Nationality Versus Age**

**Nationality**

Age Group	U.A.E. Citizen		Non U.A.E. Citizen		Missing Values		Total	
	(N)	%	(N)	%	(N)	%	(N)	%
20 - 29	73	47.10	8	15.09	25	23.36	106	33.65
30 - 39	53	34.19	17	32.08	38	35.51	108	34.29
40 - 49	19	12.26	18	33.96	25	23.36	62	19.68
50 - 59	1	0.65	9	16.98	1	0.93	11	3.49
60 +	0	0.00	1	1.89	0	0.00	1	0.32
Missing Values	9	5.81	0	0.00	18	16.82	27	8.57
<b>Total</b>	<b>155</b>	<b>100%</b>	<b>53</b>	<b>100%</b>	<b>107</b>	<b>100%</b>	<b>315</b>	<b>100%</b>



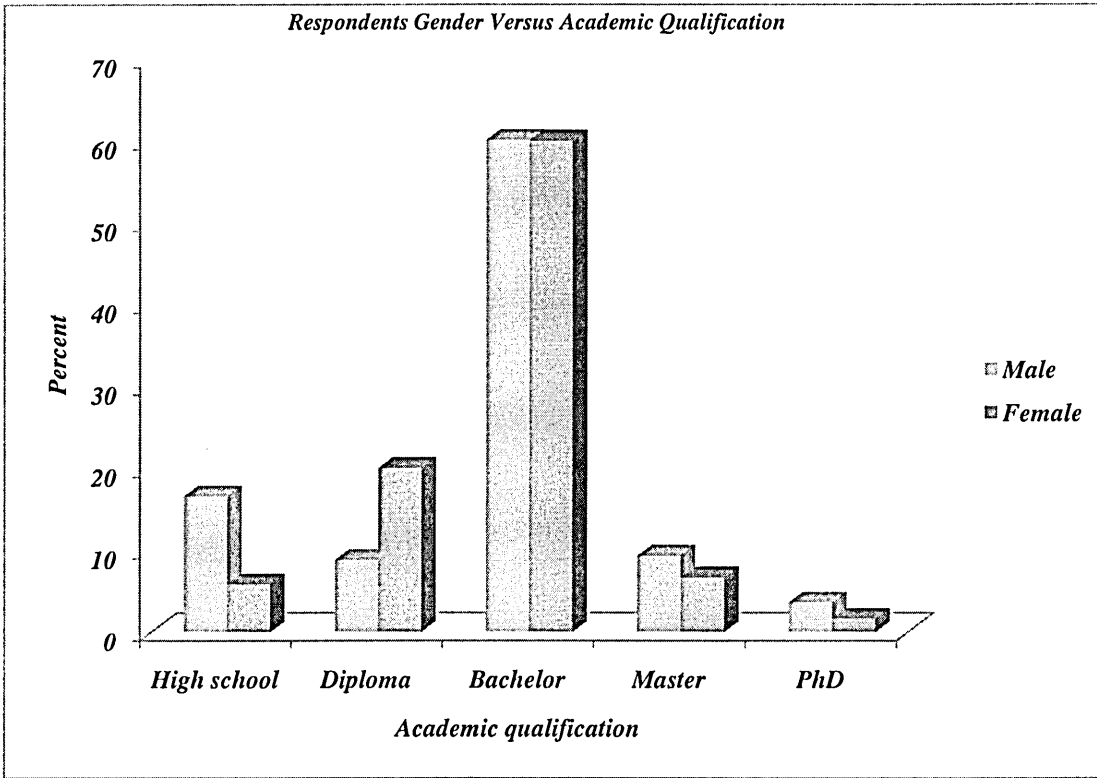
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**Respondents Gender Versus Academic Qualification**

<i>Qualification</i>	<i>Gender</i>							
	<i>Male</i>		<i>Female</i>		<i>Missing Values</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>High school</i>	<i>32</i>	<i>16.58</i>	<i>7.00</i>	<i>5.83</i>	<i>0.00</i>	<i>0.00</i>	<i>39.00</i>	<i>12.38</i>
<i>Diploma</i>	<i>17</i>	<i>8.81</i>	<i>24.00</i>	<i>20.00</i>	<i>0.00</i>	<i>0.00</i>	<i>41.00</i>	<i>13.02</i>
<i>Bachelor</i>	<i>116</i>	<i>60.10</i>	<i>72.00</i>	<i>60.00</i>	<i>1.00</i>	<i>50.00</i>	<i>189.00</i>	<i>60.00</i>
<i>Master</i>	<i>18</i>	<i>9.33</i>	<i>8.00</i>	<i>6.67</i>	<i>0.00</i>	<i>0.00</i>	<i>26.00</i>	<i>8.25</i>
<i>PhD</i>	<i>7</i>	<i>3.63</i>	<i>2.00</i>	<i>1.67</i>	<i>0.00</i>	<i>0.00</i>	<i>9.00</i>	<i>2.86</i>
<i>Missing Values</i>	<i>3</i>	<i>1.55</i>	<i>7.00</i>	<i>5.83</i>	<i>1.00</i>	<i>50.00</i>	<i>11.00</i>	<i>3.49</i>
<i>Total</i>	<i>193</i>	<i>100%</i>	<i>120</i>	<i>100%</i>	<i>2</i>	<i>100%</i>	<i>315</i>	<i>100%</i>

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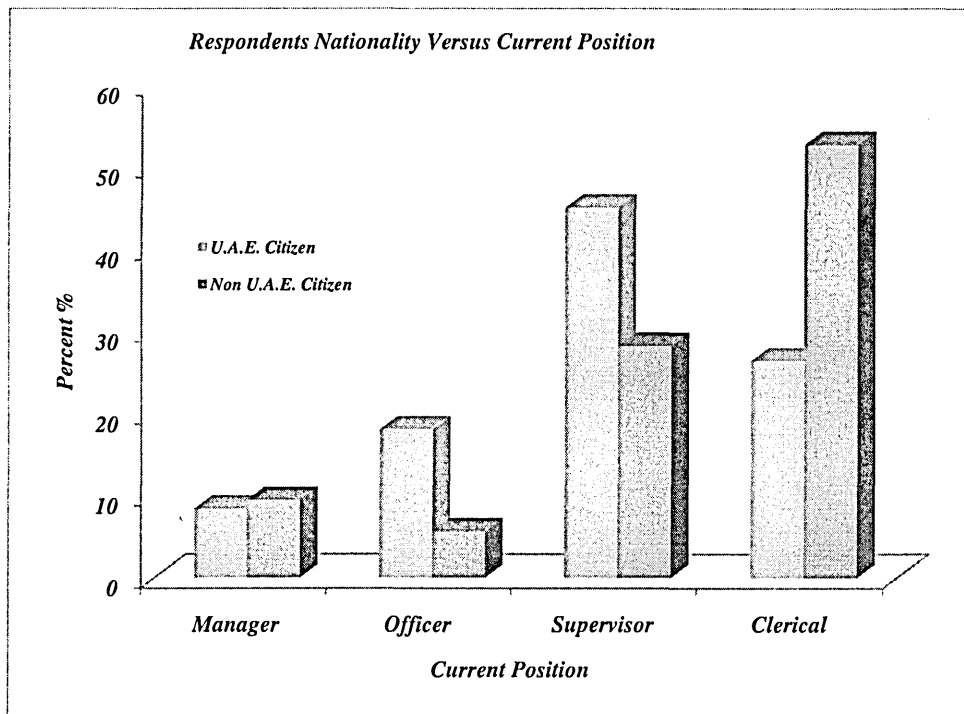
*Respondents Gender Versus Academic Qualification*





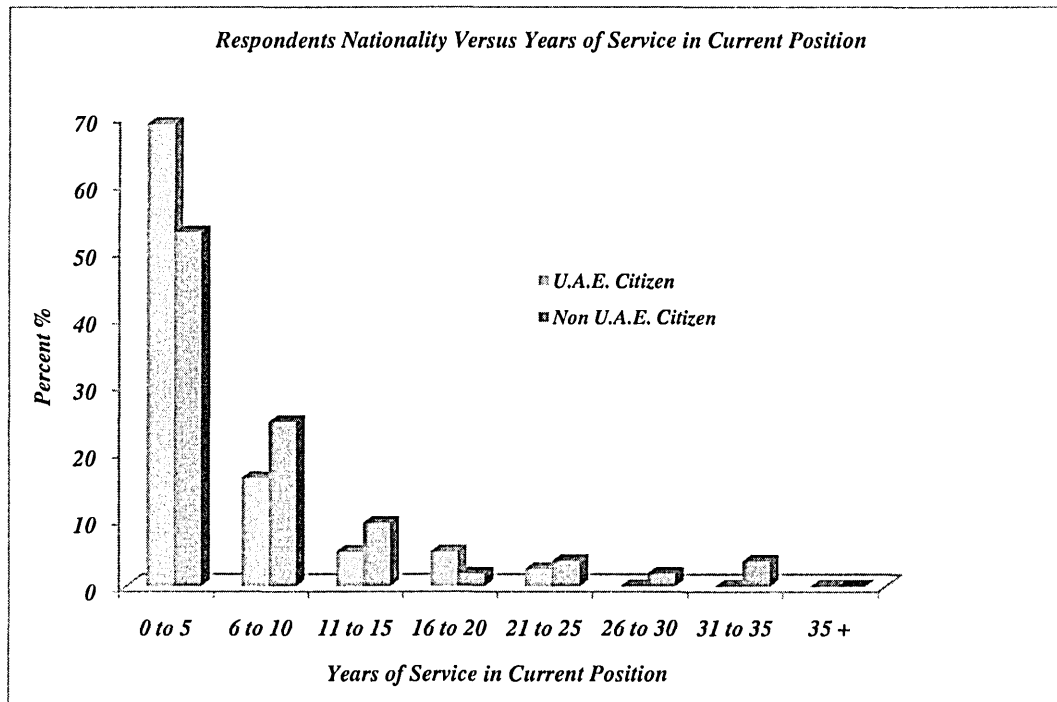
**Respondents Nationality Versus Current Position**

<i>Current Position</i>	<i>Nationality</i>							
	<i>U.A.E. Citizen</i>		<i>Non U.A.E. Citizen</i>		<i>Missing Values</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>Manager</i>	13	8.39	5	9.43	10	9.35	28	8.89
<i>Officer</i>	28	18.06	3	5.66	14	13.08	45	14.29
<i>Supervisor</i>	70	45.16	15	28.30	48	44.86	133	42.22
<i>Clerical</i>	41	26.45	28	52.83	28	26.17	97	30.79
<i>Others</i>	0	0.00	0	0.00	0	0.00	0	0.00
<i>Missing Values</i>	3	1.94	2	3.77	7	6.54	12	3.81
<i>Total</i>	155	100%	53	100%	107	100%	315	100%



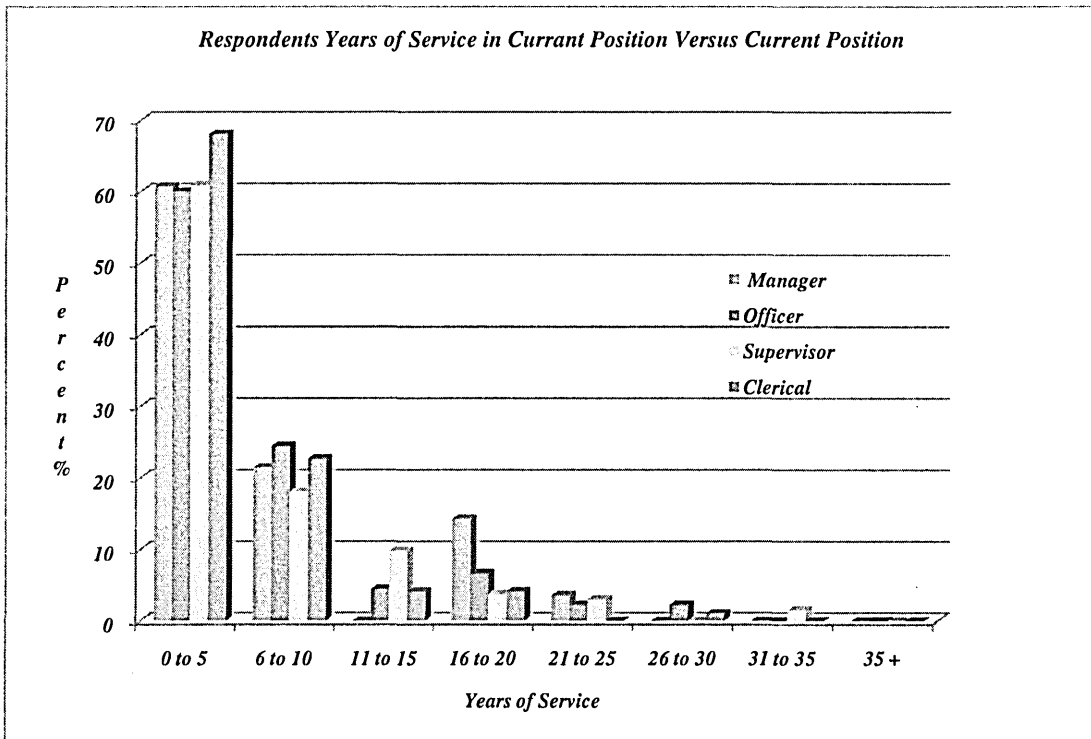
**Respondents Nationality Versus Years of Service in Current Position**

Years of Service	Nationality							
	U.A.E. Citizen		Non U.A.E. Citizen		Missing Values		Total	
	(N)	%	(N)	%	(N)	%	(N)	%
0 to 5	107	69.03	28	52.83	60	56.07	195	61.90
6 to 10	25	16.13	13	24.53	25	23.36	63	20.00
11 to 15	8	5.16	5	9.43	9	8.41	22	6.98
16 to 20	8	5.16	1	1.89	7	6.54	16	5.08
21 to 25	4	2.58	2	3.77	0	0.00	6	1.90
26 to 30	0	0.00	1	1.89	1	0.93	2	0.63
31 to 35	0	0.00	2	3.77	0	0.00	2	0.63
35 +	0	0.00	0	0.00	0	0.00	0	0.00
Missing Values	3	1.94	1	1.89	5	4.67	9	2.86
Total	155	100%	53	100%	107	100%	315	100%



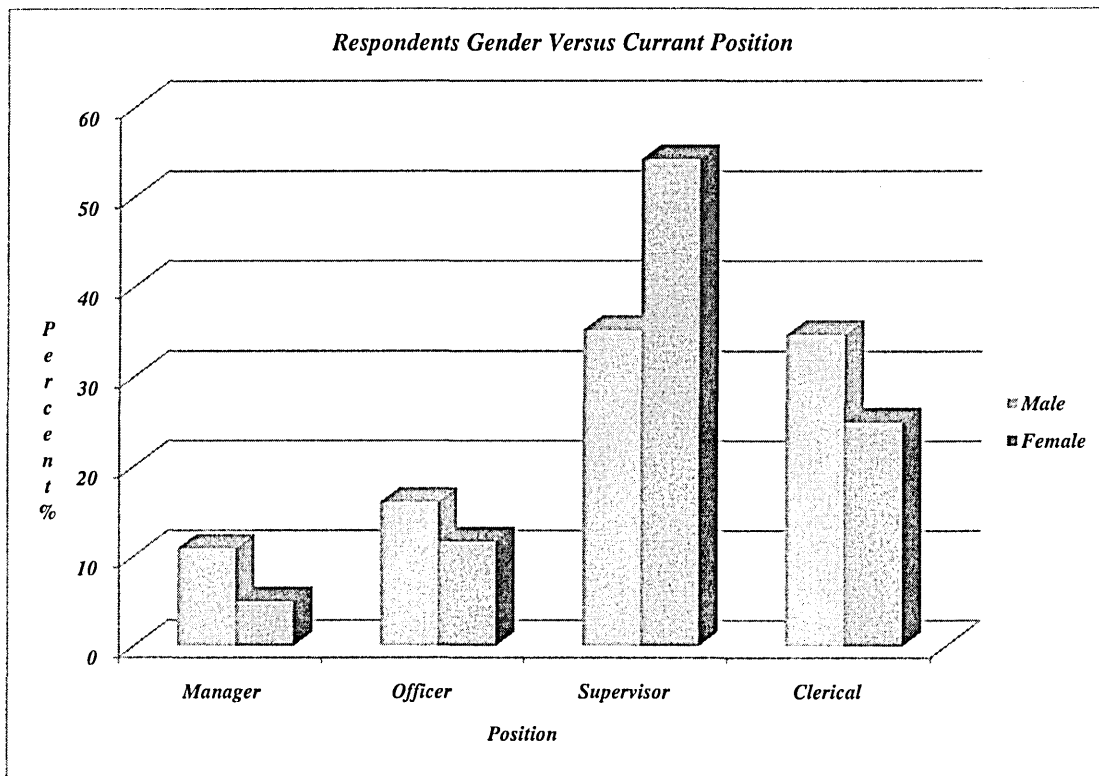
*Respondents Years of Service in Currant Position Versus Current Position*

<i>Years of Service</i>	<i>Current position</i>												<i>Total</i>	
	<i>Manager</i>		<i>Officer</i>		<i>Supervisor</i>		<i>Clerical</i>		<i>Others</i>		<i>Missing Values</i>			
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>0 to 5</i>	17	60.71	27	60.00	81	60.90	66	68.04	0	0.00	4	33.33	195	61.98
<i>6 to 10</i>	6	21.43	11	24.44	24	18.05	22	22.68	0	0.00	0	0.00	63	20.00
<i>11 to 15</i>	0	0.00	2	4.44	13	9.77	4	4.12	0	0.00	3	25.00	22	6.98
<i>16 to 20</i>	4	14.29	3	6.67	5	3.76	4	4.12	0	0.00	0	0.00	16	5.08
<i>21 to 25</i>	1	3.57	1	2.22	4	3.01	0	0.00	0	0.00	0	0.00	6	1.90
<i>26 to 30</i>	0	0.00	1	2.22	0	0.00	1	1.03	0	0.00	0	0.00	2	0.63
<i>31 to 35</i>	0	0.00	0	0.00	2	1.50	0	0.00	0	0.00	0	0.00	2	0.63
<i>35 +</i>	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<i>Missing Values</i>	0	0.00	0	0.00	4	3.01	0	0.00	0	0.00	5	41.67	9	2.86
<i>Total</i>	28	100%	45	100%	133	100%	97	100%	0	0%	12	100%	315	100%



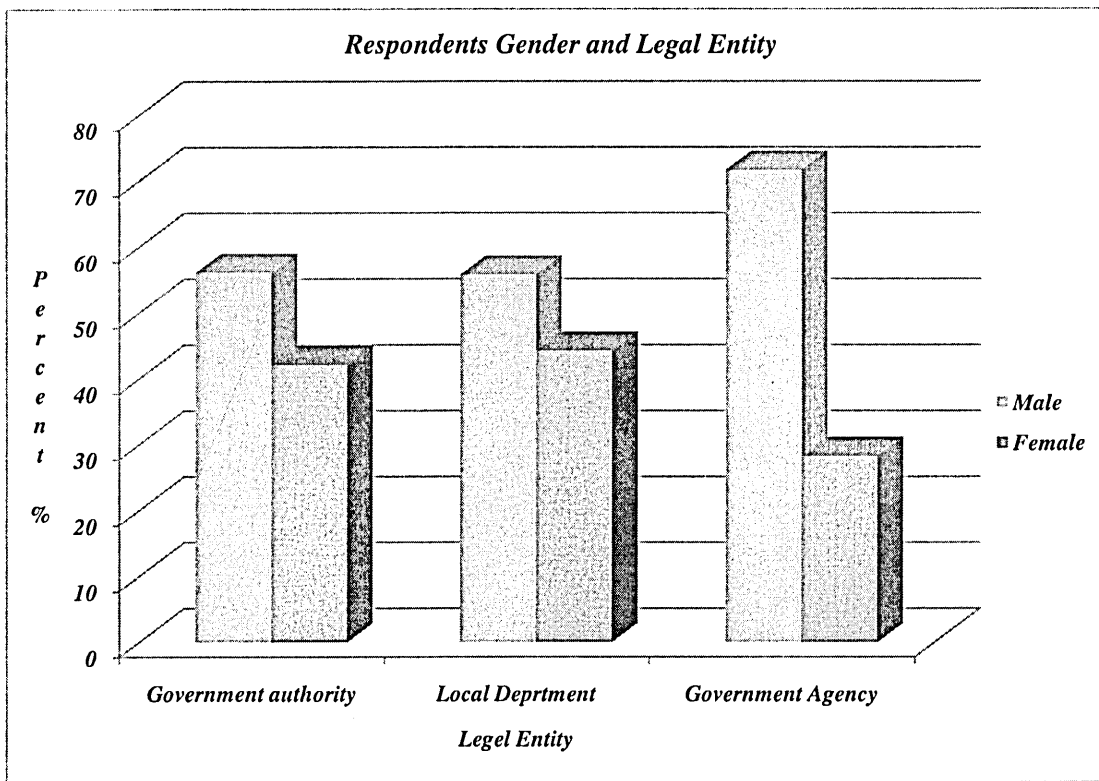
**Respondents Gender Versus Current Position**

<i>Current Position</i>	<i>Gender</i>							
	<i>Male</i>		<i>Female</i>		<i>Missing Values</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>Manager</i>	21	10.88	6	5.00	1	50	28	8.89
<i>Officer</i>	31	16.06	14	11.67	0	0	45	14.29
<i>Supervisor</i>	68	35.23	65	54.17	0	0	133	42.22
<i>Clerical</i>	67	34.72	30	25.00	0	0	97	30.79
<i>Others</i>	0	0.00	0	0.00	0	0	0	0.00
<i>Missing Values</i>	6	3.11	5	4.17	1	50	12	3.81
<i>Total</i>	193	100%	120	100%	2	100%	315	100%



**Respondents Gender and Legal Entity**

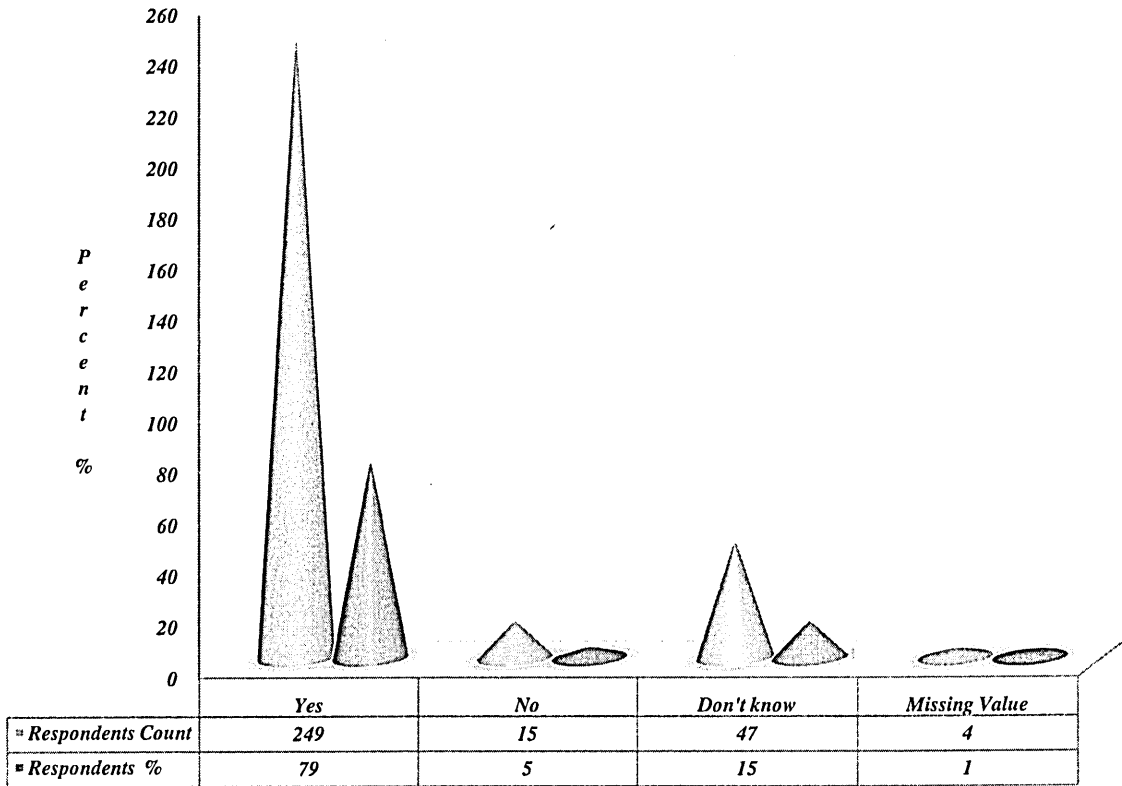
<b>Gender</b>	<b>Legal Entity</b>						<b>Total</b>	
	<b>Government authority</b>		<b>Local Department</b>		<b>Government Agency</b>		<b>(N)</b>	<b>%</b>
	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>		
<b>Male</b>	64	56.14	53	55.79	76	71.70	193	61.27
<b>Female</b>	48	42.11	42	44.21	30	28.30	120	38.10
<b>Missing Values</b>	2	1.75	0	0.00	0	0.00	2	0.63
<b>Total</b>	114	100%	95	100%	106	100%	315	100%



*Respondent's perceptions distributed on the extent of critical factors from not significant to most significant as a vital prerequisite for successful implementation of quality initiatives in their institutions*

Critical Success Factors	Options										Missing Values		Total	
	Not Significant		Less Significant		Not Sure		Significant		Most Significant		Cou nt	%	Cou nt	%
	Cou nt	%	Cou nt	%	Cou nt	%	Cou nt	%	Cou nt	%				
1 Top management commitment	0	0.00	1	0.32	3	0.95	33	10.48	275	87.30	3	0.95	315	100
2 Leadership style & effective leader	0	0.00	1	0.32	2	0.63	54	17.14	257	81.59	1	0.32	315	100
3 Clear strategies and planning	0	0.00	6	1.90	10	3.17	97	30.79	198	62.86	4	1.27	315	100
4 Encouragement of talented people	4	1.27	4	1.27	7	2.22	80	25.40	219	69.52	1	0.32	315	100
5 Processes improvement	2	0.63	0	0.00	6	1.90	72	22.86	233	73.97	2	0.63	315	100
6 Speed of service delivery	2	0.63	2	0.63	11	3.49	86	27.30	211	66.98	3	0.95	315	100
7 Recognition of employees	1	0.32	5	1.59	36	11.43	104	33.02	167	53.02	2	0.63	315	100
8 Flexible and dynamic organization structure	0	0.00	2	0.63	13	4.13	90	28.57	208	66.03	2	0.63	315	100
9 Continuous improvement	0	0.00	4	1.27	13	4.13	100	31.75	196	62.22	2	0.63	315	100
10 Job satisfaction enhancement	1	0.32	1	0.32	14	4.44	124	39.37	173	54.92	2	0.63	315	100
11 People competence and skills	0	0.00	1	0.32	8	2.54	51	16.19	253	80.32	2	0.63	315	100
12 Employees involvement in setting plans and strategies	0	0.00	3	0.95	12	3.81	116	36.83	182	57.78	2	0.63	315	100
13 Use of latest technologies	0	0.00	2	0.63	10	3.17	123	39.05	179	56.83	1	0.32	315	100
14 Practicing effective performance management system	1	0.32	4	1.27	8	2.54	109	34.60	191	60.63	2	0.63	315	100
15 People & organization behaviour	0	0.00	5	1.59	14	4.44	77	24.44	217	68.89	2	0.63	315	100
16 Adequate quality awareness	1	0.32	2	0.63	23	7.30	110	34.92	177	56.19	2	0.63	315	100
17 Dialogue and communication	0	0.00	7	2.22	18	5.71	93	29.52	195	61.90	2	0.63	315	100
18 Best practices and benchmarking	1	0.32	2	0.63	5	1.59	78	24.76	227	72.06	2	0.63	315	100
19 Team working spirit	0	0.00	3	0.95	14	4.44	103	32.70	193	61.27	2	0.63	315	100
20 Staff suggestions scheme	0	0.00	3	0.95	10	3.17	85	26.98	216	68.57	1	0.32	315	100
21 Existence of appropriate facilities	0	0.00	5	1.59	14	4.44	111	35.24	182	57.78	3	0.95	315	100
22 Efficient recourse utilization	0	0.00	4	1.27	11	3.49	105	33.33	194	61.59	1	0.32	315	100
23 Emiratization careers scheme	0	0.00	0	0.00	7	2.22	81	25.71	225	71.43	2	0.63	315	100
24 Collaboration and partnership	0	0.00	4	1.27	11	3.49	120	38.10	178	56.51	2	0.63	315	100
25 Changing to an appropriate management system	0	0.00	5	1.59	29	9.21	125	39.68	155	49.21	1	0.32	315	100
26 Social & corporate responsibility	0	0.00	6	1.90	51	16.19	121	38.41	135	42.86	2	0.63	315	100

*The UAEPSI with strategies for services delivery improvement*

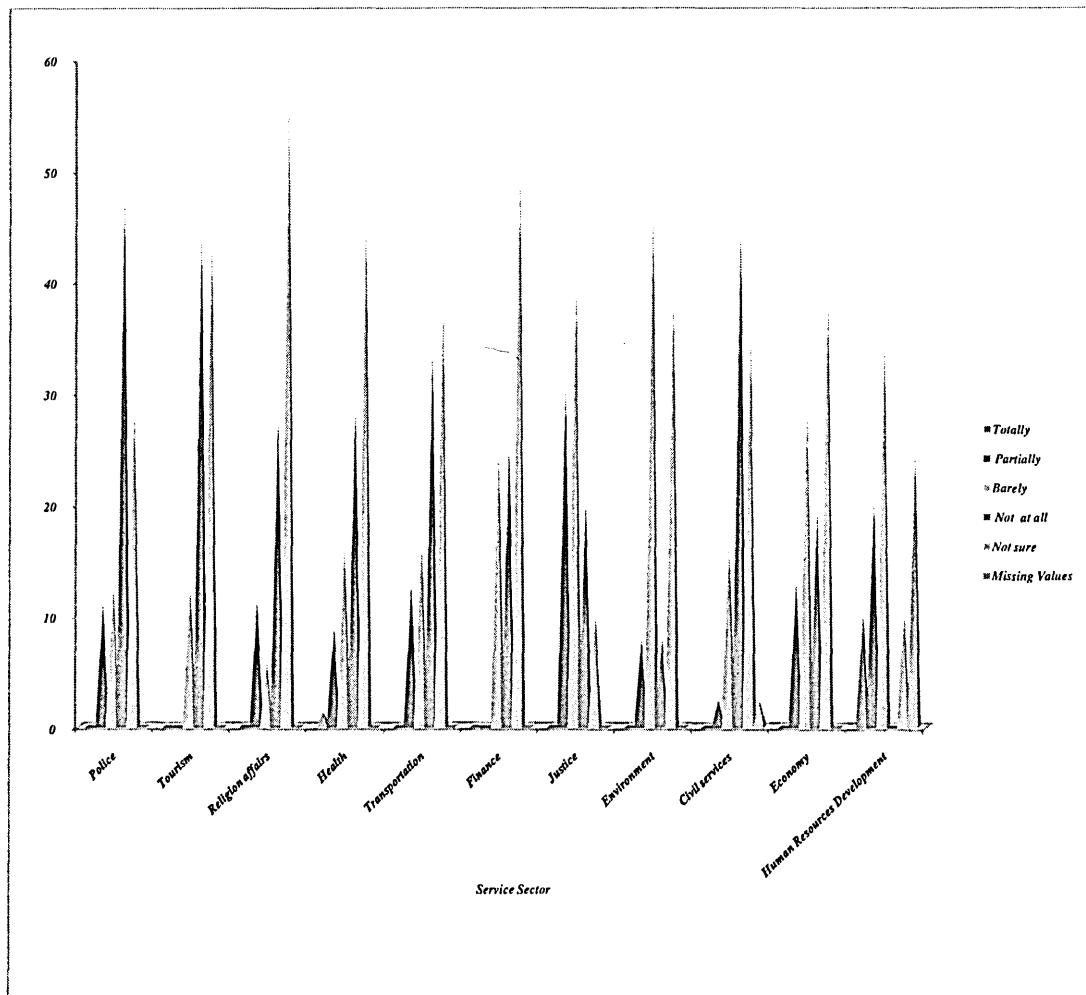


*Distribution of respondents view on the extent that the UAEGEP improved their institutions services according to institutions service sector*

<i>Service sector</i>	<i>Totally</i>		<i>Partially</i>		<i>Barely</i>		<i>Not at all</i>		<i>Not sure</i>		<i>Missing Values</i>		<i>Total</i>	
	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>	<i>(N)</i>	<i>%</i>
<i>1 Police</i>	<i>0</i>	<i>0</i>	<i>6</i>	<i>10.91</i>	<i>7</i>	<i>12.73</i>	<i>26</i>	<i>47.27</i>	<i>16</i>	<i>29.09</i>	<i>0</i>	<i>0</i>	<i>55</i>	<i>17.46</i>
<i>2 Tourism</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0.00</i>	<i>2</i>	<i>12.50</i>	<i>7</i>	<i>43.75</i>	<i>7</i>	<i>43.75</i>	<i>0</i>	<i>0</i>	<i>16</i>	<i>5.08</i>
<i>4 Religion affairs</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>11.11</i>	<i>1</i>	<i>5.56</i>	<i>5</i>	<i>27.78</i>	<i>10</i>	<i>55.56</i>	<i>0</i>	<i>0</i>	<i>18</i>	<i>5.71</i>
<i>5 Health</i>	<i>1</i>	<i>1.23</i>	<i>7</i>	<i>8.64</i>	<i>13</i>	<i>16.05</i>	<i>23</i>	<i>28.40</i>	<i>37</i>	<i>45.68</i>	<i>0</i>	<i>0</i>	<i>81</i>	<i>25.71</i>
<i>6 Transportation</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>12.50</i>	<i>4</i>	<i>16.67</i>	<i>8</i>	<i>33.33</i>	<i>9</i>	<i>37.50</i>	<i>0</i>	<i>0</i>	<i>24</i>	<i>7.62</i>
<i>7 Finance</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0.00</i>	<i>1</i>	<i>25.00</i>	<i>1</i>	<i>25.00</i>	<i>2</i>	<i>50.00</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>1.27</i>
<i>8 Justice</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>30.00</i>	<i>4</i>	<i>40.00</i>	<i>2</i>	<i>20.00</i>	<i>1</i>	<i>10.00</i>	<i>0</i>	<i>0</i>	<i>10</i>	<i>3.17</i>
<i>9 Environment</i>	<i>0</i>	<i>0.00</i>	<i>1</i>	<i>7.69</i>	<i>6</i>	<i>46.15</i>	<i>1</i>	<i>7.69</i>	<i>5</i>	<i>38.46</i>	<i>0</i>	<i>0.00</i>	<i>13</i>	<i>4.13</i>
<i>10 Civil services</i>	<i>0</i>	<i>0.00</i>	<i>1</i>	<i>2.33</i>	<i>7</i>	<i>16.28</i>	<i>19</i>	<i>44.19</i>	<i>15</i>	<i>34.88</i>	<i>1</i>	<i>2.33</i>	<i>43</i>	<i>13.65</i>
<i>11 Economy</i>	<i>0</i>	<i>0.00</i>	<i>4</i>	<i>12.90</i>	<i>9</i>	<i>29.03</i>	<i>6</i>	<i>19.35</i>	<i>12</i>	<i>38.71</i>	<i>0</i>	<i>0.00</i>	<i>31</i>	<i>9.84</i>
<i>12 Human Resources Development</i>	<i>2</i>	<i>10.00</i>	<i>4</i>	<i>20.00</i>	<i>7</i>	<i>35.00</i>	<i>0</i>	<i>0.00</i>	<i>2</i>	<i>10.00</i>	<i>5</i>	<i>25.00</i>	<i>20</i>	<i>6.35</i>
<i>Total</i>	<i>3</i>	<i>0.95</i>	<i>31</i>	<i>9.84</i>	<i>61</i>	<i>19.37</i>	<i>98</i>	<i>31.11</i>	<i>116</i>	<i>36.83</i>	<i>6</i>	<i>1.90</i>	<i>315</i>	<i>100</i>



*Distribution of respondents view on the extent that the UAEGEP improved their institutions services according to institutions service sector*



Source: The Author

### APPENDIX (4) THE TABLES SECTION THREE

*Respondents view on the extent that following factors are significant / not significant as a vital prerequisite for successful implementation of quality & excellence initiatives in their organization*

	Options												Total	
	(1)		(2)		(3)		(4)		(5)		(6)			
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
1 Top management commitment	0	0.00	1	0.32	3	0.95	33	10.48	275	87.30	3	0.95	315	100
2 Leadership style & effectiveness	0	0.00	1	0.32	2	0.63	54	17.14	257	81.59	1	0.32	315	100
3 Employees involvement	0	0.00	6	1.90	10	3.17	97	30.79	198	62.86	4	1.27	315	100
4 Employees recognition	4	1.27	4	1.27	7	2.22	80	25.40	219	69.52	1	0.32	315	100
5 People encouragement	2	0.63	0	0.00	6	1.90	72	22.86	233	73.97	2	0.63	315	100
6 Job satisfaction enhancement	2	0.63	2	0.63	11	3.49	86	27.30	211	66.98	3	0.95	315	100
7 Management systems	1	0.32	5	1.59	36	11.43	104	33.02	167	53.02	2	0.63	315	100
8 People competences and skills	0	0.00	2	0.63	13	4.13	90	28.57	208	66.03	2	0.63	315	100
9 Resource management (Man, Machine, Material...etc)	0	0.00	4	1.27	13	4.13	100	31.75	196	62.22	2	0.63	315	100
10 Partnership with customers and other stakeholders	1	0.32	1	0.32	14	4.44	124	39.37	173	54.92	2	0.63	315	100
11 Strategy and policy development	0	0.00	1	0.32	8	2.54	51	16.19	253	80.32	2	0.63	315	100
12 Team working spirit	0	0.00	3	0.95	12	3.81	116	36.83	182	57.78	2	0.63	315	100
13 Staff suggestions scheme	0	0.00	2	0.63	10	3.17	123	39.05	179	56.83	1	0.32	315	100
14 Communication and knowledge management	1	0.32	4	1.27	8	2.54	109	34.60	191	60.63	2	0.63	315	100
15 Flexible and dynamic organization structure	0	0.00	5	1.59	14	4.44	77	24.44	217	68.89	2	0.63	315	100
16 Recourse utilization	1	0.32	2	0.63	23	7.30	110	34.92	177	56.19	2	0.63	315	100

17	Performance management system	0	0.00	7	2.22	18	5.71	93	29.52	195	61.90	2	0.63	315	100
18	Processes design and management	1	0.32	2	0.63	5	1.59	78	24.76	227	72.06	2	0.63	315	100
19	Quality assurances	0	0.00	3	0.95	14	4.44	103	32.70	193	61.27	2	0.63	315	100
20	Continuous improvement	0	0.00	3	0.95	10	3.17	85	26.98	216	68.57	1	0.32	315	100
21	Benchmarking	0	0.00	5	1.59	14	4.44	111	35.24	182	57.78	3	0.95	315	100
22	Manpower planning and strategy	0	0.00	4	1.27	11	3.49	105	33.33	194	61.59	1	0.32	315	100
23	Product-Service design and delivery	0	0.00	0	0.00	7	2.22	81	25.71	225	71.43	2	0.63	315	100
24	Appropriate facilities	0	0.00	4	1.27	11	3.49	120	38.10	178	56.51	2	0.63	315	100
25	Social and corporate responsibility	0	0.00	5	1.59	29	9.21	125	39.68	155	49.21	1	0.32	315	100
26	Environmental responsibility	0	0.00	6	1.90	51	16.19	121	38.41	135	42.86	2	0.63	315	100
27	Emiratization careers scheme	4	1.27	13	4.13	36	11.43	84	26.67	178	56.51	0	0.00	315	100

*Value label*

(1) Not Significant  
(3) Not Sure  
(5) Most Significant

(2) Less Significant  
(4) Significant  
(6) Missing Values

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*Leadership style & effectiveness*  
*Employees involvement*  
*Employees recognition*  
*People encouragement*  
*Job satisfaction enhancement*  
*Management systems*  
*People competences and skills*  
*Resource management (Man, Machine, Material...etc)*  
*Partnership with customers and other stakeholders*  
*Strategy and policy development*  
*Team working spirit*  
*Staff suggestions scheme*  
*Communication and knowledge management*  
*Flexible and dynamic organization structure*  
*Recourse utilization*  
*Performance management system*  
*Processes design and management*  
*Quality assurances*  
*Continuous improvement*  
*Benchmarking*  
*Manpower planning and strategy*  
*Product-Service design and delivery*  
*Appropriate facilities*  
*Social and corporate responsibility*  
*Environmental responsibility*  
*Emiratization careers scheme*

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