

Total Quality Management in Private and Public Sectors in Bahrain: An Exploratory Study

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Abstract

This study has a central theme of reviewing and overcoming TQM barriers. Thus, the researcher aims to provide the government of Bahrain set of recommendations for employing useful tools in the human resources position to assist the TQM process. The objective of the novel research conducted here is to determine the extent of TQM and the factors impacting it. It will also provide a subjective comparison between the Private and Public sectors and determine which sector has adequate TQM. On the other hand, the researcher will evaluate the impact of TQM on employees' satisfaction. The key critical success factors measured in this research include leadership and top management, quality planning and strategy, communication, employee's involvement, quality of product and services, customer focus, quality culture, MIS, and continuous development. The methodology utilized in this research, described as cross-sectional, adopted a multi-method approach (quantitative and qualitative) conducted through questionnaires and interviews, to perform the research objectives. An SPSS program and other analysis tools were used to analyze the data collected appropriately. The result shows that many theories models and tools were used to facilitate Total Quality Management. In addition, critical success factors affecting the implementation of total quality management depend on their business and environment. On the other hand, there is less awareness among the employees in Bahrain from both sectors private and government, regarding the total quality management, plan, and effect. The researcher concluded that employee job satisfaction is one of the main critical success factors affecting TQM. Finally, a comparative summary of the best practice results between private and government organizations, concerning TQM, results in similar effectiveness and efficiency with a little more emphasis in the private sector.

Keywords

Total Quality Management, Quality, TQM, Bahrain, Private, Government,

1. Introduction

The increasing impact of globalization and uncertainty in the business world has pushed business managers and academic researchers to think about how to increase the performance of the companies to maintain a competitive advantage. This is the primary assumption for many industry practitioners and management researchers that the performance of the organization had to be maintained. This leads one to question the relationship between organizational performance, organizational resources, and quality management of the external environment utilizing these resources.

The current business dynamics of Bahrain have been concerned about various issues such as poor financing and limited market access, slow growth and privatization efforts, and less quality culture. Understanding these problems, the Government of Bahrain set up the Bahrain Center of Excellence in Manama in 2008. Under these initiatives, the Government had three organizations to monitor the progress and development of education, economy and public sector business excellence and small businesses. The Bahrain Excellence Center has examined 26 government organizations, and organized 52 workshops, and 163 hours of excellence where team working, and training was provided to 191 leaders to improve the quality. On the other hand, economy, education, and small business development are managed by Economic Development Board (EDB), Quality Assurance Agency (QAA) and Tamkeen (Independent Authority for Strategic and Operational Plans) respectively Bahrainedh.com (2009).

Even after this support of strategic planning and efforts maintained by government, businesses still lack in their quality and performance. Problems like poor competitiveness come from low service quality, low technology use, low level of innovation, and poor corporate leadership. These issues are internal to the companies operating in Bahrain and proceed into structural challenges for performance excellence ([Labour Fund, 2007](#)).

Countries worldwide have on average increased their labor productivity by 21 percent over the past 25 years while Bahrain's development has been just 17 percent. On a global scale, Bahrain's innovation production is currently small. Without increased productivity, innovation, and quality, Bahraini companies will not be able to remain competitive in the end. We need to transform the economy, acquire the right skills, and increase productivity and innovation ([Vision2030](#)).

1.1. Problem Statement

Hence, institutions in Bahrain need to increase quality and improvement in the human resources field to understand the TQM. This required transformation

can be a long-term system but can be supported by the appropriate use of a tool such as TQM to facilitate smooth change for being ahead of competing countries in the GCC, and continue with industrialized economics, Bahrain needs an effective TQM process.

Therefore, this study has a central theme of reviewing and overcoming TQM barriers and consequently provides the Government of Bahrain the form of recommendations for taking useful tools in the human resources aspect to assist the TQM process.

In this research, the researcher will examine the extent of TQM and the factors affecting it. It will also provide a comparison between private and public sectors and determine which sector has a satisfactory TQM level. On the other hand, the researcher will determine the effect of TQM on employees' job satisfaction.

Therefore, the problem statement phase is:

“The extent of TQM concepts and best practices in private and public sectors in Bahrain, the main critical success factors affecting it and the impact of TQM practice on the employees' job satisfaction.”

1.2. Research Questions

- What are the best practices, benefits, critical concepts, and theories of TQM?
- To what extent are TQM concepts and best practices, implemented in Bahrain?
- What are the main critical successful factors affecting TQM in Bahrain?
- What is the impact of TQM practices on the Employees' job satisfaction?
- What are the strategies and recommendations that will create a conducive environment for TQM in Bahrain?

1.3. Hypotheses

The following Hypotheses were developed based on the objectives of the study:

- H0: Total Quality Management has no effect on the effectiveness of the Government & Private Sector.
- H1: Total Quality Management has a positive effect on the effectiveness of the Government & Private Sector.
- H0: Total Quality Management has no effect on the employees' satisfaction in the Government & Private Sector.
- H1: Total Quality Management has a positive effect on the employees' satisfaction in the Private & Government Sector.

1.4. Objectives of the Study

The main objectives of this study are how well TQM principles are known and understood by Public & Private Sector professionals from the employees' point of view and the factors affecting it.

More dimensions of the aim of this research project are:

- Understanding the international best practice of TQM that contributes to both the theoretical and practical aspects of TQM, and reviews the concepts, principles, and benefits influencing TQM.
- To investigate the extent of TQM in Bahrain and to measure the effect of TQM on organizational performance.
- To understand the main critical success factors affecting TQM in Bahrain, make a comparison between the private and public sectors.
- To measure the impact of TQM practices on the Employees' job satisfaction.
- To propose strategies and recommendations that are extremely conducive to TQM in private and public sectors in Bahrain organizations.

The researcher will collect suitable data from previous research and after conducting a survey procedure answer the research questions and reach research objectives.

1.5. Significance of the Study

The successful outcome of these objectives would lead to the best possible practice of TQM to achieve performance excellence. That would meet the long-term objectives of the Bahrain Center of excellence and the vision 2030 programme of the Government of Bahrain.

The generation of further knowledge on TQM, will contribute to the existing knowledge and influence the tools in human resources in Bahrain, which will provide guidance to Bahraini institutions and organizations to focus on improving the quality of people, processes, and environment to meet increased competition in the global market.

An article by Mann & Kehoe (1995), recommended that the organization should give TQM factors specific consideration when developing TQM, to provide a guideline to manage the implementation of TQM, which will assist us to point out the main factors affecting TQM and the employees' satisfaction.

1.6. Limitations of the Study

- There was a lack of literature on Quality Management in Bahrain and other Arab countries because of less research material found related to the factors affecting Total Quality Management.
- The research was done by selected organizations from the Private and Government sectors without concerning the type of organization and field. This could conclude biased data.
- Interviews were conducted with the General and TQM managers in the sampled companies, instead of the TQM employees who are a vital source of information. The interviews with TQM employees could add facts regarding the TQM implementation.
- The date collected does not exactly show whether their organization applied TQM or ISO so this could create biased data.
- In terms of the limitations of this analysis, the author does recognize that the

strict selection criteria used in this study may have possibly led to the inadvertent omission of some empirical studies.

1.7. Research Framework

The research framework is based upon the exploratory research methodology which focuses upon the research objectives. The following diagram (**Figure 1**) is an illustration of the exploratory methodology used in this research by the relationships between the aims and objectives, data collection instruments, and the processes which are linked directly to the focus on the private and public sectors of Bahrain.

This framework is intended to serve as a guide to the sequence and connectivity of the research, analysis, conclusions, and future recommendations that are presented in the following chapters.

2. Literature Review

This chapter reviews the concept of Quality and Total Quality Management by assessing the various definitions and views of several authors. General concepts and theories related to total quality had discussed the general framework of what quality is all about and the effects of TQM inside the organization. The literature also gave information about the implementation of Total Quality Management and the factors affecting them.

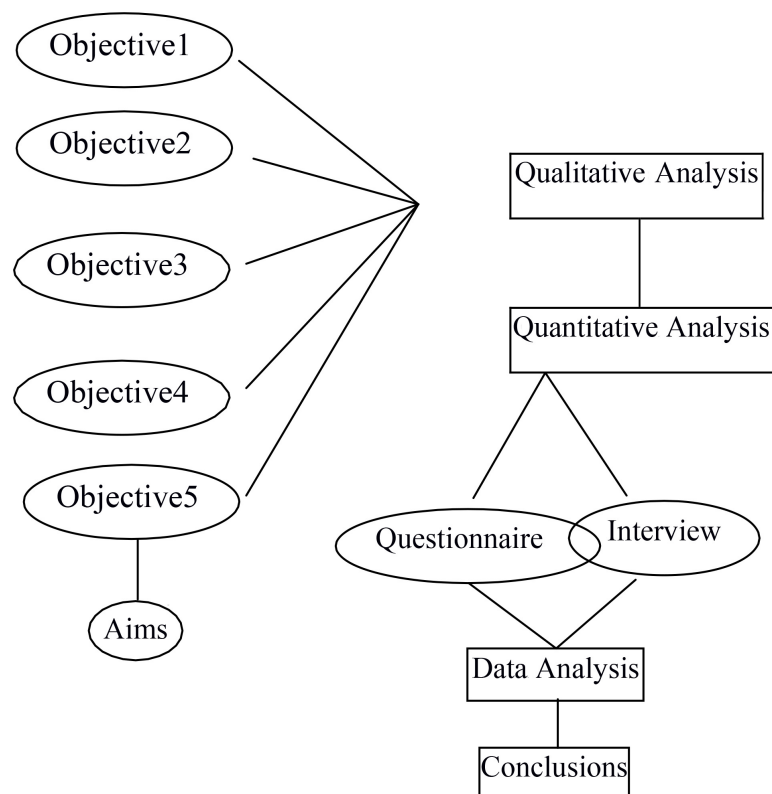


Figure 1. Research conceptual framework, source: Salman (2015).

2.1. Total Quality Management Implementation

In today's world, organizations are facing the growing challenges from global competition and more demanding customers in terms of what they want and their changing needs. Most organizations are starting to use and implement TQM with the aim of achieving the desired growth in the markets and increasing profit (Al-Shobaki, 2010).

TQM creates fundamental change throughout the corporation, but TQM's impact goes beyond management practice. Embedded in the work of Deming, Juran, and other TQM theories, such as K. Ishikawa, is a philosophy that includes the role of the corporation, the role of work, and human nature. Certainly, TQM and top management restructuring are more than a clash of conflicting management practices; they also consider deep-seated incompatibility between the theoretical principles inherent within these practices (Grant, Shani, & Krishnan, 1994).

Similarly, a study by Mohammed et al. (2008), about "*Total Quality Management implementation at Saline Water Conversation Corporation*" expressed that Total Quality Management is a management approach that creates a cultural change and attempts to achieve continuous improvement of quality through organization-wide efforts based on facts and data. The current research study focuses on the implementation of TQM principles as saline water Conversation Corporation, and since the subject is large, the study concentrated on the Al-Khobar plant's substantial overhaul schedule (MOS) and its instability as a case study.

2.2. Best Practices in TQM Implementation

Worldwide, QM Implementation was conducted in most of the research. After a review of the relevant TQM literature, different TQM definitions and frameworks were adopted based on their own understanding of TQM and research objectives.

In a study by Al-Shobaki et al. (2010) about *the Implementation of Total Quality Management (TQM) for the Banking Sector in Jordan*, this paper investigates the application of TQM to service organizations using the Jordanian banking sector as a model example. The government has introduced several laws aimed to further developing this sector, improving its ability to compete within a global market, and encouraging investment in the country. However, little work has been done to measure and control quality in this sector. The work showed that the use of TQM could be of substantial benefit to the Jordanian banks as it will lead to an increase in organizational customer orientation and competitive advantage. The study also investigated the relationship between the application of TQM and the increase in the organization's performance and efficiency. The results showed that the application of TQM in the Jordanian banking sector would lead to increased productivity and the ability to participate in the global markets. The study also showed that there was a powerful, realistic relationship between

all TQM principles and organizational performance in commercial Jordanian banks measured in productivity and profitability. The evaluation of commercial Jordanian banks' customers that provided services quality level was positive, although the general feeling of customers was not satisfied. On the customer side, the study showed that customers' evaluations regarding the provided financial services quality differ, and this gives to the Management an indication of the need of giving high priority to improving quality approaches. The advanced technology available in the bank has almost the highest importance in customer evaluation, so the banks should give it more priority in their development process. Frequently dealing with the bank requires a strong relationship between customers and the bank employees and this affects the customers' evaluation. They conclude that there is a relationship between the evaluations of commercial Jordanian banks' customers to services quality provided level and the number of dealings with the bank.

2.3. The Critical Success Factors Affecting TQM Implementation

The implementation of Total Quality Management is affected by certain factors that affect the performance and the outcome of the system. Here, some of the research practices and studies show the main critical success factors affecting TQM implementation.

Karuppusami & Gandhinathan (2006) reported the following CSFs as the most critical after reviewing the TQM literature from 1989 until 2003.

- The Role of Management Leadership and Quality
- Supplier Quality Management
- Process Management
- Customer Focus
- Employee Relationships
- Role of Quality Dept.
- Training
- Product & Services Design
- Design & Conference
- Human Resource Management and Development
- Quality Data
- Cross-Functional Quality Teams
- Bench Marking
- Information and Analysis.

2.4. Problems Affect TQM Implementation

In this section, the researcher explains the problems and issues affecting TQM implementation that have been stated by other research studies:

A research article by Yusuf & Aspinwall (2000) about Total Quality Management implementation frameworks: Comparison and review stated that one of the most significant factors in ensuring Total Quality Management (TQM) adop-

tion success is the formulation of implementation framework before starting a change process. Current frameworks appear to have developed and are derived primarily from the environment and experience of larger-sized organizations rather than small businesses. They tend to be complex and inflexible, rather than being a comprehensive guide. This survey compares and analyses a selection of the existing frameworks found in the literature. The first part examines and investigates small companies in relation to their definition and characterizes the variances among small and large companies with respect to TQM implementation. Furthermore, it is analyzing the proposed frameworks as to their applicability and suitability to small and medium-sized enterprises. This sector is selected because it needs much-required attention, particularly if TQM is to be sustained by the larger multinational organizations. By improving the small business sectors, the result effects on the global economy will be great.

2.5. Quality Management in Bahrain

Quality Management in Bahrain has been taking a proper position to achieve the required and recommended level of its share. In 2008, the Bahrain Center of Excellence was established, to offer a wide range of educational, training, and technical assistance programs for government and private sectors in the area of Quality Management that would meet the long-term objectives of the Center Vision 2030 programme of the Government of Bahrain.

Another research study prepared by Al-Baharna (2002) about *Developing a Quality Assurance Model in Further Education and Vocational Training: A Case Study of the Bahrain Training Institute* investigated the essential dimensions of developing a Quality Assurance framework in Further Education Institutions and Vocational Training Sectors. The research seeks to determine, through a case study of Bahrain Training Institute, how a newly established training center adapts and assimilates Quality Assurance Systems processes into its training and learning environments. Using action research techniques, this case study analyses the continual conceptualization, implementation, and evaluation of Quality Assurance actions over time. The cyclical process through time involves the development of a model of Quality Assurance Systems processes, implementation, and evaluation. The study covers the period of the training year 1997-1998 to 2000-2001, during which major quality initiatives were taken. The researcher concluded that a strategic model of quality implementation emerges as a response to the inputs from the dynamic environment, the aspects of which are particularly ascertained by the actions of committed Staff. This thesis concluded with the identification of areas of future research.

Farhan (2005) prepared a research study about “*The Successful Extent of Quality System (ISO) in the Development of Government Sector Services in Bahrain*” and expressed that, the ISO Quality System as Management System focuses on customers’ needs and leads to improve and enhance the work. They developed a questionnaire to ensure the implementation of ISO in three government societies such as the Civil Service Bureau, Bahrain Airport Services, and BDF. In this

research, the researcher investigates the employees' satisfaction of Management Quality at government sectors. They concluded that the theoretical review and the data collected from the questionnaire analysis are consentient, and the use of ISO improved services and achieved organization objectives are related to performance. The researcher discovered that after applying the TQM in the government sector, the services provided to the customers had improved and it developed a confident atmosphere and employee satisfaction.

2.6. Summary of the Literature Review

Most of the organizations around the world are now concerned about Quality Management and Total Quality Management, or even trying to understand or get the ISO by applying certain standards to obtain the certificate. On the other hand, many researchers from different parts of the world wrote and discovered many theories, standards, and frameworks to help organizations from different fields to perform in the perfect manner.

Many factors affect TQM implementation, so the researcher is given a clear view of the main critical success factors that help an organization overcome them and be better equipped to perform its performance, work and duties.

There are many benefits and problems facing the organization while they implement the TQM several summaries in the literature review prove this.

Finally, research studies about Bahraini companies practicing Total Quality Management and ISO standards have been reviewed to investigate and examine TQM in Bahrain.

2.7. Research Gap

Several studies have attempted to find those quality management practices, which maximally contributed to organizational performance. While these studies have unquestionably contributed to the body of quality management knowledge, they have fallen short of offering comprehensive explanations of how the quality management practices interact and influence each other to culminate in superior organizational performance. A significant number of previous research studies of TQM have not been fully developed and the concepts have not been fully validated on a level that adequately explains the significance of quality management concepts, practices, and implementation strategies (Franks, 2009).

Most relevant TQM and Quality management studies concluded that the continuous improvement strategies were difficult to implement as well as difficult to assess the key factors. However, few prior studies proposed how to evaluate TQM implementation, performance, and how to improve ineffective implementation. Yeh & Lin (2010) aimed to fill the gap; proposing a performance evaluation method to find which TQM practices are implemented effectively and efficiently.

3. Research Methodology

The researcher employs the Survey Strategy that is associated with the deductive

approach for the data collection. The measurement data of these variables will be identified and used. Data is going to be collected from the population in a form that is going to be collected from a sample that is easily converted to numerical indices. On the other hand, the researcher intends to use also the descriptive qualitative method of data collection; this method tends to be more focused on explaining the guidelines, concepts, measurement tools, and hypotheses previously (Leedy & Ormrod, 2001).

The survey strategy is used to collect data for research, yielding qualitative information that can be summarized through statistical analysis. The primary data is collected through questionnaires that are distributed to the sample of Bahraini employees from the private and public sectors.

This research focuses on the present situation in Bahrain, so the Survey Strategy plays an effective role in analyzing the current situation and gives the researcher the ability to analyze the collected data statistically. Survey Strategy looks most closely at phenomena of the moment; therefore, it is sometimes called a Descriptive Survey or Normative Survey.

On the other hand, the researcher reviewed the previous research studies were done by other researchers to analyze their cases and reached the suitable facts about TQM implementation and the main factors affecting the organization, and the benefit and problems of TQM implementation inside the organization for private and government sectors.

3.1. Sample Size

The sample population consists of approximately 3413 employees which requires a sample size of approximately 343 participants. The sample size required was determined according to Mason & Samphtho who formed 343 questionnaires for the total population of 3413 Staff, who represented 10 firms from the private and public sectors in Bahrain.

Sampling Procedure:

The researcher uses a sample of 343 of the population, to obtain data for research analysis. A random sample, stratified proportionally by the sector, was also generated.

The response rate can be executed by using the formula:

$$\text{Total response rate} = \frac{\text{Total no. of response}}{\text{Total no. of sample} - \text{ineligible}}$$

The response rate was 73%, which is considered, a constant rate compared to other research. According to Saunders (2007), calculating the response yielded:

$$\frac{356}{500 - 12} = 73\%$$

The sample size of 343 employees from the total population of 3413 employees is given 95% confidence. The remaining percentage of 5% shows the systematic error that may occur.

3.2. Sampling Technique

A random sample, stratified proportionally by the sector, was also generated. The research target sample is from the entire population because the research is very large, the survey questionnaire was distributed by mail to 10 organizations from both sectors, by the researcher, and her friends who helped to distribute the required sample size. Among the 500 survey questionnaires distributed, about 343 of the questionnaires were collected from the respondents.

3.3. Description of Respondents

The sample population consists of respondents that completed the survey questionnaires and participated in an interview during the period of data collection. A total of 500 questionnaires were distributed, of which 343 were returned filled, while 12 questionnaires were deemed ineligible. The characteristics of the respondents were divided into six groups: gender, age, current position, experience in the field of TQM, education, and company type. 57% of the eligible survey participants were male and 40% female. **Table 1** shows the gender division of the sample population.

The respondents' ages ranged between 20 years, and above 50. 40% of the respondents were aged between 20 and 30 years, 30% between 31 and 40 years, 25.2% between 41 years and 50 years old, and 2.6% were more than 50 years old (see **Table 2**).

40% of the respondents were from the government sector, 54.7% from the private sector, and 4.5% from a semi-government sector: (see **Table 3**).

Table 1. Gender, source Salman (2015).

		Frequency	Percentage	Valid Percentage	Cumulative Percent
Valid	Male	176	57.0	58.7	58.7
	Female	124	40.1	41.3	100.0
	Total	300	97.1	100.0	
Missing	System	9	2.9		
	Total	309	100.0		

Table 2. Age, source Salman (2015).

		Frequency	Percentage	Valid %	Cumulative %
Valid	20 - 30	124	40.1	40.9	40.9
	31 - 40	93	30.1	30.7	71.6
	41 - 50	78	25.2	25.7	97.4
	Over 51	8	2.6	2.6	100.0
	Total	303	98.1	100.0	
Missing	System	6	1.9		
	Total	309	100.0		

13.6% of the respondents were from the education field, 15.9% from the health field, 9.4% from security, 25.9% were from service fields, 15.5% from industrial, 5.5% from finance, and 13.3% from other fields. **Table 4** shows the Company Class and field for the respondents along with their percentages and frequencies.

A total of 10 public and private Bahraini organizations were selected to respond to the survey form for this study: Gulf Plastic, Batelco, the Novatel Hotel, American Hospital, the Sacred Heart School, AMA University, and the Ministry of the Interior, the Ministry of Municipality, the Bahrain Institute and the GA Protection of Marine Resources. The organizations were also classified by ISO certification status. **Table 5** describes the organization names, classification, and the percentage of the organization that participated in the survey.

In total, 10 organizations from the private sector and public sector; all of which have some form of a Quality Management department. **Table 5** shows the organizations that obtained the ISO certificate, specialty ISO9001 International Quality Management Standards, and the guidelines that earned the company a global reputation as a basis for establishing effective and efficient Quality Management systems.

The researcher collected data by distributing questionnaires to private and government sectors to help in analyze the objectives of this research.

Table 3. Company ownership, source [Salman \(2015\)](#).

		Frequency	Percent	Valid Percent	Cumulative %
Valid	Government	124	40.1	40.4	40.4
	Private	169	54.7	55.0	95.4
	Other	14	4.5	4.6	100.0
	Total	307	99.4	100.0	
Missing	System	2	.6		
Total	309	100.0			

Table 4. Company class, source [Salman \(2015\)](#).

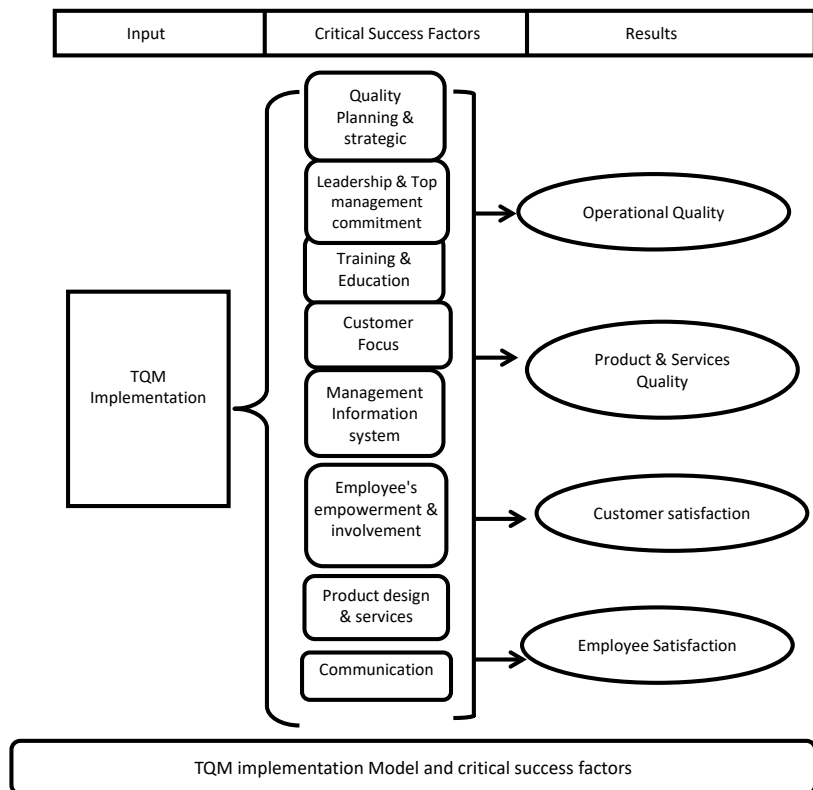
		Frequency	Percent	Valid	Cumulative %
Valid	Education	42	13.6	13.7	13.7
	Health	49	15.9	16.0	29.7
	Security	29	9.4	9.5	39.2
	Services	80	25.9	26.1	65.4
	Industry	48	15.5	15.7	81.0
	Finance	17	5.5	5.6	86.6
	Other	41	13.3	13.4	100.0
	Total	306	99.0	100.0	
Missing	System	3	1.0		
Total	309	100.0			

Table 5. Organization, type and participation, source [Salman \(2015\)](#).

No	Company	Sample Collection	Company Type	No. of Staff	ISO	Quality Management Dept.
1	Gulf Plastic	18	Private	130	9001	Yes
2	Batelco-Call Centre	29	Private	200	27001	Yes
3	Novatel Hotel	20	Private	118	0	Yes
4	American Hospital	53	Private	450	0	Yes
5	Sacred Heart school	23	Private	91	-	QAAET
6	AMA University	40	Private	300	9001	QAAET
7	Ministry of Interior-Coast Guard Directorate	61	Govt.	980	9001	Yes
8	Ministry of Municipality-Northern	35	Govt.	352	9001	Yes
9	Bahrain Institute	33	Govt.	384	-	QAAET
10	GA Protection of Marine Resources Environment Section	31	Govt.	408	Under Process	Yes
Total		343		3413		

Furthermore, interviews with quality manager were done to gather necessary data from them to help the researcher to answer research questions. On the other hand, other interviews will be done with the ISO specialist to collect the necessary data about the implementation of quality inside the organization.

Finally, a comparative summary of the results was done between private and government organizations concerning TQM best practices.



Research model, source [Salman \(2015\)](#).

4. Research Discussion

In this chapter, the investigation of Total Quality Management implementation is discussed and summarized. Also, a clear view of the Total Quality Management role inside the organization has been discussed and reviewed. Then, the main critical success factors affecting Total Quality Management will also be reviewed and compared to the situation in Bahrain. Finally, the objectives of the research will be investigated and discussed after the analysis of the data is collected from the previously mentioned sources.

4.1. The Relationship between ISO, Six Sigma, and Total Quality Management

ISO is an international standard for quality systems. These standards are put for quality insurance purposes, for development, production, designing, and or for final inspection and testing, since ISO provides significant improvement in any organization. [Gotzamani & Tsiotras \(2001\)](#) agree that the development and certification of ISO quality assurance is the first step toward Total Quality Management. They proved that it increases quality culture and commitment and offers significant improvement in operational performance. The researchers presented ISO certification to eight TQM categories. These are leadership, quality planning, quality data and analysis, process management, supplier and customer relationship, and product quality design.

However, [Martínez-Lorente & Martinez-Costa \(2004\)](#), disagrees with [Gotzamani & Tsiotras \(2001\)](#), that the use of ISO and TQM together are not efficient and will reduce company benefits of achievement, despite the beliefs about ISO 9000 being a good step in the process of TQM implementation.

Overall, the ISO standard and TQM are the two ways to increase performance and improve the work, and using them together, or in isolation with the good policy, management could lead to an increase in quality improvement and performance. From that, we can conclude that ISO and TQM are positive relationships that lead to increased and improved performance. However, ISO leads to customer satisfaction, but not to employees' satisfaction, but TQM leads to both customer and employees' satisfaction. This makes TQM more exhaustive to the management than ISO.

On the other hand, Six Sigma, which is a business improvement strategy that seeks to minimize defects and errors in manufacturing and service processes has several benefits to the management such as customer satisfaction, efficient operations, improve knowledge through the organization's functional, and functional teamwork. In addition, it reduces the number of non-value-added operations through systematic eliminations.

This shows that Six Sigma focuses on output, customers' requirements, and company returns only. Six Sigma is not inclusive of all management quality principles, and it misses some of the critical issues of management. On the other hand, Total Quality Management is a comprehensive tool used by Management

to improve performance and minimize defects.

4.2. Total Quality Management in Bahrain

This research aims to examine the level of Total Quality Management in Bahrain in both sectors private and government. First, an examination of previous research done by other researchers about Bahrain companies, then an investigation of the organizations and companies from both sectors to measure the extent of TQM implementation in Bahrain. Finally, a comparison between private and government sectors has been done to investigate the perfect reach and implement TQM in Bahrain.

These are some researches done about Quality Management in Bahrain; the researcher has mentioned the ones suitable for this research.

Research done by Janahi (1993) about *the extent of Quality Assurance Implementation in the Construction Industry*, concluded that several organizations started to implement Quality Management in the area. They thought it was useful, but the market situation at that time revealed the main problems thus preventing the adoption of Quality Management.

Another research was done by Farhan (2005) about *the successful Extent of Quality System (ISO) in the development of government sector services*, concluded that ISO improved services and achieved organizational objectives that related to work performance could be used. In addition, he approved that using TQM could improve services provided to the customer and develop a confident atmosphere and employee satisfaction.

On the other hand, the Ministry of Industry and Commerce has adopted three approaches to develop quality for their performance and to the customer. They adopted TQM and ISO 9001:2000 to develop their quality objectives and they agree that quality is the responsibility of all employees being within the ministry, and they focus on the good-training and skilled employees assigned to the highest levels of services that are provided to their customers MIC (2011).

Similarly, Al-Sehali (2001) developed a framework for implementation of Total Quality management in the construction industry by developing the specification model to improve performance, supplier chain, improve consultancy, and variation in the construction field. He believed that Total Quality Management becomes the best solution to overcome the problems in the work and has benefits to reduce the cost, reduce the cost of maintenance, improve life cycle value and solve problems at rework.

Zahra (2011), prepared research about “*The Influence of Implementing TQM in the Performance OF Zain Bahrain*”, and provided a conceptual framework to evaluate the practices of TQM for the organizational performance. The research provided a general picture of the practices of TQM in telecommunication organizations in the following areas: “*The effectiveness of the current Quality Management System and the Organizational Performance achieved in the recent years.*” It helps the consultants or training centers in designing relevant training courses

about Quality Management. She concluded that from the governmental institution's point of view, this research was a useful reference and guide to provide appropriate support for organizations for the implementation of the Total Quality Management System.

4.3. Quality Rules and Standard Used by Bahrain Government

The Government of Bahrain issued some decisions regarding the application of quality systems and regulations in organizations and ministries of Bahrain in 2005, including the Quality Assurance Authority for Education & Training, and Quality Assurance and Accreditation Center, to ensure the importance of quality Procedures and standards.

The Quality Assurance Authority for Education and Training (QAAET) was officially established by Royal Decree No.32 in 2008, The QAAET is an independent national body; it controls under the direction of a Board of Directors formed by the Royal Decree No.7 in 2009. This Authority is supervised and committed to the Council of Ministers.

In line with the purposes for which the Quality Assurance Authority for Education & Training was established and in the aspect of its purpose to credibility and clarity, the Authority publishes reports on the quality of educational and vocational institutions. These reports show the level of quality implemented and the results of the reviews of the institutions that have been evaluated by the QAAET. They are based on the most critical determinations of the evaluation divisions' visits to schools, vocational providers, and higher educational institutions. The reports highlight institutions' strengths and areas for enhancement, together with recommendations for development. This is to ensure the Quality of Education and Training Organizations in Bahrain.

4.4. Critical Success Factors Affecting TQM Implementation

After reviewing the literature concerning the main Critical Success Factors affecting the implementation of TQM, the analysis of the main studies found on the topic is expressed below.

Metri (2005) studied the TQM Critical Success Factors for Construction firms. He analyzed the CSF of the 14 most relevant TQM Frameworks (see **Table 1**). The main factors he concluded depending on the prioritization of CSF are 1) Process Management 2) Education & Training 3) Customer Satisfaction 4) Top Management Commitment 5) Supplier Quality Management 6) Employees Empowerment 7) Information & Analysis 8) Strategic Quality Management 9) Design Quality Management 10) Business Result.

On the other hand, a study by **Karuppusami & Gandhinathan (2006)** reviewed the literature review from 1989 until 2003 about the most critical success factors affecting TQM. He listed the most important 14 factors as follows: 1) leadership 2) Supplier Quality Management 3) Process Management 4) Customer Focus 5) Employee Relationships 6) Role of Quality Dept. 7) Training 8) Product & Ser-

vices Design 9) Design & Conference 10) Human Resource Management 11) Quality Data 12) Cross-Functional Quality Teams 13) Benchmarking 14) Information and Analysis.

This clarified that both researchers agreed about the main critical success factors affecting TQM implementation.

4.5. Factors Affecting Total Quality Management in Bahrain

The researcher evaluates the most critical factors affecting the implementation of Total Quality Management according to the most effective factors by arranging them from most to least effective. Most of the participants were confused while answering these questions due to the similarity and confusing factors.

The results as per the analysis of the questionnaire through the SPSS program illustrated in **Table 6**.

1) Quality Culture

The most affecting factor according to the participant's view is the quality culture, which expresses the weakness of attention to the quality culture and awareness of the important effect of the quality of work performance.

2) Employees Involvement

This factor too is of great importance to implement Total Quality Management as per participant view. Employee involvement shows the need for all employees' empowerment to a participant to achieve quality. Involvement becomes the key to effectively implementing and increasing employee commitment to change and improve work.

3) Training and Education

Training employees and creating awareness of the importance of Quality Management for improving the operations are the third factors ranged by the participant. This shows the effect of training to achieve organizational goals toward Quality Implementation.

Table 6. Factors affecting TQM, source *Salman (2015)*.

1	Weakness of attention to a quality culture
2	Weakness of commitment in employee empowerment and involvement.
3	Weakness of Training and TQM culture
4	Weakness of commitment of Top Management in achieving continuous development
5	Weakness of focusing on customer satisfaction and their expectations
6	Weakness of services and product design
7	Lack of Top Management commitment and belief in the programmes of TQM
8	Lack of use of Quality Measurement and Benchmarking
9	Poor organizational communication
10	Inefficient information systems used in the company

4) Continues Development

The fourth factor ranged by the participants was Continuous Improvement and development of the operation. It is particularly vital for the business to continue improving and correct the action from time to time to ensure the quality of the procedure and work operation.

5) Customer Satisfaction

Customer Satisfaction is one of the most significant factors for the success of the organization. TQM increases Customer Satisfaction by enhancing the quality motivating the workforce and improving the way the company operates. The participants ranged in Customer Satisfaction and focus as the fifth critical success factor of Total Quality Management.

6) Product & Service Design

The quality of designing products and services increases Customer Satisfaction. Product Design is the sixth critical success factor ranged by the participants.

7) Leadership and Top Management Commitment.

Leadership is the seventh critical success factor of Quality Implementation. This shows that most of the participants do not believe in the power of leaders or top management where quality implementation is concerned.

8) Measurement & Benchmarking

Participants ranged the need for Measurement and Benchmarking for the implementation of quality management as the eighth Critical Success Factor.

9) Communication

Communication between employees and top management is extremely powerful, but here it gets the ninth level of the critical success factors affecting the Quality Implementation inside the organization.

10) Management Information System

The need to use Management Information System inside an organization to implement the quality system is the tenth level of critical success factors. This shows that Quality could be implemented without the use of a Specific System.

4.6. Summary of the Comparison between Private and Government Sectors

The summary for the above-mentioned comparison between the Private and Government Sectors regarding the factors affecting Total Quality Management implementation. It shows that the Private Sectors are more applying the Quality Standards more than Government Sector with an average of 5% - 10% only. In addition, the Government sector applies 40% factors and the Private Sector applies 45%. See **Table 7** below.

In addition, the factors that have more effect on the Private Sector than the Government Sector are the effect of Top Management, Communication, Training Customer Focus, Quality Culture, and Management Information systems, as shown in **Table 7**.

Table 7. Factors affecting TQM in Bahrain, source [Salman \(2015\)](#).

Factors Affecting TQM	Government	Private	Differences
	43%	48%	5%
1) Top Management	42%	52%	10%
	43%	48%	5%
2) Quality Planning & Strategy	37%	39%	2%
	31%	30%	-1%
3) Communication	44%	52%	8%
	38%	53%	15%
4) Employees Involvement	40%	41%	1%
	38%	33%	-5%
	42%	38%	-4%
	39%	37%	-2%
5) Training	38%	42%	4%
	35%	42%	7%
	48%	50%	2%
6) Product Design	41%	37%	-4%
	41%	46%	5%
	50%	56%	6%
7) Customer Focus	48%	60%	12%
	43%	52%	9%
8) Quality Culture & MIS	32%	41%	9%
	37%	43%	6%
9) Continuous Improvement	40%	41%	1%
	41%	46%	5%
Average	40%	45%	

5. Conclusion, Contributions, and Recommendations

The conclusion of the first objective shows the international best practice of Total Quality Management implementation. This clarifies that for the successful implementation of TQM, the organization depends on its culture. It must first identify TQM barriers and the main factors affecting the performance of the organization and simplify the understanding of TQM implementation.

TQM implementation is recommended in all sectors and in all fields; it is not for specific sectors or specific fields. Different researchers studying the effects of TQM Implementation in a certain field can use it too.

The Government of Bahrain started to implement TQM in 2005. Some researchers wrote that several organizations in Bahrain started to implement Quality management in the areas they thought useful, but the market situation presented the main problems which prevented the adoption of Quality Management.

Another research concluded that using ISO improved services and achieved organizational objectives that related to work performance and approved that using TQM improves services provided to the customer and develops a confident atmosphere and employee satisfaction. In addition, other researchers believe that Total Quality Management becomes the best solution to overcome problems regarding work and has benefits to reduce cost, reduce maintenance cost, improve life cycle value, and solving problems of rework.

Many successful organizations started to implement TQM and get ISO certificates to improve the quality of products and services and gain customer satisfaction. The Government of Bahrain issued some decisions regarding the application of quality systems and regulations in organizations and ministries of Bahrain in 2005, including the Quality Assurance Authority for Education & Training (QAAET) and Quality Assurance and Accreditation Center in 2008 to ensure the importance of Quality Procedures and Standards and to add credibility and clarity, the authority publishes reports on the Quality of Educational and Vocational Institutions to ensure the Quality of Education and Training organizations in Bahrain.

On the other hand, the Assessment and Inspection Section in the Ministry of Labour reviews licensed training institutions, to ensure their training activities comply with established procedures.

The Kingdom of Bahrain signed a Memorandum of Understanding with the European Foundation for Quality and Excellence of the European Union regarding the framework and cooperation mechanism to promote excellence and achieve a high level of Quality Performance.

The awareness increases much more these days because of the increase in competition between organizations.

From the analysis, of the survey results, 39% of Government organizations apply TQM and 38% apply TQM from the private sector. This percentage expresses the level and extent of the organizations, which apply TQM. On the other hand, 39% of both sectors do not know if their organization implements TQM or not. This shows the weakness of awareness in the organization and the top management must increase their awareness in the organization to increase performance and quality.

5.1. Comparison of TQM Success Factors between Bahrain and Other Countries

Table 8 shows the critical TQM success factors in the USA, UK, UAE, Hong Kong (China), Japan, Jordan, and Bahrain are based on this study.

5.2. Critical Success Factors Comparison between Private and Government Sectors

A comparison between the Private and Government Sectors related to critical success factors affecting TQM in Bahrain. The result shows that Private Sector is more interested in implementing Total Quality Management than the Govern-

ment Sector, with a percentage average of 5% - 10% only. The result shows that the Government Sectors implement 40% and Private Sectors 45%.

Table 8. Source, Twaissi (2008), modified by Salman (2015).

Nation/Area	CSF
USA	<input type="checkbox"/> Top management leadership <input type="checkbox"/> Role of the quality department <input type="checkbox"/> Training <input type="checkbox"/> Product design <input type="checkbox"/> Supplier quality measurement <input type="checkbox"/> Process management <input type="checkbox"/> Quality data reporting <input type="checkbox"/> Employee relationship
UK	<input type="checkbox"/> Effective leadership <input type="checkbox"/> Application of best practice <input type="checkbox"/> Economic survival <input type="checkbox"/> Market orientation <input type="checkbox"/> Employee involvement
Japan	<input type="checkbox"/> Management thinking driven by TQM <input type="checkbox"/> Employee involvement and commitment at all level (down-up) <input type="checkbox"/> Total dedication to achieving customer satisfaction <input type="checkbox"/> Innovations as a supplementary process to TQM <input type="checkbox"/> Long-term planning
Hong Kong (China)	<input type="checkbox"/> Training and education <input type="checkbox"/> Quality data and reporting <input type="checkbox"/> Management commitment <input type="checkbox"/> Customer satisfaction orientation <input type="checkbox"/> Role of the quality department <input type="checkbox"/> Communication to improve quality <input type="checkbox"/> Continuous improvement
Jordan	<input type="checkbox"/> Top management commitment <input type="checkbox"/> Employee training <input type="checkbox"/> Customer satisfaction and focus <input type="checkbox"/> Quality communication and structure <input type="checkbox"/> Quality information system <input type="checkbox"/> Policy and strategic planning <input type="checkbox"/> Supplier relationship <input type="checkbox"/> Quality measurement and benchmarking
UAE	<input type="checkbox"/> Role of the divisional top management and quality policy <input type="checkbox"/> Role of the quality department <input type="checkbox"/> Training <input type="checkbox"/> Product and service design <input type="checkbox"/> Supplier quality relationship <input type="checkbox"/> Process management <input type="checkbox"/> Quality data and reporting <input type="checkbox"/> Employee relations

Continued

	<input type="checkbox"/> Leadership & Top management commitment
	<input type="checkbox"/> Employee training
	<input type="checkbox"/> Customer satisfaction and focus
Bahrain	<input type="checkbox"/> Quality communication
	<input type="checkbox"/> Quality culture & MIS
	<input type="checkbox"/> Quality Planning and strategic
	<input type="checkbox"/> Continues Development
	<input type="checkbox"/> Quality of product & services

This shows an extremely low percentage related to the expected level and still the Bahrain society with all the rules and standards published by the Government is substandard.

Furthermore, the factors that are implemented by the Private Sector are more than the Government Sector. According to this study, the factors implemented are Leadership & Top Management, Communication, Training, and Quality Culture & MIS.

This research seeks to investigate the employees' perception of the Total Quality Management factors and their impact on job satisfaction in Bahrain. The result shows a low average rate for the employees' satisfaction with a percentage of 41% of employees satisfied. Managers must, therefore, consider the employees' satisfaction factor in all TQM initiatives. It is necessary to encourage employee involvement in TQM implementation.

However, the findings indicate that the Management encourages teamwork, suggestion, motivation and training, and employee involvement in decision-making for predicting job satisfaction.

The result agrees with Ooi et al. (2007) in their study "*Does TQM influence employees' job satisfaction?*" An empirical case analysis examined that with TQM practice, improvements in job satisfaction levels were significant.

The research study concluded that a strategy should be used by the organizations that attempt to implement Total Quality Management. Some critical factors are put into consideration for the successful implementation of Total Quality Management in Bahrain.

The researcher presents a model that provides a basis for implementing Total Quality Management and shows all the factors and outcomes affecting TQM.

5.3. Recommendations

The findings could recommend potential suggestions for Top Management to review their TQM programs. Managers must, therefore, consider employees' satisfaction factors in all TQM initiatives.

TQM needs full support from the Government over the long period to improve quality and organizational performance. There are many factors and barriers that influence TQM implementation in the organization.

Therefore, it is necessary to encourage employee involvement in TQM im-

plementation. In addition, the researchers concluded that awareness inside the organization regarding quality rules and standards is extremely low. These outcomes concluded that around 40% of the total participants in this questionnaire did not know if their organization implemented Total Quality Management or got an ISO certificate. So, we recommended that organizations should assess the awareness of Total Quality Management among their employees. This could be done by providing all the members of the organization with the standards and rules applied by the organization regarding the quality and enhancing training to improve the quality management skills and knowledge. On the other hand, Top Managers should show a stronger familiarity with TQM concepts and practices and believe that TQM is a way of guaranteeing high-quality products and services.

Therefore, organizations should invest in TQM as this could help them to improve their effectiveness and work performance. Further, managers and practitioners must be more concerned about the standards and take a more active approach toward TQM, therefore, preparing their company to be more effective for future challenges.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Al-Baharna, B. (2002). *Developing a Quality Assurance Model in Further Education and Vocational Training: A Case Study of the Bahrain Training Institute*. PhD Thesis, University of Sunderland.
- Al-Sehali, J. (2001). *A Framework for Total Quality Management in the Construction Industry in Bahrain*. PhD Thesis, Loughborough University Institutional Repository.
- Al-Shobaki, S. D., Al-Hadeethi R.H.F., & Ahmad Bashir, A. (2010). The Implementation of Total Quality Management (TQM) for the Banking Sector in Jordan. *Jordan Journal of Mechanical and Industrial Engineering*, 4, 304-313.
- Bahrainedh.com (2009). *Annual Report*.
<https://www.bahrainedb.com/latest-news/responsibilities-and-achievements-of-the-economic-development-board>
- Farhan (2005). *The Successful Extent of Quality System (ISO) in the Development of Government Sector Services in Bahrain*. Thesis.
- Franks, O. S. W. (2009). A Theoretical Model for Implementing Quality Management in an Automated Environment. In *2008 Second International Conference on Future Generation Communication and Networking Symposia* (pp. 23-28). IEEE.
<https://doi.org/10.1109/FGCNS.2008.128>
- Gotzamani, K. D., & Tsiotras, G. D. (2001). An Empirical Study of the ISO 9000 Standards' Contribution towards Total Quality Management. *International Journal of Operations & Production Management*, 21, 1326-1342.
<https://doi.org/10.1108/EUM0000000005972>
- Grant, R. M., Shani, R., & Krishnan, R. (1994). TQM's Challenge to Management Theory and Practice. *Sloan Management Review*, Winter, 25-35.
- Janahi (1993). *The Extent of Quality Assurance Implementation in the Construction Industry in Bahrain*. Master's Thesis, the University of Newcastle upon Tyne.

- Karuppusami, G., & Gandhinathan, R. (2006). Pareto Analysis of Critical Success Factors of Total Quality Management: A Literature Review and Analysis. *TQM Magazine*, 18, 372-385. <https://doi.org/10.1108/09544780610671048>
- Karuppusami, G., & Gandhinathan, R. (2006). Sustainable Development of Total Quality Management through Deming's PDSA Cycle. *The International Journal for Quality and Standards*.
- Labour Fund (2007). *Strategic Plan Kingdom of Bahrain 2007*. <https://documents.pub/document/labour-fund-strategic-plan-kingdom-of-bahrain-2007.html?page=1>
- Leedy, P., & Ormrod, J. (2001). *Practical Research: Planning and Design* (7th ed.). Merrill Prentice Hall.
- Mann, R., & Kehoe, D. (1995). An Evaluation of the Effects of Quality Improvement Activities on Business Performance, June 1994. *International Journal of Quality & Reliability Management*, 11, 29-44. <https://doi.org/10.1108/02656719410057935>
- Martínez-Lorente, A. R., & Martínez-Costa, M. (2004). ISO9000 and TQM: Substitutes or Complementaries? An Empirical Study in Industrial Companies. *International Journal of Quality & Reliability Management*, 21, 260-276. <https://doi.org/10.1108/02656710410522711>
- Metri, B. A. (2005). TQM Critical Success Factors for Construction Firms. *Management*, 10, 61-27.
- MIC Website (2011). <https://www.moic.gov.bh/en/Ministry/Pages/Ministry-Quality-Policy.aspx>
- Mohammed, S., Mohammed, K., & Mohammed, J. (2008). *Total Quality Management Implementation at Saline Water Conversation Corporation*. MBA Thesis, Open Arab University.
- Ooi, K. B., Abu Bakar, N., Arumugam, V., Vellapan, L., & Kim Yin Loke, A. (2007). Does TQM Influence Employees' Job Satisfaction? An Empirical Case Analysis. *International Journal of Quality & Reliability Management*, 24, 62-77. <https://doi.org/10.1108/02656710710720330>
https://www.researchgate.net/publication/235308709_Does_TQM_influence_employee_s'_job_satisfaction_An_empirical_case_analysis
- Salman, M. (2015). *Total Quality Management in Private and Public Sectors in Bahrain: An Exploratory Study*. PhD Thesis, Asia e University.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*. (4th ed.). Financial Times Prentice Hall.
- Twaissi, N (2008). *Evaluation of the Implementation of Total Quality Management (TQM) within the Information and Communications Technology (ICT) Sector in Jordan*. Huddersfield University.
- Vision2030. <https://www.evisa.gov.bh/Vision2030Englishlowresolution.pdf>
- Yeh, T.-M., & Lin, W.-T. (2010). The Diagnosis and Improvement of TQM Implementation in Semiconductor Industries. *African Journal of Business Management*, 4, 1095-1106.
- Yusuf, S., & Aspinwall, E. (2000). Total Quality Management Implementation Frameworks: Comparison and Review. *Total Quality Management & Business Excellence*, 11, 281-294. <https://doi.org/10.1080/0954412006801>
- Zahra, A. A. (2011). *The Influence of Implementing TQM in the Performance of Zain Bahrain*. Hard Copy, Master's Thesis, Open University of Malaysia, University of Bahrain.