

THE IMPACT OF TQM IMPLEMENTATION ON EMPLOYEES' PERFORMANCE

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ABSTRACT

The objective of this paper is to evaluate the impact of Total Quality Management (TQM) implementation on the performance of Dubai Chamber of Commerce and Industry (ACCI), and to find out whether it increases the efficiency and productivity of employees in order to serve better the Business Sector. A survey was developed and distributed to a random sample of (325) employees in Dubai Chamber and the valid ones for analysis were (317). Statistical Package for Social Sciences (SPSS) was used to analyze the data collected.

The survey instrument was pilot tested, and the final questionnaire was distributed in October 2015. The survey instrument contained questions on employees' demographic and functional elements such as: gender, qualifications, specialization, and years of experience. An internal consistency tests (Cronbach Alpha) and other statistical methods were used.

The results of the study showed a high impact of TQM implementation on the performance of employees at Dubai Chamber of Commerce.

Keywords: TQM, Implementation, Efficiency, Effectiveness, Performance, Economic Development, Satisfaction.

INTRODUCTION

TQM Implementation is the most important goal of the Dubai Chamber of Commerce. The Chamber is in charge of enhancing its customers' services and satisfaction to attract investors to Dubai. Adopting Total Quality Management to improve services and enhance economic development is an integral part of the economical sustainability and continuous improvement of Dubai and to a certain extent all emirates of UAE.

While typically arising out of concern for service quality, the most successful TQM programs end up becoming efficiency improvement initiatives that involve organization-wide changes in decision-making, authority and performance measures. For this reason, effective implementation of TQM requires major changes in the Chamber of Commerce by applying the critical elements affecting the implementation of TQM such as committed leadership, communication, training, process improvement, closer supplier relationships, zero-defects mentality etc.

HYPOTHESES:

The main hypothesis of the study is:

Ho1: There is no impact of a statistical significance of ($\alpha=0.05$) of TQM implementation on the performance Dubai Chamber of Commerce.

The Sub hypotheses are:

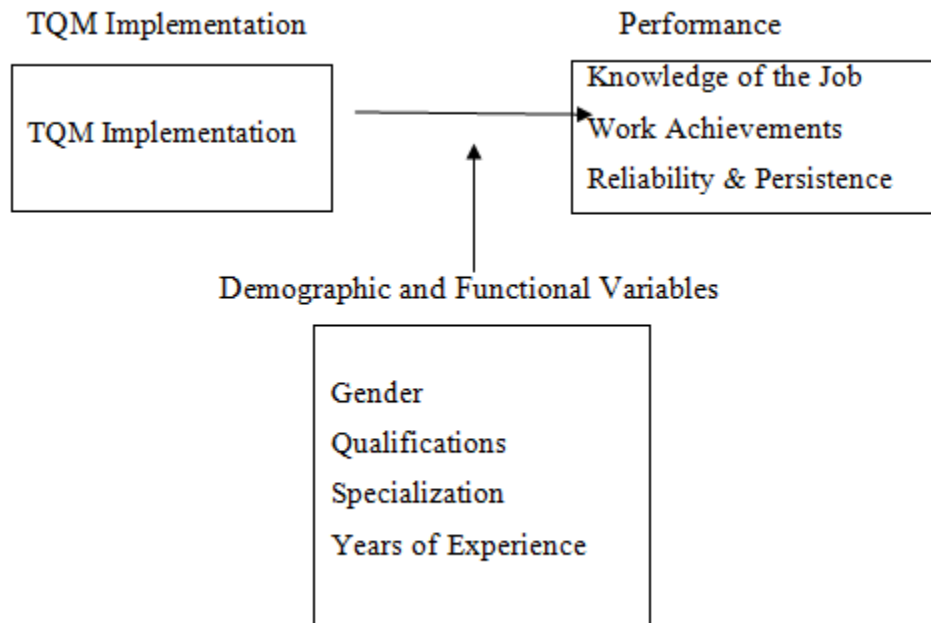
Ho1-1: There is no impact of a statistical significance ($\alpha=0.05$) of TQM implementation on the required knowledge of the job in Dubai Chamber of Commerce.

Ho1-2: There is no impact of a statistical significance ($\alpha=0.05$) of TQM implementation on the achievements of work (quantity of work done) in Dubai Chamber of Commerce.

Ho1-3: There is no impact of a statistical significance of ($\alpha=0.05$) of TQM implementation on the reliability and persistence of employees in Dubai Chamber of Commerce.

Ho2: There are no differences of a statistical significance ($\alpha=0.05$) of TQM implementation attributed to the demographic and functional variables (gender, qualifications, specialization, and years of experience).

Model



LITERATURE REVIEW

Quality is defined differently by the main gurus of Quality -Deming, Crosby, Feigenbaum, Ishikawa and Juran (Hoyer & Hoyer 2001:55-59).

- Crosby’s definition of quality “conformance to requirements”.
- Deming’s definition “Quality is multidimensional to produce a product and/or deliver a service that meet customer’s expectation to ensure customer satisfaction”.
- Feigenbaum defined quality as “the total composed product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectations of customer”.
- Ishikawa’s definition of quality “we engage in quality control in order to manufacture products with the quality which can satisfy the requirements of customers”.
- Juran defines quality as “consisting of those products’ features which meet the needs of customers and thereby provide product satisfaction”.

According to Dale (2003) and Evans & Dean (2003) quality, reliability, delivery, and price build the reputation enjoyed by an institution. Quality is the most important of these competitive

weapons and is an extremely difficult concept to define in few words in order to agree on a consensus definition. Quality is a trait shared with many phenomena in business and social sciences (Hoyer & Hoyer 2001:54). Quality does not refer to goods and services but includes quality of time, place, equipment and tools, process, people, the environment and safety, and information and measurement (Dale 2003; Dale & Roden 2000). Quality is an ongoing process that has to be so persuasive throughout the institution, that it becomes the philosophy and culture of the whole institution. All institutions and departments within the institution need to adopt the same strategy, to serve customers with even better quality, lower cost, quicker response and great flexibility (Waddock & Graves 1997).

According to Evans & Dean (2003), Reeves & Bender (1994), Wood (1997), Savolainen (2000) and Yong & Wilkinson (2002), the roots of quality definitions can be divided into four categories: Excellence, value, conformance with expectations and meeting and/ or exceeding customer expectations.

Finally, we can integrate the meaning of quality in one definition that is “Quality is the degree to the added value to products and/or service delivery as perceived by all stakeholders through conformance to specifications and the degree to the added excellence to products and/or service delivery through a motivated workforce, to meet customer satisfactions” (Hoyer & Hoyer 2001:55-59)

Dubai Chamber has started very well focusing on excellence and the use of service quality to meet the customer expectations according to Mr. Al Hamrani -Director General of the Chamber-, (Chamber News 2015).

Within the excellence context, Mohamad Ben Rashed the Crown Prince of Dubai Emirate has said “Dubai Chamber has exerted excellent efforts to handle the economic services of the Emirate with a high degree of excellence” (Emirates News Agency, 2015).

ORGANIZATION PROFILE

Dubai Chamber of Commerce and Industry was incorporated under an Ameri Decree issued by late H.H. Rashed Ben Maktoom in 1977, stipulating that the chamber of commerce and industry shall be a legal entity with an independent financial status practicing such authorities and powers invested to it under the provisions of the law applicable in the Emirate of Dubai, and that it shall have full competence to achieve its objectives.

The following are some of the Chamber’s objectives:

- Enhance the emirate's economic position, show its commercial, industrial, and agricultural capabilities, and organize the activities, festivals, and programs required for promoting the emirate's economy and its commercial, industrial, and agricultural institutions.
- Organize the commercial, industrial, and agricultural interests pertaining thereto, and act on realizing their progress.
- Cooperate with the relevant authorities in all matters concerning the commerce, industry, and agriculture, in addition to any other matters related to their practice in the emirate
- Establish friendly ties among the chamber's members, in addition to establishing such relations with other chambers of commerce and industry inside and outside the U.A.E., as required for realizing the common interest
- Promote commercial and industrial awareness in the emirate
- Enhance the Economical and social development, integration, and economic security on the level of Dubai emirate, the U.A.E., the region, the Arab World, and the world as a whole.
- Introduce the local products, open the markets abroad for them, and act on expanding such economic exchange and cooperation with other countries.
- Take part in promoting the ethical awareness in the commercial transactions, and boost the feeling of commercial honesty.
- Take care of the chamber's members' interests, provide such services, information, and data necessary to enable them practice their commercial businesses efficiently, protect their rights, and act on solving any problems facing them, in addition to encouraging and supporting the ties among them.

Chamber's Services

The Chamber of Commerce is regarded as one of the most important establishments serving the private sector in Dubai. It acts as a servant of the economic interests of the individuals of the said Emirate; in addition to providing support and handling any problems and difficulties facing that sector.

The chamber provides many services that can be summarized as follows:

- Providing membership services, certificates of origin, and attestation:
 - Registration and membership services for members and private sector establishments.

- Attest the private sector's transactions such as certificates of origin, invoices, trading agencies, and many other transactions.
- Supporting the economic activities
 - Organize economic symposiums, forums, and events.
 - Take part in organizing international exhibitions in a manner introducing the national products abroad
 - Organize and receive the trading delegations including diplomats and economic analysts to enhance the economic ties between both parties
- Taking part in providing such social, cultural, and sports services.
- Issuing many publications, periodicals, commercial and industrial manuals, in addition to distributing offers and investment opportunities it receives from investment companies and organizations from all parts of the world.
- Furnishing business men with economic information.

Total Quality Management Policy & Objectives

In the effort of Dubai's Chamber towards supporting commercial and industrial activities, and enhancing the Chamber's mission to be "a distinguished meeting place for the local and international investors", the TQM policy of the chamber focused on the following standards:

- Improve the Chamber's income and differentiating its sources.
- Improve the relationship between The Chamber and its national and international partners.
- Enrooting the corporate excellence culture and improve the internal operations in The Chamber.
- Increase customers' satisfaction towards services by exceeding their expectations.
- Improve employees work environment and develop their skills and performance.
- Conformance with ISO 9001
- Reviewing the policy and objectives regularly to adopt continuous improvement.

Approaches of TQM

Top management of the Chamber decided to adopt and implement the Total Quality Management within the following process approaches:

1. Choosing efficient human resources to work within the teamwork.

2. Putting comprehensive work plan to guide their work
3. Providing training courses and workshops to start the strategic plan operation.
4. Doing SWOT analysis
5. Benchmarking
6. Building mission, vision, values and objectives.
7. Designing a Policy
8. Preparing some initiatives and suggested projects related to the chamber through workshops.
9. Preparing a final draft of the strategic plan .
10. Designing the Operations and Process with Plan the Internal Auditing and KPI.
11. Implementing the operations and processes
12. Follow up the operations and data analysis.
13. Proof the processes and proceed

Data Collection

The current study had used two sources to get data, secondary and primary sources. In the secondary source the data was collected from various available sources that include Bulletins, Pamphlets, published articles, books, previous studies and website materials in order to form the theoretical framework of the study. The primary source was gathered from a questionnaire that was designed and developed to reflect the study objectives and questions.

Significance of the Study

The Chamber of Commerce in Dubai is an important body of society because of its economic and financial weight. This study will help the employees of the chamber to find the best possible ways to help their customers to achieve their needs which will provide implementation of total quality management.

Because of the disparity of customers' satisfaction with the implementation of TQM in the chamber and because a large number of customers are dealing with those different employees the researchers wanted to highlight these disparities, and shed the light on the services available at the chamber in an effective way so that TQM would be fully implemented there.

Sampling of the Study

The population of the study consisted of the employees of the chamber of Commerce in Dubai. A total sample of (350) employees were used to examine the implementation of TQM in the

Chamber. (33) Questionnaires were excluded because either they were returned blank or not completed; therefore the unit of analysis consisted of (317) customers

Limitations of the Study

One of the limitations of the study was that the unit of analysis was from the Emirate of Dubai only and it does not cover the 6 other emirates. Moreover many employees were not optimistic about change and they believe that it was useless to fill up the questionnaire. The other limitation was that some of the employees under study were not convinced with the idea of distributing questionnaires inside the chamber.

Tool of Study its Reliability and Validity

The tool that was used for this study is the questionnaire and in order to check the content validity of the questionnaire, academic professors and professional bodies were asked to verify the content validity of the questionnaire and on receiving their comments the needed amendments were made and the questionnaire was distributed to the study sample.

To check the questionnaire reliability Cronbach's Alpha reliability coefficients was used to calculate the study variables and it was clear that all alpha values are higher than 60% which indicates that all the questionnaire statements are appropriate for this study.

RESEARCH METHODS

The research used the descriptive and analytical approach to get results. A questionnaire was developed to collect data from employees of the chamber of commerce of Dubai. For the purpose of this study 5- level Likert scale has been used and coded to enter the data to the database to get results. The levels of the scale were given the following codes: Strongly agree (5), agree (4), Neutral (3), disagree (2), and strongly disagree (1). Statistical analysis was used by using means, modes and standard deviations and the Statistical Package for Social Sciences (SPSS) was used too. For the purpose of testing the hypothesis, means of all statements were calculated and considered as the factor of analysis (reference), while the mean of the other questions representing the same hypothesis were calculated to be compared with the reference using one way ANOVA.

Table (1) below shows the required knowledge of the job in Dubai Chamber of Commerce:

Table (1)

No	Variables	Mean	Deviation	Degree of Importance
1	I have the required knowledge to do my job	4.265	0.78301	High
2	I know the fields related to my job	4.1956	0.76281	High
3	I develop myself continuously	4.1735	0.79845	High
4	I gain new ways of doing things every day	4.0978	0.87143	High
	Total	4.1829	0.80035	High

Table (2) below shows the work Achievements (quality of work done) in Dubai Chamber of Commerce:

Table (2)

No	Variables	Mean	Deviation	Degree of Importance
5	I help customers quickly	3.8833	1.08307	High
6	I leave work in time	4.3249	0.75375	High
7	I come to work in time	4.3186	0.79719	High
8	There is an increase in the quantity of achievements	3.9054	0.9955	High
	Total	4.108	0.9073	High

Table (3) below shows the reliability and persistence in Dubai Chamber of Commerce:

Table (3)

No	Variables	Mean	Deviation	Degree of Importance
9	I try to reach the highest level of performance	4.4732	0.71826	High
10	I try to have recognition at work	4.5016	0.64936	High
11	I can handle pressure	4.4416	0.71638	High
12	I can be a good team member	4.4353	0.78338	High
	Total	4.46292	0.71684	High

Table (4)

Area	Sig.	Null Hypo.	F	R	R2
TQM Implementation	0.000	Reject	3.8415	.254a	.064

ANOVA for the first sub-hypothesis

Table (5)

Model	Sum of Square	No	Mean Square	F	Sig.
Regression	8.545	2	8.545	21.690	.000
Residual	124.093	315	.394		
Total	133.638	317			

The two tables above show the tabulated F (21.690) is bigger than the calculated F .The statistical sig. is (0.000) and it is smaller than 0.05, therefore we reject the null hypo. (Ho) and accept the alternate hypo. (Ha). This is enhanced by the R (.254a) which explains the strong relationship between TQM implementation and the required knowledge of the job by employees.

Coefficients of the first sub-hypothesis.

Table (6)

Model	Unstandarized Coefficient		Standardized Coefficient	t	Sig.
	B	Standard Error	Beta		
Required knowledge of the job	3.670 .160	.116 .034	.254	31.739 4.657	.000 .000

Table (7) t-test to check gender

Table (7)

Performance	Gender	No	Mean	St. Deviation	T	Sig.
Required knowledge of the job	Male	187	4.2233	.63760	.125	.187
	Female	130	4.1250	.66052		
Work Achievements	Male	187	4.2045	.75487	2.314	.003
	Female	130	3.9692	.65074		
Reliability & Persistence	Male	187	4.4358	.60843	.064	.342
	Female	130	4.5019	.60880		

ANOVA

Table (8)

Performance	Sum Square	df	Mean Square	T	Sig.
Required knowledge of the job	4.113	4	1.028	2.496	.043
	128.525	312	.412		
	132.638	316	1.543		
Work Achievements	6.172	4	.509	3.034	.018
	158.690	312		.509	
	164.862	316			
Reliability & Persistence	1.079	4	.270	.726	.575
	115.923	312	.372		
	117.002	316			

Scheffe Test for the required knowledge of the job and qualifications

Table (9)

Qualifications	No	Subset for Alpha=0.05
Diploma	90	4.0972
Bachelor	158	4.2896
Higher Diploma	33	4.0379
Master	32	4.0234
Doctoral	4	4.3750
Sig.		0.685

Scheffe Test for the work achievements and qualifications

Table (10)

Qualifications	No	Subset for Alpha=0.05
Diploma	90	3.8106
Bachelor	158	3.8750
Higher Diploma	33	4.0278
Master	32	4.0625
Doctoral	4	4.2310
Sig.		0.620

Means for qualifications

Table (11)

Performance	Qualifications	No	Mean
Required knowledge of the job	Diploma	90	4.0972
	Bachelor	158	4.2896
	Higher Diploma	33	4.0379
	Master	32	4.0234
	Doctoral	4	4.3750
	Total	317	4.0278

Work Achievements	Diploma	90	4.0278
	Bachelor	158	4.2310
	Higher Diploma	33	4.8106
	Master	32	4.0625
	Doctoral	4	3.8750
	Total	317	4.1080
Reliability & Persistence	Diploma	90	4.3944
	Bachelor	158	4.5127
	Higher Diploma	33	4.3788
	Master	32	4.4922
	Doctoral	4	4.5000
	Total	317	4.4629

ANOVA test for specifications

Table (12)

Performance	Sum Square	df	Mean Square	F	Sig.
Required knowledge of the job	1.214	4	.304	.721	.578
	131.424	312	.421		
	132.638	316			
Work Achievements	3.829	4	.957	1.854	.118
	161.033	312	.516		
	164.862	316			
Reliability & Persistence	1.687	4	.422	1.141	.337
	115.315	312	.370		
	117.002	316			

Means for qualifications

Table (13)

Performance	Specialization	No	Mean
Required knowledge of the job	Management	89	4.1517
	Accounting	55	4.1955
	Marketing	25	4.2900
	Finance	34	4.3162
	Others	114	4.1382
	Total	317	4.1830
Work Achievements	Management	89	4.1320
	Accounting	55	4.2818
	Marketing	25	3.8300
	Finance	34	4.1029
	Others	114	4.0680
	Total	317	4.1080
Reliability & Persistence	Management	89	4.5084
	Accounting	55	4.3227
	Marketing	25	4.5800
	Finance	34	4.4265
	Others	114	4.4803
	Total	317	4.4629

ANOVA test for years of experience

Table (14)

Performance	Sum Square	df	Mean Square	F	Sig.
Required knowledge of the job	2.550	3	.850	2.045	.108
	130.088	313	.416		
	132.638	316			
Work	3.189	3	1.063	2.058	.106
	161.673	313	.517		

Achievements	164.862	316			
Reliability & Persistence	3.581	3	1.194	3.293	.021
	113.420	313	.362		
	117.002	316			

Scheffe test for the years of experience

Table (15)

Experience	No	Subset for alpha = 0.0	
		1	2
Less than 4 years	167	4.5240	
4-less than 7 years	54	4.3661	4.3661
7-less than 10 years	31	4.2419	4.5240
More than 10 years	35		4.6000
Significance		0.137	0.282

Means for the years of experience

Table (16)

Performance	Years of Experience	No	Mean
Required knowledge of the job	Less than 4 years	167	4.2380
	4-less than 7 years	84	4.1310
	7-less than 10 years	31	3.9516
	More than 10 years	35	4.2500
	Total	317	4.1830
Work Achievements	Less than 4 years	167	4.1497
	4-less than 7 years	84	4.0893
	7-less than 10 years	31	3.8226
	More than 10 years	35	4.2071
	Total	317	4.1080
	Less than 4 years	167	4.5240
	4-less than 7 years	84	4.3661

Reliability & Persistence	7-less than 10 years	31	4.2419
	More than 10 years	35	4.6000
	Total	317	4.4629

CONCLUSION

Throughout the previous analytical analysis, the following conclusions can be mentioned:

1. The sampled employees of the Dubai Chamber of Commerce are, in general, satisfied with the quality implemented in the chamber.
2. Customers strongly believe that there are still some aspects that need more improvement in the Chamber.
3. Suggestions introduced by customers are well taken into consideration by the Chamber all the time.
4. The efforts made by the chamber and the results led to customer satisfaction, excellent employee performance, excellent productivity and high profitability.
5. There is a strong trust for the documentation methods available in the above-mentioned Chamber.
6. The Chamber has a new strategic plan measured by key performance indicators, supported by projects and initiatives and cleared operations and processes with tools to evaluate and enhance them.
7. The Chamber enhanced their human resources with a very good program for improving and training, so it has a very good staff with good knowledge about TQM and performance indicator, and good awareness about chamber's vision and mission.
8. There is a very strong commitment from top management for implementing TQM and Excellence culture and good commitment to build effective human resources.
9. Dubai Chamber is doing well in its procedures to implement TQM by following the processes which have been mentioned above. They did very well to beat barriers and change the waste to added value products by increasing initiatives towards customer's satisfaction.

RECOMMENDATIONS

The chamber depended on its old employees to form teams to implement TQM. Although it is very good to avoid the high cost of consultation from other companies but it will not be easy for many employees in the chamber to drop what they are doing and convert to the new demands of TQM, especially in making the extra effort to link it to institutional effectiveness. Old habit is difficult to change but employees must accept that TQM is not add-on to the job but it is part of the existing job.

It was hard to find tools or techniques for improving communications between departments of the Chamber and the excellence teams were not good enough to create good communication between departments.

REFERENCES

- Alnaweigah, Atallah (2013), “Total Quality Management Role in Organizational Change and Development: Case Study”, *International Journal of Business Administration*, Vol. 4, No. 4 pp 34-51
- Chang, Guangshu, (2009), “Total Quality Management in Supply Chain”, *International Business Research*, Vol.2, No.2, pp 29-36
- Dale, B. G. (2003), “A Study of the Purchasing Management System with Respect to TQM”, *Industrial Marketing Management*, Vol. 32, Issue 6, pp 443-454.
- Dale, B. G. and Roden, S. (2000), “Understanding the Language of Quality Costing”, *The TQM Magazine*, Vol. 12, Issue 3, pp 179-185.
- Dow, D., Samson, D., and Ford, S. (1999) “Exploding the Myth: Do All Quality Management Practices Contribute to Superior Quality Performance”, *Production and Operations Management*, 8(1), 1–27.
- Evans, R, and Dean, J. (2003), “The Influence of an Integration Strategy on Competitive Capabilities and Business Performance”, *Journal of Quality Management*, Vol. 22, Issue 4, 437-456
- Hill, Adams (2005), *Operations Management*, Palgrave Macmillan; New York.
- Hugos, M. (2003) *Essentials of Supply Chain Management*, John Wiley, New Jersey.
- Jefferson, R.W. (2002) *Total Quality Management: An Organizational Communication Analysis*, Doctorate Theses, University of Texas, Austin.
- Kaynak, H. (2003) “The Relationship between Total Quality Management Practices and their Effects on Firm Performance”, *Journal of Operations Management*, 21(4), 405-435.
- Lindborg, H. (2003) “The Shift to Customer Focuses”, *Quality Progress*, 36(3), 84–85.

- Motwani, J. (2001) “Critical Factors and Performance Measures of TQM”, TQM Magazine, 13(4), 292-300.
- Palo, S., and Padhi, N. (2005) “How HR Professionals Drive TQM: A Case Study in an Indian Organization”, TQM Magazine, 17(5), 467-485
- Rahman, S. (2001) “A comparative Study of TQM Practice and Organizational Performance of SMEs with and without ISO 9000 Certification”, International Journal of Quality and Reliability Management, 18(1), 35–49.
- Rahman, S., and Bullock, Ph. (2005) “Soft TQM, Hard TQM, and Organizational Performance Relationships: An Empirical Investigation”, OMEGA, 33(1), pp. 73-83.
- Reeves, C. and Bendar, D. (1994), “Defining Quality: Alternatives and Implications”, Academy of Management Review, Vol. 19, No 4, pp 419-445.
- Robinson, C. and Malhotra, Manoj (2005), “Defining the Concept of Study Chain Quality Management and its Relevance to Academic and Industrial Practice”, Int’l Journal of Production Economics, Vol. 96, Issue 3, pp 315-337.
- Savolainen, T. (2000), “Leadership Strategies for Gaining Business Excellence Through Total Quality management: A Finnish Case Study”, Total Quality Management, Vol. 11, Issue 2, pp 211-226
- Sekaran, Uma. (2008) Research Methods for Business: A Skill Building Approach. New York: John Wiley and Sons.
- Shenawy, E.E., Baker, T. and Lemak, D.J. (2007) “A Meta-Analysis of the Effect of TQM on Competitive Advantage”, International Journal of Quality & Reliability Management, 24(5), 442-471.
- Strategic plan 2009 – 2011, Dubai Chamber.
- Valance N. (2003) “Pacesetters: Corporate Leaders Agree on the Highest Standard—Set Rules and Follow Them”, CEO Magazine, 1: 10—12
- Waddock, S. and Graves, S. (1997), “Quality of Management and Quality of Stakeholders Relations”, Business and Society, Vol. 36, Issue 3, pp 32-45.
- Wilson, D.D., and Collier, D.A. (2000) “An empirical investigation of the Malcolm Baldrige National Quality award causal model”, *Decision Sciences*, 31(2), 361–390.
- Yong, J. and Wilkinson, A. (2001), “Rethinking TQM”, Total Quality Management, Vol. 12, Issue 2, pp 36-48.
- Yusuf, Y., Gunasekaran, A., and Dan, D. (2007) “Implementation of TQM in China and Organisation Performance: An Empirical Investigation”, Total Quality Management & Business Excellence, 18(5), 509–530.

- Zeitz, G., Johannesson, R. and Ritchie Jr., J.E. (1997) “An Employee Survey Measuring Total Quality Management Practices and Culture”, *Group and Organization Management*, 22(4), 414–444