

Original Paper

Impact of Implementing Total Quality Management (TQM) System on Improving Performance at the Cooperative of State Employees (CSE) in Lebanon

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Abstract

The Total Quality Management System (TQM) is an integrated management approach that aims to continuously improve the performance of services and exceed the expectations of associates. The study aimed at determining the impact of the application of the Total Quality Management (TQM) system in improving performance in the Cooperative of State Employees (CSE) in Lebanon. The study also aimed at building a conceptual framework that can be used as a guide in formulating an effective approach that enables high management in the Cooperative of State Employees (CSE) to successfully implement a Total Quality Management (TQM) system. The study sample consisted of employees in the Cooperative of State Employees (CSE). To verify the study hypotheses, a five-point Likert style questionnaire was constructed and distributed among the sample to measure and reveal the impact of implementing the TQM system on improving the performance of the CSE. The results of the study showed that implementing the TQM system has a critical role in improving the financial performance of the CSE, while it has no impact of significance on improving managerial performance at the CSE.

Keywords

total quality management, managerial performance, financial performance, cooperative of state employees

1. Introduction

Total Quality Management (TQM) is considered the most important product of the developed administrative intellect and a natural result of the changes accompanying this era, such as the increasing growth of globalization and the importance of competition and the rise of economic clusters and the domination of information technology over contemporary life. Total Quality Management (TQM) is an organizational philosophy and culture that seeks to achieve excellence in both public and private sectors, respond to the expectations, needs, and desires of the customer being the primary focus of the organization's intellect. It focuses on creating an integrated mechanism or system to achieve the highest levels of performance to meet customer expectations.

Some nations, such as America, Japan, Malaysia, and others adopted TQM and began applying it in arms factories. Then its application moved to industrial and service companies and private institutions where it achieved great successes. As for the failure of governmental organizations in the field of improving productivity and the quality of services they provide to citizens, many of them have been constantly striving to adopt some modern management methods that have proven effective in improving productivity in private sector institutions—including TQM which is the most recent—where they have resorted to this method in order to improve their performance.

Serving citizens has become a major goal for any country in its social and economic development plans. This system has achieved tangible success in public service institutions such as health and education and contributed to the transfer of guarantor institutions from its old framework of being just a place to provide services to take a more comprehensive framework in how the service is provided to its applicants as well as planning and implementing development and research programs, in addition to setting standards to control the quality of the services provided.

The success of any institution depends mainly on the ability of its management to interpret and analyze the changes surrounding and the accuracy of its response and to work on diagnosing it to know the opportunities and threats it faces in the sector it belongs to and to identify the challenges of success and how to deal with others.

2. Literature Review

As a result of the fast-changing and continuously-developing business environment, organizations are currently facing many challenges including the enormous high-tech services and products that develop frequently, the emergence of economic clusters and confederations, the inclination toward globalization and trade liberalization and the achievement of a good local, regional and international competitive position that enable the organizations to continue in the business market.

Cetindere et al. (2015) studied the impact of TQM on business performance in Turkey, and their paper was presented at the Second Global Conference on Business, Economics, Management, and Tourism that was held in Prague, Czech Republic. The results of the study showed that the TQM practices relative to leadership and education are strongly related to the organization's performance. Thus, the

organizations should supply their employees with essential training and knowledge about quality in the light of the top managements' leadership.

Chin et al. (2014) studied the impact of TQM on corporate performance in Malaysian public listed companies. The findings of the study showed that TQM can positively affect corporate performance across five performances, the top management leadership style of the management, management of human resources, focusing on customers, deliberate preparation, and information and procedure management. They also found that the impact of TQM can also be detected in some sectors of the listed public companies. They also cited a lot of literature on TQM that recognized a positive association between the efficient application of TQM and innovation performance (Long et al., 2015; Prajogo & Sohal, 2006) and between TQM and financial performance (Douglas & Judge, 2001; O'Neill et al., 2016).

Amin et al. (2017) examined the structural relationship between TQM, employee satisfaction, and hotel performance. The results of the study depicted that seven TQM constructs have considerable associations with job satisfaction of employee and performance of the organization. Leadership style and focus on clients have major roles in augmenting job satisfaction of employees and the performance of their organization. They also concluded that employees who are increasingly satisfied with their jobs are keen to support their fellow workers. They are also devoted to performing their jobs, and thus, are able to improve the performance of the organization. They recommended that managers and owners of hotels provide a friendly atmosphere in the workplace, as well as a long-term plan to amplify job satisfaction and improve the organizations' performance. In addition, they cited some research papers that depict the benefits of TQM such as increased organizational performance (Talib et al., 2011-2013). In their study, Sadikoglu and Olcay (2014) examined the effects of TQM practices on the performance and investigated the obstacles facing TQM practices in Turkey. The results of their study showed that, unlike leadership styles, TQM practices have a considerable impact on various performance outcomes. The results also showed that many barriers are facing TQM practices in Turkey; mainly, lack of employees' participation, dedication and awareness, lack of the necessary resources, and lack of proper organizational structure. The researchers recommended that organizations persist on implementing TQM with its different variables, enhance participation, dedication, and awareness of employees toward TQM, supply enough resources, and improve the organization's structure to defeat the obstacles facing the employment of TQM practices efficiently.

Phan et al. (2019) examined the impact of TQM practices and Just-In-Time (JIT) production practices on flexibility performance. The results of their study showed that there exists a close correlation between TQM practices and JIT production practices. The results also showed that increased TQM level of practices enhanced the impact of JIT production practices on flexibility performance. Also, the findings of the study suggest that implementing both TQM and JIT production practices can augment flexibility performance.

Nguyen et al. (2018) examined the extent of contribution of quality management practices to sustainability performance among Vietnamese firms. The results of their study showed that quality management practices a positive and significant impact on sustainability performance and that such practices are decisive factors that contribute considerably to sustainability goals. The study also supplied an essential understanding of the proficient distribution of resources in order to achieve sustainability goals.

Miyagawa and Yoshida (2010) examined the effects of TQM practices of manufacturers in the USA and China that are owned by Japanese people. The results of the study showed that total quality management practices have a significant impact on the general performance which means that applying TQM practices appropriately is a proficient process in augmenting the business performance regardless of the organization's location. Also, findings of the empirical data supply additional evidence that supports the conclusion.

Al-Basheer et al. (2015) studied the dimensions of TQM and their effect on financial performance in the Jordan Islamic Bank. The researchers analyzed statistically the relationship between TQM dimensions and improving financial performance. They found that workers' awareness about the importance of the quality elements helps in improving the financial performance of the bank. The results also specify that there exists a statistically significant relationship between the overall quality and financial performance. The study also revealed that there exists a statistically significant effect of TQM on the liquidity ratio. The study depicted is a statistically significant impact of TQM on the profitability ratio.

Baird et al. (2011) studied the relationships among organizational culture, TQM practices, and operational performance in both Australian manufacturing and service industries. The results of the study illustrate that the most essential aspect in augmenting the use of TQM practices is teamwork. The study also found that businesses that are outcome-oriented used TQM practices largely. The study found that out of the four TQM practices examined in the study, three of them help achieve operational performance goals; these are quality data and reporting, supplier quality management, and process management. The researchers pointed out that managers of the organizations should identify the correlations among TQM practices and their relationships with operational performance. In addition, they supply insights into the multi-dimension practices of TQM their impact on operational performance.

Gambi et al. (2015) investigate the relationship between organizational culture and quality techniques, and its impact on operational performance. The study utilized four groups of quality techniques and four cultural profiles, in addition to a number of performance indicators (operational). Based on the results of their study, culture did not prove to be an explicit predictor of using quality measures. The findings of the study also show that most quality techniques contribute to the total impact on operational performance indirectly. The researchers recommended that managers be aware of the

cultural features of the organizations they are managing before applying quality techniques to have the full benefit of using these techniques.

Wang et al. (2012) examined the interrelations among TQM, market orientation, and hotel performance. The results of their study show that TQM and market orientation affect hotel performance positively. The study also found that the impact of market orientation plays a mediating role between TQM and hotel performance. Moreover, the study results showed that the external environment aspects act as an arbitrator among the three variables (TQM, market orientation and hotel performance), particularly when these aspects changes to help build the relationship with customers to augment the performance of the hotel which would increase chances of its survival.

Agus and Hassan (2011) studied improving production and customer performance through TQM. The study examined managers' awareness of TQM and the level of their organizations' performance. The findings of the study suggest that adopting TQM has considerable associations with production and customer performance. The study provides an outstanding expression about the impact of TQM on enhancing Malaysian organizations' performance. The results of the study also specify that retail manufacturing organizations emphasize more attention to quality measurement aspects of TQM and more management support for TQM initiatives to ensure the long-term sustainability of the organization's competitive advantage.

Siva et al. (2016) conducted a literature review on quality management support to sustainable development. Their study determined that most research in the literature was on only two approaches for sustainable development—integration of management systems and quality management. In addition, the paper recommended moving beyond existing criteria and management systems to enable more thorough improvements. The study also pointed out that there is a need for evidence of the effect of integrated management systems on environmental performance. Finally, the study called attention to the point that Quality Management (QM) practices should be developed and adjusted to support sustainability.

Topalović (2015) examined the implementation of TQM to improve production performance and enhancing the level of customer satisfaction. The study depicted that applying TQM is one of the most important deciding factors of the organization's survival. The researcher stated that managements recently are more focused on TQM since it leads to maximizing customer satisfaction and loyalty. The study examined the clients' positions on various elements applying TQM practices and provided by banks. The results of the study determined that management commitment, courtesy, and responsibility towards clients are considerable factors of customer satisfaction. The study also points out that the results may help managements recognize aspects of quality that need improvement in order to enhance customer satisfaction, and consequently, the organization.

On the other hand, Whyte and Witcher (1992) and Naden and Bremner (1991) had a different view on the topic. Their studies on issues in Total Quality Management showed that materialization of the impact of TQM on the organizational performance was still not constant as shown in the results of the

surveys they had conducted. Rates of total success or failure they had examined in some surveys of TQM were a bit low. Some of these results were also confirmed in some later studies (Witcher, 1993; Shin et al., 1998).

The study at hand examines whether or not there exists an impact of implementing TQM system on the financial and managerial performance of the Cooperative of State Employees (CSE). There are some studies in the literature about implementing TQM system in certain organizations; however, the study at hand is the first to tackle the topic from this perspective in Lebanon as far as the researchers know.

2.1 A Historical View of Total Quality Management (TQM)

The concept of Total Quality Management (TQM) initiated in Japan, then it spread in the USA and Europe and the rest of the world. Academics and intellectuals from around the world have had serious contributions to defining and developing the concept of quality since the beginnings of the twentieth century. Walter A. Shewhart invented TQM and was originally applied at Western Electric Company in 1926, as Joseph Juran who had worked there with the method developed it. TQM was applied on a large scale in the Japanese industry through the involvement of William E. Deming—who came to be considered the “father” of quality control and the quality movement in general.

Walter Shewhart, who worked at Bell Telephone Laboratories at that time, developed a statistical control chart in 1923. His method was published in 1931 under the title “Economic Control of Quality of Manufactured Product”. It was first introduced at Western Electric Company’s Hawthorn plant in 1926, and Joseph Juran was one of the people who was trained in the technique and applied it. Shewhart wrote a paper titled ‘Statistical Methods Applied to Manufacturing Problems’ in 1938, and it was included in the AT&T Statistical Quality Control Handbook. Joseph Juran also published his prominent Quality Control Handbook in 1951.

The U.S. State Department requested that William E. Deming, who was a renowned mathematician and statistician, to go to Japan to help in preparing for the 1951 Japanese Union of Scientists and Engineers (JUSE) Census to help rebuild the Japanese economy after the war. The Japanese who were interested in the issue had already had an idea about Shewhart’s statistical quality control; therefore, they asked Deming to JUSE and lecture on the subject. And so, a number of lectures were presented under the patronage of the JUSE. Deming had built up a critical analysis of production techniques in the U.S.A. during WWII, mostly about techniques of quality control. In his lectures, Deming endorsed his own thoughts with the techniques, specifically a much higher involvement of the workers in the process of quality control and the implementation of his statistical tools. The Japanese executives present at the JUSE welcomed his ideas, and as such, Japan initiated a course of action that would lead to the implementation of what came to be known as Total Quality Management. Consequently, the Japanese asked Joseph Juran to come to Japan and lecture on the topic in 1954 (Westcott, 2013).

3. Research Problem and Hypothesis

Generally, public organizations are notorious for corruption, which led to the problem of developing them. The study at hand examines the possibility of implementing Total Quality Management (TQM) to solve the problem of corruption at the Cooperative of State Employees (CSE). Thus, the researchers have the following questions:

- **Does implementing the TQM at the Cooperative of State Employees (CSE) in Lebanon lead to improving its financial performance?**

The following questions arise from the question above:

- 1) Does focus on affiliates lead to improve financial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 2) Does high management support lead to improve financial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 3) Does continual improvement lead to improve financial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 4) Does training employees lead to improve financial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 5) Does teamwork lead to improve financial performance at the Cooperative of State Employees (CSE) in Lebanon?

- **Does implementing the TQM at the Cooperative of State Employees (CSE) in Lebanon lead to improving its managerial performance?**

The following questions arise from the question above:

- 1) Does focus on affiliates lead to improve managerial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 2) Does high management support lead to improve managerial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 3) Does continual improvement lead to improve managerial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 4) Does training employees lead to improve managerial performance at the Cooperative of State Employees (CSE) in Lebanon?
- 5) Does teamwork lead to improve managerial performance at the Cooperative of State Employees (CSE) in Lebanon?

Based on the research problem and the above questions, the researchers have two main hypotheses to prove or disprove.

The first hypothesis:

H₁ There is no impact of statistical significance between implementing Total Quality Management (TQM) and improving financial performance at the Cooperative of State Employees (CSE) in Lebanon.

The following sub-hypotheses arise from the first hypothesis:

H_{1.1} There is no impact of statistical significance of focus on affiliates on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{1.2} There is no impact of statistical significance of high management support on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{1.3} There is no impact of statistical significance of continual improvement on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{1.4} There is no impact of statistical significance of training employees on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{1.5} There is no impact of statistical significance of teamwork on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

The second hypothesis:

H₂ There is no impact of statistical significance between implementing Total Quality Management (TQM) and improving managerial performance at the Cooperative of State Employees (CSE) in Lebanon.

The following sub-hypotheses arise from the second hypothesis:

H_{2.1} There is no impact of statistical significance of focus on affiliates on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{2.2} There is no impact of statistical significance of high management support on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{2.3} There is no impact of statistical significance of continual improvement on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{2.4} There is no impact of statistical significance of training employees on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

H_{2.5} There is no impact of statistical significance of teamwork on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

4. Procedures and Methods

4.1 Population and Sample Selection

The population of the study consists of all employees at the Cooperative of State Employees (CSE), which count 330. The questionnaire was distributed among all the employees, from which 308 were retrieved (93.3%) and all were valid for testing. The following table shows the demographic data of the population:

Table 1. Distribution of Population according to Demographic Data

Variable	Category	No.	Percent
Education	Baccalaureate	5.5	5.5
	Technicien Supérieur-TS	12.7	12.7
	Licence Technique-LT	13.5	13.5
	Bachelor's Degree	30.8	30.8
	Master's Degree	22.1	22.1
	Ph.D	7.8	7.8
	Other	8.1	8.1
Major	Management and Accounting	38.3	38.3
	Engineering	1.0	1.0
	Medicine	16.2	16.2
	Law	14.9	14.9
	Social Sciences	4.5	4.5
	Management Information Systems	4.2	4.2
	Statistics	1.3	1.3
	Other	19.5	19.5
Job Position	Director General	.3	0.3
	Head of Organization	1.3	1.3
	Head of Branch	1.9	1.9
	Circle Head	1.9	1.9
	Expense Contract Controller	2.9	2.9
	Head of Office	2.3	2.3
	Permanent Employee	69.8	69.8
	Contracted Employee	19.5	19.5
Years of Experience	Less than 5 years	17.2	17.2
	5 to 9 years	21.4	21.4
	10 to 14 years	24.0	24.0
	15 to 19 years	13.0	13.0
	20 to 24 years	14.0	14.0
	More than 24 years	10.4	10.4
Total		308	100.0

4.2 Instrumentation

Based on the previous studies, the problem and questions of the study, and the researchers' personal experience, a five-point Likert Style questionnaire was constructed and distributed among the sample of the study. The questionnaire has two main sections. The first section is personal data (education, major, job position, and years of experience). The second section is the items and domains of the study as follows:

- First Domain: Focus on affiliates, and it has 10 items to express it.
- Second Domain: High Management Support and it has 10 items to express it.
- Third Domain: Continual Improvement and it has 10 items to express it.
- Fourth Domain: Employee training and it has 10 items to express it.
- Fifth Domain: Teamwork and it has 10 items to express it.
- Sixth Domain: Improving Financial and Organizational Performance, and it has dimensions as follows:
 - First Dimension: Improving Financial Performance and it has 5 items to express it.
 - Second Dimension: Improving Organizational Performance and it has 5 items to express it.

The scale ranges as follows in Table 2:

Table 2. Correct Tool of the Study

Answer	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Degree	5	4	3	2	1

4.3 Internal Consistency

The researchers took an exploratory sample of 50 individuals among the population of the study to verify the internal consistency through calculating Pearson Correlation Coefficient to recognize the extent of correlation of each item of the questionnaire to the total level of the domain or dimension it belongs to. Table 3 shows that all items of the study tool are significantly correlated at the level 0.01 and 0.05 at the total level of its domains since the coefficient for these items ranged from 0.318 to 0.915. This denotes that there exists internal consistency within the items of the study, which supports the validity of the data gathered from the sample.

Table 3. Table Cronbach's Alpha and Guttman Split-Half Coefficient (N=50)

Item	Cor. Coef.	Sig.	Item	Cor. Coef.	Sig.	Item	Cor. Coef.	Sig.	
First Domain			Second Domain			Third Domain			
1	.464**	0.001	1	.784**	0.000	1	.716**	0.000	
2	.551**	0.000	2	.864**	0.000	2	.519**	0.000	
3	.699**	0.000	3	.805**	0.000	3	.741**	0.000	
4	.479**	0.000	4	.718**	0.000	4	.703**	0.000	
5	.546**	0.000	5	.732**	0.000	5	.671**	0.000	
6	.698**	0.000	6	.798**	0.000	6	.776**	0.000	
7	.743**	0.000	7	.829**	0.000	7	.815**	0.000	
8	.651**	0.000	8	.870**	0.000	8	.757**	0.000	
9	.812**	0.000	9	.670**	0.000	9	.736**	0.000	
10	.674**	0.000	10	.758**	0.000	10	.657**	0.000	
Fourth Domain			Fifth Domain			Sixth Domain			
1	.540**	0.000	1	.713**	0.000	Financial Performance	1	.629**	0.000
2	.915**	0.000	2	.783**	0.000		2	.606**	0.000
3	.741**	0.000	3	.854**	0.000		3	.660**	0.000
4	.847**	0.000	4	.812**	0.000		4	.791**	0.000
5	.779**	0.000	5	.644**	0.000		5	.853**	0.000
6	.824**	0.000	6	.714**	0.000	Organizational	1	.755**	0.000
7	.811**	0.000	7	.318*	0.025		2	.755**	0.000
8	.816**	0.000	8	.739**	0.000		3	.842**	0.000
9	.809**	0.000	9	.751**	0.000		4	.680**	0.000
10	.641**	0.000	10	.700**	0.000		5	.739**	0.000

4.4 Reliability of the Study Tool

The researchers took an exploratory sample of (50) individuals among the population of the study to verify the reliability of the study tool using Cronbach's Alpha (α) and Split-Half Coefficient. The following tables show reliability coefficients in each of the two methods. The results show that there exists high reliability in the data of the study, which supports validation of the data collected from the sample.

Table 4. The Value of Cronbach's Alpha

Domain/Dimension	No. of items	Cronbach's Alpha	Correlation between items	Guttman Split-Half Coefficient
First Domain: Focus on affiliates	10	0.837	0.831	0.907
Second Domain: High Management Support	10	0.928	0.868	0.929
Third Domain: Continual Improvement	10	0.89	0.823	0.900
Fourth Domain: Employee training	10	0.923	0.905	0.940
Fifth Domain: Team work	10	0.891	0.854	0.911
Sixth Domain: Improving Financial Performance	5	0.556	0.556	0.673
Financial and Organizational Performance	5	0.599	0.599	0.731
All items	60	0.961	0.944	0.971

4.5 Normal Distribution of Variables

The researchers conducted the Kolmogorov-Smirnov test to examine the normal distribution, and the result showed that the study variables do not follow the normal distribution. Despite that, and since the sample is large (more than 30), according to the Central Limit Theory, Parametric tests can be conducted in the case of large samples regardless of the normal distribution condition (Anderson, Seppäläinen, & Valkó, 2017), in addition to what Geoff Norman (2010, p. 31) reached about the possibility of using parametric tests with data from the quintet Likert scale regardless of the size of the sample and regardless of whether or not the data follows the normal distribution. Thus, the researchers relied on parametric tests in testing and discussing the hypotheses of the study.

5. Data Analysis and Discussion

5.1 Analysis of the Results of the First Domain "Focus on Affiliates"

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the first domain "Focus on Affiliates". The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following table:

Table 5. Analysis of the Results Related to the First Domain “Focus on Affiliates”

No.	Focus on Affiliates	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	The Cooperative of State Employees (CSE) considers affiliates as the basis of its activities.	4.30	0.57	86.0%	39.83	0.00	1
2	The CSE is fully aware of the services it offers to affiliates.	4.23	0.66	84.7%	32.63	0.00	2
3	The CSE follows up the affiliates' complaints using appropriate methods to settle them in the least possible time.	3.70	0.92	74.0%	13.36	0.00	6
4	The CSE regards the subscriptions paid by affiliates fair considering the services provided to them.	3.70	0.90	74.0%	13.68	0.00	6
5	The CSE is keen to supply appropriate services to affiliates as soon as possible in due time.	3.94	0.84	78.9%	19.67	0.00	3
6	The CSE has a system that facilitates access of the affiliates' opinions to measure their satisfaction.	3.63	0.86	72.7%	12.91	0.00	8
7	The CSE measures the affiliates' satisfaction towards its services from time to time and tolerates their suggestions to improve the quality of its provided services.	3.55	0.90	71.0%	10.75	0.00	9
8	The CSE depends on specialists to study the affiliates' novel suggestions.	3.61	1.08	63.1%	2.52	0.01	10
9	The CSE seeks to provide all its services electronically.	3.81	0.88	76.1%	16.04	0.00	5
10	The affiliates' satisfaction is the management's most important goals at present and in the future, so it constantly studies their needs and desires.	3.88	0.77	77.7%	20.25	0.00	4
Total		3.79	0.46	75.8%	29.94	0.00	

*Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample's responses on all the items of the first domain "Focus on Affiliates" was 3.79 out of 5 with a standard deviation of 0.46 and a relative weight of 75.8%. To examine the mean of the domain "Focus on affiliates against the value (3) which expresses neutrality, the value of T-calculated was 29.94, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the first domain "Focus on Affiliates".

The two items that got the highest levels of approval are:

- The item that states: "The Cooperative of State Employees (CSE) considers affiliates as the basis of its activities" got the first place with a relative weight of 86%.
- The item that states: "The CSE is fully aware of the services it offers to affiliates" got the second place with a relative weight of 84.7%.

The two items that got the lowest levels of approval are:

- The item that states: "The CSE depends on specialists to study the affiliates' novel suggestions" got the last place with a relative weight of 63.1%.
- The item that states: "The CSE seeks to provide all its services electronically" got the place next to the last with a relative weight of 71%.

5.2 Analysis of the Results of the Second Domain "High Management Support"

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the second domain "High Management Support". The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following table:

Table 6. Analysis of the Results Related to the Second Domain "High Management Support"

No.	High Management Support	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	The high management believes in TQM, considers it a slogan, and has a desire to implement it.	4.00	0.73	80%	24.16	0.00	1
2	The high management has a clear vision and a strategic plan to treat internal weaknesses.	3.42	0.97	68.4%	7.60	0.00	10
3	The high management works on providing means and resources to implement TQM among different levels.	3.62	0.82	72.4%	13.20	0.00	8
4	The high management gives enough time and facilitates implementing decisions.	3.79	0.74	75.8%	18.76	0.00	4
5	The high management spreads the culture of improving performance and facilitating the	3.44	0.98	68.8%	7.89	0.00	9

	flow of information among all departments.						
6	The high management accurately keeps up with managerial changes and updates.	3.68	0.76	73.5%	15.59	0.00	7
7	The high management lays down practical and factual policies and strategies to achieve the overall goals.	3.79	0.70	75.8%	19.86	0.00	4
8	The management works on decreasing and eliminating obstacles, diagnosing and analyzing problems, and posing suitable solutions.	3.82	0.78	76.4 %	18.56	0.00	3
9	The management works on keeping its commitments toward affiliates through supplying unique services proficiently.	3.94	0.69	78.7%	23.90	0.00	2
10	The high management puts forth new procedures for funding from various sources.	3.75	0.87	74.9%	15.00	0.00	6
Total		3.72	0.53	74.5%	23.96	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample's responses on all the items of the second domain "High Management Support" was 3.72 out of 5 with a standard deviation of 0.53 and a relative weight of 74.5%. To examine the mean of the domain "High Management Support" against the value (3) which expresses neutrality, the value of T-calculated was 23.96, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the second domain "High Management Support".

The two items that got the highest levels of approval are:

- The item that states: "The high management believes in TQM, considers it a slogan and has a desire to implement it" got the first place with a relative weight of 80%.
- The item that states: "The management works on keeping its commitments toward affiliates through supplying unique services proficiently" got the second place with a relative weight of 78.7%.

The two items that got the lowest level of approval are:

- The item that states: "The high management has a clear vision and a strategic plan to treat internal weaknesses" got the last place with a relative weight of 68.4%.
- The item that states: "The high management spreads the culture of improving performance and facilitating the flow of information among all departments" got the place next to the last with a relative weight of 68.8%.

5.3 Analysis of the Results of the Third Domain “Continual Improvement”

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the third domain “Continual Improvement”. The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following table:

Table 7. Analysis of the Results Related to the Third Domain “Continual Improvement”

No.	Continual Improvement	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	The CSE considers continual improvement of services it provides to affiliates is part of the requirements of the TQM system.	4.12	0.67	82.3%	29.05	0.00	1
2	The CSE continuously monitors the implementation of employment standards.	3.52	0.97	70.3%	9.37	0.00	9
3	The CSE continuously depends on using technology to develop services provided.	3.88	0.78	77.6%	19.81	0.00	2
4	The CSE reviews the regulations and procedures and measures performance indicators to secure continual improvement.	3.83	0.74	76.7%	19.76	0.00	5
5	The CSE utilizes an advanced procedure to communicate among all departments considering that continual improvement is a joint responsibility.	3.67	0.84	73.4%	14.05	0.00	7
6	The CSE utilizes the mode of preventing mistakes rather than falling into them to reach continual improvement.	3/48	0.96	69.6%	8.75	0.00	10
7	The CSE is keen to supervise and train employees to secure continual improvement.	3.67	0.91	73.4%	12.83	0.00	7
8	The CSE continuously decreases the discrepancy between the affiliates’ expectations about the quality of the service provided and the expected service.	3.71	0.81	74.3%	15.50	0.00	6
9	The CSE is keen to follow quality procedures relative to continual improvement and evolution of corrective measures to control documentation and, records, and audits.	3.85	0.75	77.1%	20.11	0.00	3
10	Rules and regulations of the CSE allow search and improvement operations.	3.83	0.86	76.9%	17.32	0.00	4
Total		3.76	0.53	75.1%	25.30	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample's responses on all the items of the third domain "Continual Improvement" was 3.76 out of 5 with a standard deviation of 0.53 and a relative weight of 75.1%. To examine the mean of the domain "Continual Improvement" against the value (3) which expresses neutrality, the value of T-calculated was 25.3, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the third domain "Continual Improvement".

The two items that got the highest levels of approval are:

- The item that states: "The CSE considers continual improvement of services it provides to affiliates is part of the requirements of TQM system" got the first place with a relative weight of 82.3%.
- The item that states: "The CSE continuously depends on using technology to develop services provided" got the second place with a relative weight of 77.6%.

The two items that got the lowest levels of approval are:

- The item that states: "The CSE utilizes the mode of preventing mistakes rather than falling into them to reach continual improvement" got the last place with a relative weight of 69.6%.
- The item that states: "The CSE continuously monitors the implementation employment standards" got the place next to the last with a relative weight of 70.3%.

5.4 Analysis of the Results of the Fourth Domain "Employee Training"

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the fourth domain "Employee Training". The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following table:

Table 8. Analysis of the Results Related to the Fourth Domain "Employee Training"

No.	Employee Training	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	The CSE is keen to participate in local and international conferences.	3.65	0.82	72.9%	13.83	0.00	2
2	The CSE is keen to train employees on the most recent information, managerial, and leadership systems.	3.03	1.06	60.6%	0.48	0.63	9
3	The CSE selects and attracts the most qualified to improve its work.	3.61	0.89	72.1%	11.92	0.00	3
4	The CSE trains all employees on using counseling and guidance.	3.06	1.03	61.3%	1.11	0.27	8
5	The CSE is keen to train heads of departments and organizations on a unified program of support and commitment to improving work in all organizations.	3.39	0.91	67.9%	7.56	0.00	5
6	The CSE assesses and studies the viability of its	3.28	0.98	65.6%	5.08	0.00	7

	employees' participation in training programs and sessions.						
7	The CSE is keen to put forth suitable plans to train employees on the means and processes of treating the affiliates.	3.35	0.99	67.0%	6.24	0.00	6
8	Employees who achieve goals within their line of work are rewarded according to their contribution to achieving that goal.	2.91	1.16	58.2%	1.32	0.19	10
9	Employees are elected to undergo training sessions objectively based on the needs of their work.	3.54	0.99	70.8%	9.95	0.00	4
10	Financial compensations are considered an incentive for employees to implement standards of the TQM system.	3.86	0.98	77.1%	15.38	0.00	1
Total		3.37	0.67	67.4%	9.70	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample's responses on all the items of the fourth domain "Employee Training" was 3.37 out of 5 with a standard deviation of 0.67 and a relative weight of 67.4%. To examine the mean of the domain "Employee Training" against the value (3) which expresses neutrality, the value of T-calculated was 9.70, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the fourth domain "Employee Training".

The two items that got the highest levels of approval are:

- The item that states: "Financial compensations are considered an incentive for employees to implement standards of TQM system" got the first place with a relative weight of 77.1%.
- The item that states: "The CSE is keen to participate in local and international conferences" got the second place with a relative weight of 72.9%.

The two items that got the lowest approval level are:

- The item that states: "Employees who achieve goals within their line of work are rewarded according to their contribution in achieving that goal" got the last place with a relative weight of 58.2%.
- The item that states: "The CSE is keen to train employees on the most recent information, managerial and leadership systems" got the place next to the last with a relative weight of 60.6%.

5.5 Analysis of the Results of the Fifth Domain "Team Work"

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the fifth domain "Team Work". The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following table:

Table 9. Analysis of the Results Related to the Fifth Domain “Team Work”

No.	Team Work	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	The CSE promotes teamwork and cooperation among organizations and departments to achieve its goals.	3.99	0.80	79.9%	21.82	0.00	2
2	The CSE is keen that all employees participate in preparing strategic plans to improve quality.	3.50	1.00	70.1%	8.80	0.00	8
3	The CSE depends on reverse feedback by accepting and adopting useful suggestions.	3.32	0.98	66.4%	5.70	0.00	10
4	The CSE continuously stimulates teamwork by strengthening bonds and acquiring trust among all employees.	3.65	0.86	73.1%	13.29	0.00	6
5	The CSE is keen to have heads of organizations and departments share in decision-making.	3.36	0.96	67.3%	6.64	0.00	9
6	The CSE works on finding relations and mutual interests among all employees to boost their ability to create added value.	3.57	0.86	71.4%	11.53	0.00	7
7	The employees at the CSE are willing to work as a team.	4.00	0.78	79.9%	11.53	0.00	1
8	The CSE is keen to resolve conflicts through a qualified and harmonious team.	3.74	0.84	74.7%	15.36	0.00	5
9	The employees share with full effort in presenting suggestions, problem-solving, and solutions to improve financial and managerial performance at the CSE.	3.88	0.85	77.6%	18.04	0.00	3
10	The management mandates all employees the necessary power to serve the affiliates as soon as possible.	3.88	0.80	77.6%	19.30	0.00	3
Total		3.69	0.58	73.8%	20.92	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample's responses on all the items of the fifth domain “Team Work” was 3.69 out of 5 with a standard deviation of 0.58 and a relative weight of 73.8%. To examine the mean of the domain “Team Work” against the value (3) which expresses neutrality, the value of T-calculated was 20.92, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the fifth domain “Team Work”.

The two items that got the highest levels of approval are:

- The item that states: “The employees at the CSE are willing to work as a team” got the first place with a relative weight of 79.9%.

- The item that states: “The CSE promotes teamwork and cooperation among organizations and departments to achieve its goals” got the second place with a relative weight of 79.9%.

The two items that got the lowest levels of approval are:

- The item that states: “The CSE depends on reverse feedback by accepting and adopting useful suggestions” got the last place with a relative weight of 66.4%.
- The item that states: “The CSE is keen to have heads of organizations and departments share in decision-making” got the place next to the last with a relative weight of 67.3%.

5.6 Analysis of the Results of the Sixth Domain “Improving Financial and Organizational Performance”

The researchers calculated the mean, standard deviation, relative weight, and rank for each item of the sixth domain “Improving Financial and Organizational Performance”. The researchers also verified the averages of the responses for the items against the value (3) which expresses the neutral degree using the One-Sample T-Test as shown in the following two tables:

5.6.1 Improving Financial Performance

Table 10. Analysis of the Results Related to the Dimension “Improving Financial Performance”

No.	Improving Financial Performance	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	Caring for affiliates leads to increasing revenues.	3.55	1.23	71.0	7.86	0.00	5
2	High management support leads to improving sources of funding.	3.90	0.80	78.1%	19.87	0.00	3
3	Continual improvement of various services presented would reduce their costs.	3.88	0.83	77.5%	18.63	0.00	4
4	Training employees in accordance with certain standards leads to cost control.	4.19	0.70	83.8%	29.75	0.00	1
5	Cooperation and teamwork among all organizations and departments lead to decreasing costs.	4.17	0.72	83.4%	28.31	0.00	2
Total		3.94	0.60	78.8%	27.36	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample’s responses on all the items of the dimension “Improving Financial Performance” was 3.94 out of 5 with a standard deviation of 0.6 and a relative weight of 78.8%. To examine the mean of the dimension “Improving Financial Performance” against the value (3) which expresses neutrality, the value of T-calculated was 27.36, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the dimension “Improving Financial Performance”.

The two items that got the highest levels of approval are:

- The item that states: “Training employees in accordance with certain standards leads to cost control” got the first place with a relative weight of 83.8%.
- The item that states: “Training employees in accordance with certain standards leads to cost control” got the second place with a relative weight of 83.4%.

The two items that got the lowest levels of approval are:

- The item that states: “Caring for the affiliates leads to increasing revenues” got the last place with a relative weight of 71%.
- The item that states: “Continual improvement of various services presented would reduce their costs” got the place next to the last.

5.6.2 Improving Managerial Performance

Table 11. Analysis of the Results Related to the Dimension “Improving Managerial Performance”

No.	Improving Managerial Performance	Mean	Std. Dev.	Rel. Wt.	T-test	Sig.	Rank
1	Focus on affiliates leads to earning their trust and satisfaction for the services.	4.24	0.63	84.8%	34.78	0.00	5
2	Enhancing internal control by high management leads to combating corruption.	4.26	0.61	85.3%	36.11	0.00	4
3	Continual improvement leads to the advancement of services provided.	4.32	0.58	86.4%	39.59	0.00	3
4	Training employees in accordance with due process leads to rapid delivery.	4.40	0.57	88.1%	43.11	0.00	1
5	Teamwork leads to streamlining the procedures.	4.34	0.40	86.8%	37.73	0.00	2
Total		4.31	0.40	86.2%	57.91	0.00	

Note. The value of T-tabular at degree of freedom 307 and significance level 0.05 is 1.96.

The mean of the sample’s responses on all the items of the dimension “Improving Managerial Performance” was 4.31 out of 5 with a standard deviation of 0.4 and a relative weight of 86.2%. To examine the mean of the dimension “Improving Managerial Performance” against the value (3) which expresses neutrality, the value of T-calculated was 57.91, which is greater than T-tabulated at the significance level 0.05, which depicts the positive attitude of the sample towards the dimension “Improving Managerial Performance”.

The two items that got the highest levels of approval are:

- The item that states: “Training employees in accordance with due process leads to rapid delivery” got the first place with a relative weight of 88.1%.

- The item that states: “Teamwork leads to streamlining the procedures” got the second place with a relative weight of 86.8%.

The two items that got the lowest levels of approval are:

The item that states: “Focus on affiliates leads to earning their trust and satisfaction for the services” got the last place with a relative weight of 84.8%.

The item that states: “Enhancing internal control by high management leads to combating corruption” got the place next to the last with a relative weight of 85.3%.

6. Testing the Hypotheses

The researchers tested the following null hypotheses:

1) There is no impact of statistical significance of focusing on affiliates on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

2) There is no impact of statistical significance of focusing on affiliates on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

To test these hypotheses, the researchers used the simple linear regression, and the results came as follows:

Table 12. Impact of Focus on Affiliates on Improving Financial and Managerial Performance

Independent variable	Unstandardized Coefficient		Standardized Coefficient	T-Test		ANOVA Test		Correlation Coefficient R	Coefficient of Determination R ²
	Coefficients	Standard Error	Beta	Value of T	Sig. Level	Value of F	Sig. level		
	Impact of focus on affiliates on improving financial performance								
Fixed	2.809	.276		10.179	.000	17.00	.000	.229	.053
Focus on Affiliates	.298	.072	.229	4.123	.000				
	Impact of focus on affiliates on improving managerial performance								
Fixed	4.106	.187		21.961	.000	1.234	.267	.063	.004
Focus on Affiliates	.054	.049	.063	1.111	.267				

It is evident from the above table that there is an impact of significance for focus on affiliates on improving financial performance at the CSE ($\beta=0.298$), while the results did not show an impact of significance for focus on affiliates on improving managerial performance at the CSE.

The researchers tested the following null hypotheses:

1) There is no impact of statistical significance of high management support on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

2) There is no impact of statistical significance of high management support on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

To test these hypotheses, the researchers used the simple linear regression, and the results came as follows:

Table 13. Impact of High Management Support on Improving Financial and Managerial Performance

Independent variable	Unstandardized Coefficient		Standardized Coefficient	T-Test		ANOVA Test		Correlation Coefficient R	Coefficient of Determination R ²
	Coefficients	Standard Error	Beta	Value of T	Sig. Level	Value of F	Sig. level		
Impact of high management support on improving financial performance									
Fixed	2.450	.228		10.729	.000	43.298	.000	.352	.124
High Management Support	.400	.061	.352	6.580	.000				
Impact of high management support on improving managerial performance									
Fixed	4.158	.161		25.828	.000	0.932	.335	.055	.003
High Management Support	.043	.049	.055	0.966	.335				

It is evident from the above table that there is an impact of significance for high management support on improving financial performance at the CSE ($\beta=0.400$), while the results did not show an impact of significance for high management support on improving managerial performance at the CSE.

The researchers tested the following null hypotheses:

1) There is no impact of statistical significance of continual improvement on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.

2) There is no impact of statistical significance of continual improvement on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

To test these hypotheses, the researchers used the simple linear regression, and the results came as follows:

Table 14. Impact of Continual Improvement on Improving Financial and Managerial Performance

Independent variable	Unstandardized Coefficient		Standardized Coefficient	T-Test		ANOVA Test		Correlation Coefficient R	Coefficient of Determination R ²
	Coefficients	Standard Error	Beta	Value of T	Sig. Level	Value of F	Sig. level		
	Impact of continual improvement on improving financial performance								
Fixed	2.550	.235		10.845	.000	35.534	.000	.323	.104
Continual Improvement	.369	.062	.323	5.961	.000				
	Impact of continual improvement on improving managerial performance								
Fixed	4.308	.164		26.245	.000	.001	.980	0.001	.000
Continual Improvement	.001	.043	.001	.025	.980				

It is evident from the above table that there is an impact of significance for continual improvement on improving financial performance at the CSE ($\beta=0.369$), while the results did not show an impact of significance for continual improvement on improving managerial performance at the CSE.

The researchers tested the following null hypotheses:

- 1) There is no impact of statistical significance of training employees on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.
- 2) There is no impact of statistical significance of training employees on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

To test these hypotheses, the researchers used the simple linear regression, and the results came as follows:

Table 15. Impact of Training Employees on Improving Financial and Managerial Performance

Independent variable	Unstandardized Coefficient		Standardized Coefficient	T-Test		ANOVA Test		Correlation Coefficient R	Coefficient of Determination R ²	
	Coefficients	Standard Error	Beta	Value of T	Sig. Level	Value of F	Sig. level			
	Impact of training employees on improving financial performance									
	Fixed	2.734	.163		16.798	.000	56.857	.000	.396	.157
	Training Employees	.357	.047	.396	7.540	.000				
Impact of training employees on improving managerial performance										

Fixed	4.256	.117		36.354	.000	.236	.627	.028	.001
Training	.017	.034	.028	.486	.627				
Employees									

It is evident from the above table that there is an impact of significance for training employees on improving financial performance at the CSE ($\beta=0.357$), while the results did not show an impact of significance for training employees on improving managerial performance at the CSE.

The researchers tested the following null hypotheses:

- 1) There is no impact of statistical significance of teamwork on improving financial performance in the CSE at the significance level $\alpha \leq 0.05$.
- 2) There is no impact of statistical significance of teamwork on improving managerial performance in the CSE at the significance level $\alpha \leq 0.05$.

To test these hypotheses, the researchers used the simple linear regression, and the results came as follows:

Table 16. Impact of Teamwork on Improving Financial and Managerial Performance.

Independent variable	Unstandardized Coefficient		Standardized Coefficient	T-Test		ANOVA Test		Correlation Coefficient R	Coefficient of Determination R ²
	Coefficients	Standard Error	Beta	Value of T	Sig. Level	Value of F	Sig. level		
	Impact of teamwork on improving financial performance								
Fixed	2.501	.206		12.136	.000	49.843	.000	.374	.140
Teamwork	.390	.055	.374	7.06	.000				
	Impact of teamwork on improving managerial performance								
Fixed	4.298	.147		29.268	.000	.01	.921	.006	.000
Teamwork	.004	.039	.006	.10	.921				

It is evident from the above table that there is an impact of significance for teamwork on improving financial performance at the CSE ($\beta=0.390$), while the results did not show an impact of significance for teamwork on improving managerial performance at the CSE.

7. Conclusions and Recommendations

The study rendered the following results:

- There is an impact of significance for focus on affiliates on improving financial performance at the CSE, while there is no impact of significance for focus on affiliates on improving managerial performance at the CSE.
- There is an impact of significance for high management on improving financial performance at the CSE, while there is no impact of significance for high management on improving managerial performance at the CSE.
- There is an impact of significance for continual improvement on improving financial performance at the CSE, while there is no impact of significance for continual improvement on improving managerial performance at the CSE.
- There is an impact of significance for training employees on improving financial performance at the CSE, while there is no impact of significance for training employees on improving managerial performance at the CSE.
- There is an impact of significance for teamwork on improving financial performance at the CSE, while there is no impact of significance for teamwork on improving managerial performance at the CSE.

The current study surprisingly corresponded with Whyte and Wicher (1992), Nadan and Bremner (1991), Witcher (1993) and Shin et al. (1998) in that TQM has no significant impact on managerial performance. The researchers believe that the results came as such since the sample of the study may think that there should be other administrative procedures coupling the implementation of TQM. On the other hand, the study was in accordance with Al-Basheer et al. (2015) in that applying TQM system has a positive and significant impact on the financial performance of the organization.

Based on the above findings, the researchers believe that, in addition to a TQM system, there should be moral and material incentive programs at organizations to improve productivity. Also, there should be a highly reactive control system to correct errors promptly as soon as they are detected, and the employees who are responsible for the errors should be held accountable for the mistakes they make. Thus, the management should conduct a workshop for employees to be aware of the “rewards and punishment” program at the organization.

References

- Agus, A., & Hassan, Z. (2011). Enhancing Production Performance and Customer Performance through Total Quality Management (TQM): Strategies for Competitive Advantage. *Procedia-Social and Behavioral Sciences*, 24, 1650-1662. <https://doi.org/10.1016/j.sbspro.2011.09.019>
- Al-Basheer, A., Shawaqfeh, G., Mathani, B., & Al-Jabari, M. (2105). The Impact of Total Quality Management on Financial Performance “A Field Study in the Jordan Islamic Bank, Irbid

- Province-Jordan". *International Journal of Business and Social Science*, 6(11), 65-82. Retrieved from https://ijbssnet.com/journals/Vol_6_No_11_1_November_2015/9.pdf
- Amin, M., Aldakhil, A. M., Wu, C., Rezaei, S., & Cobanoglu, C. (2017). The Structural Relationship between TQM, Employee Satisfaction and Hotel Performance. *International Journal of Contemporary Hospitality Management*, 29(4), 1256-1278. <https://doi.org/10.1108/IJCHM-11-2015-0659>
- Baird, K., Hu, K. J., & Reeve, R. (2011). The Relationships between Organizational Culture, Total Quality Management Practices and Operational Performance. *International Journal of Operations & Production Management*, 31(7), 789-814. <https://doi.org/10.1108/01443571111144850>
- Cetindere, A., Duran, C., & Yetisen, M. S. (2015). The Effects of Total Quality Management on the Business Performance: An Application in the Province of Kütahya. *Procedia Economics and Finance*, 23, 1376-1382. [https://doi.org/10.1016/S2212-5671\(15\)00366-4](https://doi.org/10.1016/S2212-5671(15)00366-4)
- Chin, K. S., Sofian, S., & Leng, O. Y. (2018). The Impact of Total Quality Management on Corporate Performance in Malaysian Public Listed Companies. *The Journal of Social Research, Special Issue 2*, 22-30. Retrieved from <https://ideas.repec.org/a/arp/tjssrr/2018p22-30.html>
- Douglas, T. J., & Judge, W. Q. (2001). Total quality management implementation and competitive advantage, the Role of Structural Control and Exploration. *The Academy of Management Journal*, 44(1), 158-169. <https://doi.org/10.2307/3069343>
- Gambi, L., Boer, H., Gerolamo, M., Jorgensen, F., & Carpinetti, L. (2015). The Relationship between Organizational Culture and Quality Techniques, and Its Impact on Operational Performance. *International Journal of Operations & Production Management*, 35(10), 1460-1484. <https://doi.org/10.1108/IJOPM-12-2013-0563>
- Long, C. S., Aziz, M. H. A., Owang, T. O., & Ismail, W. K. W. (2015). Impact of TQM Practices on Innovation Performance Among Manufacturing. *The South African Journal of Industrial Engineering*, 26(1), 75-85. <https://doi.org/10.7166/26-1-1038>
- Miyagawa, M., & Yoshida, K. (2010). TQM Practices of Japanese-owned Manufacturers in the USA and China. *International Journal of Quality & Reliability Management*, 27(7), 736-755. <https://doi.org/10.1108/02656711011062363>
- Naden, J., & Bremner, A. (1991). A Guide to Total Quality Management. *Glasgow: Scottish Enterprise*.
- Nguyen, M., Phan, A. C., & Matsui, Y. (2018). Contribution of Quality Management Practices to Sustainability Performance of Vietnamese Firms. *Sustainability, MDPI*, 10(2), 375. <https://doi.org/10.3390/su10020375>
- O'Neill, P., Sohal, A., & Teng, C. W. (2016). Quality Management Approaches and Their Impact on Firms' Financial Performance—An Australian Study. *International Journal of Production Economics*, 171, 381-393. <https://doi.org/10.1016/j.ijpe.2015.07.015>
- Phan, A. C., Nguyen, H. T., Nguyen, H. A., & Matsui, Y. (2019). Effect of Total Quality Management Practices and JIT Production Practices on Flexibility Performance: Empirical Evidence from

- International Manufacturing Plants. *Sustainability, MDPI, 11*(11), 1-21.
<https://doi.org/10.3390/su11113093>
- Prajogo, D. I., & Sohal, A. S. (2006). The Integration of TQM and Technology R&D Management in Determining Quality and Innovation Performance. *Omega, 34*(3), 296-312.
<https://doi.org/10.1016/j.omega.2004.11.004>
- Sadkoglo, E., & Olcay, H. (2014). The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey. *Advances in Decision Sciences, 2014*, Article ID 537605, 17 pages. <https://doi.org/10.1155/2014/537605>
- Shin, D., Kalinowski, J. G., & El-Enein, G. A. (1998). Critical Implementation Issues in Total Quality Management. *SAM Advanced Management Journal, 63*(1), 10.
- Siva, V., Gremyr, I., Bergquist, B., Garvare, R., Zobel, T., & Isaksson, R. (2016). The support of quality Management to Sustainable Development: A Literature Review. *Journal of Cleaner Production, 138*(2), 148-157. <https://doi.org/10.1016/j.jclepro.2016.01.020>
- Talib, F., Rahman, Z., & Qureshi, M. (2011). Analysis of Interaction among the Barriers to Total Quality Management Implementation Using Interpretive Structural Modeling Approach. *Benchmarking: An International Journal, 18*, 563-587.
<https://doi.org/10.1108/14635771111147641>
- Talib, F., Rahman, Z., & Qureshi, M. (2013). An Empirical Investigation of Relationship between Total Quality Management Practices and Quality Performance in Indian Service Companies. *International Journal of Quality & Reliability Management, 30*, 280-318.
<https://doi.org/10.1108/02656711311299845>
- Wang, C.-H., Chen, K.-Y., & Chen, S.-C. (2012). Total Quality Management, Market Orientation and Hotel Performance: The Moderating Effects of External Environmental Factors. *International Journal of Hospitality Management, 31*(1), 119-129. <https://doi.org/10.1016/j.ijhm.2011.03.013>
- Westcott, R. T. (2013). *The Certified Manager of Quality/Organizational Excellence Handbook* (4th ed.). ASQ Quality Press.
- Whyte, J., & Witcher, B. (1992). *The Adoption of Total Quality Management in Northern England*. Occasional Paper, Durham: University of Durham.
- Witcher, B. (1993). *The Adoption of Total Quality Management in Scotland*. Durham: University of Durham.