

# Total Quality Management in the Airlines Services Industry: The Case of Bahrain Airport Services

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**Abstract:** Previous studies showed a different results of total quality management factors and its effect on organization performance. The main objective of this study is to investigated the effect of total quality management on organization performance. The population of this study included different level of employment at Bahrain Airport Services, convenience sampling used in this research. The researcher has used five point Likert in the questionnaire SPSS software version 23.0 used for data analysis. This study decided on leadership, training, continuous improvement and strategic quality planning as total quality management factors based on literature review. It also included multiple organization performance measures; operation performance, employee performance, innovation performance and social responsibility as organization performance. The study found that overall total quality management practices have a significant effect on organization performance.

**Keywords:** Total Quality Management, Organizational Performance, Strategic Quality Planning, Continuous Improvement

## I. INTRODUCTION

Under the contemporary increasing competition conditions quality became an important factor for business to increase their competitiveness and total quality Management approach gained importance [3]. Total quality management can be described as a technique or method used for goods and services continues enhancement by involving all the levels and functions of the organization [1]. Total quality management is philosophy that aims to achieve organizational objective and continuously improve customer satisfaction [6]. Total quality management is one of numerous quality-based methods when it is practiced efficiently it conveys many advantages, including improving employees involvement, improving quality, increasing efficiency, enhance customer satisfaction and strengthening the business performance and competitive advantage [4]. The studies were conducted in different context such as different industries, by using different total quality management practices and by measuring different performance indicators [2].

The aim of this study to find the effect of total quality management practices and organization performance.

## II. THEORETICAL FRAMEWORK

Previous studies showed an ambiguous and mixed results of the relationship between total quality management practices and performance [5] by using different total quality management factors and by measuring different organization performance measures. The framework of this study developed based on Sadikoglu and Olcay (2014) model which showed the relationship between total quality management practices and firm performance measures.

## III. RESEARCH OBJECTIVES

The current study aims at achieving the following objectives:

- 1- Determine the level of total quality management terms of:
  - a. Leadership
  - b. Training
  - c. Continuous improvement
  - d. Strategic quality planning
- 2- Determine the level of organization performance terms of:
  - a. Operational performance
  - b. Employee performance

- c. Innovation performance
- d. Social responsibility
- 3- Determine the effect of total quality management on organization performance.

**IV. METHODOLOGY**

The study employed a descriptive research design and regression analysis were deployed as analytical statistical techniques. The study used a questionnaires survey consist of two parts with five-point Likert Scale. These two parts are; total quality management and organization performance. Prior to the distribution of the questionnaire a reliability test was conducted to 30 employees by using Cronbach’s Alpha in SPSS version 23.0, all items indicators have Cronbach’s Alpha values are greater than 0.70. Convenience sampling was utilized. Total of 131 respondents were part of the final sample of the study. The data was tabulated and treated using SPSS 23.

**V. RESULT AND DISSECTION**

**1- Total Quality Management**

Table I the level total quality management in terms of leadership, training, continuous improvement and strategic quality planning

Statement	Mean	SD	Description
<b>Leadership</b>			
Top management handles the quality performance responsibility.	4.04	0.91	Good
Departments heads handle the quality performance responsibility.	4.01	0.98	Good
Clear work process instructions are given by the managers and supervisors to employees	4.18	0.81	Good
Data about quality is available to supervisors and managers	4.12	0.83	Good
The heads of the departments are involved in quality improvement process	4.06	0.93	Good
Quality department communicated quality issues to top management	4.14	0.93	Good
Top managers focus on quality and quality related issues during meetings	4.15	0.81	Good
<b>Average</b>	<b>4.1</b>	<b>0.88</b>	<b>Good</b>
<b>Training</b>			
Adequate and appropriate training of specific work skills is given to the staff	4.21	0.88	Very good
Teamwork training programs are provided for the employees	4.02	0.89	Good
Training related to quality is given to different level of employment	4.01	0.92	Good
TQM training is provided to the employees	3.97	0.96	Good
Adequate and appropriate training resources are available	4.20	0.85	Good
Program identification training are available for the employees	4.13	0.80	Good
<b>Average</b>	<b>4.09</b>	<b>0.74</b>	<b>Good</b>
<b>Continuous improvement</b>			
Quality performance instructions are discussed with the employees	4.03	0.90	Good
Managers and units heads are responsible for continuous improvement, teaching new methods and leading to empower the employee	4.07	0.92	Good
Evaluation and improvement of work process	4.14	0.85	Good
Supervisors and managers performance evaluation reviewed based on actual quality data	4.12	0.86	Good
Staff has a good understanding to their roles in quality assurance	4.19	0.87	Good
<b>Average</b>	<b>4.09</b>	<b>0.89</b>	<b>Good</b>
<b>Strategic quality planning</b>			
Mission stander and quality objective are clearly defined and communicates	4.16	0.98	Good
Quality policy and goals are attend through measurable KPIs (key performance indicators)	4.17	0.84	Good
Managers put a long term plan regarding quality improvement	4.11	0.99	Good
Continuous quality initiatives result profit increase	4.28	0.93	Very good
Quality plan monitored and reviewed regularly	4.22	0.92	Very good
<b>Average</b>	<b>4.17</b>	<b>0.93</b>	<b>Good</b>

Table I shows the level of total quality management in term of leadership, training, continuous improvement and strategic quality planning. First, the level of total quality management in term of leadership at the organization is good with average mean = 4.1 where, clear work process instructions are given by the managers and supervisors to employees in addition, top managers focus on quality and quality related issues during meetings furthermore, top managers focus on quality and quality related issues during meetings. Second as shown in table I the organization has a good level of total quality management in term of training with average mean = 4.09 where adequate and appropriate training of specific work skills is given to the staff moreover, adequate and appropriate training resources are available in the organization in addition, program identification trainings are available for employees Third the mean of continuous improvement as shown in table I is 4.09 which means that the level of total quality management in term of continuous improvement at the organization is good where, the staff has a good understanding of their roles in quality assurance, evaluation and improvement of work process and supervisors and managers performance evaluation reviewed based on actual quality data. Fourth as shown in table I the level of total quality management in term of strategic quality planning is good where the average mean = 4.17 in fact, continuous quality initiatives result profit increase and quality plan monitored and reviewed regularly.

2- Organization performance

Table II the level of organization performance in terms of operational performance, employee performance, innovation performance and social responsibility

Statement	Mean	SD	Description
<b>Operational performance</b>			
Applying quality standards enhance process productivity	4.17	0.95	Good
The key measures of operational performance have a positive trend	4.21	0.84	Good
Training is a crucial elements of measuring operational performance	4.13	0.90	Good
Training helps control time effectiveness of daily operations	4.24	0.91	Very good
Managers communicated to the junior staff on key measures of operational performance.	4.23	0.90	Very good
Data collected from real market situations helps in keeping an updated record of operational performance	4.26	0.86	Very good
<b>Average</b>	<b>4.20</b>	<b>0.89</b>	<b>Good</b>
<b>Employee performance</b>			
Employees are empowered enough to take more responsibilities	4.19	0.82	good
Employees are able to take corrective action to solve problems	4.15	0.82	Good
Employees able to participate in quality improvement	4.18	0.92	Good
Employees communicate and support management	4.27	0.72	Very good
Employees have the quality initiative to work	4.36	0.72	Very good
Employees consider training as an important tool for better performance	4.34	0.78	Very good
<b>Average</b>	<b>4.25</b>	<b>0.81</b>	<b>Very good</b>
<b>Innovation performance</b>			
Bringing external trainers from outside is beneficial to the quality of the training	4.27	0.75	Very good
Brainstorming sessions provide space for creativity	4.32	0.81	Very good
Top management willing to accept and implement new ideas	4.26	0.88	Good
Setting new goals motivates employees to be more creative	4.25	0.85	Very good
Innovation creates opportunities	4.34	0.75	Very good
<b>Average</b>	<b>4.27</b>	<b>0.83</b>	<b>Very good</b>
<b>Social responsibility</b>			
Organization contribute resources to preserve the environment	4.27	0.78	Very good
The organization contributes in non-profitable social activities	4.23	0.76	Very good
Organization work to fulfill the stakeholders expectations	4.19	0.84	Good
Organization has a positive impact on the society	4.31	0.81	Very good
	4.16	0.87	Good
<b>Average</b>	<b>4.23</b>	<b>0.81</b>	<b>Very good</b>

Table II shows the level of organization performance in four terms; operational performance, employee performance, innovation performance and social responsibility based on the average mean of each term. As table II shows the level of organization performance in term of operation performance is good with a mean of 4.20. In fact, data collected from real market situations helps in keeping an updated record of operational performance in addition, training helps control

time effectiveness of daily operations and managers communicated to the junior staff on key measures of operational performance. As shown in the table the level is very good in term of employee performance (mean = 4.25) where employees have the quality initiative to work, support management and consider training as an important tool for better performance. The level of organization performance in term of innovation performance is very good with the highest mean= 4.27 where, innovation creates opportunities, brainstorming sessions provide space for creativity and bringing external trainers from outside is beneficial to the quality of the training. The result obtained from table II showed a very good level of organization performance in term of social responsibility (mean = 4.23) in fact, the organization has a positive impact on the society, it contributes resources to preserve the environment and it contributes in non-profitable social activities.

**3- regression explanation**

Table III Regression Statistics

Multiple R	0.882607613
R Square	0.778996198
Adjusted R Square	0.771980204
Standard Error	0.264498554
Observations	131

	Df	SS	F	Significance F
Regression	4	31.0708	111.0314	2.493 <sup>E-40</sup>
Residual	126	8.81489		
Total	130	39.8857		

	Coefficients	SE	t Stat	P-value
Int	0.9009	0.1674	5.379	3.508 <sup>E-07</sup>
L	0.0562	0.07054	0.7978	0.4264
T	0.22661	0.07158	3.1658	0.0019
CI	0.2867	0.0767	3.7366	0.0002
SQP	0.2414	0.05424	4.4522	1.850 <sup>E-05</sup>

L= leadership  
T= training  
CI: continuous improvement  
SQP: strategic quality planning

Table III shows the whole model information including the degree of freedom, the sum of square, mean square, the F-value and the significance value, the table shows the result of regression analysis between total quality management and organization performance. The significance value of this research is 2.493<sup>E-40</sup> which is less than 0.05 (mean value) from this result we can conduct that overall TQM factors have a significant effect on organization performance.

Table III showed that adjusted R square is 0.77 which means that 77% of the variation in organizational performance can be explained by total quality management.

As shown in the table coefficients of each of total quality management factors and organization performance. P-value or probability value used to test the likely validity of the null hypothesis and the p-value of each term test the null hypothesis where a low p-value <0.05 reject the null hypothesis.

The study resulted that leadership has no significant effect on organization performance, training has a significant effect on organization performance, continuous improvement has a significant effect on organization performance and strategic quality planning has a significant effect on organization performance this would support the findings of Sadikoglu and Olcay (2014) stating that Overall TQM practices improve all performance of the firm. Although leadership is not significantly related to any performance measures.

**VI. CONCLUSION**

The finding of the study has been concluded based on the conducted research above and the analysis data from the questionnaire distributed. The study has found that overall TQM factors (leadership, training, strategic quality planning, continuous improvement) have a significant effect on organizational performance (operation performance, employee performance, innovation performance and social responsibility) which means that any changes whether it is decrease or increase in total quality management result change in organization performance. By testing each factor of total quality management and its effect on organization performance the result shows that leadership has no significant impact on organization performance and this support the findings of Sadikoglu and Olcay (2014) stating that Overall TQM practices improve all performance of the firm. Although leadership is not significantly related to any performance measures. In addition, the study shows that training has a significant effect on organization performance, continuous improvement has a significant effect on organization performance furthermore, strategic quality planning has a significant effect on the organization performance then other total quality management factors.

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