

# Investigating the Effect of Total Quality Management Practices on Organizational Performance in the Jordanian Banking Sector

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## Abstract

The aim of this study is to examine the effect of Total Quality Management (TQM) practices (customer satisfaction, education and training, continuous improvement, teamwork, and top management commitment) on organizational performance (financial and non-financial) in the Jordanian banking sector.

Research papers which are related to services are limited in Jordan. Since Jordanian economy is heavily dependent on the services sector, such research may enhance the quality of this sector.

The methodology is based on a questionnaire distributed to 11 commercial banks, and the statistical package for social sciences (SPSS) was used to analyse and examine the hypotheses. This research has indicated that TQM practices have a positive effect on organizational performance both financially and non-financially.

**Keywords:** banking sector, organizational performance, Total Quality Management (TQM)

## 1. Introduction

In recent years, measuring organizational performance has become essential for companies to survive, whether they are in the manufacturing or service sector. Globalization has brought unexpected changes to the economy, and because of this, all organizations are looking for strategies to increase performance and mechanisms to withstand any crisis, particularly in the banking sector. The banking sector is facing unstable financial times, related to liquidity, inflation, exchange rate, credit, loans, cash flow and interest rate, so banks need to establish procedures and tools in order to confront these challenges enhance their performance and survive through economic hardships.

The banking sector is the largest sector in the service industry that serves the needs of different categories of people. Currently, TQM has become the new method to reinforce competitive advantages and organizational performance; it is the core of a company's success (Ooi et al., 2011).

The main idea of this research is: Can the Jordanian banking sector utilizing of TQM practices to improve their performance? Answering this question will provide a deeper understanding of the dynamic role of all TQM practices.

Many banks in Jordan have a vested interest in implementing TQM practices. However, research efforts related to this field in Jordan are scarce; this study seeks to understand the relationship between TQM practices and organizational performance in the Jordanian banking sector. While TQM has been heavily researched in recent years, researchers have struggled to decide how to breakdown the concept of TQM into appropriate sub-categories. Through creating appropriate sub-hypothesis this paper will be able to provide a more thorough picture than before of how all the different aspects of TQM affects the success in the banking sector. This paper also fills an important hole in the literature by specifically addressing the banking sector in Jordan. This study will help managers working in developing economies understand how TQM may benefit their business.

## 2. Literature Review

### 2.1 TQM Practices

During the last couple of decades, a number of studies have shown that total quality management (TQM) has benefited organizations by improving quality of products and services, helping to provide superior quality products to their customers, and enhancing and increasing a firm's performance. (Hoang et al., 2010), Kaynak

(2003, p. 206) stated that: "TQM is a holistic management philosophy that strives for continuous improvement in all functions of an organization, and it can be achieved." It is very essential for organizations to consider the common ties among service productivity, quality and innovation (Parasuraman, 2010). TQM has become one of the most important factors of today's vigorous competition (Almansour, 2012).

TQM practices in service firms have been discussed in many studies, but there are always disagreements as to 'how to best cut the TQM cake' into factors or elements (Samson & Terziowski, 1999). Each firm relies on a set of practices depending on the nature of that firm as there are a variety of TQM practices and a diversity of dimensions (Bon & Mustafa, 2013a).

Bon and Mustafa (2013b, p. 519) identified the following seven practices of TQM; top management leadership, employee involvement, employee empowerment, customer focus, training, information analysis, and continuous improvement.

Other studies such as Zehir et al. (2012, p. 275) focus on the eight dimensions of TQM; leadership management, employee management, customer focus, factual approach to decision making, supplier management, continual improvement, system approach to management and process management.

In this research, the TQM practices that were selected for banking sector are: top-management commitment, customer satisfaction, training and education, continuous improvement, and teamwork. These practices have been identified as the key practices of TQM in service industries, and in the promotion of service quality. (Sweis et al., 2013, p. 274).

#### 2.1.1 Customer Satisfaction

Rai (2013) defined satisfaction as "a buyer's emotional or cognitive response post-subjective assessment and comparison of pre-purchase expectations and actual performance subsequent to the consumption of the product or service, meanwhile evaluating the costs incurred and benefits reaped in a specific purchase even or over time in course of transacting with an organization".

Most recent studies emphasize the importance of customer satisfaction, like (Asikhia, 2010; Kassim & Abdullah, 2010), who showed that the customer satisfaction is a vital trend to develop the organizational performance, Fotopoulos and Psomas's (2010) study also reflects that customer focus and satisfaction are positively and significantly related to the performance of the organization, while Chen et al. (2012) confirmed that well-established relationship with customers can increase both financial and nonfinancial performance.

Dadfar et al. (2013) reveals that it is important to build a strong relationship with the customer and service provider in order to be able to have an efficient co-production together.

So, does focusing on the customer improve the organizational performance or not?

#### 2.1.2 Training and Education

Employees are the most important asset in any organization, whether it has one employee or a hundred. Better employees will always lead to better performance. In order to cultivate good employees companies should educate their staff by training them in new skills and knowledge which will lead to a more efficient and effective workplace (Cervená 2011). Globalization and radical change in technology require innovative ways of providing education and training programs for employees (Vargas & Tian, 2013).

Training refers to a planned effort by a company to facilitate employees' learning of job-related competencies, including knowledge, skills, or behaviours that are critical for successful job performance (Mondy & Mondy, 2013). Training and education make employees more productive and helps increase employee's skills and knowledge to increase job satisfaction (Gagnon et al., 2013).

*If the bank improves the educational and training program for its employees, will this improve the bank's performance?*

#### 2.1.3 Top Management Commitment

The definition of commitment is "a force that binds an individual to a course of action of relevance to one or more targets" (Meyer & Herscovitch, 2001).

Top management commitment plays a vital role in building trust with employees, and must go beyond adopting slogans of improving quality and become more involved in quality efforts at various planning and implementation and monitoring phases. Top managers must focus on developing people's skills and capacities through the engagement of employees in several kinds of training programs, which provide the organization with a skilful sales-force and marketing team (Jones & Grimshaw, 2012).

Top managers should involve all employees in the implementation and design stages in order to meet the expectations of stakeholders, customers, and to raise levels of quality and satisfaction (Pencarelli et al., 2013).

The managers must have profound knowledge of TQM, a willingness to actively participate and enthusiasm. They need clearly defined terms for good understanding of the work; otherwise employees may develop their own definitions which might lead to unfavourable outcomes for the organization and stakeholders (Sanzo & Alvarez, 2012).

*In conclusion the query is: what is the relationship between top management commitment and organizational performance?*

#### 2.1.4 Team Work

Doorewaard et al. (2002) define teamwork as a “process to fulfil the employee’s need for control over their work environment”. It holds a common task requiring interdependent work and action (Thompson, 2011). Subsequently teamwork is a set of behavioural skills working together to generate best outcomes (Hughes & Jones, 2011).

Teamwork is an essential aspect for the success of the organization; it leads the organization to communicate with the goal and mission of the organization, encourages creativity, shares information, builds trust and openness and empowers employees (Griffin et al., 2001).

Salas et al. (2010) found that teamwork helps maintain competitive advantage in the face of challenges caused by several world events and also by international marketplaces.

*So now we need to know if teamwork has a positive or negative impact on organizations.*

#### 2.1.5 Continuous Improvement CI

CI concept is widely used in many organizations worldwide. There are numerous definitions of continuous improvement, such as: Bessant et al. (2001) “an organization-wide process of focused and sustained incremental innovation.” Gertsen (2001) describes CI as “an improvement process that is systematically applied, carried out in small steps, and to a large extent relies on employee participation”, Similarly, Boer (2002) defines CI as planned, organized and systematic incremental changes that influence organizational performance.

CI is like an umbrella for a wide domain of tools and techniques to improve an organization’s performance, such as Lean, Six Sigma, problem solving methodology, statistical process control SPC, control charts and cause and effect diagrams (Ehie & Sheu, 2005). It’s mostly applied to any management approach to improve the quality of the outcome.

Also, CI can be defined as the ongoing interaction between operations, innovation, learning that aims to achieving organizational cost and administrative effectiveness, efficiency and flexibility, (Davison & Hyland, 2006). In addition the employees’ creativity and knowledge are the basis for continuous improvement (Liker & Hoseus, 2010).

TQM is mainly concerned with continuous improvement in all work, from high level strategic planning and decision-making, to detailed execution of work elements. The defects can be prevented, as it leads to continuously improving results of people, processes, and technology (Ijaz et al., 2012). The continuous improvement is a dynamic process, focus on improvement programs, services, materials and their relationship with the organization’s customers, suppliers, competitors, and capital markets (Jagdeep & Singh, 2013).

*So the question is: can continuous improvement reinforce organizational performance?*

### 2.2 Organizational Performance

Performance is “the results document the relationship between what organizations do in terms of quality management practices and the results they achieve in several types of outcomes” (NIST, 2010). Wheelen and Hunger (2010), in a hypercompetitive environment, organizations are increasingly seeking development, innovation and to improve the quality of the product/service (Alam & Yasin 2010). Promoting superior quality and innovation should be one of the most important priorities in any organization (Zeng et al., 2010).

#### 2.2.1 Balanced Scorecard Basics BSC

The balanced scorecard is a strategic planning and management system that is used extensively in business, industry, government, and non-profit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals. As Kaplan and Norton (2003) mention, “Balanced Scorecards tell you the knowledge, skills and systems that your employees will need (learning and growth) to innovate and build the

right strategic capabilities and efficiencies (internal processes) that deliver specific value to the market (customer) which will eventually lead to higher shareholder value (financial)”.

### 2.2.2 Six Sigma

Six Sigma is one of the most effective problem solving methodologies for improving business and organizational performance. Other persons described Six Sigma as a disciplined and statistically based approach for improving product and process quality (Hahn et al., 2000). Also, Six Sigma refers to a business process that allows organizations to improve drastically their bottom line by designing and monitoring everyday business activities in ways that minimize waste and resources while increasing customer satisfaction (Harry & Schroeder, 2000).

### 2.2.3 TQM Practices and Banking Sector

For long term survival organizations must adopt a broad, strong strategy that gives a sustainable competitive advantage and superior services that distinguish the organization from its competitors. Service is a kind of performance that is offered by one party to another (Kotler & Keller, 2012). Many researchers support the role of TQM in the banking sector. (Lukasz, Skowron, & Kristensen, 2012) found that the TQM has a positive relationship with customer satisfaction.

Goetsch and Davis, (2013) said that total quality management enhances the organization’s strength to reduce the cost and improve the organization’s chances of becoming a leader in a particular market. Al-Marri et al. (2007, p. 174) found it is essential for banking sector to improve profitability, expand the customer base and increase customer loyalty. Likewise SamanYapa (2012, pp. 505-517) recommends the best ways of utilizing TQM tools and techniques that will improve bank performance and service quality.

## 3. Research Model and Hypotheses

Based on the literature review, a framework is developed to discuss the relationships between TQM practices and organizational performance (financial and non-financial) in the Jordanian banking sector. In this framework, the independent variable is TQM practices and the dependent variable is organizational performance. Two main hypotheses and five sub-hypotheses for each main hypothesis are suggested to investigate these relationship:

H<sub>1</sub>: There is a positive relationship between TQM practices and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H<sub>1</sub> a: There a positive relationship between customer satisfaction and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H1 b: There is a positive relationship between training and education and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H1 c: There is a positive relationship between continuous improvement and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H1 d: There is a positive relationship between teamwork and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H1 e: There is a positive relationship between top management commitment and organizational performance (financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

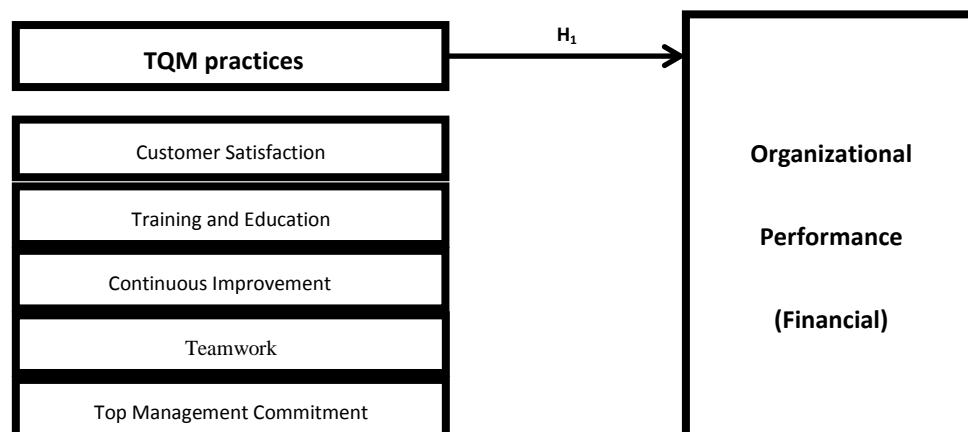


Figure 1. Study model (1)

H<sub>2</sub>: There is a positive relationship between TQM practices and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H2 a: There is a positive relationship between customer satisfaction and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H2 b: There is a positive relationship between training and education and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H2 c: There is a positive relationship between continuous improvement and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H2 d: There is a positive relationship between teamwork and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

H1 e: There is a positive relationship between top management commitment and organizational performance (non-financial) in the Jordanian banking sector at level ( $\alpha \leq 0.05$ ).

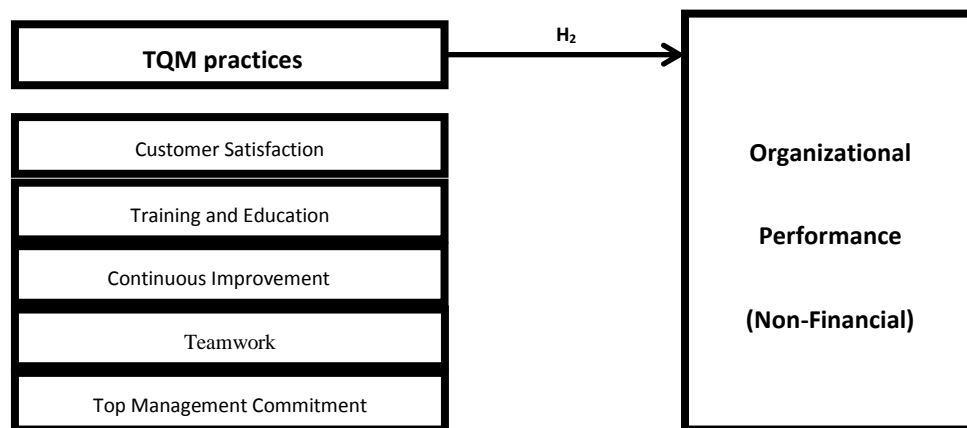


Figure 2. Study model (2)

## 4. Research Methodology

### 4.1 Population, Sample and Data Collection

The population of this study is the Jordanian banking sector, specifically commercial banks, as we focus on several departments in banks that have an effect on the study variables. The researcher developed a questionnaire after reviewing various references to serve the research purpose.

The researcher posted (250) questionnaires distributed randomly (by hand) to 11 commercial banks in Jordan. Only (230) were usable questionnaires. Twenty questionnaires were invalid for analysis and were excluded, so the total response approximately was (92%). The researcher used a five - points scale in which 1=strongly agree, 2= agree, 3= neither agree nor disagree, 4= disagree, 5= strongly disagree.

### 4.2 Reliability and Validity

Validity refers to the accuracy of an assessment, the ability of a scale or measuring instrument to measure what it is intended to measure. It allows the researchers to determine if the items on an assessment target their goal or not, after preliminary designing of the questionnaire, the related questions have been studied in several steps, and examined from the point of being understandable, relevant to the test's objective and omission of the irrelevant questions through consulting sophisticated people and experts as well as taking comments from the advising professors, the questionnaire was valid enough as for the contents after effecting the required modifications.

Reliability is the degree that indicates if the dimension is free from accidental errors and offers constant data, therefore yielding consistent results.

Reliability was measured by using cronbach alpha that determine the inter correlations between items, the closer cronbach alpha is to 1, the higher the internal consistency, and the research tool constructs are reliable (Sekaran, 2013). For this study the result is shown in Table 1.

Table 1. Reliability statistic

Variables	Reliability Statistic	Cronbach's alpha value
TQM practices	Customer satisfaction	0.825
	Training and education	0.832
	Continuous improvement	0.819
	Teamwork	0.820
	Top management commitment	0.777
Organizational performance	Organizational performance (financial)	0.901
	Organizational performance (non-financial)	0.865
Reliability for all variables		0.916

## 5. Analysis and Results

### 5.1 Factor Analysis

Factor analysis for each measurement scale was performed to ensure that the scales were reliable indicators of their constructs, and factor analysis was carried out with principle of components analysis as the extraction method.

Table 2. Factor loading

F1 Customer satisfaction	Factor Loading
customer satisfaction Q1	.846
customer satisfaction Q2	.795
customer satisfaction Q3	.807
customer satisfaction Q4	.803
F2 Education & Training	Factor Loading
Education & Training Q1	.858
Education & Training Q2	.895
Education & Training Q3	.847
F3 Continuous Improvement	Factor Loading
Continuous Improvement Q1	.822
Continuous Improvement Q2	.857
Continuous Improvement Q3	.842
F4 Teamwork	Factor Loading
Teamwork Q1	.839
Teamwork Q2	.883
Teamwork Q3	.850
F4 top management commitment	Factor Loading
Top Management Commitment Q1	.837
Top Management Commitment Q2	.885
Top Management Commitment Q3	.779
F1 Organizational performance (financial)	Factor Loading
O.P. (F). Q1	.867
O.P. (F). Q2	.882
O.P. (F). Q3	.879
O.P. (F). Q4	.886

F2 Organizational performance (non-financial)	Factor Loading
O.P.(non.f) Q2	.756
O.P.(non.f) Q3	.799
O.P.(non.f) Q4	.818
O.P.(non.f) Q6	.798
O.P.(non.f) Q7	.776

Factor analysis above shows that all of group questions are explained by one variable per group which is the ideal form. It has been found that all factors have high correlation with variables, which means that the instrument of variable is valid.

The KMO statistic is a measure of sampling adequacy. This measure varies between 0 and 1, and values closer to 1 are better.

Table 3. KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.892
Bartlett's Test of Sphericity	Approx. Chi-Square	781.349
	Df	21
	Sig.	.000

KMO measure of sampling adequacy and Bartlett's test of Sphericity are shown in this table. These results meet criteria and support use of factor analysis for this data as KMO=.892, the degree of common variance is "Meritorious" bordering on "Marvellous".

Also in this data the Bartlett's test is highly significant sig = .000 < .05, and therefore factor analysis is appropriate.

### 5.2 Hypotheses Testing

In order to test hypotheses, two main hypotheses have been formulated and tested by SPSS; the researcher used Simple Linear and Multiple Regression analysis to test the research hypotheses.

#### 5.2.1 First Main Hypothesis

H<sub>1</sub>: There is a positive relationship between TQM Practices and Organizational Performance (Financial) in the Jordanian banking sector **at level  $\alpha = 0.05$ .**

Table 4. ANOVA for regression for first main hypothesis

	Sum of Squares	Df	Mean Square	F calculated	F tabulated	Sig.	R	R <sup>2</sup> Square
Regression	59.897	8	7.487	19.042	1.9384	.000		
Residual	86.897	221	.393					
Total	146.793	229					0.639	0.408

In Table 4, the F calculated (19.042) is greater than F tabulated (1.9384). Therefore; the null hypothesis is rejected and the alternative is accepted, with significant value=.000 < 0.005, that indicate there is a positive relationship between the independent variable TQM and dependent variables organizational performance (financial) at  $\alpha=0.05$  level.

As appeared in this Table, R value = (0.639), which refers to coefficient of correlation of the independent variable (TQM practices) and the dependent variable (financial performance of the organization).

Whereas, the coefficient of determination R<sup>2</sup> = (0.408) means that the independent variable (TQM practices) explains (40.8%) of the dependent variable (organizational performance, financial).

Table 5. Regression coefficient for first main hypothesis

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	.412	.290		.157
Customer satisfaction	.245	.073	.227	.001
Education & training	-.046	.080	-.043	.567
Continuous improvement	.340	.087	.313	.000
Teamwork	.005	.068	.005	.946
Top management commitment	.266	.076	.258	.001

- H<sub>1</sub> a: There is a positive relationship between Customer Satisfaction and Organizational Performance (Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H<sub>1</sub> b: There is a negative relationship between Education and Training and Organizational Performance (Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H<sub>1</sub> c: There is a positive relationship between Continuous Improvement and Organizational Performance (Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H<sub>1</sub> d: There is a positive relationship between Teamwork and Organizational Performance (Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H<sub>1</sub> e: There is a positive relationship between Top Management Commitment and Organizational Performance (Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .

### 5.2.2 Second Main Hypothesis

H<sub>2</sub>: There is positive relationship between TQM Practices and Organizational Performance (Non-Financial) in the Jordanian banking sector **at level  $\alpha = 0.05$** .

Table 6. ANOVA for regression for second main hypothesis

	Sum of Squares	Df	Mean Square	F calculated	F tabulated	Sig.	R	R2 Square
Regression	53.429	8	6.679	30.961	1.9384	.000		
Residual	47.673	221	.216					
Total	101.102	229					0.727	0.528

According to Table 6, the F calculated (30.961) is greater than F tabulated (1.9384). Therefore, the null hypothesis is rejected if calculated is greater than tabulated, with sig .000 < 0.005, that indicates there is a positive relationship between the independent (TQM Practices) and dependent (Organizational Performance, non-financial) variables at  $\alpha = 0.05$ .

Table 5 shows R value (0.727) which refers to correlation of the independent variable (TQM practices) and the dependent variable (non-financial performance of the organization).

Whereas, the coefficient determination R<sup>2</sup> (0.528) means that the independent variable (TQM practices) explains (52.8%) of the dependent variable (organizational performance, non-financial).

Table 9. Regression coefficient for second main hypothesis

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	.840	.215		.000
Customer satisfaction	.209	.054	.234	.000
Education & Training	.159	.059	.181	.008
Continuous improvement	.236	.064	.262	.000
Teamwork	-.024	.051	-.029	.638
Top management commitment	.182	.056	.212	.001



- H2a: There is a positive relationship between Customer Satisfaction and Organizational Performance (Non-Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H2b: There is a positive relationship between Education and Training and Organizational Performance (Non-Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H2 c: There is a positive relationship between Continuous Improvement and Organizational Performance (Non-Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H2 d: There is a positive relationship between Teamwork and Organizational Performance (Non-Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .
- H2e: There is a negative relationship between Teamwork and Organizational Performance (Non-Financial) in the Jordanian banking sector at level  $\alpha = 0.05$ .

## 6. Discussion and Conclusions

The purpose of this paper was to study the relationship between TQM practices and organizational performance in the Jordanian banking sector. The results show that there is a positive relationship between TQM practices and organizational performance (financial and non-financial) in the Jordanian banking sector, this result is supported by (Hoang et al., 2010; Fotopoulos & Psomas's, 2010; Goetsch & Davis, 2013; Sweis et al., 2013).

Also, the research results show that there is a positive relationship between (customer satisfaction, continuous improvement, teamwork, top management commitment) and organizational performance (financial) in the Jordanian banking sector, this result is supported by Chen et al. (2012).

So, it is very essential to utilize these practices effectively in the Jordanian banking sector. On the other hand, there is a negative relationship between education and training and organizational performance (financial) that should not apply in banks that need to increase their financial performance.

Likewise, there is a positive relationship between (customer satisfaction, education and training, continuous improvement, top management commitment) and organizational performance (non-financial) in the Jordanian banking sector, this result is contrary with: (Ooi et al., 2010), but there is a negative relationship between teamwork and the organizational performance (non-financial).

The practical implications of the research are very important means for Jordanian banking sector for revealing information about TQM practices as well as organizational performance financial and non-financial, In addition, the results of this study reveal the relationship between the TQM practices and the organizational performance.

It's interesting that one strong predictor of performance was continuous improvement which is considered one of the main aspects of the TQM philosophy.

This result is consistent with Joiner (2006, p. 26), who mentions that: "One of the central tenets of effective TQM implementation is employees' commitment to continuous improvement of processes".

Therefore we suggest that banks be more concerned with TQM practices that could increase the organizational performance whether it's financial or nonfinancial, It has been from the research results that the most important TQM practices on organizational performance is the continuous improvement, we recommend to develop suitable plan and implemented to the fullest, motivate their employees to innovate and create new services which distinguish banks from others. We also recommend investigating the obstacles to TQM implementation, and implementing a study on other sectors or industries.

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