

Impact of Using Total Quality Management on the Financial Performance of Companies Listed on the Palestine Exchange

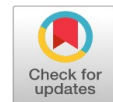
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Abstract: This paper aimed to explore the impact of using total quality management on the financial performance of companies listed on the Palestine Exchange. The researcher used the descriptive analysis approach and relied on a questionnaire and the analysis of the financial data of 15 companies from 2011 to 2015. A census is used to explore the opinions of the study population of 75 people, consisting of managers, heads of departments, and workers in quality management and finance departments in the listed firms. Responses were 60, which represented a response rate of 80%. Research has concluded with a number of results, among which: The population expressed the degree of strongly agree on the dimensions of "Total Quality Management": Support of top management to the quality, continuous operations improvement, focus on the customer, workers participation, and workers training. The study showed an impact of the use of total quality management on ROA, ROE, and ROS, while there was no impact of TQM on the current ratio of listed companies in Palestine Exchange. The study showed significant differences at a significant level ($\alpha \leq 0.05$) in the responses of the research population about the use of total quality management of companies listed in Palestine Exchange. In the axis of participation of workers: recommended to enhance the level of participation of workers in companies listed on the Palestine Securities Exchange through work on the participation of employees in the construction of development plans to improve the quality of the company.

Keywords: Total quality management, Financial performance

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INTRODUCTION

The price is no longer the only driving force in the consumer's desire to purchase and behaviour, and, therefore, a great deal of attention is paid to the concept of Total Quality Management (TQM) and it is regarded as one of the modern management concepts that have helped to raise the spirit of competition between companies, factories and services and also increase consumers awareness when selecting high-quality goods or services (Kober, Subraamanniam, & Watson, 2012).

Financial performance occupies a special place within any industrial or service organisation as it is considered a real way to judge the outcome of all of an organisations activities. It also plays an important and fundamental role in measuring the overall performance of an organisations throughout the user of a set of indicators, such as financial ratios which are regarded as proof of the strength and correctness of the financial position of any project. Due to the recent availability of information about the companies listed on the Palestine Exchange, and also the importance of those companies that helping to build the Palestinian society (Al-daas, 2010).

This has driven researchers to focus their attention on the activities of these companies. From above, the researcher in this study seeks to explore the effect of using TQM on the financial performance of companies listed on the Palestine Exchange.

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PROBLEM STATEMENT

In light of global development and, the spread of information technology and modern technologies, organisations are facing an increase in local and international competition and the consequent change in consumer behaviour as consumers have become more conscious of their consumption and of choosing the best quality products or services at an appropriate price (Ainga, 2015; Ripain, Amirul, & Mail, 2017).

Organisations achieve their goal of survival and continuity of the competition through changing their methods of traditional management that are not commensurate with the challenges they face and by adopting modern management concepts that enable organisations to deal with these challenges in order to achieve efficiency and efficacy (Al-daas, 2010).

The researcher can formulate those mentioned above by stating that the profit margin is equal to the sale price minus the fixed and changeable costs and by reducing the cost level using TQM systems. This in turn increase efficacy, which is reflected in the provision of products and services that have specifications that increase the price level on the profit margin.

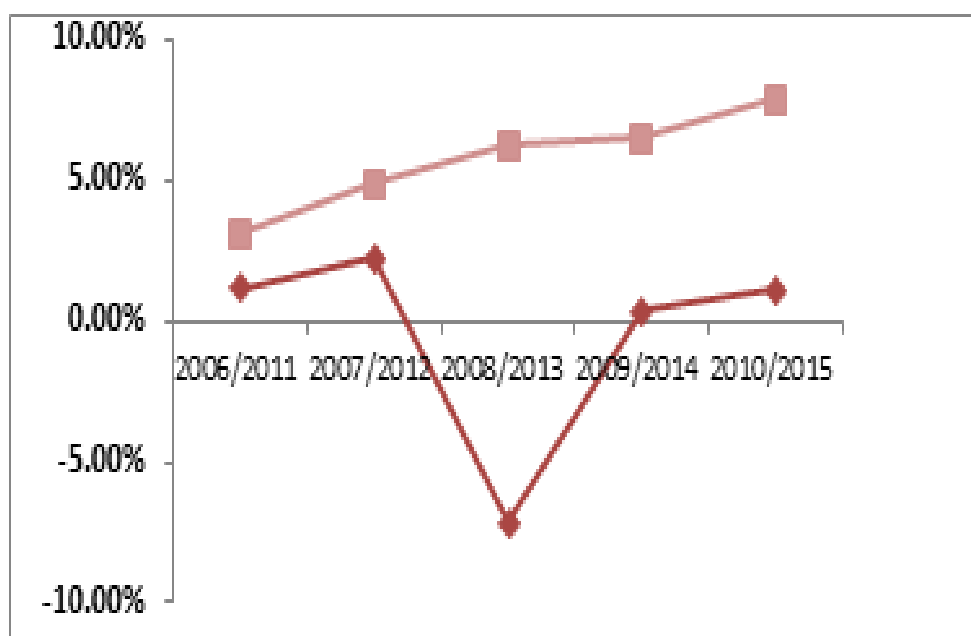


Figure 1. Representation of profitability ratios

By reviewing the audited financial statements of the Palestinian companies listed on the Palestine Exchange and the researcher focus on the rate of profitability, which represents the companies that use quality systems. From Figure 1 the profitability ratios (rates of ROA) in two periods: 2006-2010 and 2011-2015, It is clear the relative profitability ratios start to increase from 2013, taking into consideration that companies had started to apply quality systems on average since almost 2011. This leads us to investigate whether the profitability of these companies is due to their use of quality systems and other factors.

In addition to those mentioned above, and in the framework of the study and research, some sources were identified that could enhance the problem of the study which may provide support for and clarification of the reasons why this study was conducted. The researcher depended on a group of sources that looked at the problem, which were based on recommendations and suggestions for some studies related to the subject. It is possible to review what these included: Nahal (2016) submitted recommendations for the need for further studies and research to determine the factors affecting the financial performance of the banks listed on the Palestine Exchange. Al-Wadiyeh (2016) recommended conducting continuous studies to identify the factors that would influence the objective of the financial management of companies which is to maximise the wealth of owners in any available way. Thus, through the financial performance assessment index, it is possible to measure to what extent this goal can be

achieved.

The impact of using TQM on the financial performance of companies is usually represented in terms of ratios. Therefore, based on the above, the problem for the study lies in the impact of the profitability and liquidity of the Palestinian companies listed on the Palestine Exchange. This can be formulated in the following main question:

Does the use of TQM have an effect on the financial performance of companies listed on the Palestine Exchange?

HYPOTHESES

1-There is a statistically significant effect at the significance level of $(0.05 \geq \alpha)$ for using TQM on the ROA of companies listed on the Palestine Exchange

2- There is a statistically significant effect at the significance level of (0.05α) for using TQM on the ROE of companies listed on the Palestine Exchange.

3-There is a statistically significant effect at the significance level of $(0.05 \geq \alpha)$ for using TQM on the ROS of companies listed on the Palestine Exchange.

4-There is a statistically significant effect at the significance level of (0.05α) for using TQM on the Current Ratio of listed companies on Palestine Exchange.

OBJECTIVE AND IMPORTANCE

There are 12 companies in textile industry (occupying 26.1%), 11 companies in service industry (occupying 23.9%), 6 companies in real estate industry (occupying 13%), 5 companies in shoes industry (occupying 10.9%), 4 companies in agriculture and food processing industry (occupying 8.7%), 4 companies in tourism industry (occupying 8.7%), 2 companies in food processing industry (occupying 4.3%), and 2 others.

There are 17 companies have under 50 employees (occupying 37%), 15 companies have 50 100 employees (occupying 32.6%), 8 companies have 101 300 employees (occupying 17.4%), 3 companies have 301 500 employees (occupying 6.5%), and 3 companies have 500 or more employees (occupying 6.5%).

RESEARCH METHODOLOGY

In order to achieve the objectives of the study, the researcher used the “descriptive analytical” method, in which it is possible to describe the phenomenon of the subject of the study, analyze its data, the relationship between its components and the opinions that are raised around it and the processes it contains and the effects it causes. [Al-Hami \(2018\)](#) defines a descriptive analytical approach as “the approach that seeks to describe contemporary or contemporary phenomena or events is one of the forms of systematic analysis and interpretation of a phenomenon or problem, and provides data on particular characteristics in practice. It requires knowledge of the participants in the study and the phenomena we are studying and the times we use to collect data.”

The researcher used two main sources of information:

1. Secondary sources through the analysis of the financial statements of companies using the total quality management system listed in the Palestine Securities Exchange in the period 2011 to 2015. And through the review of Arab and foreign references, including: books, periodicals, publications, scientific messages, scientific journals, websites on the Internet related to the subject of study and any other references contribute to enriching the study.

2. Primary Sources: The researcher aimed to collect primary data through the questionnaire as a tool for collecting the necessary data related to the independent variable of the study (TQM).

MODEL OF RESEARCH

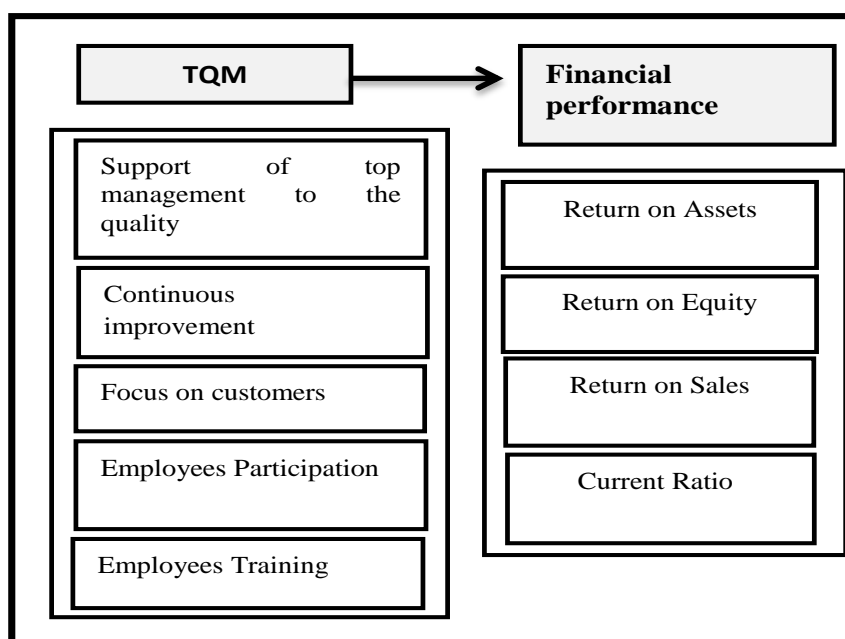


Figure 2. Model of research

STUDY TOOLS

The study tools were identified by linking the results of the analysis of the questionnaire with the results of the financial performance analysis, which are represented by the financial ratios of the companies that filled out the questionnaire.

1. Financial Performance of Study Society: The financial reports of 15 companies in the study society were used. Several key figures were extracted through which the financial ratios representing the financial performance were extracted: ROA, ROE, ROS, the current ratio of the ratio of the ratio of each variable to the last five years from 2011 to 2015. Through the review of the annual technical and financial reports of companies, the study shows that the implementation of the quality system has started on average almost since 2011.
2. Questionnaire: The components were prepared and corrected through the five-dimensional Likert scale.

LITERATURE REVIEW

TQM: is an administrative method that ensures submitting the value to the internal and external beneficiary through continuous improvement and development of administrative processes correctly from the first time and each time based on the needs and requirements of the beneficiary (Hamid, 2012).

The concept of TQM is represented in terms of the support offered by top management to ensure quality, continuous improvement, employee participation and a focus on the consumer. It is one of the methods used to meet these challenges as it works to increase efficacy, efficiency and productivity, profitability, market share and improve competitiveness (Al Taie, 2014).

Financial Performance: is a tool to identify the current financial position of an enterprise at a given moment or as a whole or a certain aspect of the institutions performance or to performs in terms of its shares for the market on a specific day and period (Naimi & Tamimi, 2009; Willy, 2017).

Previous studies have constituted an important heritage and rich source for all scholars and researchers as they help them to formulate a scientific background about the topics of their study and research. This study will review what the researcher gained from Arabic and foreign studies, such as that by Kebbji, M., & Abu Awad, B (2013). The author aims to examine whether the use of the TQM system has an effect on improving the financial performance of the company. The results of the study showed that the interest levels of companies for the dimensions of TQM were very high. The study recommended that management teams of companies should adopt the TQM system because improving

the quality ensures optimal exploitation, machinery and materials, which mean reducing costs, and this will inevitably improve the financial performance of the company in the long run (Kebbj, M., & Abu Awad, B, 2013). Mwaniki and Okibo (2014) aimed to identify the overall quality management practices used by the National Bank of Kenya and examined their impact on the financial performance of the bank. The results of the study showed that the bank’s senior management was interested in using a quality system and focusing on customers was a high priority. The study also indicated there was a positive relationship between the management and treatment of relations with suppliers and financial performance. The study concluded that there was a need for continuity to support the top management and focus on customers (Mwaniki & Okibo, 2014).

RESULTS AND DISCUSSION

The mean, relative average, Standard Deviation (SD) and *t* test were used to describe the responses of the study samples members to the terms of TQM dimensions.

Table 1: Results of statistical analysis of all paragraphs of the questionnaire

Dimension	AVG	SD	Relative mean	<i>t</i>	Sig
Support of top management to the quality	4.31	0.38	86.21	26.44	0.0
Continuous improvement	4.28	0.43	85.67	23.09	0.0
Focus on customers	4.29	0.49	85.75	20.15	0.0
Employees Participation	4.05	0.53	81.00	15.22	0.0
Employees Training	4.11	0.55	82.13	15.72	0.0
All paragraphs of the questionnaire	4.21	0.39	84.15	23.89	0.0

The Table 1 summarises the results of the constituent area analysis of the independent variable (TQM). The computational mean of the total score for the TQM areas is 4.21. This value indicates a very high degree of approval by individuals of the study population on all aspects and areas of TQM (Table 1).It is clear that the previous results presented to all the companies and responses to the questionnaire were positive with a high degree of approval for their use of the TQM system because all these companies use TQM. The researcher sees that getting the field of support of top management to the quality the first rank in the areas of TQM refers to the awareness of top management in these companies to the magnitude of the challenges they face with the non-implementation of the TQM system, which increases the intensity of local and global competition. It also reduces costs through continuous improvement and employee training, which reduces errors and provides them with a high level of quality. It is necessary to describe the financial performance data of companies and clarify the main features, using the most common descriptive statistical methods, such as means, averages, standard deviations and smaller and higher values.

Table 2: Descriptive statistics for variables of financial performance

Variables	Least value	Greatest Value	Relative mean	SD
ROA	-1.00	0.21	0.03	0.27
ROE	-0.22	0.32	0.07	0.11
ROS	-1.95	1800	0.24	0.63
Current Ratio	0.71	5.73	1.14	1.48

The following applies: the mean the ROA for a study period is equal to 3% the companies in the study’s population. It reflects a company’s ability to use its assets to generate profits, which measures the relationship between the net profit and the size of the assets and funds available for the company. This ratio is considered to be good based on the authors and finance experts (Brigham & Houston, 2015). As it starts to increase proportionately in companies after they have started to use TQM. The mean of the ROE is equal to 7% for the companies in the study population and indicates the return of shareholders for their funds employed in a company’s capital. It provides a clear vision of the shares for the investor so they can compare companies and assess whether the ratio is good (Bull, 2007). The mean of the ROS

accounts for 24% for the companies in the study population. The earned net profit is measured for each unit of sales, that is, the profit achieved by the sales after covering the cost of sales and all other expenses. This percentage is considered a high priority; an increase in this ratio indicates good operating policies, as the average ratio for the current ratio equals 1.14. This ratio measures the number of times that current liabilities can cover the current demand, that is, the ability of companies to pay their short-term liabilities when the date comes (Chandra, 2014).

Table 3: Multiple regression - the first hypothesis

Dimension	β	t	Sig	R^2	Sig
Support of top management to the quality	0.12	0.95	0.32		
Continuous improvement	-0.18	-0.88	0.31		
Focus on customers	0.098	0.51	0.60	0.09	0.01
Employees Participation	-0.22	-1.48	0.14		
Employees Training	0.20	1.92	0.06		

Table 4: Multiple regression - the second hypothesis

Dimension	β	t	Sig	R^2	Sig
Support of top management to the quality	0.13	0.15	0.70		
Continuous improvement	-0.33	-1.65	0.10		
Focus on customers	0.13	0.71	0.43	0.12	0.02
Employees Participation	-0.10	-0.70	0.41		
Employees Training	0.14	2.01	0.01		

Table 5: Multiple regression - the third hypothesis

Dimension	β	t	Sig	R^2	Sig
Support of top management to the quality	0.17	0.92	0.34		
Continuous improvement	-0.46	2.06	0.04		
Focus on customers	-0.07	-0.36	0.61	0.10	0.09
Employees Participation	-0.27	-1.70	0.09		
Employees Training	0.32	1.79	0.05		

Table 6: Multiple regression - the third hypothesis

Dimension	β	t	Sig	R^2	Sig
Support of top management to the quality	-0.12	-0.61	0.54		
Continuous improvement	0.013	0.055	0.96		
Focus on customers	-0.37	-0.18	0.86	0.02	0.85
Employees Participation	0.185	1.110	0.27		
Employees Training	0.008	0.029	0.98		

These results were agreed with Shahin (2011), which indicated that there is an impact on the use of TQM on the return on assets of the public shareholding companies in Iran. This is because the use of TQM has increased profits for companies through their assets. These results also differed with the study of Dainn (2017), which showed that there was no impact on the use of TQM on return on assets (Dainn, 2017; Shahin, 2011).

Also These results were agreed with the study of Mwangi and Birundu (2015) and Shahin (2011), which indicated that there is an impact of the use of TQM on the return on equity of companies due to the increase in the efficiency of investment decisions and employment in companies in these studies after applying the quality system Which led to a rise in the return of shareholders in their companies. These results also differed with the study of (Dainn, 2017) which showed no effect on the use of TQM on

return on equity and agreed with [Mwangi and Birundu \(2015\)](#), which indicated an impact on the use of TQM on the return on sales of cement companies in Kenya due to lower costs, higher sales and net profits and therefore higher sales revenue for these companies. The results also differed with the study of [Dainn \(2017\)](#) which showed that there is no impact on the use of TQM on the return on sales due to the high cost of companies at the beginning of their application of TQM as a modern management method, resulting in the inability to access competitive prices in products and services which are offered by those companies and lower in return on sales ([Dainn, 2017](#); [Mwangi & Birundu, 2015](#); [Shahin, 2011](#)).

CONCLUSION AND RECOMMENDATIONS

Based on this study conducted on the impact of TQM on the financial performance of the companies listed on the Palestine Securities Exchange, and through the concepts and the various aspects of the theoretical framework and literature of the study, in addition to the collected data from the initial questionnaire, and data of the audited and published financial reports - according to the principle of disclosure - and after the financial analysis of the data and out of the financial ratios represented for the dependent variable at a time depth of five years from 2011 to 2015 and after the results of the appropriate statistical analysis of the fields of study from the questionnaire The study concluded with a set of results as mentioned above. The study concluded with the following recommendations:

Strengthening the principle of delegation of powers to the departments and divisions of listed companies in the Palestine market.

Providing financial Based on this study conducted on the impact of TQM on the financial performance of the companies listed on the Palestine Securities Exchange, and through the concepts and the various aspects of the theoretical framework and literature of the study, in addition to the collected data from the initial questionnaire, and data Of the audited and published financial reports - according to the principle of disclosure - and after the financial analysis of the data and out of the financial ratios represented for the dependent variable at a time depth of five years from 2011 to 2015 and after the results of the appropriate statistical analysis of the fields of study from the questionnaire The study concluded with a set of results as mentioned above.

This study reached the following recommendations:

In the field of support and commitment of senior management and work towards enhancing the role of TQM and achieving its principles from Through:

1. Promote the principle of delegation of powers to the departments and sections of companies listed in the Palestine market.
2. Provide the human and technological support required to develop modern information systems that contribute to the flow of information between the departments to ensure continuous improvement of quality.

In the axis of participation of workers: recommended to enhance the level of participation of workers in companies listed on the Palestine Securities Exchange through:

1. Work on the participation of employees in the construction of development plans to improve the quality of the company
2. Enhancing the level of encouraging senior management to cooperate between employees and teamwork at various levels of management, and using the views of the employees to take advantage of them in different decision-making stages when making any change to the working patterns and performance methods.
3. The importance of granting employees effective authority and authority to solve their problems, and the formation of the management of teams to provide studies and suggestions to improve the methods of work and problem solving. In the axis of continuous improvement of operations: led to the listing of companies listed on the Palestine Securities Exchange By comparing and sharing their services and information on problems and community resources and their internal situations with other similar or successful companies to improve the quality of service/product.

In focusing on the customer:

1. Responding quickly to changes in the environment, as well as responding to changes in customers' tastes and desires.
2. Updating the organization's strategy, and modifying the existing products/services to suit the needs of the customer and meet his ambitions. In the training of employees: To promote the implementation of advanced and non-routine training programs for employees on the quality system and study the impact on improving the financial performance of companies.

Recommendations regarding the financial performance of listed companies in Palestine market.

1. To conduct further studies and research to study the factors that improve the financial performance of companies listed on the Palestine Securities Exchange, especially as the results confirmed that there are other factors that could lead to the improvement and raise the financial performance of listed companies in the Palestine market from the degree of good financial performance to the high. As well as work on the establishment of an independent department specialized in the management of total quality in companies that do not exist and the appointment of specialists in the field of quality are responsible for everything related to the quality policies in the company. To enhance the level of encouragement provided by the company for any initiative aimed at improving the financial performance of the company.
2. Also, the increase in TQM usage by 1% leads to an increase of 11.2% in return on assets, meaning that the use of TQM affects the return on equity of the shareholders, Significance 0.05 for the past As long as TQM on the return on sales of listed companies in Palestine Exchange. That is, a 1% increase in the utilization of TQM leads to a 52.8% increase in the ROA. The results of the study indicate that the use of TQM does not have a statistically significant impact, at the level of significance of 0.05, on the Current Ratio, in the sense that the use of the total quality system does not affect the ability of a company to meet its short-term obligations.

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