A study of the impact of financial performance in tourists and travel agencies by applying a Total Quality Management approach

Tariq Irmaan Abbas
Middle Technical University (MTU)
Institute of Technology-Baghdad
Baghdad, Iraq
E-mail: abbasali1998143@gmail.com

Abstract

The aim of the study was to assess the impact of TQM applications on the financial performance indicators of government sector organizations. The importance of this research springs from the general trend of interest in the development of this important sector and work to raise the level of performance to meet the rapid changes in the needs of the individual and society. This helps organizations to achieve levels of performance that contribute to attract investors and create jobs that enhance the national income of the country. The results of the research have shown a positive impact of the applications of TQM on financial performance despite the existence of some obstacles existing. The study recommended the need to overcome the obstacles to the application of quality management through providing programs focusing on the methods and tools of techniques to solve quality problems and develop the skills of workers for continuous improvement and encourage the initiative in providing ideas and solutions to quality problems.

Keywords: Total Quality Management, financial performance, profitability, sales growth, quality costs.

Introduction

Organizations face different challenges such as low productivity, increasing operating costs, lack of financial resources, adopting ineffective methods to achieve the goals they seek, as well as low customer satisfaction, intensifying competition, increasing changes in customer behavior and renewing their needs with multiple alternatives due to market openness. The system of globalization, facilitated the flow of goods and services and capital among the countries of the world so as to ensure the choice of the product based on good quality and low prices. The challenges faced are important not merely for competition purposes and to expand market share and maximize profits. In order to enable organizations to be sustainable and continue in the field of work organizations have tended to adopt contemporary administrative approaches that raise the level of their performance (Aquilani, 2017; Nicolaides, 2008).

The overall quality management approach is an integral part of the overall vision of the quality of the organization as an administrative philosophy that adopts the commitment of senior management, achieving customer requirements, minimizing re-thinking and long-term thinking, and raising the participation of employees through team work teams (Nicolaides, 2008, 2012, 2015, 2015a). Building partnerships with suppliers and benchmarking with leading organizations and continuous measurement of results in order to benefit from feedback, the adoption of comprehensive quality management applications in an integrative and meaningful manner all help to achieve the objectives of the organizer to improve financial performance and satisfy stakeholders, which is an
important element of operation (Nicolaides, 2015a). There have been some interesting studies in this regard as well.

**Arabic Studies**

1 - Al - Sharah, 2003 entitled: Evaluation of economic and financial performance in accordance with the concept of Total Quality Management. This study aimed at evaluating the economic and financial performance of the Kuwaiti banking system in accordance with the concept of total quality. The study found that the performance of the Kuwaiti banking system during the 1990s developed well. Total deposits increased at an average rate of 2.8% per annum, and credit facilities increased at a high rate of 67.5%.

2 - Yunus, 2004, entitled: The logical relationship between integration strategies and economic performance of business organizations. This study identified the problem that the work of individual business organizations have in achieving a low performance, which necessitates the activation of the mechanisms of collective action as one of the applications of TQM so the question was asked: What is the logical nature of the process of applying integration strategies using the mechanisms of collective work in the field of work business organizations? The study aimed at presenting theoretical and practical concepts supported by quantitative models that can be used to rationalize strategic decisions in the framework of the activities of the organizations. The study hypothesized that the integration process will achieve economic performance rates that exceed the rate of change that occurs on the inputs of operations and the study showed a set of conclusions, but the performance of the organizations grew by raising the returns achieved by the integration process of all kinds.

**Foreign Studies**

3. In 2001, Yong and Wilkinson, entitled: Experience of Total Quality Management in Singapore. The study aimed at determining the evolution of quality management practices in Singapore companies. The researcher used the criteria of the Baldrige Award. The study included (1002) companies. The study found that there is a statistically significant relationship at (α ≥ 0.05) Of profitability and market share, and the absence of statistical significance at (α = 0.05) between TQM applications on the one hand and direct work performance and employee satisfaction on the other.

4. Sun’s 2000 study: Total Quality Management according to the ISO 900 specification, to improve the performance of organizations. The study examined the extent to which the use of TQM according to the ISO 900 specification improves the performance of the organizations by adopting performance indicators of internal and external customer satisfaction, market share, competitive position and environmental protection. The study included 900 Norwegian industrial and service companies. The study showed that there are significant statistical differences in the performance of ISO certified companies in terms of market share, competitive position, external customer satisfaction, and the absence of significant statistical differences in internal customer satisfaction and environmental protection variables.

**The research problem**

The development of the organizations depends on the nature of the administrative systems adopted by them. The relationship between the applications of the approved administrative system and the levels of performance achieved and the systems that the organizations are seeking to adopt in the total quality management system. Therefore, the problem lies in the following question:
Do the TQM applications affect the financial performance for Iraqi government sector organizations?

The importance of the research

The research draws on the importance of addressing the overall quality management system and its impact on the financial performance of government sector organizations, as well as seeking attention to development, and this only through the application of quality standards in order to help organizations to achieve financial performance levels to attract investors. For example hotel groups.

Research Objectives

The research aims to identify the application levels of total quality management and its impact on the financial performance of the organization under consideration by identifying the strengths and the extent of their contribution to achieving success and identifying the weaknesses that impede the integrity of the applications.

Research limits

1- Spatial boundaries: The General Company for Textile Industries in Wasit was chosen as a researchable entity as one of the largest companies in the governmental sector. It owns a number of factories that supply the market with more than one product.
2 - Temporal boundaries: the search extended for the period from 2018/2/1 until 2019
3 - Boundaries of humanity: all directors of the company's labs and heads of departments and a number of employees at different levels of management.

Research Sample

The survey sample was represented by all laboratory managers, department heads and a number of employees at various administrative levels in the company's inspected factories. 145 out of which (5) were excluded for incomplete data and (140) were subjected to analysis. The Statistical Package Program (SPSS), V2, was used to conduct data analysis to obtain the arithmetic mean and standard deviations of the independent and dependent variables. The Spearman Correlation test was also used to find the correlation coefficient between TQM variables and the performance variables. In addition to me find the level of significance (a).

Research hypotheses

The main hypothesis

$H_1$: The main assumption is that there is a statistically significant relationship between the application level of the principles of TQM and the financial performance indicators.

Sub-assumptions

1. There is a statistically significant relationship between the application of the principles of total quality management and profitability.
2. There is a statistically significant relationship between the application of TQM principles and annual sales growth.
3. There is a statistically significant relationship between the applications of the
principles of TQM and reducing the cost of quality.

Research model

Theoretical side

First: The importance of Total Quality Management

The importance of Total Quality Management (TQM) springs from the fact that it constitutes an administrative approach that has been successful in the performance of organizations of various types. The application of this approach has been adopted to improve the quality of its products by overcoming defects, reducing costs and maximizing profits, making it an organization-centered approach to develop operations and re-design which makes quality an organized culture, as well as being one of the ability indicators of organizations use to differentiate themselves against competitors in the marketplace (Nicolaides, 2008).

TQM is a modern management philosophy that takes the form of a comprehensive management approach or system based on events that represent radically positive changes for everything within the organization. These changes include thought, behavior, values, organizational beliefs, management concepts, management style, in order to improve and develop all the components of the organization to reach the highest quality in its outputs and at the lowest cost, in order to achieve the highest degree of satisfaction of customers by satisfying their needs and desires as they expect the to be met and exceeded (Hitt Michael et al, 2001: 93; Nicolaides, 2008).

Thus, TQM refers to the emphasis on quality at the organizational level as a whole from the supplier to the consumer. This requires the management's commitment and attention to all aspects of products and services that attract the interests of customers in the markets targeted by the organization (Frise, 2004: 44). Quality is a strategic management process that adopts a set of concepts and values whose movement energy derives from information that is able to employ workers' talents and invest their capacities at various levels of organization in an innovative way to achieve the quality
and continuous improvement of the organization (Laudon & Laudon, 2004: 112; Sallis, 2014).

Hence, the implementation of the principles of TQM requires a great effort that depends on the qualification of all the employees in the organization through the development of continuous training and education plans that will prepare them with the skills and behaviors necessary for them to carry out the duties assigned to them in practice to meet the needs and desires of the target customers (Nicolaides, 2008).

Second: The benefits of applying Total Quality Management

The organizations’ efforts to adopt and implement administrative systems vary according to the different strategic objectives set by the organization and from their systems. The total quality management system by reviewing the literature written on the comprehensive quality management system, its successful application achieves a range of benefits that reflect the improvement of the financial performance of the organization. The successful implementation of TQM achieves the following benefits:

1. Higher productivity levels
   Productivity is the measure of operational performance used to compare the performance of departments within an organization or between multiple organizations where productivity rates are indicators of profitability in a given time period and an important measure of efficiency that reflects how the organization uses its resources well. Productivity is a relationship between outputs and inputs. Inputs are equal to the total value of goods and services in a given period of time while inputs reflect the cost of materials required for production (Bank, 2000:42-64; Al-Dhaafri et al., 2016).

2. Quality improvement
   Quality improvement is intended to improve product specifications by preparing plans and projects that aim at specific product improvements to meet the current or future target customer needs. This requires the organization of a cohesive team to lead the project and identify the reasons for the reduction or improvement of quality control of new operations in order to ensure planned outputs to meet customer needs and desires (Bank, 1992:89).

3. Improve staff morale
   One of the main principles of TQM is the participation of employees at all levels in decision-making related to work and enable them to perform their duties, which helps to create the spirit of creativity and participate effectively in the processes of identifying problems and contribute to the development of solutions to them then become partners in improving the quality of goods and services provided to the customer. This enhances their morale and a sense of loyalty to the organization (Bank, 2000:145).

4. Gain customers
   The TQM system considers the customer as an essential objective as the force that leads to the design of the product in such a way as to free the benefits in use to meet the needs and satisfy the desires. Otherwise the complaints and dissatisfaction that lead to the reluctance of customers and their later loss and then a decrease in market share due to the decline in sales, cause problems affecting the position of the organization in the target markets and thus weaken its competitive position (Burnill, 2003:119).

5. Improving the Organization's reputation
That the organization will continue to provide high-quality products will give an image of the satisfaction of its customers and thus plays an active role in disseminating information that enhances the organization’s reputation, while defective products result in failure of work, destruction of the image of the organization and reduced market share due to loss of customers (Chase, 1992:14-23).

**Third:** The concept of financial performance

Organizations face diverse and rapidly changing circumstances that directly or indirectly affect the ability to secure access to the various resources that achieve successful access to the desired goals. The importance of financial performance has been recognized and assessed. Financial performance aims to evaluate performance from multiple perspectives serving users as stakeholders to identify points of strengths and weaknesses and to make use of the information provided by financial performance to rationalize financial decisions of beneficiaries (Obeidat et al., 2016).

The financial performance helps to follow up the work of the organizations, examine their behavior, monitor their situation, evaluate the levels of activities, and guide them towards the right direction by identifying obstacles and explaining their causes, proposing corrective measures, rationalizing their uses and investments according to the general objectives and contributing to decision making sound to maintain the continuity and survival of the organization (Grosby, Lawrence & Taylor, 1992:130).

There are those who define financial performance as exploiting the financial resources available to the organization in a way that enables it to achieve the goals of the financial function. This depends on the financial policy of the organization, which is shown through the composition of its financial budget of assets and liabilities and the ability to finance their investments. Their inability to finance will affect their financial performance (Davis, 1992; Goetsch, 1988; Khanam et al., 2016).

It is therefore possible to say that financial performance is the ability of the organization to act efficiently in achieving the objectives according to its ability to adapt to internal environmental conditions or external aspects, and to choose and use the appropriate method in the optimal utilization of available resources within the time limits set in advance to serve the various bodies related to the organization.

**Fourth:** Financial performance measures

The importance of measuring the performance using a set of indicators to enable comparison between the actual situation and the default situation was required and perhaps the most important indicators adopted by the organizations are the financial indicators.

1. **Profitability of the Organization**
   There is a direct correlation between quality and profitability because the high level of benefits achieved by the customer during the use of the products increases the conviction to pay more for the products, there is no separation between the quality of the realized benefits and the achievement of profits so organizations are constantly improving and improving the performance of their products to retain existing customers and attract new customers For the profit it seeks to achieve (Grosby Lawrence & Taylor, 1992:4).

2. **Annual sales growth**
   Sales are the primary source of income for all types of profit. They are the main focus of the activity through which profits are realized. Moreover, sales are based on the
calculation of many financial ratios in evaluating the financial performance of the organization such as profit margin, return on investment, Assets, net working capital, inventory turnover, fixed asset turnover, daily cash and these ratios reflect the strengths and weaknesses that show the financial position of the organization (Davis, & Goetsch, 1992:41; Honarpour et al., 2018).

3. Reduce quality costs
The total quality management is based on the zero defect strategy. The Japanese have succeeded in achieving the best quality at the lowest cost by focusing on continuous improvement and development, training the production workers, spreading the culture of teamwork and adhering to international standards that enable the internal and external failure cost, and a reflection on total costs (Dilworth, 1992:120; Jaca & Psomas, 2015).

The practical part

First: Analyzing the level of application of the principles of total quality management
A number of questions related to the importance of applying the basic principles of the Total Quality Management System were presented to a sample of the employees of the company in question and analysis was done according to the answers to the following questions:

First question: To what extent do the company’s labs seek to implement the principles of total quality management (commitment of senior management, customer focus, employee participation, staff training, task forces, resource relationship, strategic planning, benchmarking)?

<table>
<thead>
<tr>
<th>No.</th>
<th>Accounting averages and standard deviations to implement TQM principles</th>
<th>Arithmetic Mean</th>
<th>Standard deviations</th>
<th>Application level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The commitment of senior management quality</td>
<td>4.41</td>
<td>0.45</td>
<td>High</td>
</tr>
<tr>
<td>2.</td>
<td>Focus on customers</td>
<td>4.46</td>
<td>0.39</td>
<td>High</td>
</tr>
<tr>
<td>3.</td>
<td>Participation of Employees</td>
<td>3.98</td>
<td>0.51</td>
<td>High</td>
</tr>
<tr>
<td>4.</td>
<td>Training of employees</td>
<td>2.98</td>
<td>0.83</td>
<td>Medium</td>
</tr>
<tr>
<td>5.</td>
<td>Working teams</td>
<td>3.47</td>
<td>0.72</td>
<td>Medium</td>
</tr>
<tr>
<td>6.</td>
<td>Supplier relationship</td>
<td>3.97</td>
<td>0.56</td>
<td>High</td>
</tr>
<tr>
<td>7.</td>
<td>Strategic Planning</td>
<td>4.30</td>
<td>0.51</td>
<td>High</td>
</tr>
<tr>
<td>8.</td>
<td>Facts – Based Managements</td>
<td>3.89</td>
<td>0.72</td>
<td>High</td>
</tr>
<tr>
<td>9.</td>
<td>Referential Comparison</td>
<td>3.88</td>
<td>0.68</td>
<td>High</td>
</tr>
<tr>
<td>10.</td>
<td>Overall Average</td>
<td>3.92</td>
<td>0.60</td>
<td>High</td>
</tr>
</tbody>
</table>
Table 1 shows that the application of the principles of TQM in sequences (1, 2, 3, 6, 7, 8, 9) obtained the arithmetical averages (4.41, 4.66, 3.98, 3.97, 4.30, 3.89, 3.88) (0.39, 0.72) and this showed that there was agreement among the sample. Paragraphs (4 and 5) obtained a medium degree of approval, with mean (2.98, 3.47) respectively, and deviations Standard (0.83, 0.72) is a function of the consensus of the sample’s views, given the general average which received the application of the principles of total quality management combined value of (3.92). We can answer the question that the coefficient of the company in question seeks and at a high level to apply the principles of TQM and the consensus of the views of the research sample as evident from the standard deviation of 0.60. This is a positive indicator in light of the opening of the Iraqi market and the intensification of competition in light of the influx of foreign goods from all Without adequate protection of the national product, which requires the company to work on the adoption of TQM to enable it to meet the challenges in the target markets.

Second: Analyzing the impact of TQM applications on financial performance indicators

In order to analyze the impact of the application of the principles of TQM on financial performance, the following question has been addressed to the respondents: Is the implementation process of TQM principles positively affecting the improvement of the company’s financial performance?

The results achieved are summarized in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Financial Performance Indicators</th>
<th>Arithmetic Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low rate of complaints by customers</td>
<td>4.39</td>
<td>0.69</td>
</tr>
<tr>
<td>2.</td>
<td>Increased satisfaction of customers with institution products</td>
<td>4.43</td>
<td>0.71</td>
</tr>
<tr>
<td>3.</td>
<td>Rising prices of institution products in target markets</td>
<td>3.52</td>
<td>0.94</td>
</tr>
<tr>
<td>4.</td>
<td>Delivery of products to beneficiaries in a timely manner</td>
<td>4.24</td>
<td>0.74</td>
</tr>
<tr>
<td>5.</td>
<td>High total productivity of the organization</td>
<td>4.20</td>
<td>0.74</td>
</tr>
<tr>
<td>6.</td>
<td>Decrease in the number of defective products in the organization</td>
<td>4.20</td>
<td>0.71</td>
</tr>
<tr>
<td>7.</td>
<td>High output ratio in production process to total output</td>
<td>4.24</td>
<td>0.70</td>
</tr>
<tr>
<td>8.</td>
<td>Low repair activities of defective products</td>
<td>3.87</td>
<td>0.71</td>
</tr>
<tr>
<td>9.</td>
<td>The high rate of products returned by the customer</td>
<td>2.05</td>
<td>1.19</td>
</tr>
<tr>
<td>10.</td>
<td>The increase in the total market share of the Organization</td>
<td>3.89</td>
<td>0.75</td>
</tr>
</tbody>
</table>
Table (2) shows that paragraphs (1, 2, 3 and 4) that measure the impact of TQM application on customer satisfaction have obtained the arithmetical averages (4.39, 4.43, 3.52, 4.24) respectively, reflecting a high degree of confirmed approval (3), which obtained a weighted average of (3.52). The standard deviations of all paragraphs ranged between (0.69 and 0.94), respectively, confirming the homogeneity of the customer's satisfaction as a performance indicator.

The impact of applying TQM on productivity was measured in paragraph (5), which obtained a high degree of approval with a mean value of (4.20) . This means that productivity is affected by the application of TQM and the consensus of the sample members as evident from the standard deviation of 0.74. The impact of the application of TQM on quality improvement was also measured by paragraphs (6,7,8,9) where paragraphs (6, 7) on the two arithmetic mediums (4.20, 4.24) and with a high degree of approval. The application of TQM contributed to the reduction of the number of defective products, which was reflected in return for the outputs of the production process, while paragraph (8) obtained a high degree of approval and a weighted average of (3.87) (0.71, 0.70, 0.71), which confirms the consistency of the views of the sample members. Paragraph (9) obtained an average of (2.05), indicating a lack of

The recovered products offered by the company's laboratories are proof of the positive effect of ADA's application The total quality is consistent with the paragraphs that reflect the improvement of the quality of the products and the customer's satisfaction with the products and with a standard deviation (1.19).

Finally, the impact of the application of quality management on the market share was measured by paragraph (10), which obtained high approval with an average of (3.89) indicating the effect of the application on expanding the market share and the standard deviation (0.75) on the homogeneity of the opinions of the sample. The implementation of TQM system has a positive impact on the level of the financial performance indicators of the organization represented by satisfaction and productivity, improving the quality of the products and expanding the market share. This necessitates observing the relationship between the indicators of financial performance combined from the side and the impact of applying TQM.

**Third: Obstacles facing the application of Total Quality Management**

Table 3. Obstacles to the application of Total Quality Management

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures to measure the constraints of applying TQM</th>
<th>Arithmetic Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lack of senior management belief in the implementation of TQM</td>
<td>2.02</td>
<td>0.81</td>
</tr>
<tr>
<td>2.</td>
<td>Anxiety and fear among employees who apply TQM</td>
<td>2.56</td>
<td>1.08</td>
</tr>
<tr>
<td>3.</td>
<td>High turnover due to employees leaving their jobs</td>
<td>2.54</td>
<td>1.10</td>
</tr>
<tr>
<td>4.</td>
<td>Lack of performance appraisal systems for teamwork</td>
<td>2.89</td>
<td>1.11</td>
</tr>
<tr>
<td>5.</td>
<td>Lack of resources for the implementation of TQM</td>
<td>2.71</td>
<td>1.04</td>
</tr>
<tr>
<td>6.</td>
<td>Lack of a clear strategy for applying TQM</td>
<td>2.39</td>
<td>0.96</td>
</tr>
</tbody>
</table>
Table (3) shows a number of constraints that are likely to face the implementation of the TQM system. Paragraph (1) shows the lack of faith and commitment of senior management to implement the TQM system, and a standard deviation of (0.81). This indicates the interest given by the senior management in the organization to the application of TQM. This result is consistent with the first paragraph in Table (1), which received high approval within the principles of TQM.

The labor-related constraints measured by paragraphs (2 and 3) regarding the fear and anxiety of workers in the application process and the fear of change, as well as the turnover rates resulting from the probability of employees leaving their jobs, were calculated (2.56, 2.54) respectively, (1.08, 1.10). This is due to the lack or lack of alternative employment opportunities due to the economic crisis in the country, as well as the repercussions of the political and security situation, lack of opportunities for investment, and the weak contribution of the private sector in supporting the economic situation.

In terms of adopting the concept of task forces, this requires performance measurement systems for team work groups. The availability of these systems was measured by paragraph (4), which obtained moderate approval at an arithmetic mean (2.89) and by standard deviation (1.11). The existence of performance appraisal systems for teamwork- Paragraph (5) was an arithmetical average (2.71) based on average approval of a standard deviation of (1.04). This indicates that the opinions of the sample members were limited due to the scarcity of resources allocated to the process of applying TQM by the organization. The effects of the general economic situation and the intensification of competition due to external imports. Finally, paragraphs 6 and 7 related to the strategic dimension. Paragraph (6) states that there is no clear strategy for the implementation of the TQM system and has obtained a weak approval with a weighted average of (2.39) and a standard deviation of (0.96). Paragraph (7) in Table (1) of the high approval, paragraph (7), which focused on the lack of a strategy for the development of human resources skills of the Organization has obtained a medium degree of approval with an average of (2.68) and a standard deviation of (1.05) The members of the sample in line with the result of paragraph (4) on the principles of management of the Comprehensive attention and the need to train workers in Table (1).

Fourth: Analyzing and discussing hypotheses

Based on the research problem and its objectives, a basic hypothesis was developed, which includes a number of sub-hypotheses. The following is a test of these hypotheses

The first main hypothesis:

There is a statistically significant relationship between the application level of the principles of TQM on the one hand and the financial performance of (increasing profitability, increasing annual sales growth, reducing quality costs) and for testing the hypothesis were divided into three sub-hypotheses. Application of the principles of total
quality management (independent variables) and financial performance indicators (dependent variables) are shown in table (4).

Table 4. Spearman transactions between the implementation of the principles of TQM and financial performance indicators

<table>
<thead>
<tr>
<th>Principles of performance indicators</th>
<th>Profitability</th>
<th>Growth of Sales</th>
<th>Costs of Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient of Correlation</td>
<td>Coefficient of Correlation</td>
<td>Coefficient of Correlation</td>
</tr>
<tr>
<td>Total Quality Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment of senior management</td>
<td>0.364**</td>
<td>0.314**</td>
<td>0.243**</td>
</tr>
<tr>
<td>Focus on the customer</td>
<td>0.205*</td>
<td>0.100</td>
<td>0.200*</td>
</tr>
<tr>
<td>Participation of Employee</td>
<td>0.190*</td>
<td>0.204*</td>
<td>0.249**</td>
</tr>
<tr>
<td>Training of Employees</td>
<td>0.253**</td>
<td>0.175*</td>
<td>0.240**</td>
</tr>
<tr>
<td>Working teams</td>
<td>0.164</td>
<td>0.292**</td>
<td>0.305**</td>
</tr>
<tr>
<td>Supplier relationship</td>
<td>0.231*</td>
<td>0.227*</td>
<td>0.343**</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>0.245**</td>
<td>0.223*</td>
<td>0.369**</td>
</tr>
<tr>
<td>Management by facts</td>
<td>0.236**</td>
<td>0.297**</td>
<td>0.333**</td>
</tr>
<tr>
<td>Referential Comparison</td>
<td>0.198*</td>
<td>0.360**</td>
<td>0.409**</td>
</tr>
</tbody>
</table>

The first sub-hypothesis: - There is a significant statistical relationship at the level of (α> = 0.05) between the applications of the principles of TQM on the one hand and increasing profitability on the other. Based on the results of Table (4) we note a positive correlation between (19% - 36.4%) at (α> = 0.05) between the principles of total quality management on the one hand and profitability on the other hand, except for the principle of work teams, which obtained a positive correlation coefficient of (16.4%) but not statistically significant at (α> = 0.05). Thus, rejecting the first sub-hypothesis on the principle of task forces and accepting the rest of the principles of TQM.

The second sub-hypothesis: - There is statistically significant relationship at the level of (α> = 0.05) between the applications of the principles of TQM and the increase in the annual growth of sales and from the results of Table (4), there is a positive correlation between (36% - 10%) This correlation is statistically significant at the level of (α> = 0.05) between the application of the principles of TQM on the one hand and the annual growth of sales on the other hand, except for the customer focus principle, which obtained a correlation coefficient of (10%) which makes the correlation statistically insignificant at the level (α> = 0.05). Thus, the second sub-hypothesis is also rejected on the principle of focusing on the customer and accepting the other principles of TQM.

The third sub-hypothesis: - There is a statistically significant relationship at the level of (α> = 0.05) between the applications of the principles of TQM on the one hand and the reduction of the cost of quality on the other. It is clear from the results of Table (4) the existence of a positive correlation ranged between (40.9% 20%) is statistically
significant at the level of \( (\alpha > 0.05) \) between the application of the principles of total quality management on the one hand and the reduction of the cost of quality on the other hand, and the hypothesis is thus accepted.

**Conclusions**

1. There is a significant statistical correlation at the level of \( (\alpha > 0.05) \) between the applications of TQM on the one hand and increase the profitability of the organization on the other hand, except the principle of team work and this means the more the level of quality management application the greater the profitability.

2. There is a significant statistical correlation at \( (\alpha > 0.05) \) between TQM applications on the one hand and annual sales growth in the organization on the other hand, except for the focus on the customer. This means that the higher the TQM implementation, the higher the annual growth for sales.

3. There is a significant statistical correlation at the level of \( (\alpha > 0.05) \) between the applications of TQM from the side and reduce the cost of quality from the other hand, which means the higher the level of application of TQM the lower the cost of quality.

**References**


Wiley.