

The relationship between total quality management and achieving competitive advantage in the economic institution

-From the point of view of a sample of VENUS Corporation workers-

علاقة إدارة الجودة الشاملة بتحقيق الميزة التنافسية في المؤسسة الاقتصادية

- من وجهة نظر عينة من عمال مؤسسة VENUS -

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Abstract: This study elucidated the correlation between comprehensive quality management and the attainment of competitive advantage in economic institutions through an analysis of VENUS workers' perspectives. Data pertinent to the research were gathered via a questionnaire administered to a random sample of 90 employees. Employing various statistical methods, the principal findings indicated a significant correlation between total quality management and competitive advantage, as well as statistically significant differences in the perceptions of VENUS employees regarding the components of total quality management (customer focus, teamwork, senior management support, training) attributable to the job variable. The study presented several significant recommendations advocating for the implementation of overall quality management and its contribution to augmenting competitive advantage inside Algerian institutions.

Keywords: Total Quality Management, Competitive Advantage, Economic Institution.

Résumé: Cette recherche a mis en lumière le lien entre la mise en œuvre de la gestion de la qualité totale et l'acquisition d'un avantage concurrentiel dans les organisations économiques, en examinant les perceptions des salariés de l'entreprise VENUS. Les données de recherche ont été recueillies à l'aide d'un questionnaire élaboré, lequel a été distribué à un échantillon aléatoire de 90 employés pour collecter les informations nécessaires. En recourant à diverses méthodes statistiques, les résultats les plus saillants mettent en évidence une corrélation significative entre la mise en œuvre de la gestion de la qualité totale et l'obtention d'un avantage concurrentiel. Par ailleurs, des disparités statistiquement significatives sont observées dans la manière dont les employés de l'entreprise VENUS perçoivent les exigences liées à la gestion de la qualité totale (telles que l'orientation client, le travail d'équipe, le soutien de la direction supérieure et la formation), en fonction de leur catégorie professionnelle. L'étude a également formulé plusieurs recommandations essentielles visant à promouvoir la mise en œuvre de la gestion de la qualité totale et à souligner son importance dans le renforcement de l'avantage concurrentiel des institutions en Algérie.

Mots-clés : Gestion De La Qualité Totale, Avantage Concurrentiel, Institution Économique.

ملخص: جاءت هذه الدراسة للكشف عن علاقة إدارة الجودة الشاملة بتحقيق الميزة التنافسية في المؤسسات الاقتصادية ، من خلال تحليل آراء العاملين في مؤسسة VENUS ، وقد تم جمع البيانات والمعلومات المتعلقة بالبحث من خلال تصميم استبانة تم توزيعها على عينة عشوائية ضمت 90 عاملاً، ومن خلال استعمال عدة أساليب إحصائية كانت أبرز النتائج التي تم التوصل إليها تمثلت بوجود ارتباط معنوي بين إدارة الجودة الشاملة و الميزة التنافسية، وتوجد فروق ذات دلالة إحصائية في تصور العاملين في مؤسسة VENUS لمتطلبات إدارة الجودة الشاملة (التركيز على الزبون ، العمل بروح الفريق ، دعم الإدارة العليا ،

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لتدريب (مجتمعة ترجع لتغير الوظيفة ، كما تضمنت الدراسة عددا من التوصيات الهامة التي تشجع إرساء إدارة الجودة الشاملة وتدعم دورها في تعزيز الميزة التنافسية في المؤسسة الجزائرية.

الكلمات المفتاحية: إدارة الجودة الشاملة، ميزة تنافسية، مؤسسة اقتصادية .

I- Introduction :

Given the swift alterations and developments observed in the corporate landscape, institutions wishing to survive, grow, and excel must take a set of measures and procedures to confront these increasing challenges and complexities. One of the most critical administrative aspects aimed at achieving this transformation is adopting total quality.

Total Quality Management (TQM) is a contemporary management philosophy grounded in various organizational concepts that integrate administrative strategies, innovative initiatives, and technical expertise to enhance performance and foster continuous improvement. This approach aims to fulfill customer desires and needs with optimal efficiency and effectiveness. TQM is regarded as a strategic tool that significantly aids organizations in attaining a competitive advantage, as superior quality of products and services bolsters the organization's market position and facilitates customer attraction and retention.

Increasingly competitive environments require companies to adopt effective strategies to ensure their continued success. Therefore, applying the principles of total quality management is one of the primary means that can contribute to improving institutional performance. To keep pace with the rapid changes in the environment in which they operate, economic institutions must obtain a competitive advantage or advantages by providing products and services that meet the current and future needs and desires of consumers, which will achieve increased profitability for the institution and enhance its competitive position, ensure its survival and continuity in local markets, and allow it to enter global markets and occupy strong positions compared to its competitors. Based on the above, this study came to answer the following question: **Is total quality management important in achieving a competitive advantage in VENUS?**

Sub-questions:

- Does a statistically significant link exist at a significance level of 0.05 between total quality management and competitive advantage, as seen by employees at VENUS?
- Are there statistically significant differences at a 0.05 significance level in employee perceptions at VENUS regarding the needs for comprehensive quality management (customer focus, teamwork, senior management assistance, training) as influenced by the job variable?

Study hypotheses:

- The initial hypothesis posits a statistically significant correlation at a 0.05 significance level between total quality management and competitive advantage, as seen by employees at VENUS.
- The second hypothesis posits that, at a significance level of 0.05, there are no statistically significant variations in the perceptions of employees at VENUS regarding the requirements of overall quality management (customer focus, teamwork, senior management assistance, training) when analyzed in relation to the job variable.

Study objectives:

Through our study of this topic, we aim to achieve the following:

- Expand the topic, whether related to total quality management or competitive advantage, as they are new concepts in business management that have received significant attention in recent years.
- Demonstrate the necessity of attaining a competitive advantage inside the institution and elucidate the essential prerequisites of comprehensive quality management that must be considered to enhance products and services, hence bolstering the institution's competitive edge.
- The results may contribute to establishing the features of total quality in the institution and enhancing its competitive advantage.

Study Importance:

Total quality management and competitive advantage are considered vital topics for Algerian institutions, especially in light of the economic challenges associated with global changes and increasing competitiveness. Total quality management contributes to enhancing the culture of continuous improvement within institutions, which leads to increasing the level of customer satisfaction and enhancing loyalty, which is considered an essential element. In the changing business environment, Algerian institutions increasingly rely on creating distinctive strategies to outperform competitors so that quality becomes an integral part of the corporate identity.

Study Model:

The following figure illustrates the study model:

Figure No. (01): Study model.

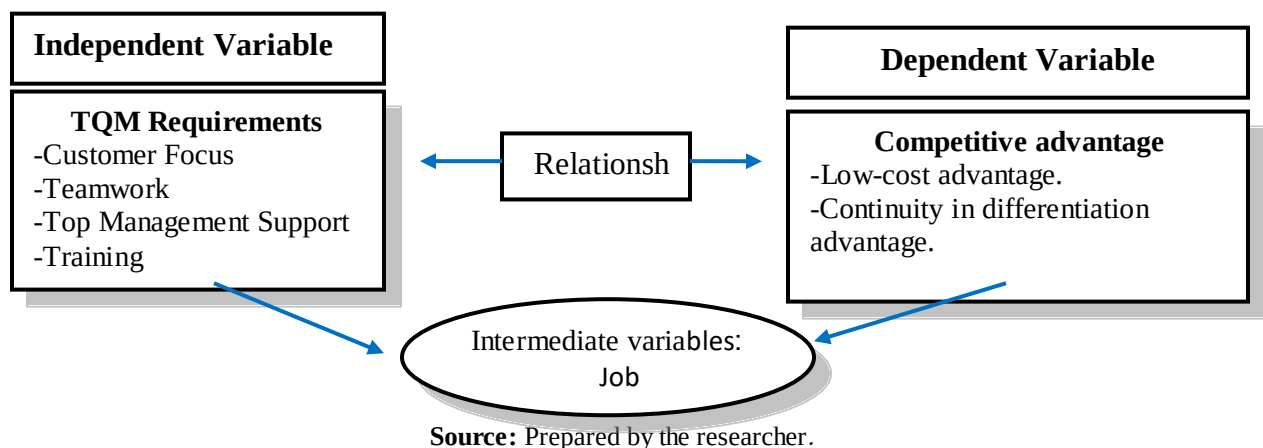


Figure No. (1) clearly shows that the current study attempts to determine the importance of applying the requirements of TQM in achieving the institution's competitive advantage.

I.1. Total Quality Management

I.1.1. Definition

Total Quality Management (TQM) is a collection of management strategies implemented across a company to achieve continual fulfillment or surpass customer expectations (Merih, 2017, p.04). Total Quality Management (TQM) is fundamentally a perpetual, incremental change initiative that prioritizes client requirements and services, underscores collaboration and teamwork, and aims to cultivate a culture that boosts productivity and profitability. (Snongtaweepon, et al., 2020, p.820)

The British Standards Institution defines Total Quality Management as an organizational philosophy encompassing all operations inside the organization. These actions fulfill the requirements and anticipations of customers and society. At the same time, the organization's

objectives are attained most efficiently and cost-effectively through the optimal utilization of all employees' efforts and a relentless pursuit of advancement. (Shaddad, 2014, p.379)

Total Quality Management is an organizational, administrative process executed collaboratively to achieve objectives by leveraging the competencies of both management and employees. It is aimed at continuously enhancing quality and augmenting productivity through work teams, guided by precise information to eradicate all waste within the organization. Any firm may attain its objectives if every individual performs their tasks with optimal efficiency. (Louarti, 2016, p. 354)

Total Quality Management denotes a systematic and holistic methodology for organizational management aimed at enhancing the quality of products and services via ongoing improvements driven by continuous feedback (Hendrik, 2010, p. 09).

I.1.2. TQM importance:

TQM importance comes from institutions or companies keenness to provide a product (service or commodity) with characteristics and features that distinguish it from its counterparts from other companies to achieve customer satisfaction that seeks to accept the product and thus obtain a result that expands the company's market share, and this is reflected in increasing sales and revenues that lead to increased profits. Several researchers and specialists summarize the importance of total quality management as follows (Habib & Al-Fakiki, 2021, p.176)

- The institution or company can gain customer satisfaction and increase their demand for its products, as the more satisfied customers are and the more they are willing to buy products, the more the institution's profits increase.
- Motivating companies to search for the best and continuously, which in turn increases the productivity of institutions or companies and customer satisfaction.
- Enhancing the competitive advantage of institutions and making them have the largest market share.
- Contributing to reducing costs, as studies conducted in this regard have shown that when a company produces high-quality products, it retains its customers, which will help it retain the profits it obtains. It will also reduce the costs and financial burdens that the company bears if it produces defective products, whether compensation or repair.
- Reduce the time spent by the institution in completing its work because the idea of total quality management is based on making good use of time to improve production and strengthen the work environment.
- Expanding the horizons of senior management by directing its thinking towards strategic planning and thus making better decisions. (Aqili, 2001, p.22)
- The institution's commitment to implementing total quality management increases its ability to change its members' behavior and embody the culture of quality. (Al-Musawi & Al Ali, 2000, p.196)

I.1.3. TQM Requirements:

The requirements and concepts through which an effective program can be built to implement TQM:

- **Customer focus:** Focusing on the customer stems from the principle of satisfying both the external customer and the internal customer, as the word (customer) in the philosophy of Total Quality Management is limited to customers external to the organization only, but this concept

is expanded to include internal customers, who are individuals working in various departments and sections within the organization. (Hammadi, 2013, p.05)

- **Cooperation and team spirit:** An atmosphere of cooperation, team spirit, and teamwork must exist among organization employees because the application of the Total Quality Management methodology depends primarily on work teams .(Khanshour & Jumaa, 2017, p.322)
- **Commitment of senior management:** Supporting senior management and the necessary interest in working to improve the quality of products or services provided is the secret to the success of Total Quality Management, in addition to the fact that senior management support is necessary to create an organizational environment that values creativity, innovation and the different points of view of diverse talents in the organization (Hamdan, 2018 p.13).
- **Quality Circles:** They are teams or groups of workers and their supervisors in the same department (quality circles) who are trained to solve problems and control operations. Statistics This group works to analyze problems related to production, study them, and find appropriate solutions for them. (Al-Mamouri & Al-Amiri, 2019 ,p.142).
- **Continuous improvement:** The philosophy of continuous improvement is one of the pillars of the Total Quality Management methodology, and its goal is to achieve complete mastery of work through continuous improvement in the organization's production processes; improvement efforts should not stop because there are always opportunities for improvement that must be exploited, as quality is a never-ending journey. (Hammadi, 2013, p.05)
- **Empowering workers means involving all workers in all production processes. When an organization grants workers powers and responsibilities, it achieves high quality in the production of its products** because workers' participation is reflected in the improvements made to the processes, equipment, and products that lead to high quality .
- **Six Sigma:** It is a measure of the amount of deviation or manifestation of a service or product from the state of perfection or zero defect and is expressed statistically with a quantitative target of 3.4 defects per million units or opportunities
- **Benchmarking:** It is the rules and procedures that are organized systematically to measure the organization's performance (products, services, processes) and compare it in a reference manner with organizations with outstanding performance in the market. (Al-Mamouri & Al-Amiri, 2019, p.142)
- **Employee training:** Training is one of the basic requirements of TQM, which is a good and continuous way to develop employees in the organization by encouraging the organization's members and improving their technical skills. (Hamdan, 2018, p.13)

I.2.Competitive advantage

I.2.1.Definition:

Competitive advantage is the capability, technology, or distinctive resource that allows an organization to deliver superior value and benefits to customers compared to its competitors. This affirms its uniqueness and differentiation in the eyes of customers who recognize this distinction and receive more significant advantages than those provided by rival firms. (Habib & Al-Fakiki, 2021, p.180)

It is described as the organization's capacity to devise and execute strategies that allow for the optimal utilization of its resources and diverse strengths, taking into account potential changes and threats to reach distinctive positions within the industrial field in which it operates. (Al-Amin & Shalali, 2022, p.235)

The competitive advantage primarily stems from the value an organization creates for its customers, manifested either through lower prices relative to competitors offering equivalent benefits or by delivering unique product advantages that justify a price increase. (Semlali & Saidi, 2005, p.35)

In other words, competitive advantage refers to building a system that has a unique or distinctive advantage that outperforms competitors through customer value, efficiently and sustainably, and that can be continuously maintained and presented or presented better than others. (Kazem, 2017, p.468)

Competitive advantage emerges when a firm identifies and implements more effective ways than its competitors, particularly through the process of innovation in its broadest definition. (M.Porter, 1993, p.48)

I.2.2. Competitive advantage importance:

It is can be defined as follows (Al-Taie & Karmasha, 2010, p.21).

- It serves as the principal instrument to confront market difficulties and the associated organization. This arises from the organization cultivating its competitive intelligence and capacity to fulfill future client demands by establishing effective appointments and competencies that empower it to adjust to swiftly evolving opportunities.
- It serves as a fundamental criterion for distinguishing successful businesses from their counterparts, as successful firms are characterized by the ongoing discovery of innovative and original models that are challenging to replicate. Their previous models have been recognized and publicly accessible, and competitors are fully cognizant of them.
- This signifies a favorable indication of the organization's strategy to secure a robust market position by acquiring a greater market share than its competitors. This strategy results in a higher number of satisfied and loyal customers, thereby enhancing sales volume and profits.

I.2.3.Dimensions of Competitive Advantage

- **Core capability:** It can be defined as the production of experience and accumulated learning in the company, which results in the knowledge and skills required to accomplish the work with actual high professionalism in performing the company's internal activities, while the core capability specific to the creative implementation and brilliant performance of the company's activity is a solid and fixed characteristic and not accidental or emergency, and through it the company ensures profitability and competition (Abdel Hamid, 2023, p.386).
- **Creative culture:** Culture is defined as that complex or compound whole that includes knowledge, beliefs, arts, ethics, customs, traditions, and all other capabilities and things that are performed by the human being as a member of society (Khawani, 2021, p.82)
- Organizational culture is an essential factor that affects the behavior and results of companies, as it is a broad concept that has not yet been reached. No consensus has been reached on it, and ideas related to shared beliefs, values, assumptions, and behavioral patterns are usually associated with organizational culture, which can contribute to overcoming many of the problems facing the company. (Abdel Hamid, 2023, p.386)
- **Information technology** refers to the diverse discoveries, advances, and inventions associated with data and information, namely in the realms of collection, organization, storage, and retrieval in a timely and suitable manner. It is one of the main tools that people, especially managers in companies and institutions, invest in to face the changes and developments surrounding them and live with them, and even invest it in improving performance and providing the best products and services (Nabar, 2018, p.89).

- **Strategic flexibility:** It means the ability or characteristic that enables the institution to modify its strategies entirely or partially in the appropriate manner and speed through the ability to anticipate the future, identify the changes that may occur in the surrounding environment, and prepare appropriate strategic alternatives within a proactive or adaptive context to environmental changes, whether internally or externally, to achieve a competitive advantage. (Bakhalili & Shalali, 2022, p.231)

II– Methods and Materials:

II.1. Areas of study: The field of study is a fundamental point in the research due to its importance during the field study, as all those working in scientific research methods agree that each study has three main areas:

- **Geographical area:** This study was conducted in the VENUS Foundation, a private limited liability company established in 1981 and specialized in cosmetic products in all their forms. Its headquarters are located in the city of Blida. The company is considered one of the successful models in the chemical products sector in its cosmetics branch. It is one of the companies that obtained the ISO9001 quality certificate and the ISO14001 environmental management certificate. It also won the Algerian Quality Award in 2015.
- **Human area:** The study was conducted on a sample of institution employees, regardless of their positions.
- **Time area:** This refers to the period during which this field study took place, which ranged from June to October 2024.

Study community and sample :

The study community represented all employees of the VENUS Foundation, and we estimated the sample size to be 100 individuals, which is a generally acceptable percentage. However, after completing the distribution process, we encountered some obstacles, including the lack of response from some sample members. This led to not retrieving all the distributed questionnaires, as we retrieved 90 valid questionnaires for the study.

II.3.Measurement methods

We used specific measurement methods when constructing the study tool, as the options available for each paragraph of the study dimensions were according to the “five-point Likert” scale. The method used to determine the direction is to calculate the measurement range ($5-1 = 4$) and then divide it by the number of scale cells (5), i.e. ($5/4 = 0.80$), to obtain the length of the cell, then add this value to the lowest in the scale, i.e. (1), to determine the upper limit of the cell. The distribution becomes according to the following table:

Table No. (01): Weighted averages and corresponding trends

<i>Interpretation</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
<i>Arithmetic mean value</i>	1 - 1.8	1.8 - 2.6	2.6 - 3.4	3.4 - 4.20	4.20 - 5

Source: (Al-Farra, 2009, p. 26)

The SPSS 25 program was relied upon in the statistical analysis and hypothesis testing process to test the study hypotheses and arrive at the study results from the collected data.

III- Results and discussion :

III.1. Analysis of the results of the Total Quality Management axis

We explain this through Table No. (02) The statistical results of the Total Quality Management axis are as follows:

Table No. (02): Arithmetic averages and standard deviations related to the Total Quality Management axis.

No	Phrase	Arithmetic mean	Standard deviation	Trend
customer focus				
1	Company seeks to be the first to meet the needs of its customers	2.866	0.3457	Agree
2	The company is keen to survey the opinions of customers continuously	2.366	0.4901	Agree
3	The company informs customers of their financial obligations promptly	2.966	0.18250	Agree
4	The company considers customer satisfaction a requirement to achieve long-term continuity	2.866	0.3457	Agree
The result of the First dimension		2.76	0.33	Agree
Teamwork				
5	The company allows employees to express their opinions	2.066	0.7396	Neutral
6	The company involves employees in the decision-making process	1.566	0.6260	Disagree
7	The company adopts teamwork policies	2.200	0.6643	Disagree
8	The company is keen to activate the role of each individual in the work team	2.266	0.86830	Neutral
The result of the Second dimension		1.86	0.71	Neutral
Senior Management Support				
9	The company's senior management is interested in developing knowledge permanently to improve the level of quality.	2.366	0.4901	Agree
10	The company's senior management emphasizes to the company's employees the necessity of adhering to the regulations and laws.	2.900	0.305	Agree
11	The company's senior management sets clear plans to achieve commitment to product quality.	2.866	0.345	Agree
12	The company's senior management adopts building a vision to improve quality	2.833	0.379	Agree
The result of the Third dimension		2.73	0.37	Agree
Training				
13	The company is keen to hold multiple training courses to develop the capabilities of employees	2.633	0.490	Agree
14	The company motivates employees to participate in training courses	2.566	0.626	Agree
15	The company sets the times of training courses in line with the nature of the work	2.300	0.651	Neutral
16	The company sets the training course times in line with the nature of the work.	2.233	0.678	Neutral
The result of the fourth dimension		2.43	0.60	Agree
The overall result of the first axis		2.44	0.50	Agree

Source: Created by the researcher based on the SPSS v25 program.

The table's data reveal that the total arithmetic mean of the customer attention index is 2.73, reflecting the level of agreement on the Likert scale. Paragraphs 9 to 12 pertain to the level of agreement as measured by the Likert scale. The aggregate standard deviation was assessed at 0.33, indicating minimal variation in the responses of the sample members, suggesting a consensus regarding the institution's concern for its customers. The data presented in the table demonstrate the

consensus among all sample members regarding the levels of agreement, with minor discrepancies reflected by these deviations.

The outcome of the second component, teamwork, was neutral, with a mean of 1.86, indicating a moderate level of collaboration. The standard deviation was 0.71, indicating a moderate dispersion of responses across the study sample participants, suggesting their replies were not uniformly directed to a significant extent.

The overall arithmetic mean of the customer focus index was 2.76, indicating the level of agreement based on the Likert scale. Paragraphs one through four relate to the level of agreement as per the Likert scale. The overall standard deviation was estimated at 0.37, indicating minimal variance in the responses of the sample members, suggesting a consensus that senior management supports total quality management. The results presented in the table demonstrate the consensus of all sample members' responses with the levels of agreement, but with minor discrepancies reflected by the deviations. The overall arithmetic mean of the customer focus index was 2.43, reflecting the level of agreement on the Likert scale. Paragraphs 13 to 16 pertain to the level of agreement as measured by the Likert scale. The estimated total standard deviation of 0.60 suggests minimal variation in the responses of the sample members, indicating a consensus that the institution effectively trains its employees to execute the procedures of the total quality management system correctly. The results presented in the table demonstrate the consensus of all sample members' responses with the levels of agreement, but with minor discrepancies reflected by these deviations.

The entire quality management axis yielded an arithmetic mean of 2.44, indicating the institution's management's alignment with the principles of total quality management. The standard deviation was calculated to be 0.55, signifying minimal dispersion across the responses of the study participants. Negligible variations in individual answers, therefore, reflect a uniform directionality.

III.2. Analysis of the results of the competitive advantage axis.

We show the statistical results of the competitive advantage axis in Table No. (03).

Table No. (03): Arithmetic averages and standard deviations related to the competitive advantage axis.

No	Phrase	Arithmetic mean	Standard deviation	Trend
Low-cost advantage				
17	Your organization strives to reduce production costs continually	1.966	0.764	neutral
18	Your organization's production costs are lower than your competitors	2.400	0.813	Agree
19	Your organization exercises strict control over spending	2.633	0.614	Agree
20	Your organization is keen to avoid work errors to reduce costs continually	2.833	0.379	Agree
	The result of the First dimension	2.45	0.63	Agree
Continuity in Excellence				
21	Your organization seeks to increase the speed of product delivery continuously	2.833	0.461	Agree
22	Your organization's product prices are competitive	2.866	0.345	Agree
23	Your organization has a good relationship with its customers	2.866	0.345	Agree
24	Your organization's profits are constantly increasing	2.336	0.490	Agree
	The result of the Second dimension	2.72	0.40	Agree
	The overall result of the second axis	2.58	0.51	Agree

Source: Created by the researcher based on the SPSS v25 program.

The table findings reveal that the total arithmetic mean of the customer attention index was 2.45, reflecting the level of agreement on the Likert scale. Paragraphs 17 to 20 pertain to the level of agreement as measured by the Likert scale. The aggregate standard deviation was assessed at 0.63,

indicating minimal variation in the responses of the sample members, suggesting an agreement among workers on the institution's utilization of the low-cost feature. The results presented in the table demonstrate that the responses of all sample members align with the levels of agreement, with minor discrepancies reflected by these deviations.

The outcome of the second dimension, the customer attention index, yielded an overall arithmetic mean of 2.72, indicating the level of agreement as per the Likert scale. Paragraphs 21 to 24 pertain to the level of agreement as measured by the Likert scale. The aggregate standard deviation was calculated at 0.40, suggesting minimal variation in the responses of the sample members, indicating modest dispersion. Consequently, there is a consensus among employees on the institution's characteristic of sustained excellence. The data presented in the table demonstrate that the responses of all sample members aligned with the levels of Agreement, with minor variations reflected by these deviations.

The results for competitive advantage, in general, were in the direction of Agree with an arithmetic mean of 2.58, which indicates a lack of interest by the institution's management in gaining a competitive advantage. As for the standard deviation, it was estimated at 0.52, which indicates a weak dispersion of the answers of the study sample members. There are very slight differences in the individuals' answers, so they are in one direction.

The statistical analysis results of the two axes indicate that the institution under consideration possesses the prerequisites for complete quality management and competitive advantage to the same extent (Agree).

III.3. Testing the study hypotheses

After completing the analysis of the results of the averages and deviations for the statements of the first and second axes, we will test the study hypotheses.

III.3.1. The first hypothesis:

Examining the correlation between the TQM and the Competitive advantage by calculating Pearson correlation coefficients according to the following:

Table No. (04): Testing the relationship between the TQM and the Competitive advantage.

Variables		X	Y
Total Quality Management	Pearson Correlation	1	0.752
	Sig Significance	0.000	0.000
	Sample Size	90	90
Competitive advantage	Pearson Correlation	0.752	1
	Sig Significance	0.00000	0.00000
	Sample Size	90	90

Source: Created by the researcher based on the SPSS v25 program.

The table reveals that the Pearson correlation coefficient between the dependent variable (competitive advantage) and the independent variable (total quality management) is estimated at 0.752, with a significance level of 0.00, which is below the hypothetical significance threshold of 0.05. This indicates a statistically significant relationship between the independent variable (total quality management) and the dependent variable (competitive advantage).

Consequently, the hypothesis was affirmed: A statistically significant association exists at a significance level of 0.05 between the independent variable (total quality management) and the dependent variable (competitive advantage).

III3.1. Testing of the second hypothesis:

Owing to the job variable, there are no statistically significant disparities in employees' attitudes of the requisites of comprehensive quality management (customer focus, teamwork, senior management assistance, training) within an institution.

Table No. (05): One-way analysis of variance ANOVA to test the differences in the level of employees' perception of the requirements of comprehensive quality management according to the job variable.

independent variable	Frame		control factor		Execution worker		Calculated value of f	Significance level F	Statistical decision
	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation			
Total Quality Management Requirements	3.44	0.71	3.41	0.78	3.08	0.92	3.52	0.03*	We reject the null hypothesis.

Source: Created by the researcher based on the SPSS v25.

Upon examining the one-way variance table to assess the disparities in employees' awareness of total quality management criteria based on job variables, it is observed that the estimated F value is 3.52, exceeding its tabulated counterpart. The result is statistically significant, as the significance threshold of f (0.03) is below 0.05. Consequently, there are statistically significant variations at the 95% confidence interval, indicating that the professional classification within the institution influences the sample members' awareness of total quality management criteria. Consequently, we dismiss the null hypothesis and endorse the alternative hypothesis, which asserts that there are statistically significant disparities in the perceptions of employees at VENUS regarding the requisites of total quality management (customer focus, teamwork, senior management support, training) as influenced by the job variable; specifically, the study sample members possess divergent views on the requisites of total quality management based on their professional classifications.

Consequently, the alternative theory was affirmed: Statistically significant differences exist in VENUS employees' perceptions of total quality management needs (customer focus, teamwork, senior management assistance, training) as influenced by the job variable.

The researcher employed the first least significant difference test, a post hoc comparison method, to ascertain the importance of these discrepancies. The subsequent table illustrates this.

Table No. (06): Results of the LSD test analysis for post-hoc comparisons between the arithmetic means of the level of awareness of employees of the TQM requirements.

Professional Categories	Arithmetic mean	Frame	Control Factor	Implementation Factor
Frame	3.44	-	-	0.36 *
Control Factor	3.41	-	-	-
Implementation Factor	3.08	-	-	-

Source: Created by the researcher based on the SPSS v25 program.

*** Significant at the significance level of <0.05**

It was found that the differences tend to be in the category of executives (since the arithmetic mean is the highest), as they are the most aware and conscious of the requirements of TQM compared to other categories. This is explained by the fact that all executives have a university level and possess academic certificates, so they have information and a view of total quality management, not to mention that some of them have received training in total quality. When we question them, then we can attribute this to the educational qualification and the nature of the training level of the worker, as the executive category is the category most aware and conscious of the TQM requirements compared to other categories.

IV- Conclusion:

In conclusion, TQM is considered one of the key factors contributing to enhancing organizations' competitive advantage in today's business environment. With increasing global competition and rising customer expectations, quality has become not just an option but an imperative necessity to ensure survival and growth in the market.

Applying the TQM principles requires the commitment of senior management and all employees, as they must work as a team to achieve quality objectives. By improving processes, increasing performance efficiency, and reducing waste, organizations can enhance their competitiveness. Focusing on customer satisfaction and meeting their needs enhances the organization's reputation and increases customer loyalty, which contributes to achieving positive results in the long term.

Moreover, TQM contributes to innovation and the development of new products and services that meet market expectations. Through continuous evaluation and analysis processes, organizations can identify weaknesses and opportunities, which helps them make strategic decisions that support their competitive position.

From the above, it is clear that the relationship between TQM and competitive advantage is not just a direct relationship but rather an integrated one, as TQM enhances the organization's ability to adapt and develop in light of the market's continuous changes. Adopting a culture of quality at all organizational levels is a strategic step that enables institutions to face challenges and exploit opportunities, which contributes to achieving sustainable success and excellence in the business world.

Study results:

The most important findings of this study are as follows :

- Management is interested in applying the TQM requirements.
- There is a statistically significant relationship between TQM and competitive advantage at a significance level of 0.05.
- There are statistically significant differences in the perception of employees at VENUS of the requirements of Total Quality Management (customer focus, teamwork, senior management support, training) combined due to the job variable, i.e., the individuals in the study sample have a different vision about the TQM requirements depending on their jobs (their professional classification), as the category of cadres is the most aware and understanding of the requirements of Total Quality Management.
- An institution seeks to achieve a high level of quality in all its activities to obtain a local and international competitive advantage;

- The senior management of an institution realizes that meeting the needs and desires of customers is done by continuously introducing them to its products and providing a distinctive product at a low price;

We present the following recommendations and suggestions:

- Work to raise awareness among workers of the importance of total quality management by developing training programs based on clear scientific foundations;
- The certainty of providing training to all workers at various levels and fairness in training courses and generalizing them to all workers and not limiting them to some only;
- Encouraging the research and development function in the institution and giving it an appropriate position to enhance the competitive position of the institution;
- Increasing communication channels to allow workers to express their opinions and facts to the higher administrative levels of the institution;
- Seeking to implement an appropriate incentive system to motivate workers to improve their commitment to the TQM principles;
- The necessity for the institution to conduct a comprehensive study of its current situation to compare it with institutions operating in the same sector to know its position in the market and try to improve it;
- The necessity of providing effective communication technologies and means that facilitate the storage of information and decision-making and an advanced Internet network that enables workers to obtain and use modern information with ease.

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