

Sunk Costs and their Impact on the Competitive Advantages of The Fitness Industry Institutions in the Arab Republic of Egypt

Abd El- Rahman Mohammad Megahed

*Assistant Professor at Department of Physical Management, Faculty of Physical Education,
Mansoura University/ Bachelor of Commerce, Department of Business Administration,
Mansoura University, Egypt.*

Abstract

The research aims to identify sunk costs and their impact on the competitive advantages of the fitness industry institutions for a sample of workers in the fitness industry centers in the Arab Republic of Egypt, in addition to showing the difference in that according to the variables of gender - experience, and administrative level. To achieve this, the researcher used the questionnaire of (Sunk costs) and (Competitive advantages of the fitness industry) as a tool for collecting data and information from an exploratory sample consisting of (47) and a basic sample of (402) workers in the institutions of the fitness industry in the Arab Republic of Egypt. The results of the research showed that the calculated "chi-square" value is greater than the tabular (9.49), for all the statements of the two questionnaires, where the calculated "chi-square" value ranged between (43.373: 146.085), which shows that there are statistically significant differences in all the statements. As the results indicated the research hypotheses that There are differences in the average degrees in a large group and a value of T (-0.014), which is a statistically significant value at the level (0.001), for females, while there are differences in the average degrees and samples between males and females on Make decisions based on sunk costs, the greater competitiveness and the total score where The value of T (1.045, -0.161, 0.399) respectively in favor of males, and there are also in the average degrees of research degrees between meals and females in the value chain where the value of T (-1.81), which is a value of a function value at the level (0.001) in favor of females, While there are differences in the average scores of the research sample between males and females in integrated information systems, integrated activities, total cost analysis, imitation barriers as a source of competitive advantage, service quality as a source of competitive advantage and competitive excellence (superiority) and the total score, where the value of T (1.767, 1.087, 1.040, 1.720, 1.002, 1.244) respectively in favor of males.

Keywords: Sunk costs, Sunk cost fallacy, Accounting Microeconomics, Competitive advantage, Sports Marketing.

Introduction to the research:

With the continuous development and intense competition that limit organizations in our time, it has become necessary to have strong citizens that enable organizations to continue their work and obtain a strong position in the target market or sector, and this is achieved through a number of procedures and policies followed in the organization, and accordingly, the leading organizations Paying clear attention to the elements of marketing and costs, which give the organization the ability to keep pace with development and competition in the market to ensure continuity and achieve the goals of the organization. Also, there must be a competitive advantage with these elements to form a force that makes organizations distinct from each other and able to take a large market share in the market. (Abdul Hamid, 2018, 2), This is consistent with the study of (Boaruri, Jaafar, 2021), (Jalouli, 2015, 81), in that due to the increase in competition between organizations, success has become a competitive advantage in the market, and the maintenance of this advantage over time, and due to the availability of financial resources to finance projects due to the difficulty of Information monopoly advanced technologies.

With the multiplicity of consumer desires and the great diversity of services, it has become imperative for organizations to adopt a new method that provides them with the necessary information on the one hand and that fits the requirements of the modern environment on the other hand, in addition to reducing costs, which is a goal that all organizations seek in one way or another in order to achieve and enhance competitive advantages. One of those methods, which is applied under the Just In Time (JIT) system, was calculating the sunk cost. (Alghras, 2013, 2)

In economics and business, the sunk cost is the costs that have been incurred in a specific project or decision and cannot be recovered. The lack of it is considered one of the advantages of the potential market to compete. **(Economic Inquiry, 2010, 323)**

The sunk cost fallacy is called when the individual discovers that the investment is a failure, but continues in it because the costs that have already been paid are not lost and cannot be recovered, although there is no relationship between costs and the success of the investment in the future **(Arkes, Blumer, 1985, 124)** For example, You may subscribe to a fitness center and then after purchasing the membership you discover that the services provided are not good, but you insist on attending only because you have paid for the subscription.

Sunk costs are inevitable in every sports business, whether it's putting in extra working hours on a failed project or goods damaged in transit that are impossible to avoid, some investments won't pay off while human error is also out of the question.

Competitive advantage is the organization's ability to provide goods and services with less expense or a product that is distinct from its counterpart in the markets with the organization's ability to maintain this advantage, meaning that the organization can achieve competitive advantages when its rate of profit is higher than the average prevailing in its field, and when it is able to Maintaining a high profit rate. **(porter, 1990,157)**, and this is consistent with the study of **(Sayed, 2020, 334)**, **(Saleem, 2019)**, **(Abdul-Azim, Muhammad, 2007)** that competitive advantage has a lot of importance, including that it is a weapon The organization has to face the challenges of the market and competitors, which enables it to respond quickly to the client, in addition to being the engine and catalyst for sports organizations to strengthen their resources and capabilities and push them to research and development in order to maintain and strengthen this advantage, in addition to that the competitive advantage is affected by a number of variables such as cost, management, creativity and others.

The impact of calculating the cost on the competitive advantage will make the leading organizations able to obtain a large market share. The components of the competitive advantage are the cost, which enables the organization to obtain the largest possible market share, the quality that makes the consumer trust what the organization offers, and the creativity that represents the attraction engine for the organization Flexibility. The speed of response to changes that occur in the design of the service provided and in a manner that suits the consumer makes him the most desirable, and time or delivery is the last element in the competitive advantage. Either it increases or decreases consumers, so the arrival of the product or service at the right time makes it successful and distinct. **(Kotlar & Armstrong, 2017,11)**

Research problem:

Many fitness centers face a number of problems that hinder their growth and make them unable to continue to obtain the leading competitive position in the target market, and these problems are related to the elements of competitive advantage.

The problem of the research is that there is a shortcoming in the information on costs, this shortcoming weakens the ability of the fitness center management in its quest to achieve a competitive advantage, especially with regard to cost. For management the appropriate information, and one of these tools was the method of calculating the cost of sunk. **(Alaghras, 2013, 10)**

Accordingly, the researcher will try to show through this research the impact of sunk costs on the competitive advantages of fitness industry centers in the Arab Republic of Egypt, as they play an important and major role in increasing the market share and sales ratios in the centers.

Research Aim:

The research aims to identify sunk costs and their impact on the competitive advantages of fitness industry centers in the Arab Republic of Egypt, through the following sub-objectives:

- 1- Studying the relationship between Sunk costs and their axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and their axes.
- 2- Clarifying the relationship between the demographic variables of the sample and each of the sunk costs and their axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and their axes.
- 3- Revealing the nature of the differences for the same research in each of the sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes. According to (Gender).
- 4- Identifying the differences between the research sample in each of the Sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt with its axes. According to (Administrative level).

Research hypotheses:

- 1- There is a statistically significant correlation between the sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes.
- 2- There is a statistically significant correlation between the demographic variables of the sample and each of the sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes.
- 3- There are statistically significant differences between the average scores of the research sample in each of the Sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes. for (Gender).
- 4- There is a statistically significant difference between the degrees of the same research in each of the Sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes. According to (Administrative level).

Search Methods:

The Method used:

The researcher used the descriptive approach, the survey method, to suit the nature of the research.

research community:

Fitness centers in the Arab Republic of Egypt.

The research sample:

The exploratory sample, which numbered (47) person from the departments and workers of fitness centers in the Arab Republic of Egypt, was selected randomly from outside the main research sample and representative of the research community, from (12/15/2021) to (29/12/2021)

The basic research sample consisted of (402) person departments and workers in fitness centers in the Arab Republic of Egypt from (49) fitness industry centers, in (Cairo – Al-Minya - Dakahlia - Damietta - Alexandria), in the Arab Republic of Egypt. Adherence to ethical guidelines during the conduct of the research and the field application of the research tools in its final form from (4/1/2022) to (2/2/2022), as shown in Table (1):

Table (1) Anumerical and relative statement of the sample under investigation

Statement	Cairo		Minya		Dakahlia		Damietta		Alexandria		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
sample number	117	29.1	63	15.6	114	28.3	56	13.9	52	12.9	402	100

Data collection tools:

- 1- The "Basic Data" form, for the research sample. Appendix (1).
- 2- "Sunk costs" questionnaire, (prepared by the researcher), Appendix (2).
- 3- Questionnaire "Competitive Advantages of Fitness Industry Centers", (prepared by the researcher), Appendix (3).
 - Basic data form for the research sample: it included the following data: name, gender, years of experience, and administrative level.
 - The Sunk costs form, which included three axes, namely determining Sunk costs, making decisions based on Sunk costs, and increasing competitiveness through calculating sunk costs in its final form.
 - The Competitive Advantages Form for Fitness Industry Centers, which included six axes: the value chain and added value, integrated information systems, integrated activities and total cost analysis, and imitation barriers as a source of competitive advantage in its final form.
 - In light of the research concepts and terms, and within the framework of the procedural concept and previous studies, and their response is determined according to the five rating (strongly agree - agree - sometimes - disagree - strongly disagree) on a continuous scale (1-2-3-4-5) for the phrases .

Statistical coefficients for the questionnaire:

First: Calculating the honesty coefficient:

The validity of the arbitrators:

The researcher relied on the validity of the experts in order to determine the appropriateness of the phrases and axes of the Sunk costs questionnaire and its axes, and a questionnaire about the competitive advantages of the fitness industry centers and its axes, where some phrases were deleted, modified and added based on the experts' opinions.

Truthfulness of internal consistency:

To verify the appropriateness of the questionnaire phrases, the researcher applied the questionnaire to an exploratory sample of (47) individuals from departments and workers in fitness centers in the Arab Republic of Egypt, the same as the research. The researcher used the internal consistency validity to calculate the validity of the questionnaire's axes and phrases by finding the correlation coefficient between the statements and their axes.

And it was clear that there was a statistically significant relationship at the level of significance (0.01), (0.05) between the two questionnaires of sunk costs, the competitive advantages of the fitness industry centers, and their statements, where the value of (t) calculated was greater than the tabular in all statements, and thus it can be based on the validity of The internal consistency between the axes and statements of both questionnaires and the degree of the axis to which it belongs.

Second: Calculation of the Reliability factor:

The researcher used the [Cronbach's Alpha](#) coefficient and the indication of internal consistency, to calculate the stability coefficient of the questionnaire axes, where the researcher applied the questionnaire to a survey sample consisting of (47) individuals from departments and

workers in fitness centers in the Arab Republic of Egypt

The stability coefficient was calculated for the axes of the two questionnaires, where the stability coefficient of the Alpha was (0.866) for the sunken costs questionnaire, and the stability coefficient of the Alpha was (0.909) to determine the competitive advantages of the fitness industry centers, and the internal consistency coefficient for each axis, which indicates For the high coefficient of stability of the axes of the two questionnaires.

Discussion and interpretation of statistical significance:

First: Descriptive results of the research sample:

The descriptive results showed that the calculated “chi-square” value is greater than the tabular (9.49), for all statements of the Sunk costs questionnaire, where the calculated “chi-square” value ranged between (15.886: 259.821), which shows that there are statistically significant differences in all the Phrases.

As well as the statements of the competitive advantages questionnaire for the fitness industry centers, where the calculated value of “chi-square” ranged between (25.736: 187.179), which shows that there are statistically significant differences in all the Phrases.

Second: The results of the basic research sample in light of the research hypotheses:

- 1- There is a statistically significant correlation between the sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes.

Table (2) Correlation coefficients between sunk costs and their hubs, and the competitive advantages of fitness industry centers and Axes (N = 402)

Variables	Sunk costs			
	Determine sunk costs	Decision making	Increasing competitiveness	Total
integrated information systems	0.266**	0.268**	0.319**	0.330**
integrated information systems	0.446**	0.616**	0.520**	0.621**
Integrated activities and total cost analysis	0.347**	0.523**	0.467**	0.525**
barriers to imitation	0.357**	0.472**	0.478**	0.510**
Quality of service	0.472**	0.627**	0.504**	0.630**
superiority competitive	0.312**	0.406**	0.454**	0.456**
Total	0.482**	0.643**	0.595**	0.673**

It is clear from Table (2) that there is a positive, statistically significant correlation at the level (0.01) between Sunk costs and their axes, and the competitive advantages of the fitness industry centers and their axes, and the results of this study agreed with the study (Bodhosh, 2008), The necessity of directing enterprises to search for a modern approach that enables them to be provided with the information that qualifies them, to better face competition by staying in a market in which the competitive advantage is its main feature. The competitive advantage as it increases the value of the product to the consumer on the one hand, and also allows for cost control and rationalization on the other hand, through the comprehensive maintenance process

The researcher believes that the competitive advantage of the institutions and centers of the fitness industry increases, especially in pricing the services provided by increasing the calculation of costs in general and the cost of drowning, especially since there are many problems that have been monitored in the selection and application of pricing policies for services provided in those centers and their resort to offers supportively and throughout the year,

and therefore Losing its market value in the competition market. Thus, the first hypothesis was fully achieving.

2- There is a statistically significant correlation between the demographic variables of the sample and each of the sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes.

Table (3) Correlation coefficients between sunk costs in its axes and competitive advantages in its axes and some variables of the demographic study (N=402)

Variables		Gender	Experience
Sunk costs	Determine sunk costs	0.001	0.012
	Decision making	-0.052	-0.019
	Increasing competitiveness	0.008	-0.016
	Total	-0.020	*0.010
Competitive Advantages	integrated information systems	0.090	0.017
	integrated information systems	-0.088	0.010
	Integrated activities and total cost analysis	-0.054	-0.081
	barriers to imitation	-0.052	-0.075
	Quality of service	-0.086	-0.032
	superiority competitive	-0.050	-0.027
	Total	-0.093	-0.062

(**) significant at the level (0.01)

(*) significant at the level (0.05)

It is clear from Table (3), that there is a statistically significant correlation at the level of significance (0.05), between the total degree of sunk costs and years of experience, for the research sample, and these results are consistent with the results of the study (Al-Astal, 2010). There is an awareness among decision makers of the interest in accurately determining the cost of products and its impact on activating, increasing and supporting the competitiveness of these establishments, and the strategic cost management plays an important role in providing the information necessary to implement the steps of the competitive strategy for enterprises by focusing on the competitive advantage and the structure of competition. Strategic cost management and its role in achieving competitive advantage by accounting for activities costs, the target cost method, and the simultaneous production system.

This can be explained that the experience factor is important for its dependence on the side of cost accounting, including the costs of drowning, by determining the sunk costs, taking appropriate decisions in form and content, and working to increase the competitiveness of fitness centers through calculating the cost (operating cost - marketing cost - equipment cost and maintenance, etc.), thus partially achieving the second hypothesis.

3- There are statistically significant differences between the average scores of the research sample in each of the Sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes. Depending on the Gender.

Table (4) The differences between the average scores of the research sample in the sunk costs in its axes and the competitive advantages in its axes according to the Gender (N=402)

Axles	males (213)		female (198)		Differences between averages	t	SIG	
	Means	STD	Means	STD				
Sunk costs	Determine sunk costs	18.47	5.64	18.48	5.49	-0.007	-0.014	SIG (0.001)
	Decision making	22.84	6.64	22.15	6.59	0.691	1.045	SIG (0.001)
	Increasing competitiveness	21.21	5.33	21.21	5.22	-0.084	-0.161	SIG (0.001)
	Total	62.45	15.09	61.85	14.88	0.598	0.399	SIG (0.001)

Competitive Advantages	integrated information systems	9.02	2.86	9.53	2.75	-0.510	-1.81	SIG (0.001)
	integrated information systems	16.46	5.37	15.55	4.94	0.0914	1.767	SIG (0.001)
	Integrated activities and total cost analysis	8.61	3.24	8.26	3.19	0.349	1.087	SIG (0.001)
	barriers to imitation	14.25	4.41	13.80	4.31	0.453	1.040	SIG (0.001)
	Quality of service	13.28	4.35	12.56	3.99	0.720	1.720	SIG (0.001)
	superiority competitive	9.85	3.20	9.53	3.16	0.319	1.002	SIG (0.001)
	Total	71.51	18.47	69.26	17.62	2.247	1.224	SIG (0.001)

It is clear from Table (4) that there are differences in the mean scores of the research sample between males and females in determining sunk costs, where the value of T-value was (-0.014), which is a statistically significant value at the level (0.001), in favor of females. While there are differences in the mean scores of the research sample between males and females in making decisions based on sunk costs - the increase in competitiveness and the total score, where the value of T (1.045, -0.161, 0.399) respectively in favor of males, There are also differences in the average scores of the research sample between males and females in the value chain, where the value of T-value reached (-1.81), which is a statistically significant value at the level (0.001), in favor of females, while there are differences in the average degrees of the research sample between males and females In integrated information systems, integrated activities, total cost analysis and imitation barriers as a source of competitive advantage and service quality as a source of competitive advantage and superiority competitive and the total score, where the value of T (1.767, 1.087, 1.040, 1.720, 1.002, 1.244) respectively in favor of male, The results of this study are in agreement with the study (Al-Moaini, 2011) that it is possible to achieve a competitive advantage through creativity and the application of new methods in the various functions of the series. Value with improving performance according to the type variable in a way that leads to an increase in its superiority over competing firms, and thus the third hypothesis is fully achieved.

There are also differences in the mean scores of the research sample between males and females in the value chain, where the value of T-value reached (-1.81), which is a statistically significant value at the level (0.001), in favor of females.

4- There is a statistically significant difference between the degrees of the same research in each of the Sunk costs and its axes, and the competitive advantages of the fitness industry centers in the Arab Republic of Egypt and its axes. According to (Administrative level).

Table (5) The differences between the study sample in each of the sunk costs in its axes and the competitive advantages in its axes according to the administrative level (N=402)

Questionnaire	Variables	Contrast Source	Sum Of Square	df	Mean Square	F	Sig
Sunk costs	Determine sunk costs	Between (G)	9.62	2	4.81	0.15	No. Sig
		Within (G)	12420.75	399	31.13		
		Total	12430.37	401			
	Decision making	Between (G)	9.48	2	4.74	0.18	No. Sig
		Within (G)	17554.76	399	43.99		
		Total	17564.25	401			
	Increasing competitiveness	Between (G)	6.08	2	3.04	0.10	No. Sig
		Within (G)	11159.74	399	27.96		
		Total	11165.83	401			

Questionnaire	Variables	Contrast Source	Sum Of Square	df	Mean Square	F	Sig
Competitive Advantages	Total	Between (G)	9.03	2	4.51	0.02	No. Sig
		Within (G)	89946.77	399	225.43		
		Total	89955.81	401			
	integrated information systems	Between (G)	2.57	2	1.28	0.16	No. Sig
		Within (G)	3193.47	399	8.00		
		Total	3196.05	401			
	integrated information systems	Between (G)	1.46	2	0.73	0.02	No. Sig
		Within (G)	10812.05	399	27.09		
		Total	10813.51	401			
	Integrated activities and total cost analysis	Between (G)	27.85	2	13.92	1.34	No. Sig
		Within (G)	4133.84	399	10.36		
		Total	4161.69	401			
	barriers to imitation	Between (G)	43.60	2	21.80	1.14	No. Sig
		Within (G)	7613.59	399	19.08		
		Total	7657.19	401			
	Quality of service	Between (G)	7.61	2	3.80	0.21	No. Sig
		Within (G)	7066.29	399	17.71		
		Total	7037.90	401			
superiority competitive	Between (G)	2.92	2	1.46	0.14	No. Sig	
	Within (G)	4078.01	399	10.22			
	Total	4080.94	401				
Total	Between (G)	205.17	2	102.58	0.31	No. Sig	
	Within (G)	131064.51	399	228.84			
	Total	131269.69	401				

It is clear from Table (5), that there is a statistically significant difference at the level of significance (0.05), between the degrees of the research sample in the total degree of the sunken costs questionnaire, according to the administrative level, where the value of P is (0.020), which is statistically significant at the level (0.05). For the benefit of senior management, This is due to the interest of the senior management in identifying, studying and calculating the costs of drowning, and thus positively and quickly affecting marketing decisions, which is reflected in maximizing the competitive advantages of fitness centers, While there is no discrepancy between the scores of the research sample in the competitive advantages questionnaire, while there is no variance in the axes of the sunken costs questionnaire, the axes of the competitive advantages questionnaire and the total score of the questionnaire according to the administrative level, and thus the fourth hypothesis is partially achieved.

Research results and recommendations:

First: Descriptive research results:

The descriptive results showed that the calculated “chi-square” value is greater than the tabular (9.49), for all the statements of the two questionnaires, where the calculated “chi-square” value ranged between (43.373: 146.085), which shows that there are statistically significant differences in all the Phrases.

Second: Results in light of research hypotheses:

- There is a positive, statistically significant correlation at the level (0.01) between Sunk costs and their axes, and the competitive advantages of fitness industry centers and their axes.
- There is a statistically significant correlation at the level of significance (0.05), between the total degree of sunk costs and years of experience, for the research sample.
- There are differences in the mean scores of the research sample between males and females in determining sunk costs, where the value of T-value was (-0.014), which is a statistically

significant value at the level (0.001), in favor of females. While there are differences in the mean scores of the research sample between males and females in making decisions based on sunk costs - the increase in competitiveness and the total score, where the value of T (1.045, -0.161, 0.399) respectively in favor of males, There are also differences in the average scores of the research sample between males and females in the value chain, where the value of T-value reached (-1.81), which is a statistically significant value at the level (0.001), in favor of females, while there are differences in the average degrees of the research sample between males and females In integrated information systems, integrated activities, total cost analysis and imitation barriers as a source of competitive advantage and service quality as a source of competitive advantage and superiority competitive and the total score, where the value of T (1.767, 1.087, 1.040, 1.720, 1.002, 1.244) respectively in favor of male

- There is a statistically significant difference at the level of significance (0.05), between the degrees of the research sample in the total degree of the sunken costs questionnaire, according to the administrative level.

Third: Research Recommendations:

Based on the findings of the research, and in light of the research hypotheses, the researcher presents these recommendations to the fitness industry centers in the Arab Republic of Egypt. As follows:

- **Attention to the application of the sunk cost method, through:**
 - Using sunk cost data to measure the cost of fitness services.
 - It is preferable to combine sunk costs with the rest of the types of costs in one accounting program.
 - The necessity of calculating sunk costs as an inappropriate cost in organizations.
 - Costs are analyzed into avoidable and unavoidable costs.
- **Making decisions based on sunk cost information, through:**
 - Choosing the lowest sunk cost when comparing costs.
 - Calculation of sunk costs in the pricing of fitness services.
 - Making decisions specific to customer needs (prices - quality).
 - Calculating the sunk costs in reviewing the prices of fitness services from time to time.
- **Increasing competitiveness through calculating sunk costs, through:**
 - Developing the accounting system because of the intense competition in the fitness industry market.
 - The necessity for the organization to obtain raw materials at a lower cost than its competitors, while ensuring the required specifications.
 - Reducing sunk costs contributed to improving the competitive position and thus maximizing profitability
 - Provides The applicable costing system accurate data about competitors.

References:

- 1- Abdel Azim, Muhammad, 2007: Management by Empowering Workers in Sports Institutions and its Relationship to Achievement Motivation to Work, Second International Scientific Conference, Faculty of Physical Education for Boys, Zagazig University.
- 2- Abdel Hamid, Anas, 2018: The Impact of Marketing Mix Elements on Competitive

- Advantage, Unpublished Master's Thesis, Al Sharq University Journal, Department of Business Administration, College of Business, Middle East University, Amman, Jordan.
- 3- Akhras, Abdel Ghafour, 2013: The impact of the return cost method on the information and cost structure to achieve a competitive advantage for the firm, unpublished master's thesis, Journal of the Faculty of Economics, Accounting Department, Faculty of Economics, University of Aleppo.
 - 4- Al-Astal, Ahmed, 2010: The role of cost data in activating competitiveness in the light of governance mechanisms "An applied study on industrial companies listed in the Palestine Stock Exchange", a master's thesis, the Islamic University - Gaza.
 - 5- Al-Maini, Saad, 2011: Cost management techniques required for Arab business organizations to achieve competitive advantage, a proposed integrative framework for continuous improvement techniques)", the Iraqi Journal of Administrative Sciences, Volume 7, Issue 30.
 - 6- Arkes, Hal; Blumer, Catherine (1985). "The Psychology of Sunk Cost". *Organizational Behavior and Human Decision Process*. 35: 124–140. doi:10.1016/0749-5978(85)90049-4.
 - 7- Bouarouri, Jaafar, 2021: The Importance of Human Resources Management in Achieving Competitive Advantage in Sports Institutions, *Journal of Human Sciences*, Mohamed Khedira University of Biskra, MD No.: 1195527.
 - 8- Boudahouch, Othman, 2008: Reducing costs as an input to support the competitive advantage in the Algerian industrial enterprises, the case of the Big Ain Cement Company, an unpublished master's thesis, Algeria, Faculty of Management and Economic Sciences.
 - 9- *Economic Inquiry* (2010): "Do Sunk Costs Matter? .48 (2): 323–336. 2010. doi:10.1111/j.1465-7295.2008.00184.x.
 - 10- Jalubi, Siham, 2015: The Role of Human Resources Management in Achieving Competitive Advantage in the Economic Institution, Abdelhamid Ben Badis University, Mostaganem- Research Lab in Wadix, *Industrial Policy and the Development of Foreign Exchanges*, No. 3p, MD No.: 1071346.
 - 11- Kotler, P., & Armstrong, G. (2017). *Principles of Marketing*, (14th ed.), UK: Pearson Education.
 - 12- porter, Michael (1990): *The Competitive Advantage of Nations*, (London: mac- millan).
 - 13- Sayed, Esmat, 2020: Human Resources Management as an Entrance to Achieving Competitive Advantage in the Egyptian Volleyball Federation, *Assiut Journal of Physical Education Sciences and Arts*, Faculty of Physical Education, Assiut University, MD No.: 1085738.
 - 14- Selim, Ahmed, 2019: The reality of creativity management as an entrance to achieving competitive advantage in the Egyptian Federation of Arms, published research, *Assiut Journal of Physical Education Sciences and Arts*, Faculty of Physical Education, Assiut University.