



## Analysis of Industrial Performance Indicators Effects On Enhance The Competitiveness of The Food Sector and The Possibility Of Support in The Iraqi Economy (2003-2020)

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**Abstract,** This study was aimed on analyze the competitiveness of the food industry sector, and showed the level of industrial and competitive performance of these industries, and the possibility of supporting and enhancing their competitiveness in the Iraqi economy for the period 2003-2020. Competitiveness is considered one of the most important indicators of the efficiency of the food industry tool in local and foreign markets, as competitiveness represents the ability of productive sectors of different types to distribute their products and increase their sales level. Therefore, the food industry in Iraq is considered one of the most important sectors of the manufacturing industries that suffer from problems and obstacles including a decrease in the level of competitive and industrial performance. It is believed that the problem of the research is the weak competitiveness of the food industry in Iraq due to the decline in the quality of manufactured products and the weak level of competitiveness of these products compared to imported products. The results of the study showed a decrease and fluctuation in the contribution of the manufacturing sector to the gross domestic product (GDP) in Iraq. The economic policy was not providing the possibility of an investment climate to support and enhance the private sector in industrial investment. The indicators of production requirements such as labor productivity, worker productivity, and the value added index of the food industries sector began to fluctuate between decrease and increase, and to measure the extent of the reciprocal effects between all parts of the standard model and the extent of its contribution to developing the competitive capacity of this sector.

**Key words:** industrial performance, competitiveness, food sector, Iraqi economy

### 1. INTRODUCTION

The industrial sector is one of the important sectors in the national economy and the Iraqi economy suffers from structural imbalances that include most of its economic sectors. The industrial sector with all its productive branches, the most important of which are the food industries, is a major of the country's economic development. This sector is characterized by its effective role in the economic environment, contributes to advancing the process of economic development, and works to develop the standard of living for all members of populations.

The food industry is one of the most important sectors of the manufacturing industry in Iraq. It represents a manufacturing process that aims to increase the added value of raw materials in order to manufacture a crucial food commodity suitable for human consumption. Competitiveness is an important indicator of the efficiency of the performance of local food industries in local markets. Competitiveness represents the ability of productive sectors to market their products and increase their sales volume, in light of the fierce competition with foreign goods in domestic and foreign markets. The competitiveness includes different dimensions and a large field of economic policies due to the multiplicity of factors influencing

the construction of competitiveness and their multiplicity. Competitiveness is one of the topics that are of utmost importance to economists, businessmen and economic policy makers.

Iraq is one of the most important countries that work efficiently to develop productive sectors and increase their competitiveness, especially in the field of food industries, and to search for the most important procedures and policies required to support competitiveness in the Iraqi economy. This study investigates the weakness of the competitiveness of food industries, whether it is due to the decline in the quality of products manufactured in the country, or the decline in the level of competitiveness of food industry products in Iraq compared to imported products for those industries in the Iraqi economic reality.

### **The importance of the study**

The importance of the study was presented by the industrial sector in Iraq. The food industry has used an analysis method to determine the level of competitiveness through the most prominent topics.

1. Study the reality of food industries under current circumstances, and stating the means to support them, to keep pace with the development that matches the tastes of consumers.
2. Understand the most important requirements for support for food industries in the Iraqi economy, for the purpose of providing recommendations to develop solutions that work to increase levels of competition and support them more effectively.

### **Study aims**

1. Identify the most important policies and procedures that can be followed to support the competitiveness of the food industry sector in the Iraqi economy.
2. Measure and analyze the competitive performance of the industrial sector in Iraq for the period (2003-2020) by calculating some indicators of the level of competitive performance.
3. Analyze the reality of the food industries sector by study and analyze the performance indicators of the manufacturing industries sector in general and the performance of the food industries sector.

### **Research hypothesis**

Support and develop the competitiveness of the food industries sector will play a positive role in developing this sector by creating an attractive and appropriate investment environment in the process of supporting the industrial competitive advantage.

### **Study methodology**

The standard method was used some criteria specific to evaluate the competitiveness of the food industries to control their performance levels.

### **Study limits**

1. Temporal limits: The study dealt with a time series extending from (2003-2020), as the competitiveness and the food industries sector were studied.
2. Spatial limits: The research includes (Iraq).

### **Study Structure**

The study was divided into three topics (the first topic includes the concept of competitiveness, its definition and types. The second topic was included an analysis of performance indicators for manufacturing industries for the period 2003-2020, an analysis of the indicator of the contribution of the manufacturing sector to the gross domestic product (GDP), an analysis of some performance indicators for small industries in the manufacturing sector. Also, an analysis of some performance indicators for the medium industrial establishment in the manufacturing sector in Iraq was studied. The third topic was included an analysis and estimation of the standard model.

### **The first topic**

#### **First: The concept of competitiveness:**

Since the concept of competitiveness in the economy has a distinctive role in crystallizing the challenges facing the economies of most countries. Institutions and companies are increasingly open and affected by the changes surrounding it. The Iraqi economy suffers, as is the case in most economies of countries and third world countries, from structural imbalances that include most economic sectors. The sector is one of the most important productive sectors in the national economy, as research into this sector will help in discovering most of these structural imbalances.

Through which the real reasons that stand as a barrier to developing competitiveness can be identified to summarize the overall outputs of this vital sector and determine of the economic treatments for those reasons and causes, and then plan and draw up the necessary economic policies. Since the concept of competitiveness is still the focus of attention and discussion of researchers in the field of business administration and economics. The concept of competitiveness is characterized by modernity and diversity of aspects. There is still no coherent theoretical framework that allows for the definition of competitiveness in an accurate and clear. The finding an accurate and specific concept of competitiveness is difficult. This term represents a feature that reflects the economic situation and performance and professional reality of various productive activities within the various economic sectors.

It can be said that the concept of competitiveness is a concept with diverse dimensions and the institution strives to achieve it with the aim of occupying a continuous and permanent position in the market, its continuity and survival depend on its ability to compete. Thus, competition is defined as the system through which various economic operators in a single market seek to dispose of goods and services that were manufactured with the aim of possessing a characteristic over other stakeholders.

## **Second: Definition of competitiveness**

Study of the competitiveness is of great importance to economic researchers and those interested in economic affairs, so defining competitiveness at the national level and overall economic performance takes a broad dimension and defining competitiveness at the microeconomic level (sector and facility), which can be presented as follows.

### **1. Definition of competitiveness at the institution**

Competitiveness is defined as the set of capabilities and skills that management can invest in, to secure the production of values and benefits for customers at a higher value than what the competitor achieves, and thus focusing on a state of difference between the facility and its competitors. Competitiveness at the institution is defined as the ability to respond to the needs and interests of consumers. It needs to provide this through the presence of important goods and needs of modern quality by reaching international markets. Competitiveness at the institutional level is defined as the ability to manufacture high-quality goods and services at the right price and at the right time, which means responding to the needs of consumers in a more efficient manner than the other facility.

### **2 - Definition of competitiveness at the sector**

It is the ability to obtain increasing profits and acquire high-quality goods from the markets within an environment of legislative and organized business. It is in line with economic developments, and within high and effective mechanisms for commercial and economic market forces.

## **Third: Types of competitiveness**

### **1-Price competitiveness**

This competitiveness means that a country that is characterized by cheaper costs can export goods to foreign markets in a better way than other countries, and the exchange rate of the national currency is considered to have a broad impact in determining competitiveness and that price control stimulates non-price competitiveness.

### **2-Non-price competitiveness**

Non-price competitiveness is divided into two parts, which are:

- A- Qualitative competitiveness which depends on manufacturing high quality products, because the country can export products of excellent quality.
- B- Technical competitiveness that projects compete by quality in high technology industries and the same high added value.

### **3-Latent competitiveness**

Latent competitiveness focuses on factors that contribute to increasing competitiveness in the long term including investment in human capital and invention.

#### **Second topic**

#### **First: Analysis of performance indicators for manufacturing industries for the period (2003-2020)**

The reality of the performance of the food industries sector in Iraq and its indicators for the period (2003-2020)

#### **1-The reality of the manufacturing industry in Iraq.**

The period following the American occupation in 2003, all economic activities has stopped including private industrial sector projects, after the destruction of the infrastructure and the destruction of many facilities as a result of military operations. This sector was exposed to flooding by imported products in the other phase, due to the opening of the borders and the cessation of customs procedures after the collapse of the government.

The government began announcing the transformation of the economic approach towards a market economy in a rapid transformation manner. The field was opened for foreign direct investment in the industrial sector under the supervision of the United States Agency for International Development. This was part of the change in the government economic approach towards openness in 2003. After long decades of international isolation and government control over the joints of economic life, the economy has set of changes that began specifically during the Provisional Coalition Authority, whose decisions had a major impact on these changes that came within many transformations that included customs, taxes imposed on imports, in addition to the issuance of Investment Law 13 of 2006.

The government laws was clear and serious in reform, as the national strategy for reform was prepared, where the private sector had a large space in its terms, which worked under the umbrella of international institutions (International Monetary Fund and World Bank). Thus, the character of international dictates due to Iraq's difficult position in terms of the accumulation of debts and compensations, which amounted to about 140 billion US dollars in April, 2003.

The issue of privatization is among the priorities of the reform policy ladder that was included in the first national strategy after 2003. The International Compact document was adopted, and this document was signed by the Iraqi government with a number of countries, and according to it, donor countries pledge to support Iraq financially provided that the government undertakes a set of reforms in many areas, politically, economically and socially. One of the most important paragraphs related to the private industrial sector is to begin preparing a strategic plan for development that works to provide structural reforms in the local economy, implement stabilization programs specified by international institutions, and emphasize the oil sector. In addition, the interest in the private sector and infrastructure, including electricity. It is worth noting that most countries did not fulfill their obligations, and later the document became just ink on paper. In 2014, the Ministry of Labor and Social Affairs took the initiative to establish a support fund for small industrial projects, which provides loans of up to 20 million dinars.

## **Second: Analysis of the index of the contribution of the manufacturing sector to the GDP**

The industrial sector has gradually shrunk and only industries that depend on raw materials such as non-metallic mining, food, and chemicals in the public sector remain concentrated in a number of old refineries with a low technical complexity factor. The stopped fertilizer factories, some of which were allocated in the number of industrial sector facilities including the industrial sector's focus on consumer industries, backward infrastructure, lack of real financing institutions, opening the borders to all types of goods, there is no real support from the government for the industrial sector, which is the basis for all industrial progress.

All these factors have led to a loss of confidence between the private industrial sector in Iraq and the government, and the index of the contribution of the manufacturing sector to the structure of the total GDP is considered one of the most important indicators that provide an impression of the extent of the development of this sector's contribution to the overall economic activity after 2003. The contribution of the industrial sector to GDP has decreased significantly (Table 1). It is noted from the data that the contribution of the manufacturing sector to the GDP in Iraq decreased in 2007, as it decreased to (1.11%) after the contribution rate was (1.98%) in 2004.

The reason for this decrease in the contribution of the manufacturing sector can be attributed to the failure to adopt sound and serious industrial policies in the field of industrial investment and the exploitation of the available resources in this sector and the reliance on the extractive industry sector (the oil sector). The economic policy did not provide the appropriate

investment climate to support the private sector and encourage it to invest in industry, as well as the weakness in the legislation of laws, legislation and procedures that guarantee the development of the industrial sector. In addition, to the dumping policies adopted as an alternative to meet the needs and local demand without pursuing policies to protect local production and producers.

For the period (2008-2011), the contribution of manufacturing industries to the GDP increased, as the contribution rate in 2011 reached (2.82%) after it was about (1.90) in 2008. This is due to the security improvement that occurred after 2007. However, the period (2013-2018), the contribution of manufacturing industries to the GDP decreased, and the contribution rate in 2018 reached about (1.80%) after it was about (2.30%) in 2013. In 2019, it was (1.79), and in 2020, it was (2.02). These reasons are due to the security conditions, the shutdown of many factories and plants, and the destruction of infrastructure in the western governorates and some of the northern governorates.

**Table (1) contribution of the manufacturing sector to the GDP at current prices in Iraq for the period (2004-2020) (million dinars)**

years	Contribution of manufacturing sector to the GDP at current prices (1)	GDP at current prices (2)	Relative importance%
2004	1.052.792	53.235.358	1.98
2005	967.274	73.533.598	1.32
2006	1.468.171	95.587.954	1.54
2007	1.233.908	111.455.813	1.11
2008	2.988.469	157.026.061	1.90
2009	5.496.388	13.0643.200	4.21
2010	3.678.714	162.064.565	2.27
2011	6.132.760	217.327.107	2.82
2012	6.919.449	254.225.490	2.72
2013	6.286.042	273.587.529	2.30
2014	4.999.233	266.332.655	1.88
2015	42.347.116	19.468.071	2.18
2016	4.118.518	196.924.141	2.09
2017	4.324.321	225.722.375	1.92

2018	4.527.691	251.064.471	1.80
2019	4.527.691	242.543.471	1.79
2020	5.352.423	262.162.781	2.03

Column (1) based on data from the Ministry of Planning and Development Cooperation, Directorate of Industrial Statistics, data for different years; Column (2) based on statistics from the Central Bank for different years; Column (3) from the researcher's work.

### **Third: Analysis of some performance indicators for small industries in the manufacturing sector**

#### **1-Number of small establishments and their employees**

People play an important role in the economic development process, in addition to being the final beneficiary of this process. They are also one of the important and main inputs in it. Economic theory initially focused on the quantitative aspect and left the qualitative aspect for individuals \*the work element\*. It assumed that work is homogeneous and dispensed with defining it as the number of workers or the number of working hours and days. Due to this great technological expansion, the population size is no longer synonymous with the availability of skilled and low-cost work, and the population size may be large, yet skilled work remains rare and high-cost.

It is noted that the number of establishments in 2004 reached (17.599) establishments, while the number of workers reached (64.338), and this indicates that there is clear activity in the private industrial sector. In 2005, the number of small private establishments decreased by (42.68%), reaching (10.088) establishments, while the number of workers decreased by (43.46%). The number of workers reached (36.379) workers. As a result of the opening of the Iraqi market to the outside world, which led to an increase in imports from abroad, the number of small establishments returned to increase in workers in 2011 and 2012, as their number reached (47.281) establishments in 2011 and decreased to (43.669) establishments at the end of 2012.

After their number in 2005 was 10.088 establishments, the number increased after that to 10.289 establishments in 2009. This fluctuation in their rehabilitation is attributed to the exceptional circumstances after 2006 and the deterioration of the security situation. It is noted that the period following the unstable environment is slow to return to recovery. In general, the increase in their numbers in 2011-2013 is due to the intensive government orientation towards the private sector, while the decrease in 2014-2015 is attributed to the military



operations that occurred after the entry of terrorist gangs (ISIS) into some northern and western governorates.

In 2016-2017, the number of establishments increased to (25.699) (27.856) and the number of workers to (81.920) (39.644) respectively after the liberation of a number of governorates and the return of security to those areas.

**Table (2) the number of small private industrial establishments and their workers for the period (2003-2020) (million dinars)**

years	NO. establishments (1)	Annual change (%) (2)	NO. workers (3)	Annual change (%) (4)
2003	17.929	---	29.187	---
2004	17.599	-1.84	64.338	120.43
2005	10.088	-42.68	36.379	-43.46
2006	11.620	15.19	46.494	27.80
2007	13.406	15.37	53.679	15.45
2008	18.550	38.37	67.569	25.88
2009	10.289	-44.53	27.780	-58.89
2010	11.131	8.18	36.898	32.82
2011	47.281	324.77	145.385	294.02
2012	43.669	-7.64	146.210	0.57
2013	27.694	-36.58	92.059	-37.04
2014	28.605	3.29	84.272	-8.46
2015	22.480	-21.41	67.157	-20.31
2016	25.966	15.51	81.920	21.98
2017	27.856	7.28	93.644	14.31
2018	25.747	-7.57	83.375	-10.97
2019	22.472	-71.12	85.325	14.36
2020	25.662	14.15	95.255	11.36

Column (1) based on data from the Ministry of Planning and Development Cooperation, Directorate of Industrial Statistics, data for different years.

#### **Fourth: Analysis of some performance indicators of the medium industrial facility in the manufacturing sector**

##### **1 - Number of medium facilities and their employees**

The medium industrial facility was decreased in its numbers after 2004, as it was (92) facilities, then it decreased to its lowest level in 2009, as it was (51) facilities in that year. There was an increase in its numbers in 2012, as it reached (281) facilities. The decrease in 2009 was due to many reasons including the lack of fuel, the deterioration of services, in addition to the problem of providing electrical energy, the lack of clarity of financing procedures by local banking institutions. It also increased to (266) facilities at the end of 2013 (Table 3).

The number of workers decreased in 2004 and reached (1.668) workers, while in 2006 was (960) workers, due to the circumstances that followed the unstable security events. Thus, these circumstances affected the overall private industrial activity, while in 2013 the number of workers reached its highest peak (3.525) workers, and the lowest number was in 2010, reaching (923) workers, while in the years (2016-2017-2018), we notice that there is an increase in the number of workers. The number of workers reached (2.624) workers in 2018 after it was (2.449) workers in 2016, and in 2019 it reached (1.841) and in 2020 the number of workers was (1. 551) (Table 3).

**Table (3) Number of medium industrial establishments and their employees for the period (2003-2020) (million dinars)**

years	NO. establishments (1)	Annual change (%) (2)	NO. workers (3)	Annual change (%) (4)
2003	79	---	1.407	---
2004	92	16.45	1.668	18.55
2005	76	-17.39	1.397	-16.25
2006	52	-31.58	960	-31.35
2007	57	9.62	1.117	16.35
2008	82	43.86	1.552	38.94
2009	51	-37.80	871	-43.88
2010	56	9.80	923	5.97
2011	159	183.93	2.431	136.38
2012	218	37.11	3.357	38.09
2013	226	3.67	3.525	5.00

2014	120	-46.90	1.916	-45.65
2015	92	-23.33	1.491	-22.18
2016	179	94.57	2.449	64.25
2017	182	1.68	2.521	2.94
2018	198	8.89	2.624	4.09
2019	215	8.58	1.841	-29.83
2020	168	-21.86	1.551	-15.75

Columns (1) (3) based on data from the Ministry of Planning and Development Cooperation, the Central Statistical Organization, the Industrial Statistics Directorate - Medium Enterprise, data for different years, Columns (2) (4), data for 2012.

#### **Fifth: Analysis of some indicators measuring the industrial performance of the food industries sector**

It will also rely on some other measures that are directly related to measuring the industrial performance of the food industries sector in Iraq.

#### **1-Labor productivity index**

According to this index, the country is able to compete internationally if the total labor productivity of its production is high compared to the competing country, and we obtain this index by dividing the value of total production by the number of workers. It notes the clear fluctuation in the value of this indicator, as the labor productivity index decreased in 2004 and the value of the index reached (8.587), then increased to reach (16.024) in 2006, then decreased in 2007 to reach (10.841) and then decreased again in 2014 to reach (30.727) and then increased gradually but below the required level, and this is a reflection of the decline in the efficiency of industrial performance of the food industries sector in Iraq during the study period (Table 4).

**Table (4) Labor productivity index in the food industries sector in Iraq for the period (2003-2020)**

years	Total production value (1)	No of workers (2)	Labor productivity index 1/2
2003	257.196.627	25.785	9.974
2004	432.796.179	50.401	8.587
2005	371.915.843	31.748	11.714

2006	526.453.255	32.853	16.024
2007	473.411.143	43.667	10.024
2008	473.797.357	37.778	12.515
2009	856.065.100	33.444	25.596
2010	1.042.882.125	36.541	28.540
2011	5.313.807.667	60.349	88.051
2012	1.932.212.677	58.430	33.068
2013	1.932.212.677	47.839	27.267
2014	1.304.451.382	35.417	30.727
2015	1.088.290.795	38.452	35.400
2016	1.361.202.680	40.460	43.837
2017	1.773.656.940	41.811	54.412
2018	2.275.032.060	46.781	52.656
2019	352.212.472	35.321	52.063
2020	2.552.642.012	47.824	53.321

columns (1) and (2) based on data from the Central Agency for Public Mobilization and Statistics for various years. Column (3) from the researcher's work

## **2 - The worker productivity index**

According to this index, the country is able to compete internationally if the total labor productivity from the added value (its production) is increasing compared to the competing country, and we obtain this index by dividing the total added value by the number of workers.

The results showed that the labor productivity index of added value increased and was characterized by fluctuation and increase during most of the study period. The value of this index reached (2.913) in 2014, and then increased to reach (75.428) in 2011, and then decreased again in 2012. After this year, the labor productivity index decreased to reach its lowest level in 2013, which may reach (13.664), and then gradually increased again, reaching (17.232) in 2017, and then decreased in 2018, reaching (14.544), and increased in 2019, reaching (15.548), and in 2020 the index decreased to (14.887), and the clear fluctuation in the value of the index indicates the weakness of the level of industrial performance in the food industries sector in Iraq (Table 5).

**Table (5) Index of worker productivity from added value in the food industries sector in Iraq for the period (2003-2020)**

years	Total added value (1)	No of workers (2)	Factor productivity index of value added 1/2
2003	120.230.656	25.785	4.662
2004	146.848.772	50.401	2.913
2005	188.369.275	31.748	5.933
2006	277.253.344	32.853	8.439
2007	298.896.157	43.667	6.844
2008	246.598.307	37.778	6.527
2009	452.044.569	33.444	13.516
2010	562.929.657	36.541	15.405
2011	455.512.696	60.349	75.428
2012	862.779.909	58.430	14.766
2013	653.699.182	47.839	13.664
2014	599.781.997	35.417	16.934
2015	536.440.466	38.452	13.950
2016	601.452.941	40.460	14.865
2017	720.522.546	41.811	17.232
2018	680.390.661	46.781	14.544
2019	740.420.681	47.621	15.548
2020	656.712.435	44.112	14.887

Columns (1) (2) prepared by the researcher based on data from the Central Bureau of Statistics for various years. Column (3) is the work of the researcher.

### 3 - The productivity index of one dinar

This index can be calculated by dividing the total wages by the number of workers for the study period (2003-2018). We note that the dinar productivity index fell in 2003, reaching (1.030) to reach (4.445) in 2006. The index continued to fluctuate between increase and decrease until it reached (4.940) in 2009, then increase in 2014 to reach (6.375), and decreased in 2015. This index continued between increase and decrease until it reached (5.831) in 2018. It continued to increase (6.161) in 2019, and in 2020 was (6.444) (Table 6). This reflects the

decrease in the industrial and competitive performance of the food industries sector in Iraq throughout the study period.

**Table (6) the dinar productivity index in the food industries sector in Iraq for the period (2003-2020).**

years	Total added value (1)	No of workers (2)	Factor productivity index of value added 1/2
2003	26,562,253	25,785	1,030
2004	60,095,171	50,401	1.192
2005	98,453,932	31,748	3,101
2006	146,042,404	32,853	4,445
2007	142,688,117	43,667	3,267
2008	140,340,602	37,778	3,714
2009	165,227,507	33,444	4,940
2010	181,437,380	36,541	4,965
2011	277,468,581	60,349	4,597
2012	295,007,804	58,430	5,048
2013	264,138,138	47,839	5,521
2014	225,942,266	35,417	6,379
2015	230,423,208	38,452	5,992
2016	232,538,763	40,460	5,742
2017	214,538,763	41,811	5,131
2018	272,814,701	46,781	5,831
2019	293,418,602	47,621	6,161
2020	284,312,711	44,115	6,444

Columns (1) and (2) prepared by the researcher based on data from the Central Agency for Statistics for various years. Column (3) is the researcher's work.

**Third topic: Analysis and discuss of the standard model**

NEW FILE.

DATASET NAME DataSet1 WINDOW=FRONT.

REGRESSION

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/MISSING LISTWISE
/STATISTICS COEFF OUTS CI(95) R ANOVA CHANGE
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT Y1
/METHOD=ENTER X11
/RESIDUALS DURBIN.
    
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**Regression**

[DataSet1]

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	X11 <sup>b</sup>	.	Enter

a. Dependent Variable: Y1

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.331 <sup>a</sup>	.110	.050	9247.57944	.110	1.848	1

**Model Summary<sup>b</sup>**

Model	Change Statistics		Durbin-
	df2	Sig. F	

		Change	Watson
1	15	.194	1.421

a. Predictors: (Constant), X11

b. Dependent Variable: Y1

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158013863.1	1	158013863.1	1.848	.194 <sup>b</sup>
	Residual	1282765881.2	15	85517725.4		
	Total	1440779744.3	16			

a. Dependent Variable: Y1

b. Predictors: (Constant), X11

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients	Standardized Coefficients	T	Sig.
		B	Beta		
1	(Constant)	12956.333		2.394	.030
	X11	-.038	-.331	-1.359	.194

### Coefficients<sup>a</sup>

Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	1419.282	24493.385
	X11	-.098	

a. Dependent Variable: Y1

### Residuals Statistics<sup>a</sup>

Minimum	Maximum	Mean	Std.	N
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1	.642 <sup>a</sup>	.412	.328	67726.96732	.412	4.906	2
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**Model Summary<sup>b</sup>**

Change Statistics

Model	df2	Sig. F Change	Durbin-Watson
1	14	.024	1.634

a. Predictors: (Constant), S3, S2

b. Dependent Variable: X11

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.501E+10	2	2.250E+10	4.906	.024 <sup>b</sup>
	Residual	6.422E+10	14	4586942103		
	Total	1.092E+11	16			

a. Dependent Variable: X11

b. Predictors: (Constant), S3, S2

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	38067.918	55221.767		.689	.502
	S2	1733.080	610.155	.703	2.840	.013
	S3	28.502	56.795	.124	.502	.624

**Coefficients<sup>a</sup>**

Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	-80370.993	156506.829
	S2	424.428	3041.732
	S3	-93.312	150.316

a. Dependent Variable: X11

**Residuals Statistics<sup>a</sup>**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	101155.4609	291557.2500	176053.2141	53036.75740	17
Residual	-135030.8139	82159.99219	.00000	63352.77689	17
Std. Predicted Value	-1.412	2.178	.000	1.000	17
Std. Residual	-1.994	1.213	.000	.935	17

a. Dependent Variable: X11

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) R ANOVA CHANGE

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT Y22

/METHOD=ENTER R1 R2 R3

/RESIDUALS DURBIN.

**Regression**

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	R3, R1, R2 <sup>b</sup>	.	Enter

a. Dependent Variable: Y22

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.382 <sup>a</sup>	.146	-.068	1320043807	.146	.682	3

**Model Summary<sup>b</sup>**

Model	df2	Sig. F Change	Durbin-Watson
1	12	.580	1.028

a. Predictors: (Constant), R3, R1, R2

b. Dependent Variable: Y22

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.566E+18	3	1.189E+18	.682	.580 <sup>b</sup>
	Residual	2.091E+19	12	1.743E+18		
	Total	2.448E+19	15			

a. Dependent Variable: Y22

b. Predictors: (Constant), R3, R1, R2

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	711458478.7	1117408336		.637	.536
	R1	175697.790	123530.907	.390	1.422	.180
	R2	-716.522	132744.560	-.001	-.005	.996
	R3	-299255.631	1599516.21	-.053	-.187	.855
			5			

**Coefficients<sup>a</sup>**

Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	-1723165139	3146082096
	R1	-93452.935	444848.515
	R2	-289942.073	288509.029
	R3	-3784302.08	3185790.819
		1	

a. Dependent Variable: Y22

**Residuals Statistics<sup>a</sup>**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	785046464.0	2429704448	1275961532	487571628.0	16
Residual	-2172507904	3198092544	.000	1180683074	16
Std. Predicted Value	-1.007	2.366	.000	1.000	16
Std. Residual	-1.646	2.423	.000	.894	16

Dependent Variable

**1-Coefficient of determination**

$$Y_i = 12956.3 - 0.08X_i$$

the regression equation (Y<sub>i</sub>) it appears that there is an inverse relationship between the GDP rate (Y) as a dependent variable and the manufacturing industry (X<sub>1</sub>) as an independent variable.

**2 - Coefficient of determination. R<sub>1</sub> = 41%**

The model (41%) explains the data. There is no problem of autocorrelation.

$$Y_i = 3867.9 + 1733.8 X_1 + 28.5 X_3$$

There is a soft relationship between both variables between the manufacturing industries (Y) is a dependent variable and the small industry X<sub>1</sub> and the medium industry X<sub>2</sub> are independent variables.

**3 - R<sub>3</sub> = 14%**

$$Y_i = 711458478.7 + 17569.7 X_1 - 716.5 X_2 - 29925.6 X_3$$

\*There is no problem of autocorrelation.

So the relationship is direct between (Y<sub>1</sub>) and the first variable (X<sub>1</sub>) and inverse with the rest of the variables and between the food industries sector and the following indicators. Labor productivity, worker productivity and dinar productivity (X<sub>1</sub>, x<sub>2</sub> and x<sub>3</sub>).

**2. CONCLUSIONS**

1-Improve the competitiveness of the food industries sector for a group of indicators, the most important of which are labor productivity, worker productivity and dinar productivity, which play a major role in driving economic advantages and developing them significantly.

- 2- The results of the economic analysis showed that there is an inverse relationship between the manufacturing industry and the GDP according to the economic logic for both (X1 and Y).
- 3- The results of the economic analysis showed that there is a direct relationship between the manufacturing industry (Y) and small and medium industries according to the economic logic for both (X1-X2).
- 4- The fluctuation and decrease in the contribution of the manufacturing industry sector to the GDP in Iraq. This decrease in the contribution of the manufacturing industry sector can be explained by the failure to adopt rational and serious policies.

### **3. RECOMMENDATIONS**

- 1- To develop the competitiveness of the Iraqi industrial sector, and thus the necessity of continuous review and evaluation of laws, regulations and legislation related to investments and administrative and technical procedures related to economic activity.
- 2- The necessity of developing the food industries sectors through the Ministry of Industry and the Ministry of Industry and other institutions in order to expand and enhance the competitiveness of the food industries in the Iraqi economy.
- 3- Pay attention to the competitive environment to rise to better levels of economic activities, and thus we must pay attention to the competitiveness of manufactured products at the local level. To enhance the competitiveness of those products at the global level.

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