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THE IMPACT OF FOREIGN TRADE INDICATORS ON THE GROWTH OF THE IRAQI ECONOMY

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A R T I C L E I N F O.

Abstract

The study aims to analyze and measure the impact of the economic efficiency indicators of foreign trade, represented by six indicators (export importance indicator, import importance indicator, economic participation degree indicator, trade openness indicator, coverage rate indicator, and per capita share of foreign trade indicator) on economic growth, which was expressed (in GDP) in Iraq during the period (2004-2022). The study also started from the hypothesis that there is a direct impact and a positive relationship between the economic efficiency indicators of foreign trade on economic growth, but the size of this impact varies from one indicator to another according to the nature and type of each indicator. In order to achieve the study's goal and prove its hypothesis, the analytical method was used to analyze the trends of efficiency indicators and economic growth and the relationship between them, in addition to the quantitative method to determine the type and size of the impact between each efficiency variable and economic growth. The time series data were relied upon and divided into quarterly and after conducting a set of standard tests starting with the stability test by Phelps-Berron, it was found that all variables after taking the first difference became stationary, which is consistent with the (ARDL) methodology. In addition, a set of diagnostic tests were conducted for standard problems, and they all confirmed that the estimated model was free of standard problems. The study reached a set of conclusions, the most important of which was that the relationship between the variables in the long run was inverse between (the export importance index, the import importance index, and the economic participation index) and the gross domestic product. The study also recommended a set of proposals, the most important of which is for the Iraqi government to increase its interest in the foreign trade sector and develop its export structure in a way that ensures the development of its economic efficiency indicators for sustainability and increasing its revenues to achieve economic growth. Keywords: Economic efficiency, foreign trade, economic growth.

Introduction

Foreign trade plays an important and effective role in various fields in most countries of the world, whether developed or developing, and is the most prominent sector driving economic growth, as foreign trade constitutes an important part of the economy of most countries of the world, and directly affects their gross domestic product, as foreign trade reflects the productive capacity of the national economy represented in exports and imports. The Iraqi economy has faced many problems since the establishment of the Iraqi state, as the rapid and unplanned transformation and openness to the outside world and the application of market rules are one of the problems that the Iraqi economy suffers from, especially after opening the doors of foreign trade wide open and canceling protection measures such as reducing customs tariffs, and canceling the quota and license system, as these measures exposed the commodity and service production sectors to fierce competition from imported products that are characterized by low prices and high quality, so the process of reforming the Iraqi economy is not limited to diversifying sources of income and production or the structure of the gross domestic product, but extends to include reforming multiple other sectors for the purpose of diversifying sources of income and reducing dependence on one source only. As for the indicators of the economic efficiency of foreign trade represented by the indicators (importance of exports, importance of imports, coverage rate, economic participation, trade openness, and average per capita share), these indicators provide a comprehensive picture of the performance of the economy and help identify the strengths and weaknesses of the economy in general, and in light of them, governments and decision-makers can take appropriate measures to improve economic performance and promote sustainable growth, which results in strengthening cultural and political ties between countries, which leads to an increase in the gross domestic product, and thus an increase in the economic welfare of members of society.

First - The study problem:

The foreign trade sector plays a fundamental role in the Iraqi economy, and is even the main sector in providing foreign currency to finance development and economic growth. Since the foreign trade sector in Iraq witnessed developments during the study period and these developments were reflected in other sectors, from this standpoint, the study problem can be formulated with the following question:

Can the foreign trade sector, represented by its economic efficiency indicators, positively affect economic growth in Iraq.

Second - Study hypothesis: The study is based on a main hypothesis: There is a positive effect and a direct relationship between the economic efficiency indicators of foreign trade and economic growth in Iraq, but the size of this effect varies from one indicator to another according to the nature and importance of the indicator.

Third - Importance of the Study:

The importance of the study comes from shedding light on the most prominent economic sectors in Iraq, namely the foreign trade sector, which is the first sector in providing sources of foreign exchange to finance economic growth, and the extent of the Iraqi government's ability to develop foreign trade indicators and increase its economic efficiency to ensure its continuity in financing economic growth.

Fourth - Study objectives:

The objectives of the study can be crystallized in the following points:

1- Study the conceptual aspect of both the economic efficiency of foreign trade and economic growth, and clarify the theoretical relationship between them.

2- Analyze the indicators of economic efficiency of foreign trade and indicators of economic growth, then know their trends and the relationship between them through the study period.

3- Measure the relationship between the indicators of economic efficiency of foreign trade and

economic growth, and then compare the results with theory and economic logic.

Fifth - Study limits:

1- Spatial limits: The study includes the application to the State of Iraq.

1- Time limits of the study: The study covers the time period starting from 2004 and ending in 2022, as that period was characterized by witnessing the beginning of the application of the capitalist system in Iraq and its transformation into a market system.

Sixth - Study variables:

1- Independent variable: Indicators of economic efficiency of foreign trade, as six indicators were identified as follows:

A- Export importance index.

B- Import importance index.

C- Coverage degree index.

D- Economic participation degree index.

C- Trade openness degree index.

H- Foreign trade per capita index.

2- Dependent variable: Economic growth, which was expressed (in GDP).

Seventh - Study methodology:

Several approaches were relied upon in the study, as follows:

1- Deductive approach: The deductive approach was relied upon by using the descriptive method and the analytical method in the theoretical aspect, relying on economic theory and previous studies related to the literature of foreign trade and economic growth.

2- Inductive approach: The inductive approach was relied upon by using the quantitative (standard) aspect, relying on econometric methods to explain the relationship between the variables of economic efficiency of foreign trade and economic growth.

Previous studies:

- Al-Janabi, Haitham Abdul Qader, (2015): The impact of exports on economic growth in the Iraqi economy,

The research aims to identify the impact of non-oil commodity exports on economic growth rates in Iraq, represented by the gross domestic product. Using quantitative standard analysis tools to describe the data. The researcher concluded that countries in which economic growth is linked to oil, is volatile, due to the link to global oil prices. Through these results, the researcher recommended the need to focus on investments and diversification of exports, developing manufacturing industries, and moving from traditional sectors to more productive sectors. - Khairi, Saeed Youssef and others (2016): Measuring the economic efficiency of inter-Arab agricultural exports" The study aims to achieve economic integration until production efficiency reaches its maximum possible, and to know the countries to which these exports should be directed to achieve the greatest possible benefit for the Arab countries, as well as to study the current status of the total value of exports and imports in the Arab world, especially agricultural and industrial, the deductive and analytical approach was relied upon. The study reached a set of results, the most important of which are: In general, all Arab markets achieved an average export efficiency of about 0.923, which means that Arab markets are among the most important foreign markets for agricultural exports, which are characterized by Arab agricultural exports with efficiency, which encourages the preservation of those markets and their sustainability in the future. The researcher

recommended the necessity of directing Arab exports of any commodity by focusing on targeting Arab markets based on their import needs from the world and their share in those markets and the economic size of those countries, and thus focusing on directing exports to countries with large import capacity before those markets become saturated by other export markets, and also focusing inter-Arab agricultural exports on countries with High income.

The first section: The conceptual framework of foreign trade and economic growth

Introduction

Foreign trade is of great importance in most countries that participate in it, and the literature on economic development has addressed the importance of economic relations between countries to achieve this development, and international economics has become a branch of economic theory, and there are economists who have emphasized that foreign trade is the main driver of economic growth.

1-The concept of foreign trade

Foreign trade constitutes a fundamental pillar in international economic relations, and it allows countries to consume more than they produce from their own resources, in addition to expanding the scope of the market and an outlet for distributing local products (LASARY, 2005: 21), foreign trade arises between individuals residing in different political units, or between governments and economic organizations residing in different political units with the aim of satisfying needs, and foreign trade consists of two basic elements, which are exports and imports in their visible and invisible forms (Khaled, 2014: 217). It is known as the movement of goods and services between different countries, as it includes external movements of capital. It is noted that this definition introduced the concept of investment into the components of foreign trade through capital, and thus the impact of foreign trade on the gross national product becomes clear, and this definition exceeds the concept of the gross domestic product (Hossam et al., 2002: 14). 2- The importance of foreign trade

The importance of foreign trade comes from the role it plays in achieving a set of goals that the participating countries seek, which can be identified as follows: (Al-Jamal, 2010: 12-13) (Awad, 2004: 13-14).

1- Foreign trade connects countries and societies with each other, helps expand the market scope, and thus increases the marketing capacity of local products and opens new markets.

2- It helps increase economic welfare by expanding the base of choices regarding consumption and investment, in addition to being an indicator of the productive capacity and competitiveness of local products in the foreign market, and its impact on the trade balance.

3- There are close relationships between foreign trade and economic development, because foreign trade leads to increased production rates, and economic development aims to increase production, and accordingly foreign trade leads to increased development rates, and increased development rates lead to increased capacity for foreign trade.

4- Foreign trade can play a positive role in getting out of the poverty cycle and positively impact economic development, by encouraging exports and obtaining the necessary capital to increase local investments and establish infrastructure, which ultimately leads to capital accumulation and the advancement of economic development.

5- Foreign trade provides the local economies with the production requirements necessary for manufacturing processes, as well as services that are not available locally. At the same time, through export operations, surplus local goods and services can be disposed of. As for the import and export process, it is reflected in the gross domestic product, national income and employment rates, as well as money and the exchange rate.

Third: The concept of economic growth

Economic growth is one of the terms that are frequently used in the modern era by politicians and economists, due to its association with the standard of living of members of society, and being the basic pillar for measuring the progress of nations. Given the importance of economic growth, multiple concepts and definitions have emerged, including that it refers to a continuous increase in the per capita share of actual or real production of goods and services, as well as an increase in the economy's ability to produce goods and services (T.R. JAIN, 2009: 2). It is also defined as a long-term increase in the state's ability to provide a wide and diverse range of economic goods and an increasing number to its population. This growing ability is based on technical progress and the institutional and ideological adjustments that are needed (Robert, 2010: 2). It is also defined as an increase in the gross domestic product or gross national income with an increase in the average share of real income per capita. Growth must be reflected in the level of real income per capita (Abdul Qader, 2000: 51). It is also defined as the process that aims to improve living standards by increasing the production of goods and services and improving their quality. It also seeks to achieve high rates of overall changes such as national income, which contributes to achieving a high level of satisfaction and well-being for members of society (Al-Dawri: 2018, 29).

Fourth: The importance of economic growth:

Economic growth is the basis for comprehensive development and the well-being of societies, and therefore it is a central goal of economic policies in many countries. The most important main reasons for the importance of economic growth can be identified as follows: (Khalifa, 2001: 10).

1-Increasing the standard of living: It leads to an increase in (Gross Domestic Product), which contributes to raising the level of income and consumption of individuals and improving their living conditions.

2-Providing job opportunities: Economic growth enhances investments and the expansion of businesses and companies, which contributes to creating new job opportunities and reducing unemployment rates.

3-Developing and improving infrastructure: Economic growth allows for more investment in basic infrastructure such as roads, bridges, electricity and public facilities, which enhances future growth and improves the quality of services available to citizens.

4-Promoting sustainable development: Economic growth contributes to achieving sustainable development, by preserving natural resources and the environment and making optimal use of them and reducing poverty and social inequality.

5-Increasing productivity and innovation: Economic growth encourages increased productivity and innovation in the economy, as resources are better invested and technology and processes are developed to achieve sustainable and effective growth.

6-Enhancing confidence and economic stability: Economic growth contributes to enhancing confidence in the local economy, reducing economic fluctuations and helping to maintain the stability of markets and the financial system.

Second Section: Practical Aspect

First: Study Variables:

1. Independent variables: Some indicators of the economic efficiency of foreign trade, which are as follows:

A- Export Importance Index (X1): - It is one of the indicators of the economic efficiency of foreign trade, as this indicator measures the extent of production capacity and the volume of exports relative to the gross domestic product, and the increase in this indicator expresses the strength of the country's economy and the increase in the flow of foreign currency, which in turn leads to achieving economic growth

B- Import Import Importance Index (X2): - It is one of the indicators of the economic efficiency of foreign trade, as this indicator measures the extent of the local market economy's dependence on imported goods. The increase in this indicator indicates that the country's production system suffers from an imbalance if the imported goods are consumer goods. If these goods are durable equipment and factories that contribute to achieving economic growth, then the coverage degree index (X3): It is one of the indicators of the economic efficiency of foreign trade, as this index measures the strength of the state and its control over the purchasing power of imports. If the value of this index is greater than 100%, it means that there is a surplus in the trade balance. If its value is less than 100%, this indicates that there is a deficit in trade advantages. Then the economic participation degree index (X4): It is one of the indicators of the economic efficiency of foreign trade, as this index shows the extent of the contribution of foreign trade. If the value of the index is equal to zero, this means that exports are equal to imports. If the value of the index is positive, this indicates that the participation of exports is greater than imports, and vice versa.

C- Trade openness index (X5): It is one of the indicators of the economic efficiency of foreign trade, as this index measures the extent of economic openness to the outside world. The high value of this index indicates the country's dependence on the outside world in selling its products and in return obtaining goods and services from abroad. H- Foreign trade per capita index (X6): It is one of the indicators used in the process of measuring the country's economic growth, as the high value of this index indicates the country's developmental progress. However, this index has some drawbacks, especially in developing countries, as wealth is concentrated in a certain part of the people, and thus the transparency of this index declines. 2. Dependent variable (GDP) (Y): It is an economic measure used to measure the total market value of all final goods and services produced in a country during a specific period of time, usually one year (Al-Hasnawi: 188, 2007)

Second: The mathematical formula of the model: We will use the mathematical formula of the logarithm of the left side in order to reduce the differences in the study variables, and (ui) represents the error limit, which is as follows:

$$Log(Y) = B0 + B1(X1) + B2(X2) + B3(X3) + B3(X4) + B3(X5) + B3(X6) + ui$$

Third: Study data: The following table shows the study data and variables:

Table (1) Study variables and data

Average per capita foreign trade index (X_6)	Coverage rate index (X_5)	Trade openness index (X_4)	Economic Participation Index (X_3)	Import Import Import Index (X_2)	Export Importance Index (X_1)	GDP Y	years
1443.25	83.61	106.83	(0.09)	58.18	48.64	36613	2004
1742.77	100.7	94.61	0.01	47.14	47.47	49921	2005
1876.36	138.71	80.63	0.16	33.78	46.85	65159	2006
2053.58	202.43	67.18	0.34	22.21	44.97	88038	2007
3226.73	182.01	75.83	0.29	26.89	48.94	130204	2008
2569.59	94.98	72.49	(0.03)	37.18	35.31	111661	2009
2943.97	117.87	69.07	0.08	31.7	37.37	138517	2010
3828.35	166.69	68.63	0.25	25.74	42.9	185750	2011
4479.97	159.66	70.27	0.23	27.06	43.21	218032	2012
4384.81	143.06	65.59	0.18	26.99	38.61	234638	2013
3999.22	145.68	63.03	0.19	25.66	37.37	228416	2014

2677.64	108.16	59.99	0.04	28.82	31.17	164705	2015
1992.24	120.73	47.84	0.09	21.68	26.17	157820	2016
2572.1	152.01	54.33	0.21	21.56	32.77	175652	2017
3467.09	188.82	62.56	0.31	21.66	40.9	211146	2018
3573.48	140.33	59.8	0.17	24.88	34.92	233636	2019
2362.66	97.26	52.06	(0.01)	26.39	25.67	182455	2020
2756.26	178.77	54.68	0.28	19.61	35.06	207692	2021
4124.74	213.87	65.58	0.36	20.89	44.68	264182	2022

Source: Prepared by the researcher, based on data from the Central Bank of Iraq - Economic Reports, different years. Fourth: Drawing the study variables: It is clear from the graph that the time series of the study variables is not stable, that the time series of all study variables fluctuated between rise and fall as a result of the crises and various economic conditions that the Iraqi economy went through during the study period, that these conditions led to clear fluctuations, so it is necessary to reveal the stability or stagnation of these variables and to know the degree of their integration to determine the appropriate model for their study, see Figure (1).

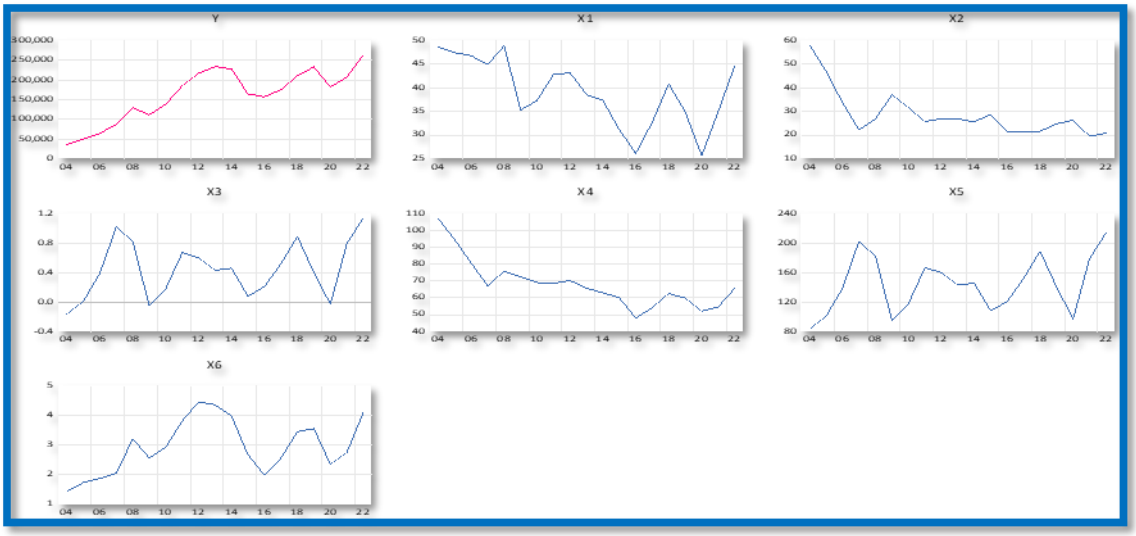

Figure (1) Study variables plot

Source: Prepared by the researcher based on the statistical program (12. EViews)

Fifth: Testing the stationarity of the time series: The problem of false regression is one of the most important problems that the results of the standard analysis suffer from, and in order to ensure that the problem does not exist, we conduct the expanded Dickey-Fuller unit root test - and through the test results, the results showed that the dependent variable (Y) is not stationary in the level, as well as the independent variables (X1, X4, X6), at a significance level of (5%).

After taking the first difference of the dependent variable and the independent variables, it is noted that all of them are stationary, whether without a constant or with a constant and a trend or without a constant and a trend and at a significance level of (1-5-10%), see Table (2).

Table (2) Unit root test (ADF)

	UNIT ROOT TEST TABLE (ADF)							
At Level								
		Y	X1	X2	X3	X4	X5	X6
With Constant	t-Statistic	-1.394	-1.706	-3.361	-6.106	-2.794	-6.102	-2.541

	Prob.	**0.5616**	**0.4096**	**0.029**	**0.0001**	**0.0811**	**0.0001**	**0.1238**
		n0	**n0**	**	***	*	***	**n0**
With Constant & Trend	**t-Statistic**	**-2.5619**	**-3.376**	**-6.797**	**-6.107**	**-2.357**	**-6.109**	**-2.698**
	Prob.	**0.2988**	**0.0879**	**0.0003**	**0.0007**	**0.3843**	**0.0007**	**0.2486**
		n0	*	***	***	**n0**	***	**n0**
Without Constant & Trend	**t-Statistic**	**1.0164**	**-1.079**	**-1.277**	**-0.255**	**-1.230**	**0.3200**	**0.229**
	Prob.	**0.9112**	**0.2415**	**0.177**	**0.578**	**0.1911**	**0.7656**	**0.7414**
		n0	**n0**	**n0**	**n0**	**n0**	**n0**	**n0**
At First Difference								
		d(Y)	**d(X1)**	**d(X2)**	**d(X3)**	**d(X4)**	**d(X5)**	**d(X6)**
With Constant	**t-Statistic**	**-3.313**	**-4.840**	**-6.860**	**-4.559**	**-3.516**	**-4.574**	**-3.571**
	Prob.	**0.0317**	**0.0017**	**0.0001**	**0.0037**	**0.0216**	**0.0037**	**0.0195**
		**	***	***	***	**	***	**
With Constant & Trend	**t-Statistic**	**-3.238**	**-3.703**	**-6.920**	**-4.633**	**-4.176**	**-4.655**	**-3.434**
	Prob.	**0.1121**	**0.0548**	**0.0004**	**0.0131**	**0.0234**	**0.0126**	**0.082**
		n0	*	***	**	**	**	*
Without Constant & Trend	**t-Statistic**	**-2.766**	**-4.848**	**-6.059**	**-4.762**	**-3.587**	**-4.774**	**-3.550**
	Prob.	**0.0087**	**0.0001**	**0.000**	**0.0001**	**0.0014**	**0.0001**	**0.0015**
		***	***	***	***	***	***	***
Notes: (*)Significant at the (10%); (**)Significant at the (5%); (***) Significant at the (1%). and (no) Not Significant								

Source: Prepared by the researcher based on the statistical program (12. EViews)

Given the short time series and in order to reach accurate results, the data were converted to quarterly based on the statistical program (12. EViews), and because the variables are stationary at the level and the first difference is a mixture and with it the autoregressive model with lagging gaps (ARDL) can be used.

Sixth: Initial estimation of the model: Through the model estimated using automatic determination, note that the coefficient of determination (R2) reached (0.99), which expresses its explanatory power, i.e. the indicators of economic efficiency of foreign trade explained (99%) of the changes in the gross domestic product in Iraq (Y), and (1%) for other random variables outside the standard model. As for the corrected coefficient of determination, it also reached (0.99), and through the (F) statistic, which shows the overall significance of the model, the results showed its significance at a significance level of (1%), and then we accept the alternative hypothesis, i.e. the model is statistically significant and valid for prediction and planning, see Table (3). Table (3) Initial estimation of the impact of some indicators of economic efficiency of foreign trade on the gross domestic product (Y)

Dependent Variable: LOG(Y)			
Method: ARDL			
Sample (adjusted): 2005Q2 2022Q4			
Maximum dependent lags: 4 (Automatic selection)			

Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (4 lags, automatic): X1 X2 X3 X4 X5 X6				
Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(Y(-1))	1.26988	0.112692	11.26863	0
X1	-0.57729	0.319222	-1.80841	0.076
X2	-0.58535	0.319633	-1.83133	0.0725
X3	-0.14937	1.079611	-0.13836	0.8905
X4	0.569688	0.318966	1.786045	0.0796
X5	0.000685	0.010756	0.063691	0.9494
X6	0.293481	0.014759	19.88485	0
C	-0.42342	0.675431	-0.62689	0.5333
R-squared	0.999855	Mean dependent var		11.93568
Adjusted R-squared	0.999815	S.D. dependent var		0.459169
F-statistic	25270.78	Durbin-Watson stat		2.010974
Prob(F-statistic)			0.000	

Source: Prepared by the researcher based on the statistical program (12. EViews)

Seventh: Joint integration test: To test the existence of a long-term equilibrium relationship, a test through the limits and the statistic (F-Bounds Test) between (some indicators of economic efficiency) as an independent variable and the dependent variable (GDP at prices). From the results of this test, we note that the value of the statistic (F) has reached (4.145), and when compared with a significance level (5%), it is noted that it is greater than its minimum and maximum values. We conclude from this that there is a long-term joint integration relationship between some indicators of economic efficiency and the GDP in Iraq, see Table (4).

Table (4) Joint integration test

F-Bounds Test		Null Hypothesis: No levels of relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	4.145906	10%	2.12	3.23
k	6	5%	2.45	3.61
		2.5%	2.75	3.99
		1%	3.15	4.43
Actual Sample Size 71			Finite Sample: n=75	

Source: Prepared by the researcher based on the statistical program (12.EViews)

Eighth: Short-term impact:

A. Export Importance Index (X1): It has an inverse effect on the GDP, and increasing it by one unit leads to a decrease in the GDP by (-0.577%), at a statistical significance level (10%). This is contrary to the study hypothesis, logic, and economic theory. The reason for this can be attributed to the association of exports with specific sectors, namely the oil sector, which represents the largest part of exports. The increase in exports from this sector is often sudden and large, and this increase may be unbalanced with the ability of the local economy to absorb these changes, and is negatively reflected on other sectors, especially manufacturing industries.

B. Import Imports Imports Index (X2): It has an adverse effect on GDP, and increasing it by one unit leads to a decrease in GDP by (-0.585%), at a statistical significance level (10%). This result is consistent with the study hypothesis, logic, economic theory, and the reality of the Iraqi economy, as increasing imports leads to a decrease in demand for local products and reduces domestic spending on

local goods. This in turn can lead to a decline in GDP because local companies may find it difficult to compete with imported goods in terms of price and quality.

C. Economic Participation Degree Index (X3): It does not affect GDP in the short term at a statistical significance level (5%).

D. Trade openness index (X4): It has a direct effect on GDP, and increasing it by one unit leads to an increase in GDP by (0.569%), at a statistical significance level (10%). This result is consistent with the study hypothesis and with economic logic, which indicates that trade openness contributes to providing goods and services at lower prices due to external competition for local products, which reduces production costs and increases the purchasing power of consumers and companies, and thus supports GDP growth.

C. Coverage rate index (X5): It does not affect GDP in the short term at a statistical significance level (5%).

H. Per capita share of foreign trade (X6): It directly affects the GDP, and increasing it by one unit leads to an increase in the GDP by (0.293%), at a statistical significance level of (10%). This result is for the economic theory and the study hypothesis, as increasing the per capita share of foreign trade means an increase in the revenues that the individual obtains from exporting goods and services, and these revenues can increase the country's gross national income, and thus contribute to increasing the GDP..

X. Conditional error correction coefficient: The results showed that it is negative and significant at a significance level of (5%), and thus it achieved the sufficient condition and its value reached (0.093-), i.e. if a deviation from the long-term equilibrium occurs, this means that (9.3%) of the gap between the actual value and the balanced value is corrected in the subsequent time period, and the imbalance in the short-term equilibrium in the GDP in Iraq will take two years and eight months to reach its equilibrium value in the long term as a result of fluctuations in some indicators of economic efficiency because 1/(0.093)=10.75 Quarterly. It is a weak response rate due to the dependence of the GDP on foreign trade in Iraq.

4. Long-term impact:

A. Export importance index (X1): It has an inverse effect on GDP, and increasing it by one unit leads to a decrease in GDP by (6.300-%), at a statistical significance level (5%), and this result contradicts the hypothesis and economic theory.

B. Import importance index (X2): It has an inverse effect on GDP, and increasing it by one unit leads to a decrease in GDP by (6.283-%), at a statistical significance level (5%), and this is consistent with the study hypothesis and economic theory.

C. Economic participation degree index (X3): It has an inverse effect on GDP, and increasing it by one unit leads to a decrease in GDP by (16.287-%), at a statistical significance level (5%), and this is contrary to the study hypothesis and economic theory, and the reason for this is the structural imbalances in the structure of Iraqi exports and their concentration in the oil sector.

D. Trade openness index (X4): It has a direct effect on the GDP, and increasing it by one unit leads to an increase in the GDP by (6.268%), at a statistical significance level (5%), and this result is consistent with the study hypothesis of the economic theory.

C. Coverage rate index (X5): It has a direct effect on the GDP, and increasing it by one unit leads to an increase in the GDP by (0.170%), at a statistical significance level (5%), and this result is consistent with the study hypothesis and the economic theory, which indicates that whenever exports exceed imports, the country can use the surplus export revenues to cover imports in developing the sectors that make up the GDP.

H. Per capita foreign trade index (X6): It has a direct effect on the gross domestic product, and

increasing it by one unit leads to an increase in the gross domestic product by (0.369%), at a statistical significance level (5%). This result is consistent with the study hypothesis and economic theory, see Table (5)

Table (5) Short-term and long-term relationship of the effect of some economic efficiency index of foreign trade on the gross domestic product (Y)

ARDL Long Run Form and Bounds Test				
Dependent Variable: DLOG(Y)				
Selected Model: ARDL(2, 1, 0, 1, 2, 1, 2)				
Sample: 2004Q1 2022Q4				
الأجل القصير				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	**-0.42342**	**0.675431**	**-0.62689**	**0.5333**
LOG(Y(-1))*	**-0.09316**	**0.022873**	**-4.07293**	**0.0002**
X2**	**-0.58535**	**0.319633**	**-1.83133**	**0.0725**
D(X1)	**-0.57729**	**0.319222**	**-1.80841**	**0.076**
D(X3)	**-0.14937**	**1.079611**	**-0.13836**	**0.8905**
D(X4)	**0.569688**	**0.318966**	**1.786045**	**0.0796**
D(X5)	**0.000685**	**0.010756**	**0.063691**	**0.9494**
D(X6)	**0.293481**	**0.014759**	**19.88485**	**0.0000**
الأجل الطويل				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
X1	**-6.30094**	**2.829721**	**-2.2267**	**0.0301**
X2	**-6.28321**	**2.836893**	**-2.21482**	**0.0309**
X3	**-16.8717**	**7.810277**	**-2.16019**	**0.0351**
X4	**6.268433**	**2.832382**	**2.213131**	**0.0311**
X5	**0.170286**	**0.077868**	**2.186858**	**0.033**
X6	**0.3699**	**0.015873**	**23.30379**	**0.0000**
EC = LOG(Y) - (-6.3009*X1 -6.2832*X2 -16.8717*X3 + 6.2684*X4 + 0.1703*X5 + 0.3699*X6)				

Source: Prepared by the researcher based on the statistical program (12. EViews)

5. Standard Problem Tests: We conduct standard problem tests for the standard model as follows:

A. Autocorrelation Test: By using the (Breusch-Pagan LM) test, the results of the probability values of the test statistic showed that it reached (0.281), which is higher than its value at the statistical significance level (5%), i.e. accepting the null hypothesis (H0), which negates the existence of the problem in the estimated model.

B. Heterogeneity of Variance Test: By using the (Breusch-Pagan-Godfrey) test, the results of the probability values of the test statistic showed that it reached (0.1479), which is higher than its value at the statistical significance level (5%), i.e. accepting the null hypothesis (H0), which negates the existence of the problem, heterogeneity of variance in the estimated model, see Table (6).

Table (6) Standard Problem Tests.

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	**1.300398**	**Prob. F(2,53)**	**0.281**
Obs*R-squared	**3.321113**	**Prob. Chi-Square(2)**	**0.1900**
Heteroskedasticity Test: ARCH			
F-statistic	**2.142724**	**Prob. F(1,68)**	**0.1479**

Obs*R-squared	2.138364	Prob. Chi-Square(1)	0.1437

Source: Prepared by the researcher based on the statistical program (12. EViews)

T. Structural tests: Using the (CUSUM) and (Squares CUSUM) tests, which represents the square of (CUSUM), these two tests are used to ensure that there are no structural changes in the data used, and the stability of the parameters of the standard model over time, and to determine the extent to which the long-term coefficients match the estimates of the short-term coefficients. The results of the two tests were shown, and by looking at the graphs of these two tests, it is clear that they are within the critical limits, i.e. (the upper limit and the lower limit) at the significance level (5%), see Figures (2) and (3).

Figure (2) CUSUM test
Source: Prepared by the researcher based on the statistical program (12.EViews)

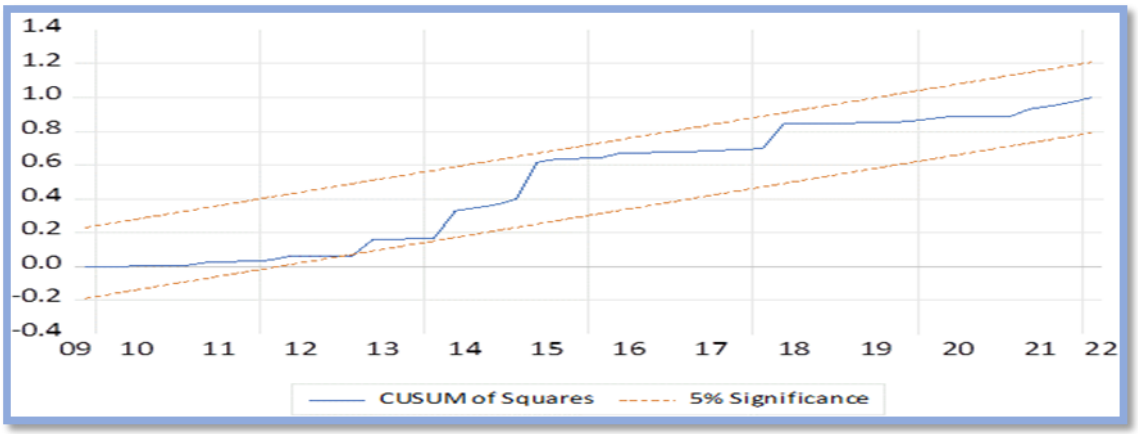

Figure (3) Squares CUSUM test
Source: Prepared by the researcher based on the statistical program (12. EViews).

Conclusions:

1. Foreign trade contributes to achieving economic growth for participating countries, and economic theories have emphasized this role by providing foreign labor and using it to achieve economic growth.
2. There is interest in indicators of economic efficiency of foreign trade by countries, organizations and international institutions, considering that the development of these indicators is evidence of the good use of economic resources, enhancing competitiveness, improving the purchasing power of individuals and increasing domestic consumption, as well as supporting economic sustainability to enhance sustainable growth.
3. Despite the increase in the volume of exports as absolute values, the indicator of the importance of exports has fluctuated and declined in general during the study period due to the increase in the gross domestic product by a greater percentage than the increase in exports.
4. The indicator of the importance of imports has also declined in general despite the increase in imports, the value of imports when comparing the beginning of the period with its end due to the

increase in the gross domestic product by a greater percentage than the increase in imports.

5. The economic participation index recorded positive values during the study period, except for the years 2004, 2009 and 2020, meaning that exports contributed more than imports to economic activity.
6. The trade openness index formed high values during the study period, which indicates the connection and openness of the Iraqi economy to the external world.
7. The values of the trade coverage rate index exceeded one for most of the study period, which indicates that Iraq was able to cover the costs of its imports through its exports.
8. The per capita share of foreign trade index took on an increasing character in general during the study period, which was positively reflected in the increase in domestic consumption by members of society.
9. The results of the standard aspect showed that there is a long-term joint integration relationship between some indicators of economic efficiency of foreign trade and the gross domestic product in Iraq.
10. The results of (ARDL) for the short- and long-term relationship showed the following:

A. There is an inverse relationship in both terms between the export importance index and the gross domestic product, and this result contradicts the study hypothesis and the economic theory.
B. There is an inverse relationship in both terms between the import importance index and the GDP, and this result is consistent with the study hypothesis and economic theory.
C. There is no effect of the economic participation index on the GDP in the short term, but in the long term the result was the opposite, and this result is contrary to the study hypothesis and economic theory.
D. There is a direct relationship in both terms between the trade openness index and the GDP, and this result is consistent with the study hypothesis and economic theory.
E. There is no effect of the coverage rate index on the GDP in the short term, but in the long term the relationship was positive, and this result is consistent with the study hypothesis and economic theory.
F. There is a direct relationship in both terms between the per capita share of foreign trade index and the GDP, and this result is consistent with the study hypothesis and economic theory.

Suggestions:

1. The Iraqi government should increase its interest in the foreign trade sector and develop its export structure in a way that ensures the development of its economic efficiency indicators for sustainability and increased revenues to achieve economic growth.
2. Work on diversifying the Iraqi economy, finding other sources of exports other than oil, and encouraging sectors such as agriculture, industry, and tourism to enhance economic diversity, and support innovation and entrepreneurship to develop new products and services.
3. It is necessary to activate trade policies by government authorities in Iraq to protect emerging industries and prevent the import of similar products. In their initial stages, these industries are expensive, which may lead to an increase in the prices of their products.
4. Improve the quality of local products to increase their competitiveness in global markets, and provide government support to them by providing subsidies and reducing taxes on raw materials used in their manufacture, and opening new markets through bilateral and regional trade agreements.

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