Measurement and Analysis of the Relationship between General Revenues and Imbalance in Iraq's Export Structure For duration (2004-2021)

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Abstract:

The Iraqi economy relies primarily on oil exports to achieve necessary financial surpluses in order to finance economic and social development plans. Capital imports also contribute to improving the productive capacity of all sectors that directly or indirectly contribute to the country's economic growth if they actually exist. These imports, represented by the equipment and machinery necessary for building and developing infrastructure in Iraq, which cannot be provided except through foreign trade, make Iraq closely connected to broad economic relationships with most of the developed world economies. Oil revenues have had a positive impact on the general budget situation. However, on the other hand, the lack of a productive base has led to the leakage of revenues towards imports to meet domestic demand, resulting in an imbalance in the overall export structure. Moreover the research objective was to identify the relative importance of total exports in Iraq and how they are affected by oil revenues during the period 2004-2021. The hypothesis is fiscal policy has led to a disruption in the structure of Iraq's exports. And one of the most important result that appeared general revenues depend to a large extent on oil revenues compared to other revenues (non-oil), which means that the Iraqi economy is considered one-sided. With the weakness of revenues achieved from productive sectors (industry and agriculture) as well as weak tax revenues, this leads to an imbalance in the structure of the trade balance, evident through the dominance of oil exports over total exports in the country.

Paper type: Research paper.
Keywords: The Iraqi economy, Imbalance of the export structure , oil revenue .

1. Introduction:

The Iraqi economy relies primarily on oil exports to achieve necessary financial surpluses for financing economic and social development plans. Capital imports also contribute to improving the productive capacity of all sectors that directly or indirectly contribute to the economic growth of the country. A sound financial policy would involve directing public expenditures towards stimulating productive sectors that contribute to generating a local output that adequately covers domestic demand for goods and services. Financial policy tools, such as public revenues and expenditures, are reflected in the general budget, which is directly linked to exports and imports. The state utilizes financial policy tools directly to address external imbalances by focusing on productive sectors, output volume, and value-added, leading to increased diversification and volume of exports and their contribution to the Gross Domestic Product (GDP).

After 2003, Iraq experienced a disruption in the structure of its balance of trade due to trade liberalization and increased imports, leading to a complete halt in factories and plants. This situation has had a significant impact on the Iraqi economy, which has become solely reliant on oil exports. Consequently, the structure of the Iraqi balance of trade has suffered from significant distortions and imbalances.

The surpluses achieved in certain years were a direct result of the Iraqi economy's dependence on oil exports, i.e., an increase in total exports (oil and non-oil) compared to total imports. However, when considering the volume of exports excluding crude oil, these surpluses turn into deficits. This indicates the actual imbalance in the non-oil balance of trade and reflects the weak contribution of productive sectors to the overall GDP.

1.1 Literature review:

There are many studies discussing general revenues and imbalance export structure as follows :

Studied the significant structural imbalances facing the Iraqi economy, which have had a negative impact on most of its economic indicators, leading to a decrease in economic diversification and distorting its foreign trade structure towards oil dependence. This has created numerous challenges for its accession to the World Trade Organization (WTO). The study aimed to highlight the necessity of Iraq's accession to WTO in light of its comparative advantage in foreign trade and its economic diversification indicators. It also emphasized the importance and means of addressing these imbalances within the framework of foreign trade. The researchers found a significant imbalance in Iraq's exports, with oil exports accounting for more than 95% on average during the study period. This indicates a quasi-absolute commodity concentration, which increases the risk of instability in these exports. As for imports, consumer goods dominate the majority, reflecting a weakness in domestic production. The country's trade balance also reflects a high level of economic exposure (Salman, 2015).

Al-Sharifi (2016) proved a fundamental problem in the Iraqi economy, which is the issue of foreign trade. It has witnessed a general weakness in non-oil exports as a result of three and a half decades of political and economic instability. The researchers sought to explore the problems of this policy and attempt to outline possibilities for activating the role of this policy in light of the requirements and commitments of the local economy and global economic trends.

The study concluded that trade policy, within the framework of accession to WTO, becomes one of the tools for redefining overall policies, as long as the accession files include the existing overall policies that need to be adapted to fulfill the membership requirements and monitor those policies. This also extends to the fact that international trade includes trade in goods and services, and its underlying policies, including legislation such as intellectual property rights, are fundamentally interrelated.

Farhan (2016) studied the imbalance in Iraq's trade balance, which has negatively affected economic growth indicators. The study aimed to analyze the existing deficit in Iraq's trade balance and clarify the mechanisms and methods used to reduce the trade deficit and achieve a trade surplus that would help diversify the Iraqi economy. Iraq suffers from distortions and imbalances in its non-oil trade balance, with the deficit ranging between (467 to 51,792) million dollars during the years 1994-2013. The researchers also found a decrease in the contribution of other sectors to the gross domestic product (GDP), with the oil sector being the largest contributor to economic growth in Iraq due to the absence of other sectors. Thus, the oil sector has become the leading sector in the economic growth process. As for how to overcome the deficit in the trade balance, it requires continuous efforts, including serious efforts to increase the productivity of non-oil sectors. This can be achieved by providing support through providing concessional loans to small and medium-sized projects capable of boosting productive sectors, thus creating a state of economic diversification.

Barieh (2017) focused on analyzing the impact of deteriorating and weak exports, which are limited to the crude oil sector, without including other sectors. On the other hand, there has been a significant increase in consumer goods imports, leading to market saturation. The study aimed to highlight the reality of the commercial sector in Iraq and attempt to address the available opportunities for its development by identifying the obstacles that negatively affect the trade balance. The researchers found that the imported goods were consumer goods rather than productive goods, and therefore did not contribute to increasing the production capacity of the Iraqi economy. Instead, they contributed to increasing the inclination towards consumption. However, Iraq needs to work on developing plans to utilize oil revenues in a focused manner to invest in non-oil sectors (industrial and agricultural) and enhance their production capacity in terms of quality and competitiveness, producing what can be produced and preventing its importation.

Yahya (2019) studied aims to shed light on the reality of the trade imbalance and work towards its improvement by identifying the imbalance resulting from exports relying solely on the crude oil supply. The Iraqi economy has suffered from a trade imbalance due to distortions in the export structure resulting from the relative dependence on crude oil, which is influenced by regional and international variables. On the other hand, there is another distortion in the import structure due to the variety of imported consumer and investment goods as a result of weak domestic production. The study found that the structural distortion in the production sector has led to an imbalance in the trade structure, as the productivity of production sectors has declined significantly due to almost complete shutdown of the production apparatus. This has negatively affected the export structure due to reliance on oil exports and the decrease in commodity exports. In light of this, the researchers recommended diversifying exports by reviving the industry, as it plays a significant role in structural transformation.

This can be achieved by supporting local producers through loans, facilitations, and other incentives. Hamdan and Hussein (2020) proved the paper aims to determine the best form of coordination between these policies to achieve their goals, payoff matrix for both policies was constructed. To achieve the purpose, the quantitative approach was applied using several methods, including regression, building payoff matrices and decision analysis using a number of software. The results of the monetary policy payment function show that inflation rate has an inverse relationship with the auctions of selling foreign currency and a positive relationship with the government's activity, while the fiscal policy function shows that real growth is positively related to price levels (the inverted Phillips curve) and correlates with the government's activity. After using the gambit solution to determine the nash balance, which is achieved through the expansion strategies of both policies to confirm the results, the Promethean-Gaia method was used for multi-criteria decision making. When the two policies interact with similar forces (50% each), the best decision is one of the expansionary strategies that help achieve their main objectives in the short and long term, represented by price stability and economic growth

The main conclusion is that the best way to achieve the goals of economic policy in Iraq is that the coordination of procedures between the two policies should be expansionary, since the Iraqi economy needs to be stimulated due to the under-exploitation of many its sectors, such as agriculture and industry

Ehsan (2021) focused the researcher on the issue of partial dependence on oil exports as a financing tool, which led to a correlation between the trade balance and the general budget. The imbalances in the general budget, including the growing consumption structure, low efficiency of investment allocations, and their significant impact on the balance structure, reflected the failure in the investment aspect directly. This lack of diversification in output hindered its ability to meet the needs of the local market. As a result, the increases in total demand resulting from the necessary increase in expenses were directed towards the global market, leading to detrimental growth and diversification in imports. Consequently, while imports increased and diversified, exports suffered from a high degree of concentration, with crude oil dominating, causing significant distortions in the trade balance structure. The aim of the study was to determine the extent of the impact of the trade balance on the general budget, or vice versa, by analyzing their relationship in the Iraqi economy according to its characteristics. The study also aimed to understand the boundaries of the relationship between the budget and the trade balance in both advanced and developing countries by reviewing empirical evidence and previous studies. The researcher found that monetary and financial variables (exchange rate, interest rate, taxes, money supply) did not have a significant impact on the relationship between the deficits. This conclusion was reached by following the standard causality method of Granger in measuring and determining the strength and direction of the relationship, relying on quarterly data on the structure of the trade balance and the general budget. Thus, a positive causal relationship was found to exist from the trade balance deficit to the general budget deficit.

The problem has an increased reliance on oil revenues created a disruption in the structure of oil exports in Iraq, so the most prominent objectives of the research were measure and analyze the relationship and direction between total exports and public revenues in Iraq and Identify the relative importance of total exports (oil and non-oil) in Iraq. The hypothesis is fiscal policy has led to a disruption in the structure of Iraq's exports for the period 2004-2021.

2. Material and Methods:

2.1 General Content of Contemporary Fiscal Policy:

2.1.1 Concept of Contemporary Fiscal Policy:

Contemporary fiscal policy refers to a set of measures enacted regarding the state's revenues and expenditures to achieve desired economic and social goals. Fiscal policy is considered part of the state's economic policy, which includes trade policies, monetary policies, and others, to manage and regulate the economy. It represents the ability to manipulate financial instruments, expenditures, and general revenues to impact investment and achieve economic objectives. In other words, fiscal policy utilizes public expenditures and revenues to manipulate the variables of the overall economy.

The fiscal policy in its contemporary meaning is a study of public sector economics and an analysis of society's needs and the necessary means to satisfy these needs (Hussein and Hamdan, 2020). It represents a procedural or technical approach to financial resources as the financial management of the national economy. It represents the economic relationships through which financial resources are systematically formed and utilized for the purpose of achieving effective and rational utilization of national economic resources and meeting the public needs.

2.1-2 Tools of Fiscal Policy:

Fiscal policy is one of the most important macroeconomic policies relied upon by the government to achieve its desired objectives(Imad and Nisreen, 2017). This is achieved through its tools, which include the general budget. The general budget encompasses its expenditures and revenues for an entire year (Abdullah and Bin Mansor, 2018) .Government spending reflects the government's performance of its expanded and diversified tasks in the present time. It is the core of public finance and its traditional roles in preserving security and public order, protecting rights, and its economic and social roles. The general revenues are also one of the most important indicators of the government's strength and effectiveness in terms of its ability to finance its necessary expenditures smoothly and regularly to establish stability in the country. The main tools of fiscal policy include public expenditures, general revenues, public borrowing, deficit financing, and public debt.

2.2- General Content of the Trade Balance Structure:

2.2.1 Concept of Trade Balance:

The content of the trade balance is directly related to the structure of foreign trade. Therefore, discussing the concept of the trade balance requires first explaining the concept and meaning of foreign trade. Foreign trade is defined as the movement of goods, services, and funds across national borders. It represents the most important form of trade relationships through which the exchange of goods and services between different countries takes place in terms of exports and imports. Foreign trade is a branch of economics that specializes in studying the process of exchanging goods, services, and capital between countries (Hamdan and Hussein, 2020). This trade represents a

significant proportion of the national output in most countries and is influenced by legislation, laws, customs duties, and exchange rate fluctuations (Obaid, 2018).

2.2.2 Basic Components of the Trade Balance:

The trade balance is an important economic indicator, and its value lies in analyzing its components rather than its absolute value. Therefore, it is necessary to understand all of its components and structure. The basic components (sections) of the trade balance are: (Dadoosh, 2020)

A-Commodity Balance: includes all intended goods and services that are exchanged across customs borders between countries.

B-Service Balance: includes all non-tangible services that are exchanged between trading countries, such as transportation, tourism, governmental services, insurance, and investments.

2.3 Analysis of the Impact of General Revenues on the Imbalance of Export Structure in Iraq (2004-2021):

2.3.1 Analysis of the Path of General Revenues in Iraq:

Oil revenues dominate and control the reality of general revenues in Iraq, due to the weakness of the tax system and the prevalence of corruption in most government departments and institutions, especially in customs outlets, which have caused imbalances in the budget and deepened the renter nature of the Iraqi economy. According to (section V of law No. 95 of 2004), the management of oil revenues is included. under this section, all extracted oil revenues and its derivatives are considered income for financing the general budget, except for 5% of oil export revenues that go to the compensation fund, according to united nations security council resolution No. 1483 of 2003. After the weakness that affected non-oil sectors, the Iraqi economy has shifted from a relatively diversified economy to a mono-sector economy relying on oil rents by more than 93% to finance the general budget revenues (Fenjan and Al-Kubaisi, 2021). As in the Table (1) .

Table 1: Components of General Revenues in Iraq for the period (2004-2021)

Year	Oil revenue	Annual growth rate	Percentage of revenue contribution	Non-oil revenues	Annual growth rate	Percentage of revenue contribution	Total public revenues	Annual growth rate
2004	22.228	---	%97.9	0,475	---	%2.1	22,703	---
2005	26.516	%19.2	%96.3	1.010	%113.6	%3.7	27,526	%21.2
2006	31.548	%18.9	%94.3	1,891	%87.2	%5.7	33,439	%21.4
2007	40.415	%28.1	%92.2	3,381	%78.7	%7.8	43,796	%30.9
2008	63.127	%56.1	%93.3	4,468	%32.1	%6.7	67,595	%54.3
2009	40.047	-%36.5	%88.1	7,169	%60.4	%11.9	45,407	-%32.8
2010	53.044	%32.4	%88.4	6,937	- %3.2	%11.6	59,981	%32.0
2011	86.562	%63.1	%93.0	6,435	- %7.2	%7.0	92,997	%55.0
2012	93.218	%7.6	%90.9	9,240	%43.5	%10.1	102,458	%10.1
2013	92.902	- %0.3	%95.3	4,576	- %50.4	%4.7	97,478	- %4.8
2014	81.624	- %12.1	%90.1	8,902	%94.5	%9.9	90,526	- %7.1
2015	58.051	- %28.8	%95.2	2,912	- %67.2	%4.8	60,963	- %32.6
2016	37.199	- %35.9	%81.3	8,523	%192.6	%18.7	45,722	- %25.0
2017	54.682	%46.9	%84.1	10,306	%20.9	%15.9	64,988	%42.1
2018	68.850	%25.9	%88.8	8.650	- %16.0	%11.2	77.500	%19.2
2019	78.551	%14.0	%89.0	9.654	%11.6	%11.0	88.205	%13.8
2020	46.500	- %40.8	%78.5	7.500	- %22.3	%21.5	54.000	- %38.7
2021	55,980	%20.3	%80.1	13,895	%85.2	%19.8	69,875	%29.3

Source: Prepared by the researcher by relying on:
(1- Iraqi Ministry of Finance, General Budget Department, various years for the period (2004-2021). 2- Ratios from the researcher's extraction).

From Table (1), we find that the total general revenues for the years (2004-2008) increased from $22.703 billion in 2004 to about $67.595 billion in 2008, an increase of 54.3%. This is due to the rise in the share of oil revenues to about 56.1%, as a result of the increase in the price of Iraqi oil per barrel to $87.9 in 2008 from $31.3 in 2004. In addition, non-oil revenues also increased, especially customs taxes and fees, accounting for about 32.1% of total general revenues.

In 2009, total general revenues decreased to about $45.407 billion, a decrease of 32.8% compared to 2008, affected by the decrease in oil revenues – the largest share of general revenues – to around $40.047 billion from $63.127 billion in 2008, a decrease of 36.5%. This was due to the global financial crisis, which caused a budget deficit of about $2.105 billion, indicating the linkage and dependence of local financial indicators on international crises.

During the period (2010-2013), the improvement in global economic conditions after the financial crisis and the gradual increase in oil prices in international markets, reaching over $105 per barrel, led to an increase in Iraqi oil revenues to $92.902 billion in 2013 from $53.044 billion in 2010. Its contribution to the total general revenues reached about 95.3% from 88.4% in 2010. However, non-oil revenues decreased to $4.576 billion in 2013 from $6.937 billion in 2010, a decrease from 11.6% to about 4.7%. This is due to the decreased contribution of non-oil sectors and activities in generating revenues, especially taxes, which witnessed significant exemptions during the mentioned period, reflecting the renter nature of the Iraqi economy and the reliance of general revenues on oil sector revenues(Dadoosh,2022) .

During the period (2014-2017), global oil prices experienced instability due to the recession that affected world economies at the beginning of 2014. This reflected a decline in global economic growth, with the price of oil per barrel dropping from $96.2 to $49.3 between 2014 and 2017. The oil revenue decrease during this period was around 50%, negatively impacting general revenues, which decreased from $90.526 billion in 2014 to about $64.988 billion in 2017.

Several factors contributed to this decline, including the war with terrorist organizations (ISIS) and their occupation of one-third of Iraq's territory, including areas containing crude oil wells. Although non-oil revenues saw an increase in their percentage contribution, reaching around 20.3% of the total revenues, they did not reach a level that makes them a substitute for oil revenues. This indicates that the country's economy is still single-sided. Additionally, the private sector did not play its role in financing the government's general budget due to challenges and exceptional circumstances faced by the country. Despite the global decrease in oil prices, oil revenues still constitute the largest share of total general revenues.

In contrast, the years 2018 and 2019 witnessed an increase in the volume of general revenues, reaching approximately $77.5 billion and $88.205 billion, respectively. This was a result of improving global oil prices and the increased export capacity of Iraqi crude oil, which exceeded 4 million barrels per day, including the Kurdistan Region's share of around 250,000 barrels per day at that time. This achieved a relative economic recovery in the country after years of war with ISIS, which imposed austerity measures on Iraq during that period.

However, in 2020, total revenues decreased to around $54,000 billion due to the decline in oil revenues to approximately $46,500 billion as a result of the COVID-19 pandemic, the closure of global markets, and the halt in commercial activities. Additionally, travel restrictions between countries globally were imposed.

The overall general revenues increased to about 29.3% in 2021 due to the opening of international trade and the improvement in global oil demand, leading to a rise in oil prices once again. This resulted in an increase in the annual growth rate by approximately 20.3% in the same year.

2.3.2 Analysis of the imbalances in Iraq's export structure:
2.3.2.1 Analysis of the structural imbalance in the Iraqi economy:

The dependence of Iraq's foreign trade on the quantities of crude oil exported contributes to a significant imbalance in the trade balance. The lack of diversification in Iraq's export volumes makes the country economically exposed and reliant on foreign markets. In other words, a decrease in the price of a barrel of oil in international markets directly impacts the Iraqi economy, as it relies solely on one source of export (crude oil). On the other hand, Iraq's import volume has increased due to its trade liberalization policy, resulting in the weakness of economic sectors, especially agriculture and industry, to meet the local demand for basic goods and services. This has further deepened the imbalance in the country's foreign trade volume. As in the Table (2).

Table 2: Commodity structure of exports and imports in Iraq for the year 2021

Exported commodity	Value	Relative Importance (%)*	Imported Commodity	Value	Relative Importance (%)
food and animal materials	33,2	0.1	food and animal materials	2479,3	5.4
Drinks and tobacco	——	0.0	Drinks and tobacco	596,7	1.3
Non-food raw materials other than fuel	15,4	0.0	Non-food raw materials other than fuel	826,4	1.8
Mineral fuels and related lubricants	68066,9	99.8	Mineral fuels and related lubricants	4498,0	9.8
Animal and vegetable oils and fats	——	0.0	Animal and vegetable oils and fats	2937,5	6.4
Chemicals	——	0.0	Chemicals	3074,9	6.7
Manufactured goods	1,2	0,0	Manufactured goods	5232,1	11.4
Transport machines and equipment	33,2	0.1	Transport machines and equipment	17671,2	38.5
Miscellaneous products	——	0.0	Miscellaneous products	7252,0	15.8
Unclassified goods	——	0.0	Unclassified goods	1330,8	2.9
Total	68149,9	100.0	total	45898,9	100.0

Source: Prepared by the researcher by relying on: (Iraqi Ministry of Finance, General Budget Department, various years for the period (2004-2021).

From Table 2, we can observe that the commodity concentration ratio for the mineral fuel paragraph, which includes crude oil and its products, recorded the highest contribution rate of about 99.8% of total exports. The remaining paragraphs accounted for the remaining ratio of 0.2%. As for the import structure, the commodity concentration ratio for the machinery and transport equipment paragraph achieved the highest contribution rate to total imports at about 38.5%, followed by the paragraphs of miscellaneous manufactured articles and manufactured goods with percentages of about 15.8% and 11.4% respectively. This proves that the commodity production structure in Iraq is weak and suffers from chronic imbalance throughout the study period.

2.3.2.2 Analysis of Iraq's export trajectory for the period (2004-2021):

Iraq relies primarily on oil exports to achieve necessary financial surpluses to finance economic and social development plans. Capital imports also contribute to improving the productive capacity of all sectors that directly or indirectly contribute to the country's economic growth if actually available. These imports, represented by the necessary equipment and machinery for building and developing infrastructure in Iraq, cannot be provided except through foreign trade. This makes Iraq linked to extensive economic relations with most advanced global economies. Table (3) shows the total exports in Iraq for the period (2004-2021), as follows:

Table 3: Structure of Exports in Iraq for the Period (2004-2021) (billion dollars)

Year	GDP	Oil export	Non-oil export	Total export	Total imported	Ratio of oil exports to total exports %
2004	36,092	17,751	739	18,490	19,954	96
2005	49,217	22,950	747	23,697	23,748	96.8
2006	65,244	29,500	1,029	30,529	22,480	96.6
2007	88,408	39,433	1,015	40,448	19,332	97.4
2008	131,180	61,111	2,515	63,626	35,888	96.0
2009	111,228	41,668	737	42,405	41,858	98.2
2010	138,018	52,290	2.309	54,599	43,275	95.7
2011	185,698	83,006	2.629	85,635	47,581	96.9
2012	218,221	94,090	302	94,392	59,006	99.6
2013	234,659	89,359	383	89,742	63,349	99.5
2014	228,242	84,303	203	84,506	58,177	99.7
2015	166,014	49,249	154	49,403	47,045	99.6
2016	167,436	43,753	137	43,890	34,713	99.6
2017	187,219	56,879	389	57,268	37,569	99.3
2018	227,604	83,290	2.115	85,405	45,861	97.5
2019	233,371	78,527	1,885	80,412	58,126	97.6
2020	180,594	41,755	1,134	46,829	48,151	97.3
2021	207,694	75,653	4,138	79,791	40,736	94.8

Source: Prepared by the researcher by relying on: (Central Bank of Iraq: Statistical Data and Statistics, Exports and Imports for the Period (2004-2021).

The researcher's analysis shows that there was an increase in total exports from $18.49 billion in 2004 to $63.624 billion in 2008 during the period (2004-2008). This was mainly due to the increase in oil exports, which reached $61.111 billion in 2008 compared to $17.751 billion in 2004. The quantity of oil exports in 2008 was around 1.85 million barrels per day, compared to 488 barrels per day in 2004. Additionally, the price of Iraqi oil per barrel increased from $34.4 in 2004 to $88.8 in 2008.

In 2009, the global financial crisis negatively impacted Iraq's foreign trade, leading to a sharp decline in oil exports and a decrease in prices. The total exports decreased by approximately 50% compared to 2008, with oil exports accounting for about 46.6% of the total. On the other hand, imports increased to $41.858 billion in 2009, a 16.6% increase compared to 2008. This was attributed to reconstruction efforts, foreign investment, and development in the oil sector(Sabah and Duaa,2018) .

From 2010 to 2013, global oil prices and economic growth improved, resulting in an increase in Iraqi oil exports to $89.359 billion in 2013 compared to $52.29 billion in 2010. Total exports reached $89.742 billion in 2013. Total imports also increased to $63.349 billion in 2013, mainly due to imports of machinery and transport equipment (38.5%) and miscellaneous manufactured articles (15.8%), as well as food, mineral fuel, animal and vegetable oils and fats. (5.4%, 9.8%, 6.4% respectively). The period (2014-2019) was highly volatile, as a series of events unfolded during this time, including the double shock of the severe recession that hit the global economy in 2014, the occupation of several provinces in Iraq by ISIS, and the decrease in oil prices to $36 per barrel in 2016, coinciding with the implementation of the production reduction agreement reached between OPEC and non-OPEC oil producers. Additionally, the United States increased its shale oil production to around 419,000 barrels per day in 2017, a 9.2% increase compared to 2016, reaching approximately 5,806 million barrels per day.

All these factors led to a disruption in Iraq's foreign trade volume, particularly in the quantity of oil exports, which had a negative impact on the total exports. Similarly, the overall import volume was also negatively affected due to the aforementioned reasons, with its proportion decreasing to 7.7% of total foreign trade during the same period (Shamkhi,2022) .

In 2020, due to the health crisis, oil exports decreased and the price of crude oil fell to less than $20 per barrel, negatively impacting the overall exports, which amounted to approximately $46,829 million. In contrast, imports increased to around $48,151 million, resulting in a trade deficit of $1,322 million. However, with the return of economic activity and gradual opening of global trade, the price of crude oil rose to over $60 per barrel, leading to an increase in overall exports to approximately $75,653 million, resulting in a trade surplus of $39,055 million.

The above can be said that the Iraqi trade balance suffers from structural imbalances due to its reliance on a single resource in the total exports, which is crude oil exports, which constitute the largest proportion of total exports. It is important for the Iraqi government to utilize the financial surpluses generated in the trade balance to develop and establish infrastructure for the production of petroleum derivatives and petrochemical industries, thus contributing to diversifying exports in the medium term. Future financial surpluses should be considered for real diversification of other non-oil productive sectors, therefore helping meet domestic demand through a range of interconnected trade and economic policies to achieve real economic growth and prosperity for all citizens in the country.

2.4 The impact of direct and indirect public revenues on total exports:

The impact of the structure of public revenues on the trade balance in Iraq derives from the dominance of oil revenues over total revenues, coinciding with the weakness of non-oil exports, leading to an imbalance in the trade balance, as shown in Table (4) below:

Table 4: Direct and Indirect Impact of the Structure of Public Revenues on Total Exports (billion dollars)

Year	Oil revenue	Non-oil revenue	Total revenue	Oil export	Non-oil export	Total export
2004	22,228	0,475	22,703	17,751	739	18,490
2005	26,516	1,010	27,526	22,950	747	23,697
2006	31,548	1,891	33,439	29,500	1,029	30,529
2007	40,415	3,381	43,796	39,433	1,015	40,448
2008	63,127	4,468	67,595	61,111	2,515	63,626
2009	40,047	7,169	45,407	41,668	737	42,405
2010	53,044	6,937	59,981	52,290	2,309	54,599
2011	86,562	6,435	92,997	83,006	2,629	85,635
2012	93,218	9,240	102,458	94,090	302	94,392
2013	92,902	4,576	97,478	89,359	383	89,742
2014	81,624	8,902	90,526	84,303	203	84,506
2015	58,051	2,912	60,963	49,249	154	49,403
2016	37,199	8,523	45,722	43,753	137	43,890
2017	54,682	10,306	64,988	56,879	389	57,268
2018	68,850	8,650	77,500	83,290	2,115	85,405
2019	78,551	9,654	88,205	78,527	1,885	80,412
2020	46,500	7,500	54,000	41,755	1,134	46,829
2021	55,980	13,895	69,875	75,653	4,138	79,791

Source: Prepared by the researcher by relying on: (The researcher based on the data sources of the previous tables).

The above information does not provide specific data or figures for Table (4) However, it suggests that there is a significant reliance on oil revenues in Iraq, leading to an imbalance in the trade balance. It also mentions the periods of increased oil exports and increased general revenues, as well as periods of decreased oil exports and decreased general revenues. This reflects the mono-structural nature of the Iraqi economy and the dominance of oil commodity in total exports, leading to an imbalance in the trade balance.

It further states that the general revenues in Iraq rely heavily on oil revenues compared to other non-oil revenues, indicating that the Iraqi economy is one-sided. With the weakness of revenues from productive sectors such as industry and agriculture, as well as weak tax revenues, there is an imbalance in the structure of the trade balance, evident through the dominance of oil exports in total exports.

2.4.1 The impact of fiscal policy instruments on the imbalance in export structure for the period 2004-2021

The standard tools applied in this chapter aim to support and enhance the results obtained by the study on the analytical side. This is done by attempting to measure the impact of the relationship between fiscal policy tools and the trade balance in Iraq. This requires initially ensuring the stationary of the time series of the variables studied using a set of standard tests through the statistical program (Eviews 12).

These tests help to avoid falling into the pitfall of spurious regression and assist in identifying long and short-term relationships. The model includes following variables, the causative relationship between exports (X) and the independent variables (government expenditures G, government revenues R, net general budget BP, and public debt DP).

2.4.1.1 The stationery test:
2.4.1.1.1 Dickey-Fuller (ADF) Test:

The time series stationery test for the study variables is conducted before starting any test in the standard aspect, with the aim of identifying the stationary of the time series or not, and in light of knowing the degree of stationary of the time series for each variable, the optimal model is chosen to test the study variables.

Table 5: Unit root Testing Dickey-Fuller (ADF)

Variable	Level			1st Difference		
	Intercept	Trend and Intercept	None	Intercept	Trend and Intercept	None
	Prob.	Prob.	Prob.	Prob.	Prob.	Prob.
G-I(I)	0.4629	0.5338	0.7641	0.0424	0.0760	0.0202
R-I(I)	0.2375	0.5989	0.6362	0.0162	0.0262	0.0010
BP-I(I)	0.4773	0.0698	0.1072	0.0031	0.0642	0.0002
DP-I(1)	0.0924	0.1542	0.6395	0.0237	0.0522	0.0015
X-I(1)	0.1989	0.4101	0.6421	0.0141	0.0551	0.0011

Source: The researcher based on the program Eviews12 .

Based on the information provided, it states that the unit root testing of the independent variables became stationary after taking the first differences. As for the dependent variable, which is exports (EX), it became stationary after taking the first difference as well.

2.4.1.1.2 Phillips-Perron (PP) Test

This is indicated by the results from the augmented dickey-fuller (ADF) test and the phillips-perron (PP) test, which are used to test for stationary in time series data.

Table 6: Unit root Testing Phillips-Perron (PP)

Variable	Level			1st Difference		
	Intercept	Trend and Intercept	None	Intercept	Trend and Intercept	None
	Prob.	Prob.	Prob.	Prob.	Prob.	Prob.
G-I(I)	0.2732	0.1614	0.8912	0.0055	0.0106	0.0011
R-I(I)	0.2198	0.5909	0.6209	0.0160	0.0522	0.0010
BP-I(I)	0.5290	0.0193	0.1250	0.0003	0.0039	0.0002
DP-I(1)	0.0005	0.0035	0.7730	0.0000	0.0001	0.0001
X-I(1)	0.2396	0.5008	0.7553	0.0133	0.0296	0.0012

Source: The researcher based on the program Eviews12 .

Based on the information provided, it states that the unit root testing of the independent variables became stationary after taking the first differences. As for the dependent variable, which is exports (EX), it became stationary after taking the first difference as well.

2.4.1.1.3 Test the optimal lag period:

Based on the information provided, it seems that the optimal lag length for the model was determined through various tests, and the results indicate that the first lag period is the optimal lag for the model.

Table 7: Results of the optimal lag test for the model

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-900.8743	NA	1.32e+40	106.5735	106.8185	106.5978
1	-860.6644	52.03639*	2.59e+39*	104.7840*	106.2544*	104.9302*

Source: The researcher based on the program Eviews12 .

2.4.2 The Granger causality test:

Additionally, the granger causality test was used to examine the short-term causal relationship between the study variables. The results, as shown in Table 8.

Table 8: The Granger causality test

Null Hypothesis	Obs	F-Statistic	Prob
G does not Granger Cause X	17	0.10113	0.7552
X does not Granger Cause G		5.59611	0.0330
R does not Granger Cause X	17	2.1E-05	0.9931
X does not Granger Cause R		1.00692	0.3327
BP does not Granger Cause X	17	7.8E-05	0.9931
X does not Granger Cause BP		8.06167	0.0131
DP does not Granger Cause X	17	0.13506	0.7187
X does not Granger Cause DP		0.25380	0.6222

Source: The researcher based on the program Eviews12 .

Indicate a causal relationship (causality) in one direction from the dependent variable, which is exports (X), to the independent variable, which is government expenditures (G). This means that an increase in export values, especially oil exports, leads to an increase in government spending. However, when testing the model, there was no causal relationship found between the change in government expenditures as an independent variable and the change in exports as a dependent variable. Therefore, the dependent variable was found to have a causal effect on the independent variable.

Furthermore, the results suggest a causal relationship (inverse) in one direction from the dependent variable, exports (X), to the independent variable, net government budget (BP). This implies a strong correlation between exports and the government budget. As exports increase, the budget deficit decreases, leading to increased government spending in both consumption and investment.

2.4.3 Model ARDL:

Based on the stationary time series of the study variables, best fit model for the data appears to be the Autoregressive Distributed Lag (ARDL) model, which is applicable when there is a mix of levels and first difference data or when there is similarity in stationary patterns.

2.4.3.1 The bounds Test results:

In the context of the ARDL model, the first step is conducting the bounds test to identify the presence of a long-term equilibrium relationship between the study variables. The results of this test (Table 9) show that the calculated F-value exceeds the critical value, indicating the acceptance of the alternative hypothesis and rejecting the null hypothesis. Therefore, it can be concluded that there is a long-term equilibrium relationship between the dependent variable imports and the independent variables government expenditures and government revenues, as shown in Table 9.

Table 9: The bounds test results

K	Value	Test Statistic
4	41.27252	F-statistic
I1 Bound	I0 Bound	Level
3.09	2.2	%10
3.49	2.56	%5
3.87	2.88	%2.5
4.37	3.29	%1

Source: The researcher based on the program Eviews12 .

We can conclude from the above and according to the results that there is a long-term equilibrium relationship between fiscal policy tools (government expenditures and revenues) and imports in Iraq. This equilibrium test is a necessary condition, and it is important to ensure the sufficient condition (error correction term) and its conditions that indicate the existence of a long-term relationship between the variables.

2.4.3.2 The parameter estimates for the short-run and long-run and the error correction term

After confirming the long-term equilibrium relationship between the study variables according to the Bounds Test, it is necessary to obtain the estimations for the short-run, long-run parameters, and the error correction term. It can be observed from Table 10 that the error correction term has a negative sign and is statistically significant at a level less than 5%. This means that the parameter corrects short-run errors by about -1.709656) %170 annually, automatically, until reaching the equilibrium level in the long run.

Table 10: Estimation results of model parameters in the short run

Variable	Estimation	Standard error	test value	Prob.
	-0.148354	0.057830	-2.565355	0.0304
	-0.532656	0.100364	-5.307227	0.0005
CointEq(-1)	-1.709656	0.087108	-19.62677	0.0000
Cointeq = EX - (0.1427*G + 0.0270*BP -0.0183*DB + 0.7832*				

Source: The researcher based on the program Eviews12 .

The above table shows the results for the short-run parameters (error correction term), indicating a significant relationship between fiscal policy tools (expenditures, revenues, general budget balance, and public debt) and exports in the short run. This is logical due to the close linkage in the Iraqi economy, which is unidirectional and lacks investments in the real sector. Even if such investments exist, they do not contribute to a significant portion of the GDP.

2.4.4 Model quality tests:

2.4.4.1 Autocorrelation Test:

The estimated model is free from autocorrelation, as indicated by the Prob.Chi-square value being greater than 0.05 (see Table 11).

Table 11: Serial Correlation LM test

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	1.062368	Prob. F	0.3328
Obs*	1.992885	Prob .Chi-Square	0.1580

Source: The researcher based on the program Eviews12 .

This implies that there is no autocorrelation problem, and exports directly finance the government expenditures in the general budget.

2.4.4.2 Heteroscedasticity Test:

The estimated model is free from heteroscedasticity, which enhances the credibility and accuracy of the model (see Table 12).

Table 12: Heteroscedasticity test

Heteroskedasticity Test: ARCH			
F-statistic	0.973005	Prob. F	0.3407
Obs*R-squared	1.039743	Prob.Chi-Square	0.3079

Source: The researcher based on the program Eviews12 .

2.4.4.3 Normality Test:

The residuals are normally distributed, as indicated by the(Jarque-Bera) test, with a p-value of 0.536450, greater than the significance level of 5%. Therefore, the null hypothesis of normality is accepted, and the alternative hypothesis of non-normality is rejected. This further strengthens the credibility and accuracy of the model (As in the Figure 1).
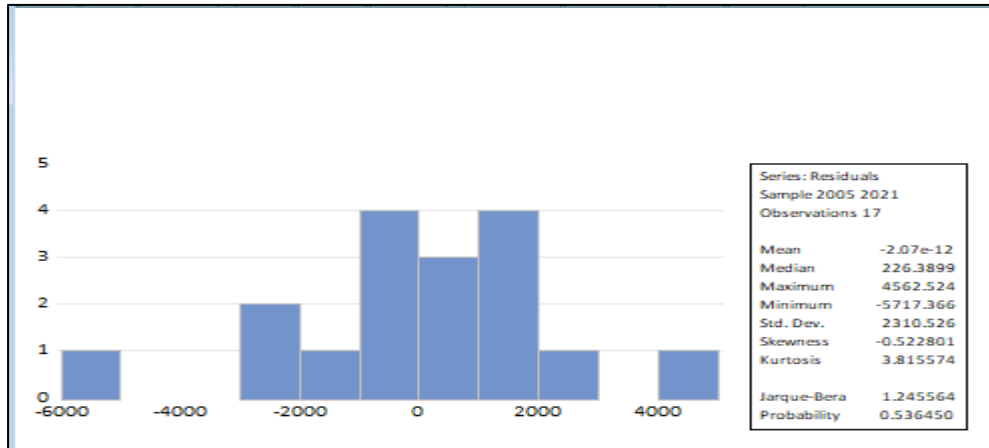

Figure 1: Normality Test

2.4.4.4 Stability Test (CUSUM):

The CUSUM test confirms the stability of the estimated ARDL model, as the estimated regression line is within the upper and lower bounds (As in the Figure 2).
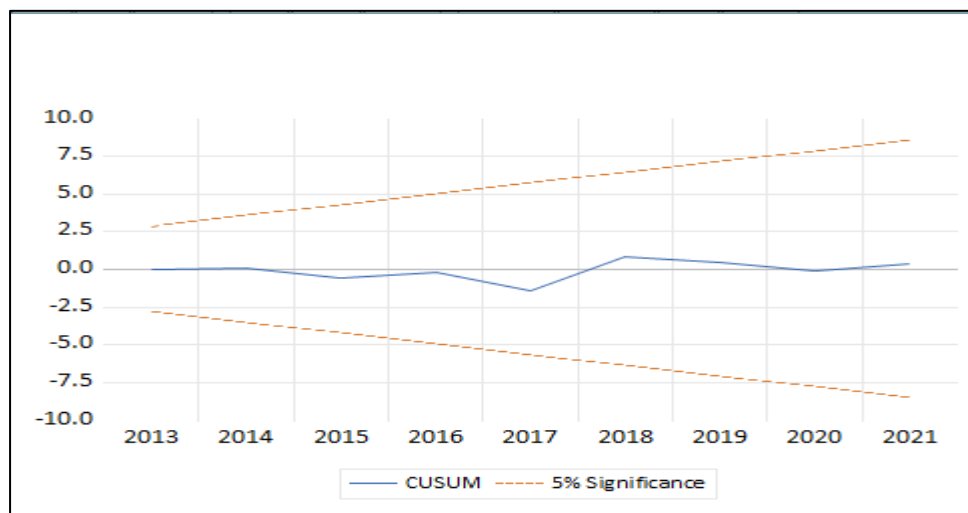

Figure 2: Stability test (CUSUM)

This indicates the stability of the structural parameters of the model and reinforces the credibility and accuracy of the results.

3. Discussion of Results:

When analyzing the revenue structure as a tool of fiscal policy and its impact on exports, there is a clear correlation and interdependence between them during the study period. In years where the trade balance witnesses a deficit or a decrease in surplus, it can be observed that the general budget follows a similar behavior in its deficit and surplus. This is due to the fact that the Iraqi economy, characterized by absolute rentierism, primarily relies on oil revenues to fund its budget. Therefore, any deficit in the general budget does not result from tax reductions as a revenue, as their proportion is insignificant in the overall revenue structure. Instead, the deficit can arise from the increase in expenditure and the inability to reduce it, or due to the decrease in oil revenues resulting from a decline in oil prices in the global market. Hence, the strong relationship between the trade balance, particularly from oil exports, and the general revenues that are fueled by this oil resource emerges. On the other hand, the relationship between the deficits or surpluses can be explained by the fact that an increase in the budget deficit due to increased expenditure will inevitably lead to an increase in non-oil income through the multiplier effect. This increase in expenditure will result in an increase in government demand as a major component of aggregate demand and an effective factor on the performance of other sectors which will experience an increased demand due to the increase in their income. With an increase in demand and income resulting from increased expenditure, imports will inevitably increase, especially in the presence local weak production activity. With an increase in imports and a stable volume of exports, the trade balance will experience a deficit. This happens contrarily if a surplus is achieved in the budget due to expenditure reduction, as imports will decrease along the same path of income and demand, resulting in a surplus in the trade balance as well.

4 . Conclusion:

Based on the research discussed, the researcher reached the following conclusions:

1- It is observed that public revenues heavily rely on oil revenues compared to other non-oil revenues. This indicates that the Iraqi economy is mono-dimensional, and with the weak revenues generated from productive sectors such as manufacturing and agriculture, as well as the weak tax revenues, there is a disruption in the structure of the trade balance. This is evident through the dominance of oil exports over total exports in the country.

2- Iraq relies on oil exports to achieve necessary financial surpluses for financing economic and social development plans primarily. Capital imports also contribute to improving the productive capacity of all sectors that directly or indirectly contribute to the country's economic growth if they actually exist. These imports, consisting of equipment and machinery necessary for building and developing infrastructure in Iraq, cannot be provided except through foreign trade. This makes Iraq connected to extensive economic relationships with most advanced global economies.

3- The reliance on oil revenues has led to a disruption in the structure of Iraq's exports, as the revenues have not been directed towards building a productive base, resulting in the outflow of revenues towards imports to meet domestic demand.

Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, Which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved By The Local Ethical Committee in The University.

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(2004-2022)أثر الانفتاح التجاري على واقع الصناعة في العراق للمدة ما بين

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مستخلص البحث:

يعد العراق من أبرز الدول التي كانت تمتلك صناعات مهمة وتحظى بالمقبولية لدى المستهلك العراقي فضلا عن التنافسية ونفادها في الاسواق الاقليمية والعالمية، لكن بعد عام 2003 وبسبب الانفتاح التجاري فقد حصل ضعف عام في هيكل الاقتصاد العراقي، وهذا إثر بشكل مباشر على واقع القطاع الصناعي العراقي، الامر الذي ادى لدخول سلع ومنتجات من كافة انحاء العالم، ومع زيادة دخول الافراد والنفقات الحكومية التي لجات الى الاستيرادات السلعية لسد الحاجة المحلية مما ادى الى القضاء على كل مظاهر الصناعة في البلاد. اذ تعنى اهمية البحث بتسليط الضوء على دور التجارة الخارجية (الاستيراد والتصدير) في الاقتصادات العالمية، وتوضيح أوجه القصور في إدارة السياسة التجارية، وتأثير الانفتاح التجاري على دور القطاع الصناعي في تحقيق التنمية الاقتصادية، والحاجة إلى اتخاذ تدابير واقعية لإنقاذ هذا القطاع الحيوي من التدهور في العراق. وارتكزت مشكلة البحث على تأثير سياسة الانفتاح التجاري بشكل مباشر وسلبي على واقع القطاع الصناعي في البلاد، اذ ان زيادة الاعتماد على الخارج لتوفير احتياجات الاقتصاد المحلي يعود الى ما يعانيه الجهاز الانتاجي من قصور وتخلف وجمود جعله عاجزا عن تلبيه الطلب المحلي الكلي. فيما هدف البحث الى تسليط الضوء على دور التجارة الخارجية (الاستيراد والتصدير) في الاقتصادات العالمية، وتوضيح أوجه القصور في إدارة السياسة التجارية، فضلا عن مدى تأثير الانفتاح التجاري على واقع القطاع الصناعي في تحقيق التنمية الاقتصادية، وقد توصل البحث الى اهم نتيجة هي ان القطاع الصناعي في العراق تأثر سلبا طوال المدة (2004-2022) بسبب سياسة الانفتاح التجاري القسري التي ادت الى توقف المعامل والمصانع نتيجة لرخص اسعار السلع المستوردة.

نوع البحث: ورقة بحثية

المصطلحات الرئيسة للبحث: القطاع الصناعي، سياسة الانفتاح التجاري، الناتج المحلي الإجمالي، هيكل الصادرات والواردات.