((Analysis of Oil Price Changes on the Size of Public Revenues in Iraq for the Period 2004-2022))

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Abstract :

Oil price shocks have significant and varying effects on public revenues in rentier economies. Rentier economies are exposed to greater fluctuations due to their heavy dependence on oil revenues.

The aim of this research is to know the impact of oil shocks on public revenues, and to provide a realistic picture of the impact of oil shocks on revenues through an analytical study. The importance of this research is highlighted in knowing the presented problem, which revolves around the most important and complex problem facing the Iraqi economy, namely the problem of relying on oil revenues mainly to finance the government budget, which made the Iraqi economy affected by the crises affecting global economies. The research problem is whether oil shocks affect public revenues and the extent of the validity of this effect. The research hypothesis was based on the hypothesis that tracking the paths of regular and irregular oil shocks had clear repercussions on total revenues.

The researcher concluded that oil is and still is one of the most important factors driving political and economic developments, and many economists see it as the path to these developments, and at the same time oil is subject to political and economic influences and to international competition, cooperation and international conflict. The heavy reliance on oil revenues in Iraq makes it vulnerable to violent shocks in the size of revenues. This reliance justifies the need to diversify sources of income in order to reduce risks. The researcher recommends working on diversifying the Iraqi economy in order to move from a rentier economy that depends on the oil sector, to an economy with strong foundations based on developing the service sectors in the first place, in addition to the agricultural, industrial and productive sectors, in order to reduce the severity of negative oil shocks that occur in the global oil markets on the Iraqi economy, which are updated from time to time. And to establish a sovereign fund in order to invest the financial surpluses obtained from the rise in oil prices in local and foreign investment projects that have financial returns.

Keywords: Oil shocks - public revenues - oil prices

Introduction

Oil is the lifeblood and the main engine of the economy, as it represents one of the biggest factors that achieve economic and social development alike. Given the growing role played by energy in economies, whether developed or developing, this topic has attracted the attention of many thinkers and scholars around the world. On the other hand, the fuel market in general and the oil market in particular are viewed as an unstable market. Oil prices have experienced many fluctuations and instability, or what are called oil shocks. The first of these shocks was in October 1973 as a result of the October War. All countries in the world are affected by the fluctuations and instability of oil prices, whether they are oil-producing countries, which are limited countries, or oil-consuming countries, albeit to varying degrees. It is natural to say that the rise in oil prices is in favor of the producing and exporting countries, as their oil revenues increase, while this rise is not in favor of the oil-consuming countries, as the rise in prices increases their financial burdens, and thus public revenues are negatively affected. However, in the case of a decline in prices, the situation is completely opposite, and the resulting risks and problems for the oil-producing and exporting countries, and thus all countries face the risk of what is called oil shocks. The state's public revenues play an important role in alleviating social inequality and raising the standard of living, by redistributing income and wealth through taxes, subsidies, social transfers, etc. Iraq is one of the oil-producing and exporting countries, which mainly depends on oil collection to collect its revenues, which are characterized by instability, as oil revenues constitute a large percentage of the general budget revenues, which makes the Iraqi economy in reality a spring economy.

Importance of research:

The importance of the research comes from knowing the presented problem, which revolves around the most important and complex problem that the Iraqi economy is going through, which is the problem of relying on oil revenues mainly to finance the government budget, which made the Iraqi economy affected by the crises that affect the global economies, through the changes in crude oil prices that these crises leave behind, and thus the occurrence of negative oil shocks that lead to a decrease in oil revenues, which leads to a decrease in public revenues that affect the Iraqi economy.

Research problem

The research attempts to answer the following questions:

1- Do oil shocks affect public revenues and the extent of the validity of this effect.

2- what extent can Iraq absorb and contain these oil shocks through an appropriate financial policy.

Research Hypothesis

The research was based on the hypothesis that tracking the paths of regular and irregular oil shocks had clear repercussions on total revenues, which prompted Iraq to follow appropriate financial methods and means to contain the deficit that occurs in the budget.

Research Objectives

The research aims to

1- Know the impact of oil shocks on public revenues.

2- And provide a realistic picture of the impact of oil shocks on revenues through an analytical study.

Research Methodology

The research relied on the analytical approach to prove its hypothesis, which is to estimate the impact of oil shocks on oil prices on public revenue decisions in Iraq, with a statement of the trends of these shocks.

Research Limits

The spatial and temporal limits of the research include the Iraqi economy for the period 2004-2022

The first section: The theoretical framework of oil shocks

First: The concept of oil shocks

concept of oil shock

The world has witnessed many oil shocks, the severity of which varies from one country to another, and their impact depends on the size of the shock, its continuation, and the type of the country's economy [(1)]. The impact differs between oil-producing countries and oil-consuming countries. Hamilton defined oil shocks as "one of the external causes of overall fluctuations and results from the impact of demand or supply on internal factors in the economy, which leads to a sharp decrease or increase in real (*) oil prices [(2)] and indicates

This definition indicates that oil shocks represent sudden imbalances in the market balance that in turn affect the macroeconomic variables through the volatility of oil prices.Baumeister and Persman defined oil shocks as "sudden and sharp movements in the basic supplies and demands of oil in a specific period of time [(3)]. This definition indicates that oil shocks represent changes resulting from the impact of the determinants of supply or demand or both at the same time by sharp and shocking economic changes.

[1]) Nourie Roubini & Bard Setser , The Effects Of The Recent Oil Price Shock On The U.S. And Global Economy , University , NU & Oxford , Aug 2, 2004 , P:2.

[2]) Kristie M. Engeman, Michael T. Owyang and Howard J. Wall “where is an oil shock?” working paper series No 16 (July 2012): p.1 .

[3]) Ine van Robays, “Macroe Economic Uncertainty and the Impact of oil shocks,” working paper series No1479 (October 2012.p.4

Oil shocks can also be defined as a sudden imbalance in the oil markets, which results from an imbalance in the determinants of demand or supply, which leads to sharp imbalances in prices, either rising or falling [(4)] This definition indicates the sudden nature of oil shocks.

An oil shock can be defined as a sudden imbalance in the market that leads to a sharp rise or fall in oil prices for a certain period of time, as a result of the influence of the determinants of demand and supply by internal factors such as changes in the structure of the industry such as the lack of supply to restore balance to the market or the collapse of monopolistic groups as happened in the energy crisis [(5)], as well as the discovery of new oil fields or the relaxation of agreed production quotas or commercial investment in new technology.

From the previous definitions, we conclude that oil shocks are a sudden imbalance in the market due to a change in demand or supply, which leads to an increase or decrease in oil prices.

Types of oil shocks

Oil shocks are divided into three types:-

1- Oil supply shock: This type of oil shock results from a disruption in supplies as a result of a change in the behavior of oil producers regarding their decisions to reduce or increase the supply of oil. Much of the historical evidence of oil price shocks, especially price shocks, indicates that they were primarily caused by major disruptions in crude oil production, due to external geopolitical events, such as crises and wars that affected important oil-producing regions and countries that influence the oil market, which caused shortages and shortfalls in oil supplies to the international market, such as the Arab embargo on the sale of oil to countries supporting Israel and hostile to the Arab cause in 1973, the Iranian Revolution in 1979, the Iran-Iraq War in 1980, and the Gulf War in 1990. The Venezuelan crisis in 2002, the war on Iraq in 2003, the sanctions on Iranian oil in 2011, other minor disruptions in Iraq and Nigeria [(6)], the Covid-19 crisis, as well as political and security unrest in major crude oil producing regions in recent years.

2-Oil demand shock: Shifts in global demand for crude oil are important and have a significant impact, along with changes in supply, on price shocks. They are also a measure of changes in global real economic activity, which is the primary influence on demand for crude oil, whether it rises or falls. This shock is also linked to the country's economic situation, because the process of economic expansion encourages an increase in consumer demand for oil, such as the 2008 shock. Sudden changes in consumer or protective demand, resulting from fear of a shortage of future supplies of oil, are the main driver of rising global oil prices and the direct cause of shocks, especially in recent years, as indicated by recent studies[(7)].

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[4])Ramadan Bin Lukil, Rizq Qatoush (Oil price fluctuations and their impact on the labor market in Algeria), North African Economics Journal, Issue 17, 2017, p. 178 .

[5]) Daoud Saad Allah, The Impact of Oil Price Fluctuations on Fiscal Policy in Algeria (2000-2010), Master's Thesis, University of Algiers, 2012, p. 19. .

[6]) Andreas Economou, Oil Price Shocks: A Measure of the Exogenous and Endogenous Supply Shocks of Crude Oil, Oxford Institute for Energy Studies, UK, August 2016, p5 –9. .

[7]) Andreas Economou, , P 5 - 7

3-Double shock: This shock refers to the occurrence and simultaneity of changes in global oil supply levels and global demand for oil during the same period, causing a sharp rise or fall in global crude oil prices in the markets according to the direction of the shift. If there is an increasing demand for oil in global markets for current or future consumption and there is a shortage in oil supply and supplies during the same period, this creates significant and accelerating pressure to raise prices in the international market. However, if the situation is the opposite of supply The oil demand was high and the shock and price movement were opposite and negative(8)

Second : Economic shocks:

The economic shock(9) is a sudden event that affects the economic variables of a certain country for an internal or external reason, leading to a setback or recovery in the economic system of these countries. Accordingly, the economic shock can be either positive or negative. The positive shock has good results for the economy, and the opposite is the negative shock.

Types of economic shocks

Economic shocks are divided into several types, but in this study we try to address the important types that we may need to clarify during our study, which are monetary shocks: These are imbalances or changes that affect one of the monetary variables (money supply, demand for money, interest rate, exchange rate, credit, etc.), and these changes may be intentional or unintentional and their resulting direct or indirect effects on economic variables. ( ) This type of shock appears when a sudden change occurs in the exchange rate, interest rate or money supply, and it is noted that these shocks are the most common among other types, and according to reports issued by the International Monetary Fund, more than two-thirds of its members were exposed to banking shocks and crises during the eighties and nineties, and it is noted that developing countries are the most exposed to such shocks(10).

Third : relationship between shocks and economic crises:

We previously learned about the economic concept of both economic shock and economic crisis, and now we will explain the relationship between them to know which one is the cause of the other, as well as to know the difference between them as follows:

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8) Muhammad Jawad Jumaa Al-Issawi, Transformations in the International Oil Market and Their Implications for OPEC with Special Reference to Iraq, Unpublished PhD Thesis, College of Administration and Economics, University of Kufa, 2020, p. 122 .

9) Michael Abedjman, Macroeconomics Theory and Policy, translated by Muhammad Barhim Mansour, Mars Publishing House, Riyadh, Saudi Arabia, 1999, p. 340.

10) Muhammad Salih Salman, Measuring and Analyzing Monetary Shocks in the Iraqi Economy for the Period (1980-2005) An Econometric Study, Journal of Economic and Administrative Sciences, University of Baghdad, Issue (58), Volume (16), 2010, p. 144 .

1- The economic shock represents the beginning of the economic crisis if this economic shock is of the negative type with bad results on the economy.

2- The economic shock can be controlled and its results if there is a correct expectation by the competent authorities, otherwise the shock increases its effects and the situation becomes more difficult until it develops into a crisis.

3- As we note from the concepts of economic shocks and crises that have passed, the shock may have positive and healthy results on the economy and economic variables, or it may have negative results, while the crisis always has negative results on the economy and has no positive effects.

4- The economic shock can be optional and intentional by the relevant authority and expresses an economic policy followed for some necessity, while the crisis is always beyond the will of the authorities and cannot be controlled.

Fourth: Common characteristics of oil price shocks in the global market (11)

1- The shocks that led to a decline in oil prices are linked to the main reason, which is the slowdown in economic growth processes.

2- The difficulty of predicting the oil shock by producing and consuming countries due to the factors affecting (supply and demand), but the severity of the shock can be mitigated by responding quickly to OPEC's production capabilities, in addition to the difference in time between one shock and another.

3- Oil price shocks do not distinguish between oil raw materials, whether OPEC basket, Brent or West Texas.

5- All oil shocks that suffered from rising prices were the result of pressure in the strength of demand that exceeds the production capacities of producing countries, as well as due to the weak flexibility of supply and its failure to adapt to pressures

Section Two: The Theoretical Framework of Public Revenues

First: The Concept of Public Revenues

The state aims to achieve a set of goals that ultimately lead to maximizing welfare in society, and creating appropriate conditions for achieving further progress in all areas. Therefore, the state needs to provide sufficient funds to cover its increasing spending. In addition, revenues are considered one of the most important tools of the state's financial policy.

Public revenues can be defined as the set of incomes that the state obtains from various sources in order to cover its public expenditures and achieve economic and social balance. Public revenues also mean "the sum of funds obtained by the government, whether in its sovereign capacity, or from its own activities and properties, or from sources outside of that, whether external or internal loans, or inflationary sources, to cover public spending

11) Sajjad Shaker Ali, The Impact of Oil Price Fluctuations on Some Economic Variables in Iraq for the Period (2004-2018), Unpublished Master’s Thesis, College of Administration and Economics, University of Wasit, 2021, p. 55. .

during a specific period of time, in order to achieve a number of economic, social and financial goals. Through the two previous definitions, we conclude that public revenues are diverse and multiple, but their main goal, regardless of their sources, is to achieve the various goals of the state.

Second: Sources of public revenues

The divisions of public revenues differ according to the characteristics studied. They are divided according to their periodicity into ordinary revenues and extraordinary revenues, or they are divided according to their source into original revenues and derived revenues, and they are divided according to the state's authority into sovereign and economic. We can determine the sources of public revenues as follows:

1- Economic revenues: These are the revenues that the state obtains in its capacity as a legal legal person that owns wealth and provides public services. They are called the domain, as the domain refers to the state's property, regardless of its nature, real estate or movable, and regardless of the type of state ownership, private or public. With this classification, they are two types: public and private domains.

• Public domain: includes all funds owned by the state or other public persons that are subject to the provisions of public law, and are allocated for the public benefit such as roads, public parks, etc., and usually do not charge a price for individuals' use of these funds.

• Private domain: refers to funds owned by the state as private property, which are generally subject to the rules of private law, and can be disposed of by sale or otherwise, as they generate revenue for the state. The private domain is not allocated for the public benefit, and the domain is divided into

• Real estate domain: consists of agricultural lands, mines, and buildings owned by the state;

• Industrial and commercial domain: consists of all industrial and commercial facilities managed by the state.

• Financial domain: refers to the revenues that the state obtains from dealing in securities, whether government bonds, treasury bills, or stocks.

2- Sovereign revenues Sovereign revenues mean all revenues that the state obtains by force and compulsion from individuals, and it depends on the element of coercion because of its authority over individuals, and the most important of these revenues are

• Taxes: A tax is defined as "an amount of money that a public person collects by force from individuals in a final manner and without special compensation in order to fulfill the requirements of the state's public policy.

• Fees: An amount of money that an individual pays by force in exchange for a special benefit that they receive from the service, and we mention among these fees education fees, judicial fees, administrative document fees, and others, as the fee differs from the tax in the element of compensation, as the fee is collected on the occasion of the individual's request for a specific service from public bodies.

• Royalties: A royalty is an amount of money paid by individuals who own real estate as a result of their benefit from public projects carried out by the state, as the royalty is a cash amount that the state or one of the public bodies takes from real estate owners as a result of implementing a specific public project such as supplying electricity and gas, and this leads to a public benefit represented in preparing these areas and improving living conditions in them Abdul Muttalib,

• Fines are financial penalties imposed by the state on The perpetrators of legal violations, and it is not considered one of the basic revenues of the state due to the inability to predict its amount.

• Public loans: Public loans mean the cash amounts borrowed by the state from public bodies or individuals or private bodies, or national or foreign public bodies, or international institutions with the obligation to return the borrowed amounts and their interest according to the terms of the loan.

• New monetary issuance means the amount of new money that the state issues in order to finance its needs. New monetary issuance is the government issuing cash during a certain period at a rate that exceeds the normal increase in the volume of transactions in the national economy during the same period. New monetary issuance is one of the means by which The state resorts to it in order to finance its budget deficit, and this mechanism is called inflationary financing due to its reliance on inflationary sources instead of relying on

The third section: Analysis of the impact of oil shocks on public revenues in Iraq for the period 2004-2022.

First, the development of oil shocks during the period 2004-2022

The oil market is characterized by a state of instability due to the imbalance that occurs between supply and demand or both at the same time due to several factors. These sharp fluctuations in prices, whether they were falling or rising, led to the occurrence of:

Table (1) Development of oil prices during the period 2004-2023 in US dollars

Years	Oil prices	Years	Oil prices
2004	36.05	2014	96.89
2005	50.64	2015	49.49
2006	61.08	2016	40.76
2007	69.08	2017	52.43
2008	94.45	2018	69.78
2009	61.06	2019	64.04
2010	77.45	2020	41.47
2011	107.46	2021	69.89
2012	109.45	2022	100.08
2013	105.87		

Source: OPEC: Annual statistical

From Table (1), we can extract a set of negative and positive oil shocks that occurred from 2004-2022:

1- Positive oil shocks

• The oil shock of 2004

After 2003, the oil markets witnessed a state of instability between demand and supply due to political tensions in the Middle East region, as well as tensions in Nigeria, and the most prominent event was the occupation of Iraq, where fears of a disruption in oil supplies began, as well as the growing demand in the United States and European countries, where oil prices rose from $32.1 per barrel in 2003 until they reached $50 in 2005 [(12)]. A group of reasons combined to lead to the rise in oil prices, which are different factors, including political and economic factors, including the spread of speculation in futures markets, as well as the exploitation of the prevailing state of instability in some oil-producing regions, which led to raising prices [(13)]. And the state of improvement in the performance of the global economy during 2004, which led to an increase in global demand for oil, especially in the United States and China, as well as political and security instability in Iraq and repeated attacks on Iraqi oil institutions and oil pipelines, led to a decrease in Iraqi exports [(14)].

• The oil shock of 2008

The price of crude oil continued its upward trend that began in 2004 until it reached (90) dollars per barrel in November 2007, as a result of the tensions in eastern Turkey and the de[(15)]cline in the value of the US dollar, and continued to rise until it reached (147) dollars in July 2008, but at the end of the same year it collapsed to (38) dollars [(16)]. The year 2008 witnessed two shocks to oil prices, a shock of increase in the middle of this year when oil prices reached approximately 150 dollars per barrel, and a shock of decrease in which prices fell to less than (40) dollars at the end of the same year.

The most prominent causes of the oil shock of 2008 [(17)] are the decline in the economic growth rate and its relationship with the demand for oil. The rapid developments of the crisis when it emerged in the third quarter of 2008 led to a decline in economic growth rates. The economic growth rate fell from 5.2% in 2007 to 3% in 2008 in countries consuming crude oil. Due to the global growth rates in demand for oil, the demand for oil rates fell. The energy consumption of emerging countries in East Asia increased and the global economic growth rates rose. On the other hand, the oil supplies weakened and the oil supply was scarce. Also, the speculative activity in the oil futures markets declined: after the owners of investment funds and hedge funds found their way to the oil futures markets to obtain large profits through the buying and selling of paper barrels (*). During the crisis and in

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[12]) Report of the Secretary General of OPEC, No. 29, 2005.

[13]) Hatim Al-Quraishi, Oil Economics, previous source, p. 158.

[14]) Madhat Al Iraqi, Rising Oil Prices: Causes and Consequences, Journal of Economic Studies, Issue 8, p. 19.

[15]) Ahmed Ibrihi Ali, Oil Economy and Oil Investment in Iraq, previous source, p216. .

[16]) Ibrahim Balqa, Developments in Oil Prices and Their Impact on the General Budget of Arab Countries during the Period 2000-2009, Al-Baheth Magazine, Issue 12, 2013, p. 114.

[17]) Majed Ibrahim Amer, The Russian-Ukrainian Crisis and Its Implications for Global Oil Trade, 2023, p. 52.

light of the reduction of interest rates by the US Federal Reserve, after the financial crisis intensified and the stock markets collapsed, investors began to liquidate their positions in the futures markets in light of the economic recession, which led to the decline of the role of speculation in those markets, and this was reflected in a significant decline in prices.

• Oil Shock 2022

On February 24, 2022, tensions escalated between Russia and Ukraine, leading to unexpected disturbances in the oil market, which accounts for nearly 30% of the total global demand for oil, which led to an increase in oil prices, as Brent crude contracts touched the level of (140) dollars per barrel, and West Texas contracts exceeded the barrier of (130) dollars, and the daily average of OPEC crude approached (128.5) dollars per barrel [(18)], which is the first time since the global financial crisis that a similar crisis has occurred. As the war in Ukraine continued for several months, the gradual increase in OPEC oil production within the previously prepared plan pushed prices down to remain for several months at around $95 per barrel, before declining in the last weeks of 2022, to revolve around (80) dollars per barrel. The most important reason for this shock is the Russian-Ukrainian war, which led to a rise in crude oil prices and was the cause of fears that the series of sanctions imposed by European countries and the United States on Russia would affect its supplies. Although Russia's production has indeed declined, it has not happened as quickly as expected. The G7 countries imposed a ceiling of $60 per barrel for Russian crude transported by sea to undermine Russia's ability to finance its war in Ukraine. Europe also abandoned Russian oil, although high inflation rates and slowing growth raise the specter of recession, it is unlikely that global demand for oil will decline enough to lower prices, as happened in 2008. The European Union has officially adopted its oil embargo, which is part of a sixth package of sanctions imposed on Russia due to Its invasion of Ukraine. Most EU countries now have six months to phase out Russian crude imports, and eight months for all other oil products. Fuel demand has fallen. China is the world's largest importer of crude and the second-largest oil consumer after the United States. The government's aggressive intervention to contain the coronavirus outbreak in 2022 has led to a sharp drop in industrial and economic output. Analysts estimate that China's measures have reduced oil demand by 30 to 40 percent in the country. ( ). OPEC countries agree to reduce the supply of crude oil on the international market. Rising interest rates and the dollar To combat rising inflation, central banks around the world have taken a series of decisions to raise interest rates to cool the economy and the labor market. The interest rate hikes have led to a rise in the value of the dollar, which has pressured oil prices, as a stronger dollar makes the commodity priced in it more expensive for holders of other currencies.

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[18]) Four reasons why global oil prices rose in 2022, December 8, 2022, https://www.alaraby.co.uk/economy.

2- Models of downward shocks

• The oil shock of 2014

Oil faced a new shock as oil prices fell by more than half from mid-2014 to early 2015. The price of a barrel of Brent crude oil fell from $115 in July 2014 to less than $30 at the beginning of 2016, the largest drop in prices since 2008 due to the financial crisis (19).

The causes of the oil shock of 2014 (20) are the economic contraction in Japan, China and Europe as a huge market and consumer of crude oil as a result of the decline in global demand for oil, as the International Monetary Fund estimates the growth rate at 3.6% for 2015, and the US policy of increasing oil reserves, which led to a decline in prices, as the increase amounted to 361.7 million barrels for 2015, and the oil reserves reached 36.4 billion barrels. The price drop is due to the success of the United States in exploiting unconventional sources of gas and oil and the United States in producing shale oil made possible by hydraulic fracturing. This source added about 4.2 million barrels per day to the crude oil market, which contributed to increasing the global oil supply. The great interest in developed countries in efficiency standards: Global interest has increased, especially from developed countries that adhere to fuel efficiency standards, the United States of America, European countries and other developed countries, which has helped reduce demand for oil, and thus reduce its prices.

• Oil Shock 2020

Oil prices witnessed a significant decline unprecedented since its discovery due to the emergence of a global epidemic crisis, which started in China and then spread to all countries of the world, as Corona (Covid 19) first appeared in China in late 2019, which caused a global health crisis, especially in Europe and the United States of America, then spread to all countries of the world, which led to the global economy stopping and the demand for crude oil declining by consuming countries, which led to a sharp decline in oil prices in 2020, as Texas crude reached minus 37 US dollars(21)

The most important reasons for the 2020 shock (22) are the cessation of economic activity, which led to the shutdown of most of the world's factories due to the Covid 19 pandemic, especially in the first months of the pandemic, and since most factories depend mainly on oil and its derivatives, which led to a significant decline in oil consumption, this stoppage led to a decrease in the use of oil, which led to a decrease in demand for oil,

[19](Organization of Arab Petroleum Exporting Countries (OAPEC), Annual Reports of the Secretary-General (2015-2016) .

[20](Bashol Al-Saeed, The repercussions of the 2014 oil shock on the performance of the Gulf stock markets, Economic Visions Magazine, University of El Oued, Algeria, 2015, Issue 9, p. 110.

[21](Tandart Mohamed, The Impact of the Covid-19 Pandemic on Oil Prices and Its Impact on the Algerian Economy, Journal of Finance and Business Economics, University of Martyr Hama Lakhdar El Oued, Volume 7, Issue 2, 2022. .

[22](Arab Monetary Fund, Arab Economic Outlook Report, April 2020. .

which led to the collapse of its prices. Also, most means of transportation between countries of the world stopped, and since means of transportation depend on oil and its derivatives, this led to a decrease in oil consumption and demand, which led to the collapse of oil prices. OPEC failed to reach an agreement between members to reduce oil production. The oil price war between Saudi Arabia and Russia resulted from Russia's refusal to reduce oil production in order to maintain prices moderately. After Russia rejected Saudi Arabia's proposal, Saudi Arabia decided to increase its oil production and reduce prices significantly in an attempt to regain its market share and push Russia to return to the negotiating table. There are also insufficient storage in oil-producing countries.

Second, the repercussions of oil shocks on public revenues in Iraq for the period 2004-2023

Table (2) Development of total and oil revenues during the period 2004-2023 in US dollars

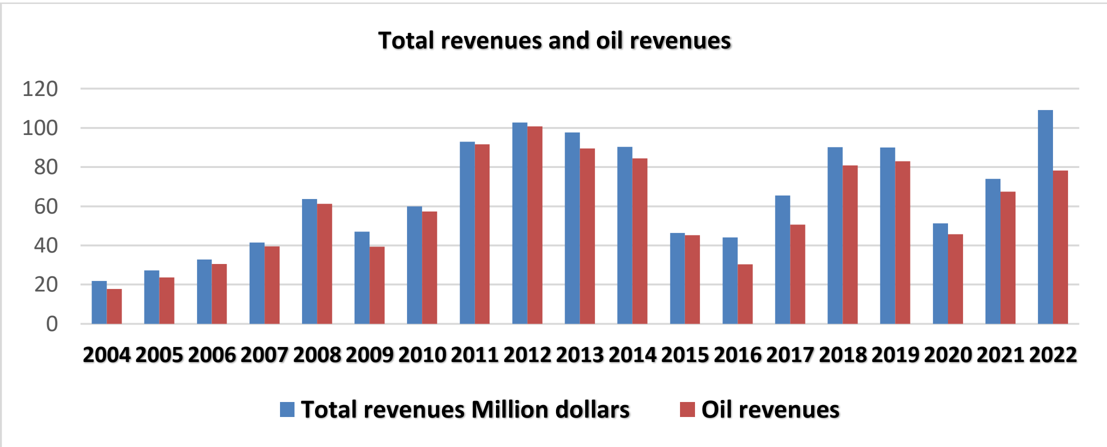
Years	Total revenues Million dollars	Amount of change in total revenue	Oil revenues	Amount of change in oil revenues	Percentage of oil revenues to total revenues
	1	2	3	4	5
2004	21.922	23.54	17.764	33.22	80.73
2005	27.166	20.41	23.649	28.83	87.06
2006	32.732	26.83	30.445	29.44	93.14
2007	41.487	53.66	39.477	54.97	95.05
2008	63.744	-26.23	61.177	-35.68	95.86
2009	47.034	27.55	39.309	45.65	83.58
2010	59.932	55.04	57.276	60.14	95.45
2011	92.932	10.50	91.689	9.74	98.58
2012	102.764	-4.99	100.698	-11.13	97.90
2013	97.638	-7.42	89.476	-5.70	91.57
2014	90.344	-48.71	84.365	-46.38	93.27
2015	46.366	-4.94	45.278	-33.08	97.53
2016	44.077	48.65	30.298	67.22	68.65
2017	65.559	37.65	50.567	59.79	77.22
2018	90.165	-0.25	80.825	2.63	89.65
2019	89.934	-43.06	82.987	-44.94	92.24
2020	51.254	44.49	45.643	47.38	89.18
2021	74.053	47.44	67.363	16.24	90.96
2022	109.154	-	78.245	-	71.71
المتوسط					88.91

Source:

- Column (1-3) Unified Arab Economic Report.

- Column (2-4-5) From the researcher's work

From Table 2, we notice the impact of oil shocks on the size of Iraq's oil revenues, because Iraq is a rentier country par excellence that depends largely on oil revenues. In 2004, we notice that oil prices rose as a result of the US invasion of Iraq, which led to an increase in revenues, as oil revenues reached 17.764 million. Oil prices continued to rise in 2005, as prices jumped to the $50 barrier as a result of the 2004 shock, and the percentage of change in total revenues reached 20.41%, and the percentage of change in the volume of oil revenues reached 28.83%. In 2008, the global financial crisis occurred, which began in the United States of America, and thus swept through most of the world's economies. It is logical that oil prices would be affected, as the price of oil fell to $61.06 per barrel, which led to a decrease in total revenues in 2009, reaching $47.034 million. Due to the decrease in oil prices, oil revenues fell in 2009, reaching $39.309 million, and the percentage of change in the volume of oil revenues reached 45.65%, after it was negative in 2008. 2008, when it reached -35.68% as a result of that crisis. After the shock of 2008, the global economy returned to turning as oil prices improved, which led to an increase in oil revenues for countries that depend on oil, especially Iraq, as oil prices rose, which was reflected in an increase in the size of Iraq's total revenues in the years (2010-2011-2012-2013), which reflected an increase in the size of total revenues if it reached 97.638 million dollars in 2013, while oil revenues were 89.476 million dollars. In 2014, oil prices faced a new oil shock, as oil prices fell, as oil prices reached less than 30 dollars per barrel in 2016, which reflected oil prices on the size of oil revenues and thus a decrease in total revenues, as oil revenues in 2016 reached 30.298 million dollars after they were 45.278 million dollars in the year 2015, after the 2014 crisis, oil prices improved if they reached $ 64.04 per barrel in 2019, which led to an increase in oil revenues, as they reached $ 82.987 million, while total revenues increased to $ 89.934 million. At the end of 2019, the Covid 19 crisis occurred, which disrupted the wheel of life in all countries of the world, and thus led to a drop in oil prices to a level below zero, which was reflected in countries that depend on oil to finance their budgets, as oil revenues in 2020 reached $ 45.643 million, which led to a decrease in total revenues to $ 51.254 million. After that, oil prices improved until a new shock occurred, which led to an increase in oil prices in 2022 as a result of the Russian-Ukrainian war, as the price of oil touched $ 100.08 per barrel, which led to an increase in total revenues, as it reached $ 109.154 million. American due to the increase in oil revenues reached 78.245 million US dollars. We note that Iraq's dependence on oil revenues is very large, as the average percentage of dependence on oil revenues from total revenues reached 88.91%, and this percentage indicates that Iraq is a rentier country par excellence. As shown in Figure



Source: Prepared by the researcher based on data from the table2

Conclusions and recommendations

First: Conclusions

1- Oil is and still is one of the most important factors driving political and economic developments, and many economists believe that it is the path to these developments. At the same time, oil is subject to political and economic influences, international competition, cooperation and international conflict.

2- Total revenues were greatly and rapidly affected by oil shocks, due to sharp fluctuations in oil prices leading to similar fluctuations in the size of revenues.

3- The negative oil shocks during the study period had a significant negative impact on the Iraqi economy, due to the dominance of oil revenues in supporting the government budget with the funds required to cover public expenditures, which led to an imbalance in the structure of the gross domestic product in the Iraqi economy.

4- Designing the fiscal policy in oil-exporting countries so that this policy is opposite to the oil price cycle in times of recession, so that government spending does not crowd out private spending, unlike times of prosperity, as is the case when oil prices increase for these countries. It is likely that some government expenditures will crowd out private activities, which contributes to reducing the multipliers of government spending.

The heavy reliance on oil revenues in Iraq makes it vulnerable to violent shocks in the size of revenues. This reliance justifies the need to diversify sources of income in order to reduce risks.

Second: Recommendations

1- Work on diversifying the Iraqi economy in order to move from a rentier economy that depends on the oil sector, to an economy with strong foundations based on developing the service sectors in the first place, in addition to the agricultural, industrial and productive sectors, in order to reduce the severity of negative oil shocks that occur in global oil markets on the Iraqi economy, which is updated from time to time.

2- The necessity of choosing the appropriate methods to invest oil revenues correctly and scientifically by directing them towards public and private investment. With regard to public investment, we note that there is an urgent need to rebuild infrastructure projects and public service facilities that have become obsolete, in addition to developing the oil extraction, export, refining and petrochemical projects sectors. As for the private sector, investing these revenues requires legislation and reform of many legal and financial policies and procedures, such as issuing a new law that encourages and creates a stimulating environment for local and foreign private investment. 3- Establishing a sovereign fund to invest the financial surpluses obtained from the rise in oil prices in local and foreign investment projects that have high financial returns so that they can be resorted to in order to cover the deficit in government budgets in the event that oil prices fall to levels lower than what is set for the price of a barrel of oil in the government budget. 4- Working on investing financial surpluses in developing and advancing human resources in Saudi Arabia, because it considers the human being to be the axis and basis of any success in any country in the world, the necessity of rationalizing government operating expenses that would burden Iraqi government budgets. 5- The necessity of diversifying sources of public revenues instead of relying on one source, which is oil, as this goal can be achieved by addressing structural imbalances in tax and fee collection systems, for example, this leads to an increase in public revenues that leads to reducing the deficit that affects government budgets in Saudi Arabia.