



OIL PRICE SHOCKS AND THEIR IMPACT ON ECONOMIC ACTIVITY IN IRAQ

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ABSTRACT

This research aims to shed light on the most important and prominent economic problem that Iraq suffers from, which is its dependence on crude oil exports to finance its current and investment expenses and maintain the value of the national currency, as Iraq's non-oil exports are very limited. Therefore, the research problem focuses on the fact that the Iraqi state depends Almost entirely on oil revenues to finance public expenditures, and since oil is a commodity that can be depleted shortly and oil prices are constantly fluctuating, this means that Iraq's economy is not sustainable and that it will be exposed to ongoing crises and perhaps to a complete collapse of economic conditions. To obtain clear results that cannot be doubted, the study included annual data from the year 2004 to the year 2022.

The research included a group of dependent variables, including economic, financial, and monetary, that would give a clear vision of the problem regarding oil prices, which represents the independent variable, and it was adopted. On the descriptive analysis of the data table to give a general and clear view of the impact of oil prices on the dependent variables, the research reached a set of conclusions, the most important of which is first: The significant decline in oil prices, i.e. less than \$50, negatively affects all economic indicators, the most important of which are the Central Bank of Iraq's oil reserves. Foreign currencies.

Secondly: When there is a significant decline in state revenues due to the decline in oil prices, the greatest damage is to investment spending, not current spending. This means that the segment most affected are non-employees, and they are multiple categories.

The most important recommendations are: The developed countries are working hard to gradually abandon fossil fuels in the future or significantly reduce dependence on them. They have set time programs for this goal. On the other hand, we must develop strategic plans to gradually reduce dependence on oil so that we notice a difference year after year.

KEY WORDS

Oil price shocks,
Iraqi economy,
public expenditures

Introduction

Research problem

The Iraqi economy faces a recurring problem related to the ability of successive governments after 2003 to finance their current and investment public expenditures in a manner consistent with general plans and the current and future needs of society. This problem is due to Iraq's reliance primarily on revenues from the sale of crude oil to finance public expenditures and maintain the value of the currency.

Patriotism.

Research hypothesis

The research has one main hypothesis, which is to know the extent of the impact of oil price shocks on economic, financial, and monetary variables.

Research Objective

The research aims to identify the impact of oil price fluctuations on the Iraqi economy, what is the economy's ability to withstand these shocks, and what are the proposed solutions to overcome this major problem.

The Introduction

The Iraqi economy is suffering a lot. He has a chronic disease that makes him barely walk, and we need to run to keep pace with the world and provide the many needs that the country needs in light of the large increase in population. One of the basic symptoms of this chronic disease is the state's heavy dependence on its foreign currency revenues for Exporting crude oil. When looking comprehensively at the Iraqi situation and comparing it with the situation in other countries, we can see beyond doubt that all members (sectors) of this country are suffering from a problem in performing their functions. In today's world, which is led by science, not speculation and speculation, achieving sustainable economic development requires all sectors to work efficiently according to scientific theories, policies, methods, and procedures, all of which work according to a strategic plan formulated in an ideal way that suits the general situation of Iraq.

Therefore, this research sheds light on this main problem, which is the dependence of the country's general budget on crude oil revenues and the impact of oil price fluctuations on a group of economic and financial variables, the most important of which are oil and non-oil revenues, gross domestic product, inflation, unemployment, and the central bank's foreign currency reserves. In the first section, we talked about the nature of oil, the price of oil, the factors that affect oil prices, and oil price shocks. The second section focused on analyzing annual data for the period from 2004 to 2022. This means that the research included the entire period of what is known as the new Iraq. The third section was limited to conclusions and recommendations.

The first topic

Crude Oil

Crude oil is the most important strategic commodity among the commodities involved in international trade and the most traded in global markets in terms of trading value and trading volume. Crude oil is a fossil fuel that may be from the remains of animals and plants that were buried millions of years

ago under sedimentary layers in the earth and the seas. As a result of anaerobic bacteria and increased pressure and temperature, these residues turned into hydrocarbons. Crude oil is a mixture of hundreds of different types of hydrocarbons with small amounts of other chemical compounds such as sulfur, nitrogen, and oxygen. Hydrocarbons are organic compounds composed of hydrogen and carbon atoms. They vary in number and arrangement of carbon atoms, which may be in the form of straight or branched chains or the form of closed rings. Oils differ from one field to another as a result of the different conditions and complexities in which the carbon and hydrogen atoms interact to form the petroleum substance. (Al-Hasnawi, 2006: 2).

Crude oil is found in underground reservoirs at depths ranging between (3000-500) meters. For oil reservoirs to exist inside the earth, permeable layers must be available for the crude oil to penetrate through, in addition to the availability of rocky oil traps that prevent the oil from exiting the surface of the earth. These traps may be structural. They arise as a result of twisting and fractures in the layers of the earth. These traps take the form of domes (Anticline Traps) or the form of broken layers (Fault Traps) in which crude oil collects. These oil traps may be stratified (Stratigraphic Traps). They produce... About changes in the layers of the earth in a way that prevents the movement of crude oil and then it collects to form the oil reservoir. The total oil reservoirs are called the oil field, and the process of stabilization of the oil in the reservoir is followed by the process of separation of water and gas from the oil liquid due to the difference in density (density), so the gas becomes At the top of the reservoir, it is followed by oil, then water. The separation process is not complete, as some gas remains dissolved in the oil, especially when the amount of gas increases, which causes an increase in pressure inside the reservoir. The same is true for oil and water, the separation is incomplete (Al-Hiti, 2000:38)

Oil price and crude oil market

The oil price means the monetary value or monetary form of a barrel of crude oil in the American standard of (42) gallons, which is equal to (3.78) liters and expressed in the American monetary unit, the dollar. Despite all the attempts, ideas, and practical procedures to find an alternative monetary unit through the names of the oil dollar and the dinar. The standard price, a basket of major currencies, and special drawing rights, but it did not succeed, and the barrel remained linked to the US dollar. The oil price has many types, including the announced price, the realized price, the tax cost price, the reference price, and the spot price (Al-Hiti, 2000: 120).

Crude oil, whether physical or financial, is largely traded on the OTC market, that is, on the unregulated stock exchange. This trading is compatible with the nature of oil, which is characterized by heterogeneity, which requires designing special contracts for each blend. About 90% of oil is traded under medium and long-term contracts. The term and the rest are in spot contracts. Oil contracts usually last from one to four months, and this is what distinguishes oil from other commodities such as gold and gas, as the delivery period does not exceed 10 days. Crude oil is also traded on organized stock exchanges such as the New York Stock Exchange (NYMEX), which trades crude oil. West Texas and the International Stock Exchange (ICE) and most contracts on these two exchanges are settled financially without physical delivery occurring (Stephanie & James, 67: 2012)

The reference price of oil

Due to the presence of many different types of oil, this leads to the difficulty of setting a specific price for each type. Instead, reference is made to a specific number of prices, which are types of oil represented by Brent crude, American crude, Dubai oil, and Oman oil.

Reference oil types

1- Brent crude oil

Brent blend is a light, sweet crude oil produced in the North Sea within the territorial waters of the United Kingdom, and is considered the reference in pricing most crude oils. This crude oil serves as a reference base for approximately 50 million barrels of crude oil produced daily, and most of the crude oils priced compared to Brent are purchased in Europe. About 20% of the crude oil it imports to the United States of America amounts to about 10%. One million barrels per day is priced compared to Brent. The crude oil that makes up the Brent mix is a production mix of (19) oil fields, and although the amount of Brent crude production does not exceed 1% of global production, it is considered a reference for pricing about two-thirds of global production. of oil (Stephanie & James, 2012: 67).

2- West Texas Intermediate Crude hg, sd' (WTI)

American oil is a sweet and light oil because it contains a small percentage of sulfur and has a low density relative to the density of water, so it floats on water. American light crude oil is considered a basic standard for pricing crude oil in North America, and it is extracted from oil fields in the United States, specifically in the state of Texas. Louisiana and North Dakota, then it is transported for delivery via a pipeline extending to the city of Cushing, which is considered an important center at the intersection of a large group of oil pipelines for export to American ports or various international ports. The New York Stock Exchange has adopted in its contracts the designation of West Texas crude oil based on any mixture that has the same Specifications, whatever the state that produces it (Horsnell and Mabro 1993: 227-228).

3- Oman Crude

The Sultanate of Oman has been producing oil for about 100 years and is currently producing approximately one million barrels per day. Oil is produced in Oman by the Oman Development Company and Occidental Petroleum Company, which is considered the second largest oil producer in Oman. Shell comes in third place, then the Italian company Eni. Oman has two advantages over its neighbors are the first Gulf countries: the oil export ports are located outside the Strait of Hormuz, which makes them close and open to global markets. Secondly: The Sultanate of Oman is not a member of OPEC and therefore has high flexibility in controlling the amount of production (Al-Hinai, 2019: 10)

4- Dubai Crude

Dubai crude is a medium-density crude oil with a sulfur content of up to 2%. It is considered one of the reference standards in determining oil prices, as crude is considered a reference basis for pricing Asian oil supplies. The production quantity of Dubai crude is about three million barrels per day, and Dubai crude is characterized by its rapid arrival. To global markets (Horsnell and Mabro, 1993: 207).

Factors affecting the price of crude oil

There are a group of different factors that affect crude oil prices and make them constantly fluctuate. These factors are:

1- Global supply and demand for crude oil:

The supply and demand for oil is considered one of the most important factors that affect global oil prices, as the price is determined according to the monthly supply and demand for the different types of oil, whether light, medium, or heavy, as well as the supply and demand for oil derivatives, as Most of the oil production is transformed into oil derivatives such as gasoline and kerosene, and these derivatives are affected by various other factors such as weather, economic activity, etc. OPEC's production is also considered one of the important factors in determining the global price because OPEC's production represents about 36% of global production and has a great ability to control the price because it is subject to a single and considered decision issued by OPEC (Al-Marsoumi,2021: 6).

2- Global economic growth: Oil prices are greatly affected by global economic growth because a decrease in economic growth leads to a decrease in demand for oil and derivatives in general, because a decrease in economic growth means a decrease in the level of production for all companies in various sectors, and these companies consume oil either directly or indirectly. Directly through its use of energy and means of transportation, the decrease in economic growth leads to a decrease in wages and profits and thus a decrease in families' demand to buy cars and travel, which directly affects the oil demand (Soumyananda, 2004: 432). There are countries where economic growth greatly affects demand. These countries are the large industrial countries that import large quantities of oil, such as China, which imports about 10 million barrels per day, the United States, which imports about 9 million, India, about 5 million barrels, Japan, and South Korea, about 3 million barrels. Millions of barrels per day for each.

It is worth noting that there is a reciprocal relationship between economic growth and oil prices. At a time when global economic growth affects prices and leads to their decline, the rise in oil prices to large levels leads to an economic recession because it leads to global inflation, which reflects negatively on the economy. Global (Saleh & etl, 2013: 81).

3- Global oil stock: What is meant here by oil stock is not the stock in the ground or the oil fields, but rather the stock of crude oil after extraction and the stock of petroleum derivatives. The best example of this factor is what the Energy Information Administration in the United States announces every week, as it presents a weekly report. Regarding crude oil stocks and derivatives, it can be seen that oil prices were affected negatively or positively immediately after the announcement of this report.

4- Liquidation margins: This means the profits of liquidation companies, as the process of liquidating crude oil and converting it into various derivatives have multiple costs, and these costs are affected by various factors such as the cost of transportation, taxes, and wages. Therefore, the profit margins obtained by the owners of refining companies and the supply and demand for oil derivatives directly affect the prices of crude oil (Al-Marsoumi, 2021:7).

5- Geopolitical and climatic factors: Many geopolitical factors affect oil prices, whether through their impact on production or consumption. There are many real examples. The sanctions on Iran greatly affected prices because they led to a decrease in production by about 2 million barrels, and what happened in Iraq during the siege and occupation greatly affected the oil supply and the disturbances that occurred from time to time in the Sharara field in Libya or the American sanctions on Venezuela and other events. Also, climatic factors, such as hurricanes that strike ports, lead to the disruption of supplies and sometimes stop the work of drilling rigs operating in the seas and oceans.

6- The price of alternatives to oil: Oil is mainly used as fuel and energy, and there are a group of alternatives, but what distinguishes oil is its low cost compared to those alternatives, but when the prices of alternatives decrease due to increased production or the discovery of new technologies that reduce costs, the demand for oil decreases, and one of these alternatives is natural gas. Coal, biofuels, hydrogen, lithium batteries, hydroelectric and solar energy, etc. (Saleh & ETL, 2013: 83).

7- The value of the US dollar: What is meant by the value of the dollar is the exchange rate of the US dollar against other currencies, and there is an indicator that expresses this value called the dollar index. The value of the dollar directly affects all commodities that enter into international trade, especially crude oil, because crude oil and basic commodities are priced and evaluated in US dollars according to the Bretton Woods Agreement, and this matter continues to this day, as the dollar is the first global currency, and the economic and political strength of the United States has helped to continue this situation, which is what the global economy has become accustomed to remain stable.

Oil price shocks

Oil price shocks mean the large fluctuations that occur in crude oil prices as a result of multiple factors mentioned above. Figure No. (1) shows the oil price shocks and the reasons that led to those shocks for the period from 1970 to the beginning of 2024, as we note that price shocks mostly occurred either as a result of wars and sanctions or because of economic and financial crises.

As is known, oil plays a very important role in the global economy, as it is the most traded commodity in international trade in terms of quantity and value. The importance of oil and its impact on the global economy comes from it being the main energy source for most means of transportation and power generation, and this is what makes it an essential element in production and trade in general. In general, it affects costs directly (Bello, 2013:3). When oil rises significantly, it hurts growth in consuming countries and has a positive impact on consuming countries. High prices affect consuming countries on the demand side and the economic supply side. On the supply side, it leads to a decrease in supply due to the rise in supply chain costs and wages. As for the impact of high oil prices on the demand side, it is concentrated in a decrease in real income or net income after excluding transportation and energy expenses, which leads to a decrease in spending on consumption and investment and thus the occurrence of recession (Ana & ETL, 2013: 3-4). An example of how high oil prices lead to stagnation and inflation in consuming countries is what happened in the United States in the 1970s, when high oil prices led to significant stagnation and inflation that lasted for several years (Lutz, 2014: 134).

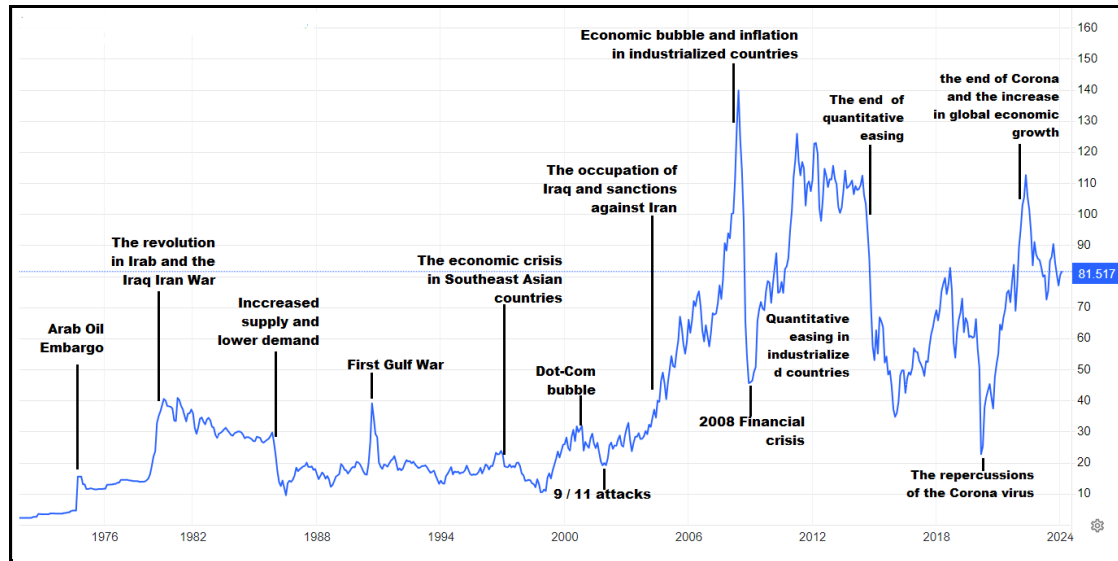


Figure (1) Oil price shocks and their causes from 1970 to 2023

Source: Prepared by the researcher based on the chart (www.economist.com)

The second topic

The impact of oil price shocks on the Iraqi economy

Table No. (1) lists for us the annual data for the period from 2004 to 2022 for oil prices and the most important economic, financial, and monetary variables in Iraq. It gives a comprehensive and clear picture of the Iraqi economy. The second column in the table shows oil prices and the large fluctuations that occurred in prices over 19 years. We talked about We explained these fluctuations and their causes in Figure No. (1). The third column shows Iraq's exports of oil and derivatives. As is known, the quantity of exports is almost constant on average, ranging between 3 to 3.5 million barrels. Therefore, the large fluctuation in the value of exports is primarily due to the fluctuation of the price. The fourth column shows the total non-oil exports to Iraq, that is, the private and government sectors, and in the best of circumstances they did not reach half a billion dollars, that is, they are almost fixed within a very small value if measured by the volume of imports, and this is a big problem, as we hardly export anything. The fifth column shows imports in billions of dollars. It can be noted that imports constitute about 60% or more of the value of total actual expenditures. This means that Iraq depends on imports to a very large extent to meet its various needs. The sixth column shows the gross domestic product. It can be noted that the growth in the gross domestic product is very weak. The gross domestic product in 2013 is almost the same as in 2022, that is, after nine years. There is no clear growth in the gross domestic product. This is a strange case in an oil-producing country. The gross domestic product must be constantly rising. Even if it includes periods of no growth or negative growth. The seventh column shows the unemployment rate in Iraq for those over 15 years of age, which has been continuously rising since 2008, when it was 8.4%, until 2022, when it reached 16%. This means that the economy is deteriorating because the unemployment rate is one of the most important economic variables that reflects the state of the economy. The eighth column, shows the annual inflation rate, as we note that in the first years, it was high due to the employment that occurred and the raising of fuel prices, then it began to decline, and this is normal because inflation is linked to economic growth and employment, but the problem is that those in charge of monetary policy do not know that inflation is the companion of economic growth, so they understand

it. They fight inflation in periods of recession and recovery, and this is a big problem. The ninth column shows the central bank's foreign currency reserves. It can be noted that the more revenues exceed total expenditures, the higher the reserves, and vice versa, because the primary source of reserves is the export of oil. In contrast, the more imports increase, the fewer the reserves. The tenth column shows the currency auction price or the selling price of the dollar before. The Central Bank for banks, companies, and merchants. It can be noted that we adopt a somewhat fixed exchange rate regardless of the economic situation, and this in itself is a big problem, as this rate must change according to the state of the economy and long-term economic planning. The eleventh column shows the currency issued by the Central Bank, which is constantly rising, and the reason may be due to internal government borrowing in recent years. As for the twelfth column, it shows non-oil revenues, which are almost constant and do not exceed 8 billion dollars at best, and most of them come from taxes and fees. The lack of these revenues and their failure to increase despite the increases in the budgets, especially investment, indicates the presence of a structural defect in the Iraqi economy. As for the thirteenth column, it shows the government's actual expenditures, which are divided into current and investment expenditures, as shown in the table. The problem that can be observed is that investment expenditures are constantly decreasing and current expenditures are constantly increasing. This is a big problem if it means that spending on services is constantly decreasing, which in turn leads to a decrease. Investments of all kinds.

Table (1) represents the independent variable (oil price) and the dependent economic, financial, and monetary variables

Public investment spending	Current year's spending	Actual state expenditures (billion dollars)	Non-oil revenues	Exported currency (trillion dinars)	Average auction price of the coin	Central bank reserves (Billion dollar)	Annual inclusion rate %	Unemployment rate %	gross domestic product (Billion dollar)	Total imports (billion dollars)	Non-oil exports (billion \$)	Exports of oil and derivatives (billion \$) (مليار دولار)	Brent crude prices	
3.3	18.54	21.84	4.9	8.02	1480	7.9	27	26.8	24.38	23.3	0.11	17.45	36	2004
4.8	19.67	24.47	4.05	10.25	1470	12.2	37	17.93	41.1	23.5	0.11	23.5	51	2005
2.37	24.33	26.7	10.08	11.9	1460	23.72	53.7	8.78	65.50	20.3	0.12	23.52	72	2006
2.8	25.78	28.58	3.67	15.63	1217	34.47	10.1-	8.65	88.84	39.7	0.25	39.3	76	2007
12.71	37.49	50.2	5.19	21.30	1172	50.07	12.7	8.40	131.61	30.17	0.30	63.1	136	2008
9.76	35.16	44.92	7.8	24.16	1170	44.33	6.9	8.49	111.66	38.43	0.11	39.32	54	2009
16.4	43.48	59.98	7.24	27.50	1170	50.6	2.9	8.34	138.52	43.91	0.17	51.9	80	2010
12.08	65.15	77.26	8.7	32.15	1170	61.02	5.8	8.15	185.75	47.8	0.22	79.9	112	2011
23.94	53.28	77.23	7.15	35.78	1166	70.04	6.1	7.97	218.10	56.23	0.27	94.85	110	2012
22.2	68.9	91.1	4.2	40.63	1166	90.47	1.9	9.27	234.64	59	0.29	93.90	108	2013
9.2	62.02	71.4	7.2	39.88	1166	77.35	2.2	10.59	228.82	59.34	0.21	89.54	102	2014
4.3	52	56.3	5.23	38.58	1182	63.88	1.4	10.72	178.8	48.01	0.19	51.1	58	2015
2.6	44.2	46.8	8.7	45.23	1182	53.55	0.6	10.82	166.6	34.27	0.10	40.9	46	2016
15.6	50.2	65.6	8.53	44.23	1182	58.36	0.2	13.02	190.96	34.2	0.1	41.2	57	2017
11.2	56.6	67.8	3.63	44.26	1182	76.48	0.4	14.07	212.4	32.18	0.21	57.3	70	2018
20.74	73.8	94.6	4.69	51.25	1182	80.38	0.2-	15.11	233.64	38.87	0.12	86.3	77	2019
2.5	56	58.5	2.10	66.03	1300	78.88	0.6	16.23	180.92	48.14	0.15	46.5	36	2020
9.18	61.7	70.34	9.47	71.56	1450	63.44	6	16.17	207.69	28.17	0.07	65.70	48	2021
8.28	72.34	80.65	5.13	82.24	1450	96.5	5	15.55	264.18	38.06.03	0.118	105.9	81	2022

Sources :

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- Iraqi Ministry of Finance, Federal Budgets.

- Ministry of Planning, Central Bureau of Statistics, National Accounts Indicators
- The World Bank(www.data.albankaldawli.org).

Reasons why the Iraqi economy was greatly affected by oil prices

We noticed from the previous analysis of Table (1) that oil price fluctuations have a very significant impact on Iraq's budget and the economy in a way, and the effect here is in two directions: the first is positive, which is when oil prices rise, and the second is negative, when prices fall, and this is what concerns us. This great vulnerability to oil price fluctuations is the result of causes and problems in the structure and structure of the Iraqi economy and the Iraqi state. These problems can be summarized as follows:

- 1- Iraq depends for its revenues on the export of crude oil at a rate of up to 90%. Dependence on crude oil in itself is not a major problem, provided that oil-related industries and refineries are developed to increase the value and to move other sectors and employ the workforce.
2. When we see that there is an increase in current and investment public expenditures over years without a clear increase in non-oil public revenues, this means that there is a structural problem in the economy and that it is not working properly because the general rule is that "an increase in public expenditures must lead to... An increase in public revenues. This problem may be due to several reasons, including: First: a decrease in investment in the private sector as a result of multiple reasons, including political, security, legal, and economic reasons. Second: The flaw in the tax and fee system, and third: The lack of a correct economic strategy.

The third section: conclusions and recommendations

First: Conclusions

- 1- To fully finance operating expenses, we need a continuous rise in oil prices. The prices that were suitable for us in 2004 and 2005 are no longer sufficient to finance public expenses, especially since the increase in oil exports is now restricted by OPEC decisions.
- 2- The significant drop in oil prices, less than \$50, negatively affects all economic indicators, the most important of which are the Central Bank of Iraq's foreign currency reserves.
- 3- When there is a significant decline in state revenues due to the decline in oil prices, the greatest damage is to investment spending, not current spending. This means that the most affected segment is non-employees, and there are multiple categories.
- 4- The Iraqi economy is unable to bear a drop in oil prices below \$50 for more than two years because this, in light of investment spending, will lead to a significant decrease in foreign currency reserves and thus the collapse of the national currency.
- 5- The official exchange rates of the Iraqi dinar against the dollar are not flexible enough to adapt to the economic situation, and this exacerbates the problem when there are declines in oil prices.

Second: Recommendations

- 1- We recommend that the executive authority, the legislative authority, and the monetary authority need to change the theories, policies, and methods that are used in managing the economic and financial file and other sectors. This is because we cannot use the same theories, policies, and methods and expect different results, and we must rely completely on the scientific and experimental methods in research and in reproducing experiments. Other countries.

2- The Iraqi state does not have an integrated strategic plan for the near and long future, and there are no clear strategic goals, in addition to the absence of appropriate programs and tactics for the advancement of the country. Therefore, the country needs a comprehensive strategy based on scientific foundations to advance the Iraqi situation.

3- Developed countries are working hard to gradually abandon fossil fuels in the future or significantly reduce dependence on them. They have developed plans and timetables for this goal. On the other hand, we must develop strategic plans to gradually reduce dependence on oil in a way that can make a difference year after year.

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