

# Evaluation of inflation targeting policies in light of uncertainty

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## Introduction:

The international oil market is characterized by lack of volatility and frequent fluctuations in oil prices as a result of its impact on many factors. Certain oil-producing and exporting countries. It becomes self-evident to say that the increase in oil prices is in the interest of the producing and exporting countries. As their oil revenues increase as the basis of their financial imports, which positively affects them and the preparation of their general budget, while this rise is not in the interest of consuming countries, as this rise increases of the financial burdens on it, which affects the preparation of the general budget in it, and the situation is opposite in the event of a drop in oil prices, which entails risks and problems. Therefore, all countries of the world face one danger, called the risk of the oil price. This danger has resulted in many risks and problems when preparing their public budgets or when making

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economic decisions for oil-exporting countries, especially since fluctuations in oil prices have become a frequent and worrisome phenomenon on

the The global level affects most of the oil-producing and exporting countries, or in which oil is the main source in achieving their financial resources in foreign currency. Therefore, these countries seek to search for non-oil sources of income to face the risks and problems of low global crude oil prices.

Research problem: The fluctuations that occur in world oil prices, whether they are an increase or decrease, affect, in a large and direct way, the preparation of the general budget due to the rentier Iraqi economy. To fill the budget deficit in the event of a decrease in the specified price during the period of preparing the general budget.

#### Objectives of the study

1 - Analysis of oil prices and factors affecting Iraq for the period 1980-2018

2 - Analysis of the impact of crude oil prices on the federal budget in Iraq during the study period

3 - Measurement and analysis using a standard model for the impact of oil prices on the federal budget in Iraq.

4 - Develop practical proposals for the financial authorities in Iraq in order to achieve economic development and economic stability through the variables under study, the most important of which is the diversity of non-oil sources of income.

#### the importance of studying:-

The importance of the study comes in that oil prices play a major role in influencing the size of the state's general budget. Therefore, these variables have a prominent role in economic growth and economic stability in Iraq, on the one hand, and on the other hand, the oil sector is of great importance in many countries of the world, including Iraq, because This sector is the back-

bone of the Iraqi economy and the financing of the state's public treasury. Hence, we find that the global financial crisis and its subsequent economic repercussions have affected the Iraqi economy from the real reality in terms of being a rentier economy that depends mainly on the production and export of crude oil and is affected by this as a result of fluctuating oil prices and the weakness of the flexibility of the production apparatus in them, which leads to the instability of the general budget, which indicates On the significance of the relationship between the fluctuation of crude oil prices and the general budget in Iraq.

Study hypothesis: The study assumes the following:

- 1 - There is a positive and significant relationship of oil prices on the general budget during the study period 1980-2018
- 2 - The fluctuation in crude oil prices will affect the federal budget in Iraq during the study period.
- 3- There is a short-term balance between oil prices and the federal budget in Iraq during the study period.
- 4 - There is a long-term balance between oil prices and the federal budget in Iraq during the study period.

Previous studies

## **Arabi**

1 - The study of Siham Hussein Al-Bassam and Samira Fawzi Shehab (the risks and problems of low oil prices in preparing the general budget of Iraq and the necessities of activating non-oil sources of income, 2013). This study focused on the risks and problems of low oil prices in preparing the general budget in Iraq and the necessity of activating non-oil sources of income In financing the general budget, the two researchers concluded that fluctuations in oil prices greatly confused the public budgets in Iraq and produced serious repercussions that posed real challenges to the budget, represented by a surplus or deficit in the budget.

2 - Abd Alawi, Najm (the flexible general budget of the state in light of fluctuations in oil prices), in which he stated that the large fluctuations in oil prices have noticeable repercussions on the economies and policies of all countries of the world. The research reached many conclusions, the most important of which is that the preparation of the flexible general budget for the state achieves ensuring the progress of work in light of fluctuations in oil prices.

The researcher also reached many recommendations, the most important of which is the necessity of preparing the state's general budget in the fluctuations of oil prices through a flexible budget that takes into account the lower and upper limits of the oil price.

3 - Shaima Abdul-Hadi Hussein Al-Sharifi's study of her tagged message ((The impact of fluctuations in crude oil prices on budget financing for the period (2003-2015) a comparative study of Iraq and Saudi Arabia)). The researcher reached several conclusions, including that oil revenues are the determining basis for public expenditures, which were characterized by imbalance as a result of focusing on current expenditures more than investment expenditures, and this reflects the consumption nature of both countries, and that oil exports occupied the largest proportion of total exports and the dependence of the domestic product in Iraq on the oil sector. It is greater than it is in Saudi Arabia. The researcher also reached results, including an imbalance in the structure of the gross domestic product of the two countries (Iraq and Saudi Arabia) due to its complete dependence on the commodity sector, as crude oil contributes to the bulk of it at a time when the proportion of the contribution of economic sectors such as agriculture and industries has declined transformative and others. And the state of the general budget of the two countries (Iraq and Saudi Arabia) was and still depends directly on oil revenues, which are affected by two main factors, the first of which is (external), which are international crude oil prices, and the other (internal), which is the amount of production and export of crude oil, which directly affects the financing of the state's general budget. As well as the imbalance in the structure of public expenditures for both countries. The dependence of the public

expenditures of both countries almost entirely on the volume of oil revenues.

4 - Salih, Omar Howaidi, 1017 study on analyzing the impact of oil prices on the structure of the general budget in Iraq (2005-2014). Short-term price changes between the fourth slowing oil and operating spending at a level of morale less than (0,1.(

5 - A study (Saleh, Ali Wahib Abdullah 2016), on the impact of changes in crude oil prices on economic growth rates in Iraq for the period (2009-2013). The year is according to the expanded Dickey-Fuller test (ADF), and as it has been proven that there is a co-integration between oil prices and GDP, and there is a direct relationship between crude oil prices and GDP.

6- A study (Belgla, Ibrahim, on developments in oil prices and their implications for the general budget of Arab countries for the period (2000-2009). Increasing the cash flows of these economies, resulting in an increase in oil revenues The increase in the capacity of the financial authorities led to the expansion of spending, which also contributed to improving the level of economic activity, which led to an increase in the volume of tax and non-tax revenues that are directly proportional to economic activity. In its balance according to the developments that witnessed high oil prices.

7- A study (Al-Mousawi, Abdul-Rasoul Abdul-Razzaq, 2009) The study dealt with fluctuations in international crude oil prices and their impact on the Iraqi budget. And its impact on the Iraqi general budget, and the study concluded that the main resource, public revenues, will be subjected to a serious decline during the next three years. It is not expected that global prices will return except in the event of political disasters in the region, and the expected price for stability when it occurs is (75-80) dollars This means an increase in revenues, not because of the increase in extraction activities, but because of the general rise in oil prices.

### **The first topic: - Oil prices and their impact on the structure of public expenditures.**

Oil is a very important strategic commodity that has multi-faceted global

importance, especially in light of the great acceleration in technological and industrial development in the world, and the price of points changes up (oil booms) and decreases (shocks) from time to time as a result of the incompatibility of its prices with a rapidly changing world.

The Iraqi economy is among the rentier economies that depend on oil revenues to finance its general budget, which makes both the general budget and the trade balance highly affected by changes at the global market level, which affects the economic policy within the state because oil revenues are the main source of financing development projects. .

The first requirement: the concept of oil prices

The issue of oil prices is one of the most controversial and shrouded in ambiguity and secrecy. There are many considerations that play a very important role in determining oil prices, as well as supply and demand factors to the extent that understanding the pricing process and realizing the meaning behind a specific price or something else has always been difficult for many to understand. Outside the oil industry (Hasnawi and Shawish, 2016, 32).

Global oil markets are characterized by the fact that their performance cannot be predicted, i.e. fluctuations in international oil prices, which leads to a lot of difficulty in planning budgets and ensuring the maintenance of public services. Oil price fluctuations are particularly important in countries that depend on oil revenues, which have direct and opposite effects on financial stability for these countries, 13 (Ghalayili, 2013) (Davig, 2015, 26).

The price of oil is defined as the monetary value or monetary image of a barrel of crude oil measured in US dollars, and the price of oil is subject to continuous fluctuations, due to the nature of the global oil market, which is characterized by instability and frequent fluctuations. , 2013,5) (Valid, 2017, 97).

The price of crude oil is known, expressed in a monetary unit, in a specific and known time and place, and that the relationship between the price of oil and its value is not equal, neutral or fixed, but there is often an unequal rela-

tionship, as the price of crude oil and for previous and long periods of time was less than the value, The other is linked and influenced by the factors that were linked and surrounded the nature of the commodity and how it was used and consumed (Omar, 137.2013) (Al Douri 1988, 22).

### **The second requirement: - analysis of oil prices and the structure of public expenditures in Iraq.**

Oil is a strategic commodity governed by economic, political and security dimensions, so that this commodity affects various aspects in the oil market, and there are reasons affecting the rise in oil prices within the camp of producers and consumers, as well as the difference in vision and interests between them, but demand and supply remain the main determinants of the price of oil. This is the case with other commodities (Saleh, 2016, 46).

And because the Iraqi economy is a rentier economy and depends on a major resource in financing current and investment expenditures, which is oil revenues, it will be constantly exposed to shocks in the oil price.

First: An analysis of oil price fluctuations in Iraq for the period 1980-2018

The changes in world oil prices and their causes in Iraq for the period 1980-2018 can be found through Table No. (1) as follows:

**table number (1) Oil prices, the volume of public expenditures, and the relative importance of both current and investment expenditures for the period (1980-2018) Million dinars**

Oil prices per barrel ((dollars	The ratio of investment expenditures to the public	The ratio of current expenditures to the public	Public expenditures	investment expenditures	current expenditures	years
35.0	45	55	7262	3268	3994	1980
37.0	53	47	11330	5980	5350	1981
31.0	46	54	14435	6606	7829	1982
29.0	41	59	12042	4988	7054	1983
28.0	36	64	10592	3858	6734	1984
26.0	31	69	10457	3219	7238	1985
14.0	27	73	10031	2730	7301	1986
17.0	22	78	11846	2617	9229	1987
17.6	20	80	13363	2733	10630	1988
18.0	22	78	13934	3062	10872	1989
22.3	20	80	14179	2821	11358	1990
18.6	11	89	17497	1844	15653	1991
19.0	21	79	32883	7007	25876	1992
20.0	27	73	68954	18894	50060	1993
15.5	14	86	199442	27700	171742	1994
16.9	22	88	690786	84946	605840	1995
20.7	7	93	542542	36441	506101	1996
20.5	54	46	1168551	634456	534095	1997
14.0	10	90	920501	95796	824705	1998
18.1	20	80	1033552	201960	831592	1999
28.2	23	77	1498700	347037	1151663	2000
24.3	28	72	2079747	588861	1490886	2001
24.9	31	69	2551386	788703	1762683	2002
28.9	5	95	5658415	288213	5370202	2003
37.8	9	91	32117491	3014733	29102758	2004
53.4	17	83	26375175	4572018	21803157	2005
64.3	16	84	38806679	6027680	32778999	2006
71.1	20	80	39031232	7723044	31308188	2007
97.1	20	80	59403375	11880675	47522700	2008
61.8	20	80	52567025	10513405	42053620	2009
79.1	22	78	70134201	15553341	54580860	2010
104.1	23	77	78757666	17832112	60925554	2011



105.1	28	72	105139576	29350953	75788623	2012
104.1	34	66	119127556	40380750	78746806	2013
96.2	32	68	112192125	35450452	76741673	2014
50.7	34	66	119462429	41214037	78248392	2015
45.4	24	76	105895723	25746312	80149411	2016
42.6	25	75	100671161	25454018	75217143	2017
43,4	25	75	101819603	25454900	76364703	2018

**Reference:** - Ministry of Planning, Central Statistical Organization, for the period (1980- (2018

1-Reducing the oil price from 35 dollars per barrel in 1980 to 14 dollars in 1986, ie a decrease of 60%, due to the decrease in demand for oil due to energy rationalization programs and the use of alternatives, as well as the impact of the Iraq-Iran war on the oil supply (Al-Jubouri 2010,37

2 -The price of oil began to rise gradually from 14 dollars per barrel in 1986 to 22.3 dollars per barrel in 1990 at a rate of 59.3 due to the increase in demand for oil on the one hand, and Iraq's occupation of Kuwait pushed Iraq from exporting oil abroad and thus imposing an economic blockade on it In the year 1990.

3 -The decline in the price of oil after witnessing a rise from 22.3 dollars per barrel in 1990 to a decrease of 18.1 dollars per barrel by 18.8%, due to the occurrence of an economic crisis in Asian countries that negatively affected the level of oil demand on the one hand, and on the supply side, it rose The oil supply of OPEC countries from 25 million barrels per day to 275 million barrels per day contributed to raising the oil stocks of the industrialized countries, all of which contributed to the decline in world oil prices (Organization of Arab Petroleum Countries, OPEC, 2001, 14

4 -The price of oil rose from \$18.1 per barrel to \$97.1 in 2008, at a rate of 436.5 percent as a result of economic growth and an increase in demand for crude oil. The decrease in the surplus production methods, the increase in production costs and the increase in speculative activity in the futures markets (Saleh 2006, 147

5 -The price of oil decreased from \$97.1 per barrel in 2008 to \$61.8 in 2009, and the rate of decline was 36.4 percent as a result of the impact of the global financial crisis and economic recession that affected most global economies.

6 -The oil price rose from 61.8 dollars in 2009 to 96.2 in 2014 and the rate of increase was 55.6% as a result of the economic stimulus programs implemented by many countries of the world, especially the major industrial countries, as well as the decrease in the commercial stock of crude oil. In those countries (Nashour 2012, 42,6) (Saleh, 2017, 99).

That period witnessed, as a result of the rise in crude oil prices during this period, to the growing investments in the oil field to enhance profits, especially in the United States of America. Coinciding with the technological development in the extraction of shale oil, the use of the latest technical and modern technical developments, the North American production of shale oil jumped from 10, 9 million i/d (Nujoum, 2015, 14), and the United States and the European Union imposed an embargo on Iranian oil exports in 2012, which caused the exit of about one million barrels per day of its oil from the market. This exacerbated fears of an Iranian military reaction, which remains Oil prices are high, as the world oil price witnessed its highest level in 2012, reaching 105.1 dollars per barrel.

7-The price of oil decreased from 96.2 dollars per barrel in 2009 to 61.8 dollars in 2014 to 42.6 dollars in 2014. The rate of decrease was 55.7% due to the increase in the supply of crude oil in the international market from countries outside the Organization of Petroleum Exporting Countries. For example, Brazil was among the Oil consuming countries have become among the exporting countries as a result of recent explorations, as well as the economic downturn in European countries and Japan, and the decline in economic growth rates in China (Fred and Nabil, 20157). Through the foregoing, and during the study period, the highest increase in price increases was witnessed in 2012 and the least decrease in oil prices in 1986, as well as some other observations as follows:

1 -The price of oil witnessed its highest level in 2012, reaching 105.1 dollars per barrel.

2 -The oil price witnessed its lowest level in 1986 and 1998, reaching 14 dollars per barrel.

3 -The general average of the oil price during the study period was ( ) dollars per barrel.

4 -The global demand for energy is increasing steadily in order to meet the aspirations and needs of population growth and social and economic developments. The demand for energy has risen from 50.65 million barrels of oil equivalent in 2000 to 63.66 million barrels in 2013, according to the reports of the US Energy Administration. These requirements come from different primary energy sources, the most important of which are oil and natural gas, which will remain one of the main sources for several decades to come. In mid-2012, oil production exceeded 3 million barrels, of which 2.4 million barrels were exported (Joint Arab Energy Conference, Abu Dhabi, UAE - December, 2014, Kuwait Petroleum Corporation). OPEC expects that demand will continue to rise to 113 million barrels per day by 2030, while the Agency for Energy expects global demand for oil to be 150 million barrels per day in the same year (Iraq's Energy Outlook, a special report in the World Energy Outlook, 17).

5 -The most important factors affecting global oil prices are global demand. The demand for oil depends on the growth of the economy and the increase in population size, as global oil consumption has increased at a rate of 1.76 annually in the last five years, and that the rise in oil prices for the year 2008, which reached 97.1 dollars, negatively led to the growth of The global economy and thus led to weak demand, in addition to economic crises such as the financial crisis in 2008 and the Asian crisis, as well as wars and natural disasters, the deterioration of the dollar exchange rates and the emergence of alternative sources of energy. 80 million barrels per day, and thus 4% of the Earth's population consumes 25% of global oil production, and according to the American production curve from the year 2005, it exceeded its absolute value in 1975, reaching 9.5 million barrels per day, and it has fallen gradually from that date until it reached 4-5 million barrels per day in 2005.

It can be said that America depends on importing virgin olive oil by 75% to cover its needs, which amount to 21 million barrels per day, and it is expected that the global demand for oil will increase from 9.1 million barrels in 2012 to 12.2 in 2030.

We find that the global demand for oil in the group of OECD countries

constitutes about 50% of the total global demand for oil, and this indicates the importance of this economic group globally and its ability to influence the international oil market, which casts the historical necessity on the makers of the Iraqi oil policy to establish relations of joint cooperation and construction With this group in a manner that suits the interest of the Iraqi economy and build its future on a balanced basis with the global market away from economic dependency, in addition to that, the Asian countries are no less important than the group of OECD countries, as the global demand for oil by Asian countries increased by a greater amount than the OECD countries in a year 2030, reaching 56.2 million barrels, which confirms the accelerated growth of this group and thus its ability to play a greater role in influencing the global market in the future. Therefore, it has become imperative for Iraq to adopt oil policies appropriate to the nature of the Iraqi economy and the political conditions it is going through and the countries of the region in general (Al-Rabi, 2013, 65-66) (Al-Muzaini, 2013, 327, 329).

## **Second: Analysis of the size of the structure of public expenditures in Iraq for the period 1980-2018.**

Through the table () we analyze the volume of expenditures, both current and investment, in Iraq during the research period according to the following:

1 -The volume of current expenditures amounted to 3994 million dinars in the year 1980, and the relative importance of it to the total public expenditures reached 55%, while the volume of investment expenditures amounted to 3268 million dinars for the same year, and the relative importance of it in the total public expenditures reached 45%, and the volume of current expenditures increased to 15653 million Dinars in 1990, and its relative importance to total public expenditures increased by 89%, while the relative importance of investment expenditures to total public expenditures decreased by 11%, and the decline in oil prices played a prominent role in the decline of that relative importance in investment expenditures.

2-Current expenditures rose by 93% to public expenditures, while they decreased 7% for investment expenditures to public expenditures in 1996,

as a result of the conditions that Iraq experienced as a result of the accumulated economic blockade, while the ratio of current expenditures to public expenditures amounted to 46%, while it increased. The ratio of investment expenditures to public expenditures is 54% as a result of the implementation of Resolution 986, which includes oil in exchange for medicine, and thus there has been a noticeable improvement in the financial situation of the Iraqi government as a result of oil exports.

3 -Fluctuations in the relative importance of each of the current and investment expenditures to the total public expenditures, as the ratio of current expenditures to public expenditures was 91% in 2004, while the relative importance of investment expenditures reached 9%, as oil prices had the largest role in these fluctuations. The rise in oil prices led to an increase in investment expenditures and a decrease in public expenditures, and vice versa, in the event of a decrease in oil prices, a rise in current expenditures compared to a decrease in current expenditures.

4- During the study period, the ratio of current expenditures to public expenditures reached 70% as a general average during the research period, and as it was and still the spending policy in Iraq tends to consumption at the expense of investment, which caused a weakness in the productive apparatus of the Iraqi economy, and a failure to increase production in real sectors such as Agriculture, industry and tourism and the failure to create a balanced and diversified economy, which is necessary for Iraq at this stage in order to advance the Iraqi economy and a push forward.

## **Measuring and analyzing the impact of oil prices on the structure of public expenditures for the period(1980-2018)**

### **First: Description and construction of the standard model:**

The numerator linear regression model can be used and it regulates each of the oil prices and is considered an independent variable, while the current and investment expenditures are variables with the dependent variable, and for the purpose of reaching the best model of the statistical program (SPSS), which is the most common computer program, and the estimated model for

the above formulas is as follows:

$$Y = b_0 + b_1X + u$$

whereas :

Y = current and investment expenditures and represent dependent variables.

X = oil prices

U = random variable

The estimated equation for the general level of prices can be found for the purpose of measuring the impact of oil prices on current and investment expenditures. The method of least squares (OLS) has been relied upon, the method of least squares, and the variables that represent the model are as follows:

First: - The dependent variable The standard model consists of two dependent variables, namely, the current and investment expenditures in Iraq  $y_1$ ,  $y_2$  respectively, and by relying on a time series for the period (1980-2018) and it contains 39 observations.

Second: The independent variable: The standard model includes one independent variable represented by the price of oil X.

Third: Building the standard model, and after describing the dependent and independent variables that represent the study variables, they must be described by the mathematical formula, which represents a key formula in building a standard model.

$$Y_1 = f(x)$$

$$Y_2 = f(x)$$

The form can be put in the following general standard form:

$$Y_1 = B_0 - B_1EX + U$$

$$Y_2 = B_0 - B_2EX + U$$

U represents the random variable, and it contains the effect of all the variables that were not included in the model, meaning more precisely the effect of the random variables, and the simple regression model will be used to analyze the data in Appendix (1), and the model that passes the economic, statistical and standard tests is relied upon. It gives the best results.

The second requirement: - Analysis of the results of the standard model for

the impact of oil prices on the volume of public expenditures for the period (1980-2018).

First: - Analysis of the results of the impact of oil prices on current expenditures for the period (1980-2018).

Statistical analysis: Statistical analysis represents one of the basic pillars through which it is possible to test the accuracy and validity of the studied model and rely on it for the purposes of forecasting and setting

**table number (2)**  
**future policies. The results showed the statistical analysis as follows:**

R <sup>2</sup>	R	F	siq	t	siq	B <sub>0</sub>	siq	b <sub>1</sub>	Siq
.628	.792	62.46	000 <sup>b</sup>	7.9	000	-12864724.615	.023	859927.241	000

Source: search results, using spss model

statistical analysis as follows: Through Table No. (٧) the results of the statistical program appeared, and based on the statistical program spss, the equation was as follows- :

$$Y= B+ b \times$$

$$Y= -12864724.615+859927.241x$$

The results of the statistical analysis showed that the value of the interpretation coefficient (R2) is 628 (0), which means that 62.8% of the variables that occurred in current expenditures were due to changes in oil prices, while the remaining percentage, which amounted to 37.2, is due to other reasons or variables. The model did not take into account the fact that they represent random variables, in addition to my study of oil prices and expenditures.

As for the (F) test, which represents the validity of the studied model for the purposes of forecasting and planning in the future, the results of the statistical program showed that the value of F, which amounted to 62.446 and

with a significant degree of high, amounted to 0006, and less than 01, and this means that it is possible to rely on the results of the model for the purposes of prediction. Planning and setting future policies in relation to oil prices and their impact on current expenditures.

As for the t-test, which measures for us the extent of the significance of the independent variables in the model and their ability to influence the dependent variables, the results of the statistical program showed that the t-value of 7,904 is highly significant, as the degree of significance reached 0.000, which is less than 0.05 and 0.01, which means that therefore, the independent variable (the price of oil) exerts a very high moral influence on current expenditures.

As for the relationship with the simple correlation coefficient, it amounted to 0.792, which is a very strong and significant directive relationship, which means that the change in oil prices is strongly correlated with current expenditures.

Economic analysis: Each of the values of B0 and B1 constitute the independence of the model and the tendency of the studied model, as the results showed through the equation that the value of B (-12864724. = 0), which is significant at 0.05.

With regard to the independent variable (change in oil prices), the value of b1 was equal to 859927.241)), which means that a change in oil prices by one unit will lead to a change in current expenditures by 859927.241)), in the event of an increase in oil prices by one unit It will lead to an increase in current expenditures, in addition to that, being highly significant and less than 0.01.

In general, it appears clearly, through sober statistical tests, that the change in oil prices greatly affects the current expenditures, which means that it is necessary to take into account when planning and setting future policies for current expenditures, to note changes in oil prices.

Second: - Analysis of the results of the impact of oil prices on investment expenditures for the period (1980-2018(



Statistical analysis: Statistical analysis represents one of the main pillars through which it is possible to test the accuracy and validity of the studied model and rely on it for the purposes of forecasting and setting future policies for investment expenditures. The results showed the

**table number (3)**

**Source: search results, using spss model**

R <sup>2</sup>	R	F	siq	t	siq	B <sub>0</sub>	siq	b <sub>1</sub>	Siq
.536	.732 <sup>a</sup>	42.71	.000 <sup>b</sup>	6.5	.000	-12864724.615	.033	-5446606.563	.000

statistical analysis as follows: Through Table No. (٣) the results of the statistical program appeared, and based on the statistical program spss, the equation was as follows- :

$$Y= B+ b \times$$

$$Y= -5446606.563+322202.678x$$

The results of the statistical analysis showed that the value of the interpretation coefficient (R2) is (.536), which means that 53.6% of the variables that occurred in current expenditures were due to changes in oil prices, while the remaining percentage, which amounted to 46.4, is due to other reasons or variables. The model did not take into account the fact that they represent random variables, in addition to my study of oil prices and expenditures.

As for the (F) test, which represents the validity of the model studied for the purposes of forecasting and planning in the future, the results of the statistical program showed that the value of F, which amounted to 42,717, with a very high significant degree, amounted to b 000, and less than 01, and this means that it is possible to rely on the results of The model for the purposes of forecasting, planning and setting future policies in relation to oil prices and their impact on current expenditures.

As for the t-test, which measures for us the extent of the significance of the independent variables in the model and their ability to influence the depen-

dent variables, the results of the statistical program showed that the t-value of 6,536, which is highly significant, reached 0.000, which is less than 0.05 and 0.01, which means that therefore, the independent variable (the price of oil) exerts a very high moral influence on current expenditures.

As for the relationship with the simple correlation coefficient, it amounted to 732, which is a very strong and moral positive correlation, which means that the change in oil prices is strongly related to current expenditures.

Economic analysis: Both the values of B0 and B1 constitute the independence of the model and the tendency of the studied model, as the results showed through the equation that the value of B is (-5446606.563), and this means that the value of costs will be this amount in the absence of excluding the impact on oil prices when it is ( $X = 0$ ), which is significant at 0.05.

With regard to the independent variable (change in oil prices), the value of b1 was 322202.678)), which means that a change in oil prices by one unit will lead to a change in current expenditures by 322202.678)), in the event of an increase in oil prices by one unit It will lead to an increase in current expenditures, in addition to that, being highly significant and less than 0.01.

In general, it appears clearly, through sober statistical tests, that the change in oil prices greatly affects investment expenditures, which therefore means the need to take into account when planning and setting future investment policies, to note changes in oil prices.

Third: - Analysis of the results of the impact of oil prices on public expenditures for the period (1980-2018)

Statistical analysis: Statistical analysis represents one of the main pillars through which it is possible to test the accuracy and validity of the studied model and rely on it for the purposes of forecasting and setting future policies for investment expenditures.

### table number (4)

#### Source: search results, using spss model

R <sup>2</sup>	R	F	sig	t	sig	B <sub>0</sub>	sig	b <sub>1</sub>	Siq
.613	.792	58.57	.000 <sup>b</sup>	7.6	.000	-18311331.178	.023	1182129.918	.000

statistical analysis as follows :Through Table No. (4) the results of the statistical program appeared, and based on the statistical program spss, the equation was as follows- :

$$Y = B + b x$$

$$Y = -18311331.178 + 1182129.18x$$

The results of the statistical analysis showed that the value of the interpretation coefficient (R<sup>2</sup>) is (.613), which means that 61.3% of the variables occurring in public expenditures, including current and investment expenditures, were due to changes in oil prices, while the remaining 39.7 percent belong to Other reasons or variables that the model did not take into account because they represent random variables, in addition to my study of oil prices and current and investment public expenditures.

As for the (F) test, which represents the validity of the model studied for the purposes of forecasting and planning in the future, the results of the statistical program showed that the value of F, which amounted to 58.576 and with a very high significant degree, amounted to .000, and less than .01, and this means that it is possible to rely on the results of The model for the purposes of forecasting, planning and setting future policies in relation to oil prices and their impact on current expenditures.

As for the t-test, which measures for us the extent of the significance of the independent variables in the model and their ability to influence the dependent variables, the results of the statistical program showed that the t-value of 7.654, which is highly significant, reached 0.000, which is less than 0.05 and 0.01, which means that therefore, the independent variable (the price of oil) exerts a very high moral influence on current expenditures.

As for the relationship with the simple correlation coefficient, it amounted

to .783, which is a very strong and significant positive correlation, which means that the change in oil prices is strongly correlated with public expenditures.

Economic analysis: Both values of B0 and B1 constitute the independence of the model and the tendency of the studied model, as the results showed through the equation that the value of B (-18311331.178), which means that the value of costs will be this amount in the absence of excluding the impact on oil prices when (  $X = 0$  ), which is significant at 0.05.

With regard to the independent variable (change in oil prices), the value of b1 was equal to 1182129. It will lead to an increase in current expenditures, in addition to that, being highly significant and less than 0.01.

In general, it appears clearly, through sober statistical tests, that the change in oil prices greatly affects investment expenditures, which therefore means the need to take into account when planning and setting future investment policies, to note changes in oil prices.

**table number (5)**

R	R <sup>2</sup>	Sig.	t	Sig.	F	b <sub>1</sub>	
.792	.618	.000	7.904	.000 <sup>b</sup>	62.466	859927.241	C.E
.732	.523	.000	6.536	.000 <sup>b</sup>	42.717	322202.678	I.E
0.783	.613	.000	7.654	.000 <sup>b</sup>	58.576	1182129.918	O

Source: search results, using spss model

From the above table, which represents the comparison table for the studied models, it appears clearly that the R<sup>2</sup> model of current expenditures has obtained the highest interpretation coefficient of 0618, and the value of F in the mentioned model (current expenditures) has reached 62,466, which is higher than its counterparts in both investment and public expenditures. , which therefore means that the current expenditures model is one of the most efficient and best models in interpreting and analyzing the impact of oil prices on public expenditures.

## Conclusions

1 -The follower of the public spending movement in Iraq, especially the last two decades, notices an important rise in the numbers over the years. But the truth of the matter is an apparent increase in most of them, and the main reason behind this is the inflation rates that the country witnessed, so that most of the public spending increase was to meet the rise in the general level of prices, and it did not harm the public benefit of society.

2 - The statistics contained in the research indicated that most public expenditures are being implemented within the framework of what is known as the operational budget, and that salaries and wages for state employees, including those working in the security sector and the military, as well as the product, subsidies, social benefits and state purchases of goods and services .... constituted the largest proportion. of current spending in the country.

3 - The basics of demand and supply are the traditional factors that govern the price mechanism in the oil market, and there are other factors that have a major role in determining global oil prices, such as geopolitical factors, natural disasters and oil crises, low spare production capacities and a speculative factor in futures markets, and oil prices are affected There are many economic and political factors that have a direct impact on global supply and demand, and that the fluctuation of oil prices in most of them may be due to temporary supply and demand factors, so they can be changed in the short term and not to long-term structural factors that are difficult to obtain.

4 -The risks and problems of fluctuations in oil prices during the study period (1980-2018) directly confused the spending policy, produced serious repercussions and posed serious repercussions and posed real challenges to the spending policy in Iraq.

5 -Iraq possesses many economic, natural, human and material resources, if they are efficiently exploited, that can contribute to activating non-oil sources of income that would diversify the gross national product, reduce the risk of oil price shocks, as well as contribute to finding means of hedging that would make revenues The public is more secure and stable than the unilateral domination of the state's public treasury resources.

6-There is a direct relationship between crude oil prices and current expenditures, and there is no doubt that the oil price parameter represented by  $b_1 = 320878.26$  represents the tendency, that is, the change in current expenditures, meaning that the improvement in oil prices by one dollar leads to an increase in current expenditures by an amount of 320878.26 million Iraqi dinars, And vice versa, and this represents the direct effect of crude oil prices.

7- There is a direct relationship between crude oil prices and investment expenditures, and there is no doubt that the oil price parameter represented by  $b_1 = 320878.26$  represents the tendency, that is, the change in investment expenditures, meaning that the improvement in oil prices by one dollar leads to an increase in investment expenditures by an amount of 320878.26 million Iraqi dinars, And vice versa, and this represents the direct effect of crude oil prices.

8 -In the short term, there is a response between oil prices and public expenditures, both of them, investment expenditures and current expenditures.

9-The impact of oil price fluctuations and shocks on investment expenditures is greater than current expenditures in Iraq, meaning in the event of a sudden rise or fall in oil prices, it will be clearly reflected in investment expenditures, and this will create negative effects that reflect on the economic sectors associated with investment expenditures such as the sector Agricultural, industrial and tourism.

10-There is a small impact of the oil price shocks on current expenditures, as with the case of low oil prices and during the study period, the state of continuation in current expenditures was witnessed, as this decrease and deficit in the public budget was covered through internal or external borrowing or alternative financial resources from revenues petroleum.

11 - Oil price fluctuations explain 50% of changes in investment expenditures, while these fluctuations explain less than a third of changes in current expenditures, and this is evidence of the severity of investment expenditures for oil shocks, which is the opposite of current expenditures.

## **Recommendations:**

1 -Develop an effective strategy in order to avoid mitigating the consequences of the oil price collapse by relying on new alternatives according to successful strategies and plans derived from the experiences of countries that have achieved success in this framework, such as the experience of Norway and the United Arab Emirates.

2 -Adopting an oil policy based on a clear strategy that requires first and foremost relying on modern technical techniques that help increase production represented in information technology and specialized cadre to advance the oil production reality according to new requirements that are in line with market priorities.

3 -The structural imbalances of the Iraqi economy must be addressed by changing the contribution of the real economic sectors to the gross domestic product, which will ensure the diversification of the economy's diversity and reduce the dominance of the oil sector in favor of other sectors such as the industrial and agricultural sectors, services and tourism, and benefit from the sources of oil wealth in the diversity of other economic sectors and the development of petrochemical sectors.

4-The government's adoption of a fiscal policy that increases the diversity of the state's financial revenue sources and directs the spending policy to increasing investment expenditures and promoting the building of technological and innovative institutions.

5- It is necessary to find a way to adapt to price fluctuations and to overcome them by decision-makers in Iraq that take into account when preparing the general budget with the development of special policies

To hedge, that would address the imbalances in the state's general budget.

6- Linking oil revenues to the process of economic development, taking into account the absorptive capacity of investment when directing investment expenditures through a program that includes a well-defined economic plan whose objectives include serving current and future generations and building a base for long-term investment, especially since oil is a successful national

wealth.

7 -The external shocks are not the only ones that put the economy in trouble, but it is the responsibility of the responsible administration through wrong thinking and the reduction of management in the path of development, so it is necessary to translate local technological research and efficient development of the way of work and production.

8 -Rehabilitation of export oil extraction facilities to increase production and export in line with the levels of proven oil reserves owned by Iraq.

9 -Developing the existing fields in the national effort with the benefit of foreign companies to provide their services if necessary, and if the new fields are not developed in cooperation with international companies according to acceptable and recognized formulas that are commensurate with the characteristics of the Iraqi oil fields in general and the characteristics of each field separately, and that This is according to competitive bases that guarantee the conditions for Iraq.

10- Reducing unnecessary government expenditures and reconsidering existing public expenditure policies with the aim of restoring the balance between current and investment expenditures in the state's general budget, supporting the trend towards rationalizing current expenditures, and reconsidering the policies used to prioritize investment expenditures on various activities in order to achieve the optimal use of financial resources available.

11 -The trend towards diversifying the sources of national income and restructuring the tax system and making it more effective in a way that allows a gradual increase in the share of taxes in place of tax revenues.

12- The correlation of oil prices with a basket of currencies alternative to the US dollar would reduce the fluctuation of oil prices as a result of fluctuations in global exchange rates, which may be the result of global economic fluctuations.

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