

Oil shocks and their impact on the money supply in Iraq for the period 2004-2020^{*}

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Abstract

The Iraqi economy was exposed to a group of circumstances, represented by wars, and then the imposition of economic sanctions and the end of the third Gulf War, which contributed to the presence of negative repercussions in all economic variables, especially monetary variables, in addition to that, a group of internal and external economic factors prevented economic development in Iraq. The Iraqi economy has suffered from some of the wrong macro policies, the effects of which are still present, such as (the rise in the exchange rate of the Iraqi currency, the deficit in the balance of payments, the rise in most prices of goods and services, the spread of unemployment, the occurrence of hyperinflation, a deficit in the general budget, and the weakness of the industrial sector, The backwardness of the agricultural sector) and others were reflected in the form of monetary imbalances in most markets and at the level of the overall balance, all of these imbalances contributed to the lack of a real treatment for the oil shocks that occurred because the Iraqi economy is a rentier economy and depends heavily on oil imports. This research will analyze the impact of oil shocks on the money supply in the Iraqi economy.

Keywords: oil shocks, money supply, Iraq.

المستخلص

تعرض الاقتصاد العراقي الى مجموعة من الظروف ، تمثلت بالحروب، وفرض العقوبات الاقتصادية وانتهاء بحرب الخليج الثالثة ، الامر الذي ساهم بوجود انعكاسات سلبية في كافة المتغيرات الاقتصادية وخصوصا المتغيرات النقدية ، بالإضافة الى ذلك مجموعة من العوامل الاقتصادية الداخلية والخارجية حالت دون احداث تطور اقتصادي في العراق. فقد عانى الاقتصاد العراقي من بعض من السياسات الكلية الخاطئة والتي مازالت اثارها قائمة مثل (ارتفاع سعر الصرف للعملة العراقية ، وعجز ميزان المدفوعات ، وارتفاع في معظم اسعار السلع والخدمات ، وانتشار البطالة ، وحدوث حالة التضخم المفرط ، وعجز في الموازنة العامة ، وضعف القطاع الصناعي ، وتخلف القطاع الزراعي) وغيرها انعكست على شكل اختلالات نقدية في معظم الاسواق وعلى مستوى التوازن الكلي ، كل هذه الاختلالات ساهمت عن عدم وجود معالجة حقيقية للصدمات النفطية التي حدث لكون ان الاقتصاد العراقي اقتصاداً ريعياً ويعتمد بشكل كبير على الواردات النفطية. وسناقش هذا البحث بالتحليل اثر الصدمات النفطية على عرض النقد في الاقتصاد العراقي .

الكلمات المفتاحية : الصدمات النفطية ، عرض النقد ، العراق .

* The research is extracted from a master's thesis of the first researcher

Introduction

Oil shocks are one of the external economic variables that are affected by the external conditions of the oil-producing or importing countries of the world, as most industrialized countries depend on oil products to liberate energy. The occurrence of economic crises, wars or natural disasters all contribute to the occurrence of oil shocks starting from the 1973 crisis. And then the crisis of the eighties and nineties of the last century, through the (2008) crisis (mortgage), the discovery of shale oil, and the end of the Covid-19 crisis. All of these crises contributed to the occurrence of oil shocks, which were reflected in a downturn in the Iraqi economy, and that all the measures taken by the monetary policy makers were poor due to the underdevelopment of the monetary sector in Iraq, and the government controlled all the decisions of the monetary authority even after the independence of the Central Bank in (2004) . Therefore, this research will deal with the impact of oil shocks on the money supply in Iraq for the period from 2003-2020. The research was divided into three sections. The first section came from the theoretical framework. The second topic dealt with the analytical aspect, while the research showed the conclusions and recommendations in the third topic, to conclude the research in Sources approved by official authorities in Iraq or international organizations.

research importance

The importance of the research lies in the extent of the impact of oil shocks on the monetary economic variables represented in the money supply in Iraq, in addition to focusing on a group of political, social and economic circumstances that greatly affect crude oil prices, especially in times of economic crises that generate those shocks.

Research problem

The research problem can be summarized by the following question, which is whether the occurrence of oil shocks leads to changes in global oil prices, or vice versa, and is the Iraqi economy able to mitigate the severity and strength of these oil shocks, and their impact on the money supply in the Iraqi economy.

Research Hypothesis

The research stems from the following hypothesis, which is that there is a relationship between the occurrence of oil shocks and the monetary variables represented in the money supply. It proceeds that the occurrence of oil shocks tends to decrease or rise in the price of crude oil, and then changes the size of the money supply in Iraq.

search objective

The research aims to identify how oil shocks occur and their impact on crude oil prices and its reflection on monetary variables represented by the presentation of cash by interpreting the reality of the relationship between them and analyzing them by economic analysis in order .

Research Methodology

The researcher relied on combining the two approaches, both the inductive approach and the deductive approach, as he dealt with research and analysis to reach the most important treatments that can be applied after the occurrence and impact of shocks in oil prices.

search limits

Spatial boundaries // Iraq

Time limits // Duration (2004-2020)

The first topic

The concept of crude oil, its importance and types of oil shocks

first requirement. The concept and importance of global demand for crude oil

The International Energy Agency defines the global demand for oil as (consists of the obligations of distributors towards consumers of crude oil and represents the quantities of crude oil that a person needs at a certain level and in a specific period of time for the purpose of satisfying basic needs, whether they are consumer, production, oil or petrochemical products)¹. The global demand for crude oil is a demand derived from the global demand for oil derivatives, and therefore it can be said that there is a reciprocal effect between the demand for crude oil and the demand for oil derivatives.

Oil was discovered in the United States of America. This commodity gained importance in the global economy and the demand for it began to increase with the passage of time. The global demand for crude oil began to increase with the rapid development in global growth rates, where the United States, Europe and Japan constitute more than half of the global consumption of crude oil, where The global demand for crude oil increased from (42.2) million barrels per day in 1970 to (104.1) million barrels per day in 2019 (), but the reason for the increase in global demand for crude oil comes from the rapid development in the growth rates of developing countries such as China, India, industrial policies and the development of productive sectors. The first requirement: the concept and definition of the general budget:

The second requirement. The importance of global demand for oil

The global demand for oil comes from its importance, which is derived from the demand for refined petroleum products. whose prices include a large amount of consumption tax in their markets. Hence, the prices of those products would affect the demand in them and thus affect the demand for oil, and the rate of economic growth and other independent variables is added to the price as a basic variable. The demand for oil is considered inelastic in the short term, due to the lack of alternative energy sources, and this contributes to price sensitivity. In the medium and long term, oil will remain a major source of energy for reasons related to its properties compared to the available alternatives or that may be available in the future. Therefore, the policies pursued by consuming and producing countries vary in dealing with the nature of demand for oil, searching for energy alternatives, and seeking to benefit from unconventional oil sources, as well as following policies aimed at reducing dependence on oil or controlling its consumption through various measures, including the use of tax on Consumption . The global demand for oil may be affected by several factors, including (oil prices and other energy sources, world population growth, growth rates in both developed and developing countries, the discovery of new alternatives, and the climate...) Projections indicate that the world population will increase from about 6.464 billion in 2005. to 8.317 billion people in 2030. Most of the population increase will be concentrated in Asia and Africa, and India will surpass China in terms of population. The following figure reflects part of the world's population expectations.² The importance of population growth as a factor affecting the demand for oil comes from the nature of the demand that this growth will create, especially since most of the increase in energy demand will be for domestic consumption. Since the increase in population will be greater in poor countries, especially India, Asian and African countries, it is not expected that these countries will be able to reduce the demand for oil by providing alternatives or adopting policies that can reduce or control demand. OPEC expected the growth of global demand in the reference scenario by about 84.7 million barrels per day from 2006 until 2030*

1 . Yusra Mahdi, Shaima Fadel, *The relative importance of Iraq's federal budget funding sources and their relationship to the public budget deficit 2003-2013 AD*, Al-Kout Journal of Economic and Administrative Sciences, Wasit University, No. 2, 2016.

2 . Nabil Jaafar Abd al-Ridha, *Oil Economy, Arab Heritage Revival House, 1st Edition, Beirut 2011*, p.

when it will reach 113 million barrels per day). The share of oil in global energy resources will reach 38% by 2030. The following table presents the reference scenario estimates for both OPEC and the US Energy Information Administration.

third requirement. The nature of the oil market and its determinants

To know the global oil markets, we must talk about the concept of the market in the economic sense. The market can be defined as a place where buyers and sellers meet to exchange goods, services and other relevant information. Both parties can meet in a city, state, province or country, and the market may be physical or virtual..and the market is (the means by which the meeting takes place). The desires of sellers and buyers for a specific commodity, and in it the forces of supply and demand meet to draw the final line to determine the price of the commodity),¹ and it is not necessary to specify a specific place for the market in the economic concept, but rather it is the point where the seller and buyer meet, and that the parties influencing it are the number of sellers and buyers and barriers It is the real or virtual place where the desires of sellers and buyers meet to exchange goods and services at the prevailing prices determined by the forces of supply and demand.” The presence of technological development and the provision of modern means of communication made it This market is a wide market and does not have a specific place, as a result of the fact that most of the transactions and deals between sellers and buyers are managed through the Internet. The oil market is one of the most volatile markets in prices, which makes it difficult to monitor and track its impact. The oil market depends largely on the competitive market mechanism, and it has acquired a great deal of international attention, and the market is a place where the price of crude oil is determined, and the oil market has become during the decade The latter is one of the largest markets for raw materials. It has evolved from a crude oil trading market into a developed financial market and attracts large numbers of participants in major oil companies. In addition, investment banks, mutual investment funds, pension funds, insurance companies, and hedge funds have been added². The oil industry in all its stages is characterized by the control of a small number of major oil companies over it, and that the international oil market is, in fact, a situation controlled by a small number of major producers, each of whom produces a high percentage of the total output, and a large number of consumers are offset by the producers’ commitment to price changes. No action is taken in this regard unless the prices deviate from what was planned, and that the basis point system was the one that prevailed and the salient feature as it applies semi-uniform prices for all major producers despite the significant discrepancy. For large areas between production and distribution³. Given the importance of oil as a strategic commodity and its important role for most countries of the world, whether these countries are producers or importers of crude oil, the oil market consists of a group dealing with each other as follows:

1. Oil-producing countries:

There are two types of oil-producing countries, some of which are limited in production to meet their local needs, and their contribution may be limited, such as Malaysia, Bahrain, and the second type are oil-producing and exporting countries such as OPEC and OAPEC countries, and they enjoy an important position in the market Global oil for their acquisition of the largest part of the world's reserves of crude oil, in addition to what you produce and export, and they dominate the price stability.

1 . Hatem Al-Quraishi, *Oil Economics*, 1, 2020 pg. 61.

2 . Hussein Abdullah, *The current oil crisis, its repercussions and its future*, *International Policy magazine*, Cairo: Al-Ahram Foundation, No. 164, (April) 2006, p. 34.

3 . Muhammad Azhar Al-Sammak, *Oil Economy and Oil Policy, Foundations and Applications*, Mosul, 1987, p. 185.

2. The major oil companies:

A group of companies participate in it and it includes (5 American, 1 British, 1 British Dutch companies) and they dominate the global market from (1960-1970), in the early seventies to the end of the eighties, the control was clear to the OPEC countries, which is The period during which the strength of the oil markets increased as a result of the highest prices by OPEC, and the production rate of OPEC countries from global production reached about 40%, and this gave them the power of influence to work in an orderly manner that makes it a market¹. Another group of companies competing with it, which is characterized by high competitiveness, and examples of this are (Canadian Oil Sands Company and the Small American Shale Oil Company) due to their ability to produce crude oil, which was reflected in reducing production costs and reducing the time taken, and this led to the adjustment of production according to the movement of the prices².

3. Oil-consuming countries:

It includes a group of countries, the most important of which are (the European group and it consists of the large energy market, the developing oil-consuming countries and the Eastern European oil-consuming countries).

4. Crude oil exchanges such as the Singapore and Texas Stock Exchanges:

These exchanges contain two parties in the market, the seller and it includes (supply and producing countries) and the buyer (demand and consuming countries) and in each of these parties a set of variables that affect the supply and demand side, and then oil prices are determined, for the presence of large numbers of buyers (international oil companies).

Fourth requirement. Oil crises.

The oil market has been exposed to many crises, starting from the crisis of 1973, through the crisis of (1979) to the crisis of (2020). From the seventies until (2008) and the following is a review of some of the oil crises, distributed as follows ().

1. The oil crisis of 1973:

It was called the correction of oil prices and the evaluation of oil at its real value, which was very low..

2. The oil crisis in 1979:

Oil prices rose at this stage suddenly three times following the outbreak of the first Gulf War (the Iran-Iraq war) from (13-32) dollars per barrel within a few months due to the decline in the export of crude oil by the two countries The presence of oil wells on the borders of the two³.

3. The oil crisis of 1986:

During this time, the price of crude oil fell sharply, which led to the start of a price war after it stopped for a period of time, as these prices fell to less than (13) dollars per barrel.

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1. Nawaf Nayef Ismail, *Determining the Prices of Arab Crude Oil in the International Market*, Iraqi Ministry of Culture and Information, Dar Al-Rasheed Publishing, Iraq, 1981, pp. 26-27.
 2. Muhammad Ahmad Al-Afandi, *Introduction to Microeconomics*, Al-Ameen for Publishing and Distribution, Sana'a 2017, pg. 48
 3. Nicolas Carnot, Catherine Haggel, *le marché pétrolier, la direction de la prévision et de analyses économiques, ministre de l'économie des finances et de l'industrie*, N 53 novembre, 2004, p2

4. The oil crisis of 1998:

The global oil market was subjected to a second shock, which led to the deterioration of oil prices to their lowest level during this period, until they reached less than (10) dollars per barrel. These declines in oil prices.

5. The oil crisis of (2004):

The year (2004) was marked by a continuous rise in crude oil prices, reaching levels that the nominal prices of crude oil had not witnessed before. The annual rate of the OPEC basket reached (36) dollars / per barrel, which is the highest rate Annual price of the OPEC basket since the start of work in the OPEC basket ¹.

6. The oil crisis of (2014):

the decline in prices this year as a result of the market oversupply of crude oil, which resulted from the production policy in the Kingdom of Saudi Arabia,² because the decline in prices harms its competitors (Iran and Russia).

7. The Crisis (2020):

Crude oil prices in global markets witnessed a significant decline due to the aggravation of the new (Covid-19 pandemic) crisis that affected the world and the deterioration of oil markets due to the disruption of economic life, and governments imposing travel restrictions and quarantine measures and closing factories and institutions and others , which generated a contraction in global demand, in addition to the supply shock caused by the end of the OPEC and Russia production cuts³, as prices fell to their lowest levels since (2002).

The second topic

The evolution of money supply growth in the broad sense (M2) in Iraq for the period 2004 - 2020

Through table (1) which reviews the money supply in the broad sense in Iraq, we find that in (2004) the money supply in the broad sense (M2) increased significantly and amounted to (12254,000) billion dinars and a large positive growth rate also amounted to (76.23)% and the reason is Paying employees' salaries in US dollars and carrying out some projects on the American grant, especially building and renovating schools, and the period (2005-2007) witnessed continuous increases until the year (2007) reached (87679.504) billion dollars with a positive growth rate of (315.93 percent) and the reason is the employment of large numbers In the ranks of the Ministries of Defense and Interior, holding parliamentary elections, expanding towards openness to international trade and importing most commodities, all factories in Iraq have stopped, and some factories have been transferred to the private sector, especially cement projects. All of these things have contributed to increasing the money supply in the broad sense (M2).

In (2008) the money supply in the broad sense (M2) decreased and amounted to (34919.675) billion dinars, with a negative growth rate of (-60.17)% due to the mortgage crisis. The period (2009-2014) witnessed a continuous increase in the money supply in the broad concept (M2) until it reached (2014) an amount of (90772.801) billion dinars, with a positive growth rate of (3.48), but the money

- 1 . Colin Campbell, Frauke Lisenborks, translated by Adnan Abbas Ali, The End of the Petroleum Age The Necessary Measures to Face the Future, Series No. 307, Kuwait, 2013, p. 1*
- 2 . Gilles Dermis et Pierre Favennec , Iesmar ches de I Energies - I Energies quell prix , Edition 2 edition ,technic ,2013,p 29*
- 3 . Abu Zayan Muhammad Abdul Hamid Al-Khadimi, Changes in Oil Prices and Oil Stability in Algeria, Journal of the Algeria Foundation, No. 2, 2013, pp. 188-189*

supply in the broad concept (M2) decreased in (2015). It amounted to (82595.493) billion dinars, with a negative growth rate of (-8.96)%. The reason for the decline in oil revenues is due to the discovery of shale oil in America, which contributed to the decline in Iraqi oil imports because the Iraqi economy is a rentier economy that depends heavily on oil revenues.

The period (2016-2020) witnessed an increase in the money supply in the broad sense (M2) until the year (2020) reached its highest level during the research phase, reaching (119906.556) billion dinars, with a positive growth rate of (15.92%) and the reason is the expansion of bank credit Granting advances and loans by the Central Bank of Iraq for the purpose of revitalizing the Iraqi economy as a result of Covid-19. We conclude from the foregoing that this period¹ witnessed successive increases in the money supply in the broad sense (M2) except for the year (2008) as a result of the decline in oil prices, which contributed to the decrease in the money supply in the broad sense in a large proportion to follow a deflationary policy rather than an increase in inflation and an increase in the price level. A negative growth rate was also recorded at (-60.17)% due to the mortgage crisis and in (2015), a negative growth rate was also recorded at (-8.96)% due to the discovery of shale oil.

Table (1)
Growth rates of money supply in the broad sense / M2 in Iraq for the period (1990-2020)
billion Iraqi dinars

<i>the year</i>	<i>Money supply in the broad sense M2/ billion dinars</i>	<i>growth rate</i>
2004	12254.000	%76.23
2005	14683.617	%19.83
2006	21080.249	%43.56
2007	87679.504	%315.93
2008	34919.675	%-60.17
2009	45437.918	%30.12
2010	60386.086	%32.90
2011	72177.951	%19.53
2012	75466.360	%4.56
2013	87679.504	%16.18
2014	90727.801	%3.48
2015	82595.493	%-8.96
2016	90466.000	%9.53
2017	92857.000	%2.64
2018	95391.000	%2.73
2019	103441.000	%8.44
2020	119906.000	%15.92

Source: Ministry of Planning, Central Statistical Organization, Directorate of National Accounts.

1. Rein hard Ell anger ,Benjamin Sawatzky ,konrad Zmitrowicz ,les farceurs al origins de la baisse des prix du petiole en 2014 ,revue de la banquet du Canada 2017 ,p4

Conclusions and Recommendations

First - the conclusions

Through the foregoing in the research, the researchers reached an important set of conclusions, the most important of which were the following:

1. Iraq did not adopt a new economic approach that is concerned with industrial, agricultural and tourism economic diversification, as it is the best way to deal with oil shocks and the drop in global oil prices.
2. Iraq is a rentier country that depends in its foreign trade on the export of crude oil to the outside world, and it is affected economically by changes in oil prices in world markets.
3. Iraq seeks the success of its management of the national economy, as well as the development of a long-term plan that is flexible and feasible.
4. The shocks of crude oil prices affect the size of the monetary mass represented in the money supply in Iraq, which is reflected in the occurrence of economic problems such as inflation or economic stagnation.
5. The monetary policy represented by the Central Bank seeks to maintain the money supply and smooth the fluctuations that occur in the economy as a result of the oil shocks.

Secondly - recommendations

1. The need for the government in Iraq to be concerned about not relying on oil resources as a major source of public revenues, due to its connection with fluctuating global markets, and its impact on oil shocks.
2. The necessity for there to be coordination between monetary and fiscal policy in order to mitigate the oil shocks that Iraq is negatively affected by, and to invest positive shocks from them.
3. That the role of the central bank has a major role in determining and controlling the money supply, and that there should be deterrent laws against currency leakage, and there must be encouraging laws for individuals in the event that the central bank aims to withdraw the monetary mass from the market.
4. That the competent authorities use the means available to them in order to maintain economic stability and to ensure that it does not affect the public budget and achieve revenues.

Certified Sources

first. Arabic sources:

1. Hatem Al-Quraishi, *Oil Economics, Volume 1*, 2020.
2. Hussein Abdullah, *The current oil crisis, its repercussions and its future*, *International Policy magazine*, Cairo: Al-Ahram Foundation, No. 164, (April) 2006.
3. Nawaf Nayef Ismail, *Determining the Prices of Arab Crude Oil in the International Market*, Iraqi Ministry of Culture and Information, Dar Al-Rasheed Publishing, Iraq, 1981.
4. Abu Zayan Muhammad Abdul Hamid Al-Khadimi, *Changes in Oil Prices and Oil Stability in Algeria*, *Journal of the Algeria Foundation*, No. 2, 2013.
5. Diaa Majid Al-Moussawi, *The Oil Price Revolution 2004*, *Diwan of University Publications*, Algeria, for the year 2005.
6. Ministry of Planning, *Central Statistical Organization, Directorate of National Accounts*.
7. Abeer Ali Nasser, *The Role of Financial Policy Tools to Reduce the State's General Budget Deficit on the Conditions of the International Monetary Fund - Applied Research in the Iraqi Ministry of*

- Finance - Budget Department, Journal of Accounting and Financial Studies, Higher Institute of Accounting and Financial Studies, Volume 14, Issue 48, 2019 .*
8. *Yusra Mahdi, Shaima Fadel, The relative importance of Iraq's federal budget funding sources and their relationship to the public budget deficit 2003-2013 AD, Al-Kout Journal of Economic and Administrative Sciences, Wasit University, No. 2, 2016.*
 9. *Muhammad Ahmad Al-Afandi, Introduction to Microeconomics, Al-Ameen for Publishing and Distribution, Sana'a 2017.*
 10. *Colin Campbell, Frauke Lisenborks, translated by Adnan Abbas Ali, The End of the Petroleum Age - The Necessary Measures to Face the Future, Series No. 307, Kuwait, 2013.*
 11. *Muhammad Azhar Al-Sammak, Oil Economy and Oil Policy, Foundations and Applications, Mosul, 1987.*
 12. *Nabil Jaafar Abdel Reda, Oil Economy, Arab Heritage Revival House, 1st Edition, Beirut 2011.*

secondly. foreign sources

1. *Nicolas Carnot ,Caterine Haggel ,le marché pétrolier , la direction de la prévision et de analyses économiques , ministre de l'économie des finances et de l'industrie , N 53 novembre ,2004.*
2. *Reinhard Ellinger ,Benjamin Sawatzky ,Konrad Zmitrowicz ,les facteurs d'origine de la baisse des prix du pétrole en 2014 ,revue de la banque du Canada 2017.*
3. *Gilles Dermis et Pierre Favennec , Les marchés de l'énergie - l'énergie quel prix , Edition 2 édition ,technic ,2013.*