


**THE IMPACT OF OIL PRICE VOLATILITY ON ECONOMIC GROWTH AND STABILITY
IN IRAQ THROUGH THE PUBLIC EXPENDITURE FOR THE PERIOD (2003-2020)**

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 24 March 2023</p> <p>Accepted 20 June 2023</p>	<p>Purpose: The purpose of the research is to analyze fluctuations in global oil prices and identify the factors that control them. The study aims to clarify the nature and characteristics of the international oil market, as well as the relationship between oil, public expenditure, and the economy in rentier countries. The research seeks to provide insights into the economic effects of the dominance of the oil resource and track the trends of oil, public expenditure, economic growth, and development in Iraq. Additionally, the study aims to evaluate the extent to which the fiscal policies pursued by oil rent countries are serving their goals, and to recommend ways to ensure the rationalization of public expenditure and real economic growth in these countries.</p>
<p>Keywords:</p> <p>Economic Growth; Gross Domestic Product; Public Expenditure; Oil Price Volatility.</p>	<p>Theoretical framework: the research is based on several economic theories related to the international oil market and rentier economies. The study uses theories such as supply and demand, rentier state, Dutch disease, and public choice theory to analyze the economic effects of oil revenues in rentier countries, the factors that control the international oil market, and the behavior of governments and policymakers in allocating public funds.</p>
	<p>Design/methodology/approach: The study adopted the induction method to achieve the objectives of the research and get the intended results by analyzing the data and statistical tables of the sample country.</p> <p>Findings: The research findings suggest that oil rents lead to inefficiency, increased centralization of power, and patterns of public expenditure that decrease efficiency. Rentier economies face challenges in diversifying and reducing their dependence on oil exports. Adherence to budgets and developing transparent and flexible principles is crucial for real economic growth in rentier economies. Effective management of oil revenues and public expenditure is essential for sustainable economic growth in these economies.</p> <p>Research, Practical & Social implications: The research has practical implications for policymakers, emphasizing the need for effective management of oil revenues and public expenditure for sustainable economic growth. Social implications relate to the impact of oil revenues on society, highlighting the need for improved living standards and reduced poverty.</p> <p>Originality/value: The research is valuable as it provides original insights into the economic effects of oil rents and highlights the challenges faced by policymakers in managing rentier economies. The study's emphasis on effective management of oil revenues and public expenditure and the development of transparent and flexible principles adds value to the literature. The research provides valuable insights into the international oil market and emphasizes the importance of sustainable economic growth.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i6.2059</p>

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O IMPACTO DA VOLATILIDADE DO PREÇO DO PETRÓLEO SOBRE O CRESCIMENTO ECONÔMICO E A ESTABILIDADE NO IRAQUE POR MEIO DOS GASTOS PÚBLICOS NO PERÍODO (2003-2020)

RESUMO

Objetivo: O objetivo da pesquisa é analisar as flutuações nos preços globais do petróleo e identificar os fatores que as controlam. O estudo visa a esclarecer a natureza e as características do mercado internacional de petróleo, bem como a relação entre o petróleo, os gastos públicos e a economia dos países rentistas. A pesquisa busca fornecer insights sobre os efeitos econômicos do domínio do recurso petrolífero e acompanhar as tendências do petróleo, dos gastos públicos, do crescimento econômico e do desenvolvimento no Iraque. Além disso, o estudo tem como objetivo avaliar até que ponto as políticas fiscais adotadas pelos países com renda petrolífera estão atendendo a seus objetivos e recomendar maneiras de garantir a racionalização dos gastos públicos e o crescimento econômico real nesses países.

Estrutura teórica: a pesquisa se baseia em várias teorias econômicas relacionadas ao mercado internacional de petróleo e às economias rentistas. O estudo usa teorias como oferta e demanda, estado rentista, doença holandesa e teoria da escolha pública para analisar os efeitos econômicos das receitas do petróleo nos países rentistas, os fatores que controlam o mercado internacional de petróleo e o comportamento dos governos e dos formuladores de políticas na alocação de recursos públicos.

Projeto/metodologia/abordagem: O estudo adotou o método de indução para atingir os objetivos da pesquisa e obter os resultados pretendidos por meio da análise dos dados e das tabelas estatísticas do país da amostra.

Conclusões: Os resultados da pesquisa sugerem que as rendas do petróleo levam à ineficiência, ao aumento da centralização do poder e a padrões de gastos públicos que diminuem a eficiência. As economias rentistas enfrentam desafios para diversificar e reduzir sua dependência das exportações de petróleo. A adesão aos orçamentos e o desenvolvimento de princípios transparentes e flexíveis são fundamentais para o crescimento econômico real nas economias rentistas. A gestão eficaz das receitas do petróleo e dos gastos públicos é essencial para o crescimento econômico sustentável nessas economias.

Pesquisa, implicações práticas e sociais: A pesquisa tem implicações práticas para os formuladores de políticas, enfatizando a necessidade de uma gestão eficaz das receitas do petróleo e dos gastos públicos para o crescimento econômico sustentável. As implicações sociais estão relacionadas ao impacto das receitas do petróleo na sociedade, destacando a necessidade de melhorar os padrões de vida e reduzir a pobreza.

Originalidade/valor: A pesquisa é valiosa, pois fornece percepções originais sobre os efeitos econômicos das rendas do petróleo e destaca os desafios enfrentados pelos formuladores de políticas na gestão das economias rentistas. A ênfase do estudo na gestão eficaz das receitas do petróleo e dos gastos públicos e no desenvolvimento de princípios transparentes e flexíveis agrega valor à literatura. A pesquisa fornece percepções valiosas sobre o mercado internacional de petróleo e enfatiza a importância do crescimento econômico sustentável.

Palavras-chave: Crescimento Econômico, Produto Interno Bruto, Gastos Públicos, Volatilidade do Preço do Petróleo.

EL IMPACTO DE LA VOLATILIDAD DEL PRECIO DEL PETRÓLEO EN EL CRECIMIENTO ECONÓMICO Y LA ESTABILIDAD DE IRAQ A TRAVÉS DEL GASTO PÚBLICO DURANTE EL PERÍODO (2003-2020)

RESUMEN

Objetivo: El objetivo de la investigación es analizar las fluctuaciones de los precios mundiales del petróleo e identificar los factores que las controlan. El estudio pretende aclarar la naturaleza y las características del mercado internacional del petróleo, así como la relación entre el petróleo, el gasto público y las economías de los países rentistas. La investigación pretende aportar datos sobre los efectos económicos del dominio de los recursos petrolíferos y seguir las tendencias del petróleo, el gasto público, el crecimiento económico y el desarrollo de Irak. Además, el estudio pretende evaluar en qué medida las políticas fiscales adoptadas por los países rentistas del petróleo cumplen sus objetivos y recomendar formas de garantizar la racionalización del gasto público y el crecimiento económico real en estos países.

Marco teórico: la investigación se basa en diversas teorías económicas relacionadas con el mercado internacional del petróleo y las economías rentistas. El estudio utiliza teorías como las de la oferta y la demanda, el Estado rentista, la enfermedad holandesa y la teoría de la elección pública para analizar los efectos económicos de los ingresos del petróleo en los países rentistas, los factores que controlan el mercado internacional del petróleo y el comportamiento de los gobiernos y los responsables políticos a la hora de asignar los recursos públicos.

Diseño/metodología/enfoque: El estudio adoptó el método de inducción para alcanzar los objetivos de la investigación y obtener los resultados previstos mediante el análisis de los datos de la muestra de países y tablas estadísticas.

Conclusiones: Los resultados de la investigación sugieren que las rentas del petróleo conducen a la ineficiencia, a una mayor centralización del poder y a patrones de gasto público que disminuyen la eficiencia. Las economías rentistas se enfrentan al reto de diversificar y reducir su dependencia de las exportaciones de petróleo. El cumplimiento de los presupuestos y el desarrollo de principios transparentes y flexibles son claves para el crecimiento económico real en las economías rentistas. La gestión eficaz de los ingresos del petróleo y del gasto público es esencial para el crecimiento económico sostenible de estas economías.

Investigación, implicaciones prácticas y sociales: La investigación tiene implicaciones prácticas para los responsables políticos, ya que subraya la necesidad de una gestión eficaz de los ingresos del petróleo y del gasto público para un crecimiento económico sostenible. Las implicaciones sociales se refieren al impacto de los ingresos del petróleo en la sociedad, destacando la necesidad de mejorar el nivel de vida y reducir la pobreza.

Originalidad/valor: La investigación es valiosa porque aporta ideas originales sobre los efectos económicos de las rentas del petróleo y pone de relieve los retos a los que se enfrentan los responsables políticos a la hora de gestionar las economías rentistas. El énfasis del estudio en la gestión eficaz de los ingresos del petróleo y el gasto público y el desarrollo de principios transparentes y flexibles añade valor a la bibliografía. La investigación aporta valiosas ideas sobre el mercado internacional del petróleo y subraya la importancia del crecimiento económico sostenible.

Palabras clave: Crecimiento Económico, Producto Interior Bruto, Gasto Público, Volatilidad del Precio del Petróleo.

INTRODUCTION

The countries that produce raw materials, especially oil, are often called countries with unilateral economies because they rely on one source in financing the budget and the economy (Al-kasasbeh et al., 2023). As a result, the economies of these countries slipped into the scope of oil markets and their volatilities, and global economic crises and fluctuations infiltrated through the channel of the oil resource. Oil economies may be affected by the rise and drop in oil prices through the transmission of volatility and instability from the oil sector to the non-oil sectors. This has an impact on the growth and economic stability of the country. The sensitivity of the economy is subject to these changes in all sectors that contribute to the largest part of the gross domestic product through the channel of public expenditure (Alzghoul et al., 2023). Accordingly, the current research deals with the analysis and diagnosis of the effects that can be caused by fluctuations in oil prices on the trends and patterns of public expenditure that cannot be separated from the characteristics of oil rentier economies. This is conducted through focusing on the change that occurs in the values of public expenditure when oil resources fluctuate as a result of volatilities in crude oil prices in the international market and the extent of the deviation of the trend of public expenditure in achieving the objectives of growth and economic stability. The Iraqi economy was adopted to analyze the nature of the financial structure in the oil-producing countries and the extent of correlation between oil, public expenditure, and economy in the oil-producing countries.

Crude oil is a crucial source of energy and an essential commodity in global trade, but its prices are highly volatile due to various economic and political factors. The fluctuations in oil prices pose a significant challenge for oil-exporting countries, as they heavily rely on oil revenues to fund public expenditure. This instability can cause a disruption in fiscal policy tools and hinder economic growth and stability (Al-kasasbeh et al., 2022). The weak capacity of rentier economies has resulted in a regular mismatch between funding sources and growth targets, leading to a large percentage of oil revenues from crude oil-exporting countries being spent abroad. Since rentier economies spend more than their domestic production value, they rely heavily on imports to meet local demand, which causes a significant portion of financial resources to be diverted away from domestic spending. This, in turn, prevents other production sectors from progressing, inhibiting the expansion and diversification of production capacity. If a rentier country is heavily dependent on foreign oil revenues, the size of those revenues affects public expenditures both negatively and positively. Public expenditure expands during times of oil resource flow, when prices recover, and contracts during periods of price decline. This pattern of managing public finances often leads to a reduction in investment spending whenever government budgets face fiscal deficits caused by drops in oil prices. This inflexibility in current spending towards curtailment can have negative consequences for employment levels, stability, and economic growth in these countries (Yamin et al., 2023).

The research highlights the impact of oil price volatilities on growth and economic stability in oil-producing countries, with a focus on the structural link between oil, public expenditure, and the economy. The study aims to develop policies to reduce the damage and enhance the opportunities provided by the flow of oil rentier. Using the induction method, the research analyzes global oil price fluctuations and their controlling elements, the international oil market, and the channels between oil, public expenditure, and the economy in rentier countries. The research hypothesizes that global volatility in crude oil prices affects growth and economic stability in most oil-producing countries, requiring reducing the dominance of the oil resource over fiscal policy tools. The research consists of three parts: 1) examining oil prices and public expenditure, 2) exploring the relationship between oil rentier and public expenditure, and 3) analyzing the relationship between oil price trends and the pattern of public expenditure in Iraq. The first part covers the historical background of oil prices and factors controlling the price compass, as well as the concept and economic effects of public expenditure. The second part focuses on the concept of rentier economy and state, and their relationship with public

expenditure. The third part analyzes the relationship between oil price volatilities and public expenditure patterns in Iraq, along with output and financial indicators.

LITERATURE REVIEW

There are studies conducted in the field of the impact of oil Price volatility on economic growth and Stability, Ali (2018) study was conducted to present a growth scenario within a macroeconomic framework for Iraq until 2040. This study showed the path of investment in terms of the formation of gross domestic fixed capital in crude oil and the non-oil sector, as well as analyzing and evaluating growth in another model. The results were supported by the possibility of changing the structure of commodity production without crude oil and presenting in terms of gross domestic product in the possible sectoral structure (Ali, 2018). The study of (Maarouf, 2016) was conducted with the aim of examining the impact of the decline in global oil prices on the general budget in Iraq for the period (2004-2013). The study assumed that the decline has risks to the general budget; therefore, these risks must be avoided by giving the oil sector in Iraq a special status, and establishing a sovereign fund as a fiscal source (Maarouf, 2016).

The study of (Faraj, 2020) aimed to measure the volatilities in oil prices on the general budget in Iraq. To achieve this goal, the research relied on the standard- analytical method by collecting secondary data from different sources for the period (1990-2018). The study reached a set of conclusions, including that: oil revenues contribute to the formation of a large proportion of government revenues, Iraq was and still relies on oil financial revenues to finance public expenditure and the process of economic development. There is a direct and positive relationship between global oil prices and the balance of the general budget, meaning that an increase in global oil prices is directly reflected in the general budget, just as oil exports positively affect the balance of the general budget in Iraq. This result came consistent with the situation of the Iraqi economy in terms of its dependence on exports oil and its revenues to finance the general budget. Accordingly, it is necessary to work on diversifying sources of public revenues and rationalizing public expenditures through increasing tax revenues and investment expenditure (Faraj, 2020).

Al-Janabi & Al-Jabiri, 2017 study was conducted to clarify the impact of volatilities in crude oil prices on the financial policy options of selected oil countries for the period 1990-2017, with special reference to Iraq. This study aimed at analyzing the financial sustainability in several selected countries, including Iraq, in light of the volatilities in crude oil prices in the

international market, as well as analyzing the economic conditions and the interaction of the financial and monetary policies thereof. The study concluded that there is a direct relationship between crude oil prices in the international market and financial sustainability, and an inverse relationship between crude oil prices in the international market and monetary policy in oil-exporting countries. The study recommended adopting a neutral financial policy to avoid financial unsustainability as well as inflation, as well as developing the agricultural and tourism sectors in Iraq (Al-Janabi & Al-Jabiri, 2017).

Crude Oil Prices

Since the emergence of oil until the present time, its prices have passed through a number of stations, during which prices fluctuated in cycles of ups and downs owing to the interaction of a variety of economic and political factors. The international oil companies were in a control position in a monopolistic manner over the pricing of crude oil in the international market; this control lasted for a period of time when these companies had absolute freedom in deciding price levels, which witnessed relative stability, especially during the sixties of the last century. However, the prices of crude oil in the international market appeared to be entering cycles of ups and downs, and the occurrence of several short and long-term cycles since the early seventies when the role of the monopolistic oil companies began to diminish over the production and pricing process. In general, crude oil prices went through a number of stages during which they witnessed significant and rapid developments, which can be reviewed as follows:

Oil Prices Pre-OPEC Era

The discovery of crude oil in the United States of America in 1859 in the state of Pennsylvania considered the beginning of the history of the modern oil industry. When Odin Drake found oil of around 30 barrels per day, the price at that time was about \$20 per barrel, after which, this price declined rapidly. It reached \$9.6 per barrel in 1860, and the reason for this decline was due to the lack of use of crude oil at that time. As the size of the supply was not commensurate with the size of the demand due to the low percentage of its contribution among other energy sources, such as wood and coal (Bamakov, 1984). Since 1860, many investors have competed to invest their money in drilling new wells, which led to an increase in production, and thus an increase in the supply of crude oil, which led to a drop in prices to 0.75 cents per barrel in 1864. After that, prices continued to fluctuate between 0.75 cent and

\$1.5 per barrel until 1900 (Mamilton, 2011). Oil prices improved in 1920 to reach \$3.7 per barrel, following the outbreak of World War I in 1914, and the increasing global demand for crude oil, as it became a strategic commodity that replaced coal as a new source of energy, in addition to its entry as one of the vital production inputs in the industry. One of the results of this war was that some American companies obtained oil concessions in the Middle East, similar to the English and French companies. These companies conducted a set of oil concession agreements with Arab countries in a close content in terms of monopoly to control the entire stages of the oil industry, which made it the power controlling international crude oil trade which, in turn, determining production and price policies (Najm, 2009). These companies remained the sole control over the process of pricing crude oil in the oil market, as oil prices ranged between \$2.18 and \$1.80 until 1960 (Abdullah, 2000).

Oil Prices From OPEC to the Year 2000

Crude oil prices witnessed rapid and significant developments, represented by the establishment of the Organization of Countries Producing and Exporting Crude Oil (OPEC) in September 1960. As it was capable to stand against the policy of price cuts practiced by the monopolistic oil companies in lowering the prices of Middle Eastern oil. The price of Arab Light Crude Oil, for example, reached \$1.80 per barrel in 1960 following a series of reductions by monopolistic corporations, while it was \$2.18 per barrel from 1947 to 1970, until international oil companies agreed to simple price increases of \$2.18 per barrel in 1971. This was the result of the implementation of the Tehran Agreement between international oil companies and OPEC countries (Hassan & Abd, 2009).

However, the OPEC countries, as a result of the circumstances of the October War in 1973, decided to reduce production and the oil boycott of the countries supporting Israel and raise the announced prices on their part without referring to the oil monopoly companies, so the declared prices became \$5.12 per barrel in 1973 (Al-Munif, 2008). Crude oil prices in the market increased sharply due to the embargo and the reduction of production due to a shortage in oil supplies, and this rise caused prices to jump to an unprecedented level at \$11.65 per barrel in 1974, and \$11-14 per barrel during the period from 1974 to 1978. At the beginning of 1979, the Iranian revolution led to a gradual deterioration of Iranian production until it stopped completely in December 1979. Because of the huge Iranian production, which reached 6 million barrels in early 1978, the other oil countries were unable to compensate for the lost production, which led to buyers flocking to buy oil from the spot market to satisfy their demands, as well as

industrialized countries developing strategic stockpiles in preparation of future situations. One of the results of this chaos in the spot market was that prices increased dramatically until they reached \$29 per barrel in 1979 and then reached their highest level in 1981 to \$35 per barrel following the outbreak of the Iran-Iraq War and the fears caused by this war regarding the oil supplies of the two countries (Micheal, 2011).

In the 1970s and early 1980s, rising prices in the industrialized countries stimulated the construction of strategic reserves, the development of high-cost oil, especially the North Sea, and the development of alternative energy sources. Many developed countries succeeded in replacing coal and natural gas with oil leading to a decrease in their demand for crude oil. This was reflected in oil prices, which began to decline from \$35 in 1980 to \$20 in 1984 as a result of the increasing supply from outside OPEC, the decline in demand of industrialized countries, and the surplus of nearly 4 million barrels in 1984 (Hassan & Abd, 2009). In the year 1990, the Second Gulf War caused the oil market to lose more than 2 million barrels of crude oil as a result of the interruption of the exports of the countries, so the price levels jumped to about \$40 per barrel during the month of September (Michael 1990, 2011). However, prices did not stabilize at these rates, but rather declined sharply in the middle of 1990 to reach \$28, and prices continued to decline, reaching \$17 per barrel in 1991 as a result of the abundance of supplies and the early success of the coalition forces in ending Iraq's control over Kuwait, and the return of supplies to their pre-crisis levels (Baqis et al., 2015).

After that, crude oil prices continued to fluctuate between \$12-20 per barrel throughout the nineties of the last century as a result of a surplus in the oil market and increased production. With the decline in the level of economic activity, especially the socialist countries, and the slide of the Asian Tiger countries into a financial crisis in 1997 and the resulting decline in the demand for crude oil, prices collapsed to less than \$12 per barrel in 1998 (Musa, 2015). In 1999, the price rose again to \$18 per barrel as a result of the reduction in production volunteered by OPEC countries since March 1999 and helped by non-OPEC countries such as Mexico, Oman, Russia and Norway. With the receding of the oil glut, which was a fundamental cause of the collapse of prices in 1998, and the associated increase in the demand for oil as a result of the exposure of the northern hemisphere to cold weather and the recovery of the economies of Southeast Asian countries from the crisis that afflicted them in 1997, prices began to rise until they reached \$24 per barrel during the last quarter of 1999 and the first quarter of 2000 (Abdullah, 2000).

Oil Prices Since the Beginning of the Millennium Until Now

This era witnessed a rise in oil prices and in unprecedented levels. During the year 2000, the high growth rates, which were reflected in the global demand for crude oil, enabled a considerable rise in US demand in the transportation sector, which reached 17.7 million barrels in 2000. The technical problems and the low level of strategic reserves in industrialized countries also aided in the rise of oil prices to \$27 per barrel in 2000 (Obeid & Jahaz, 2015). However, prices returned to drop from \$27 per barrel in 2000 to less than \$20 per barrel in 2001 as a result of the sharp decline in the growth rates of the global economy. The global economy was exposed to the worst case of unprecedented slowdown in more than eight years. Then the events of September 11, 2001 came to intensify this slowdown, turning it into a state of recession and depression. And since the link between the economies of the different countries of the world and the largest economy, the US economy, is closely related, this stagnation has spread to various economies; the oil market was not immune from these events, which significantly affected the global demand for oil leading to the deterioration of oil prices to \$17 per barrel during the fourth quarter of 2001 (Al-Faris, 2009).

It is worth mentioning that security disturbances, the growing interest in the situation in the Middle East, the fears of a decline in the level of oil supplies to global markets, the repercussions of the invasion of Iraq by the United States of America in 2003, and the effects of this war on the country's oil exports, had led to the increasing in oil prices. Starting from the year 2002, prices witnessed a steady rise as a result of the high demand for oil due to the economic growth witnessed by the countries of Southeast Asia, the recovery of the former Soviet Union from its crisis, the commitment of OPEC countries to the prescribed quotas, and the reduction of production. As a result, the price of oil reached \$50 per barrel in 2004 (Mahdi, 2015).

In 2005, oil prices reached \$58 per barrel due to hurricanes and geopolitical factors, the growth of demand for oil in America, China and India, in addition to the increase in the level of speculation in future markets, and the low level of US strategic storage (Joint Arab Economic Report, 2005: 83). The weakness of the US dollar and the rapid growth of Asian economies and their widespread consumption of oil, climatic and geopolitical factors, security unrest in Nigeria, Venezuela and Iraq, the Iranian nuclear file crisis, and the aggression against Lebanon led to oil prices reaching record levels of \$80 per barrel in 2006 (Joint Arab Economic Report, 2006:98). As a continuation of the dynamism of 2006, the level of strategic reserves in the industrialized countries decreased from 4897 million barrels in 2006 to 2617 million barrels,

and crude oil prices exceeded the barrier of \$90 in 2007 (Joint Arab Economic Report, 2007). Prices, then, continued their rise until reaching a peak level during the first half of 2008, to record unprecedented level of \$147 per barrel in 2008. The wave of high prices led to voracious speculations and rise the role of paper oil^(B) in the field of financial investment in the Global stock exchanges and rising global demand for oil led by China and India. With the outbreak of the global financial crisis caused by global economic recession and depression, the levels of demand for oil shrank and the price levels deteriorated significantly. Oil prices dropped sharply from \$147 to \$34 in 2008 (OPEC, 2010). In addition to the impact of the global financial crisis, the role of the huge strategic oil reserve level in the industrialized countries, which reached 2.6 billion barrels at the end of 2008, cannot be overlooked. Reserves have significantly contributed to prices to be dropped to very low levels. This level of reserve enables the industrialized countries, theoretically, to dispense with importing 5 million barrels of OPEC exports for a period time of 500 days in order to avoid price pressures (Al-Kuwari, 2011).

With the economic recovery, especially during the second half of the year 2009, the demand for crude oil witnessed an increasing growth until the fourth quarter of the year 2009. Oil prices witnessed a noticeable rise between \$65 and \$75 per barrel. With the continued recovery of the global economy and the achievement of positive growth rates led by developing countries, such as China and India, prices continued to rise to stabilize at \$85 per barrel in 2010 (OPEC, 2010). After that, prices jumped to \$120 per barrel in 2011. Starting from 2011 until mid-2014, prices continued to rise above \$100 per barrel. A group of different and interrelated factors, some of which are geopolitical and others of an economic nature, have combined to push prices upward: The cumulative reduction conducted by OPEC to support low prices during 2009, estimated at 4.2 million barrels until 2011, contributed to reducing the volume of supply. This was a crucial factor behind the increasing price at the beginning of 2011 (OAPEC, 2011). Other factors include the political developments in the Arab region especially the Arab Spring, and the accompanying global concern faring that it may include other oil-producing countries in the region as well as the heated debate over Iran's nuclear program and the continued depreciation of the dollar against other currencies. There are also seasonal factors related to the weather, as most countries in the northern hemisphere were exposed to relatively cold weather.

^(B) Paper oil refers to the use of financial derivatives in trading crude oil, which has largely dominated the physical oil market in terms of the volume of crude oil traded on the international oil exchanges, with more than one billion barrels of oil traded per day in the New York, London and Dubai Stock Exchanges. This means that the amount of paper oil exchanged in the oil market is about thirty times more than the amount of oil consumed daily; this is greatly reflected on oil prices in the spot market through buying and selling operations. For more information see Leodrollas, (2011:146).

In this context, the role of speculation in future markets cannot be neglected in light of the prevailing geopolitical factors. All of these factors helped in maintaining a relatively stable price above the \$100 level until mid-2014 (Obeid and Device, 2015).

After that, prices witnessed a sudden change, with a sharp decline from the level of \$100 per barrel to less than \$50 per barrel during the second half of 2014 under the influence of the increase in supply, especially the exceptional increase achieved in the production of shale oil in the United States by 1.5 million barrels, in addition to the increase in production in Iraq, Libya, Russia, Canada and Saudi Arabia, and the decline in global demand for crude oil (ECB, 2015). Prices remained below \$50 per barrel until the end of 2015 due to the decline in global demand for crude oil resulting from the slowdown in economic growth in major consuming countries, such as China, India and the European Union. Moreover, the decline in global demand for crude oil, the increase achieved in shale oil production and the overproduction by OPEC countries caused a surplus in the oil market estimated at about 2 million barrels in 2015, which formed a pressure factor on prices to drop below the level of \$50 per barrel. (Al-Khater, 2015). In addition to the state of surplus, lack of demand for crude oil and the decline in prices at the end of the year 2014 through 2015, the global economy faced severe economic and banking crises during the period 2008-2011. Oil prices have not fallen like this for such a long time. In the past, when prices fell sharply, OPEC would decide to cut production immediately to support prices (Salamah, 2015). It should be noted that the decline in prices led to a decline in the number of shale oil rigs in the United States from 1609 to 467 rigs between 2014 and 2015 (Salamah, 2015).

The expected increases in oil production after the 2015 Nuclear Agreement and the repercussions of lifting sanctions on the Iranian economy in the first half of 2016 had a major and influential role in dropping oil prices to a level below \$50 per barrel (Mirza, 2015). In 2016, prices witnessed a further decline, reaching \$23.7 per barrel, which is the lowest level since 2003. This decline was caused by several combined factors at the same time, the most prominent of which is the continued surplus in the oil market, reaching 4.8 million barrels, the declined global demand for crude oil by about 2 million barrels as a result of the slowdown in the performance of the global economy, especially the Chinese economy, which made the oil market suffer from a glut of 4 million barrels. Thus, it formed a factor of pressure on prices, pushing towards reducing them to their lowest level of \$23 per barrel (OPEC, 2016). In March 2016, prices returned to their highest level in seven months, reaching \$43.2 per barrel, as a result of the disruption of oil supplies in a number of producing countries, such as Nigeria and

Canada, and the decline in shale oil production in the United States. This led to a decrease in the quantities supplied by 1.1 million to reach 96.5 million barrels during the month of March of the aforementioned year, with an increase in global demand for crude oil by 1.5 million barrels, which, in turn, led to a reduction in the surplus in the oil market (OAPEC, 2016).

METHODOLOGY

To attain its research objectives and desired outcomes, the study employed the induction method, which involved analyzing data and statistical tables from a sample country. The research was structured into three distinct parts, each serving a specific purpose. The first part focused on examining oil prices, public expenditure, and the theoretical framework for crude oil prices through two critical requirements. The first requirement entailed exploring the historical background and trend of oil prices, examining how prices have evolved over time. The second requirement focused on investigating the factors that control the price compass of oil and explaining the concept, importance, and economic effects of public expenditure. The second part of the research aimed to analyze the impact of oil prices on the economy of the sample country. This involved examining the relationship between oil prices and key economic indicators such as GDP, inflation, and employment. The study also analyzed the impact of fluctuations in oil prices on the balance of payments, government revenue, and fiscal policy. The third part of the research investigated the impact of public expenditure on economic growth, specifically in the sample country. The study examined the relationship between public expenditure and economic growth, exploring how increased government spending can stimulate economic growth and development. Overall, the study employed a rigorous and systematic approach to analyze the data and achieve its research objectives. Through the induction method and careful examination of statistical data, the research shed light on critical issues surrounding oil prices, public expenditure, and their impact on economic growth and development in the sample country.

RESULTS AND DISCUSSION

The Iraqi economy is among the oil economies that face an imbalance in the productive structure. Most of the gross domestic product is concentrated in the oil sector, and thus the Iraqi economy is considered a one-sided economy depending on the producing and exporting of one commodity: Oil. Since the prices of this vital commodity are characterized by severe and continuous fluctuations due to the nature of the factors affecting the oil market of an

international nature, this makes the oil rent resources unstable due to the price shocks in the international oil market. This causes the Iraqi economy to suffer from fluctuating volumes of public revenues and, as a result, instability of the largest funding volume for public expenditure, leading to an irregular relationship between spending policy, its objectives, and functions, which in turn restricts the efficacy of this policy in achieving economic growth and stability. Accordingly, this topic will deal with two aspects: the first deals with the analysis of output indicators as well as financial indicators to show the reality and importance of the oil sector in shaping Iraq's rentier economy, whereas the second deals with the analysis of the relationship between oil price volatility and the structure of public expenditure in the Iraqi economy for the period 2003-2020.

Trends in Output Indicators and Financial Indicators in Iraq

Analysis of output indicators (economic growth performance)

The volume of output generated in the economy is an indicator of actual economic growth. If the output moves in the direction of increase, it is called economic growth. If the move is in the direction of a decrease, it is called an economic downturn. The economic growth indicator reflects the diversity of the productive base in the economy, as well as the extent to which economic sectors contribute to GDP generation. The following indicators can be used to determine the performance of Iraq's economic growth from 2003 to 2020:

The gross domestic product expresses the size of the national economy as well as its development and growth. It is the most obvious indicator to express the level of economic activity because the development of the gross domestic product is reflected in the development of income, and this, in turn, leads to an improvement in the level of social welfare of the individual. From the data of Table (1), it is obvious that the Iraqi economy has witnessed a state of recovery or prosperity, as the gross domestic product tended towards an increase for most of the years for the period from 2003 to 2020. It is noted from examining the data of the table below that the amount of gross domestic product was 26,990.2 billion dinars in 2003 and increased in the following years, reaching 48,510.60 billion dinars in 2007 at a positive annual growth rate of 1.4%. The achieved increases in the value of the gross domestic product were reflected in the average per capita share with 3.8 million dinars for the same year. In 2008, the gross domestic product was 51,716.60 billion dinars and achieved a positive annual growth rate of 6.6%. The same applies to the average gross domestic product per capita, which recorded a remarkable increase from 3.8 million dinars in 2007 to 5.1 million dinars in 2008, achieving a

positive annual growth rate of 34.2. Crude oil prices reached their highest in 2008, when the price of a barrel reached \$147.3, and the daily export rate reached 1.8 million barrels. The increase in the gross domestic product continued until it reached 77,518.56 billion dinars in 2020, at an annual rate of 2.9%. These improvements in gross domestic product are mostly attributed to the rise in oil prices and the amounts of oil exported.

Table 1. Gross domestic product and average per capita output in Iraq from 2003 to 2020 at constant prices for the year 1988

Years	Gross domestic product (Billion Dollars)	Change rate %	Average per capita (Million Dollars)	Change rate %
2003	26,990.20	-	1.7	-
2004	41,607.80	54.1	2	17.6
2005	43,438.80	4.4	2.6	30
2006	47,851.40	10.2	3.3	26.9
2007	48,510.60	1.4	3.8	15.1
2008	51,716.60	6.6	5.1	34.2
2009	54,721.20	5.8	4.1	-19.6
2010	57,751.60	5.5	5	21.9
2011	63,650.40	10.2	6.5	30
2012	71,680.80	12.6	7.4	13.8
2013	75,685.70	5.6	7.8	5.4
2014	72,736.20	-3.9	7.2	-7.6
2015	70,990.30	-2.4	5.2	-27.7
2016	72,468.48	2.3	5.6	4.7
2017	73,453.43	2.3	5.7	5.3
2018	74,677.75	2.5	5.8	5.3
2019	75,785.74	2.7	5.9	5.4
2020	77,568.56	2.9	6.7	5.7
Average Duration -2003) (2020)	57,849.53	8.7	4.9	11.83

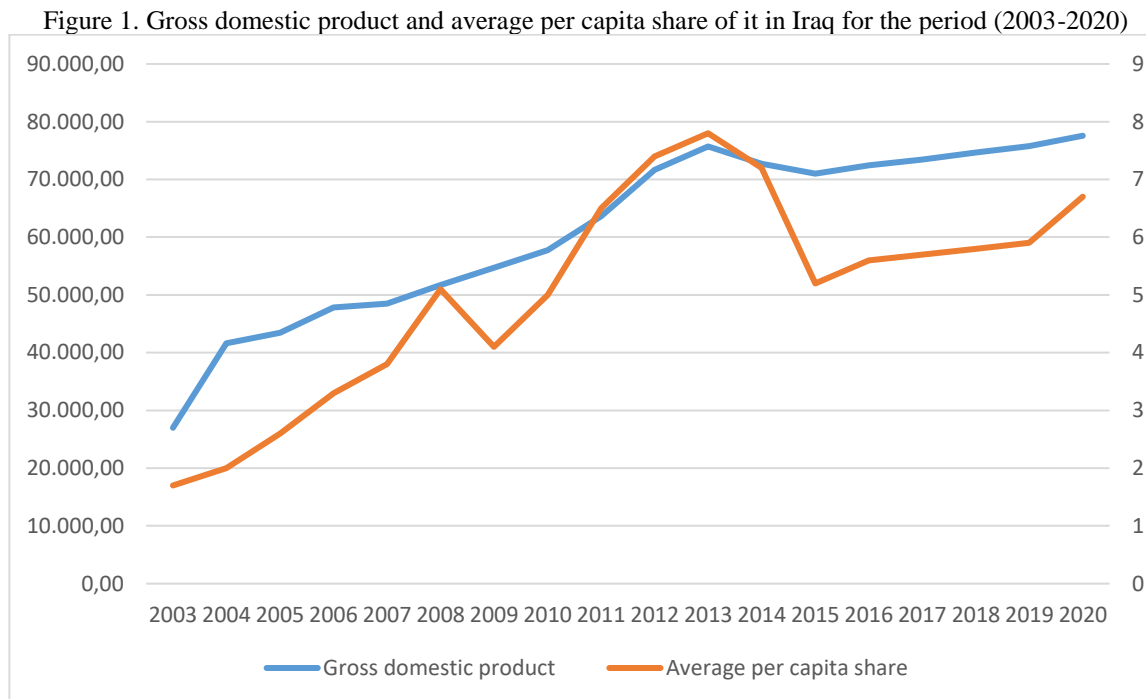
Source: Prepared by the authors (2023) based on:

Central Bank of Iraq at the following link: <https://cbiraq.org/>;

Central Bank of Iraq, Annual Statistical Bulletin, General Directorate of Statistics and Research, various issues;
Central Bank of Iraq, Annual Economic Report, Department of Statistics and Research, various years.

When examining the data of the above table, it becomes obvious that the gross domestic product has witnessed a continuous increase in its value until the year 2020, when the gross domestic product recorded its highest value of 77,568.56 billion dinars, as shown in Figure (1). It achieved a positive annual growth rate of 29%. However, in the years 2014 and 2015, the amount of the gross domestic product decreased, and this decline was 72,736.20 and 70,990.30 billion dinars, respectively, with negative annual growth rates of (-3.9%) and (-2.4%). This decline is attributed to the decline in oil prices during the second half of 2014 and its continued decline in 2015. The oil price fell below \$50 per barrel; this decline is reflected in the value of

the gross domestic product (GDP) on the average per capita share of output, which also declined from 7.2 million dinars in 2014 to 5.2 million dinars in 2015, with a negative annual rate of change of -27.7%, as shown in the figure below.



Source: Prepared by the authors (2023).

The development of the contribution of economic sectors in the formation of the gross domestic product

The sectoral structure of the gross domestic product is among the most important indicators to express the degree of structural imbalance that characterizes the national economy as it depends on the production of primary commodities (oil) whose price is determined globally, and this indicator leads to other imbalances represented by a high degree of dependence on the outside and an imbalance in the structure of the government's financial resources. It is possible to detect an imbalance in the productive sector of the Iraqi economy for the period (2003-2020) through the data of the table below.

Table 2. The contribution of economic sectors to the formation of output in Iraq for the period (2003-2020) %

Years	Oil Sector	Industrial Sector	Agricultural Sector
2003	51	5	14
2004	48	2	11
2005	42	2	14
2006	41	2	13
2007	43	2	9
2008	45	2	8

Years	Oil Sector	Industrial Sector	Agricultural Sector
2009	44	3	7
2010	42	3	7
2011	43	3	7
2012	43	3	7
2013	42	3	7
2014	44	3	7
2015	33	3	5
2016	36	3	5
2017	37	3	5
2018	42	3	5
2019	50	3	5
2020	51	3	5

Source: Prepared by the authors (2023) based on: Central Bank of Iraq, Annual Economic Report, General Directorate of Statistics and Research, different years; Ministry of Planning and Development Cooperation, Annual Statistics, Central Statistical Organization, various issues.

It is noted that the extractive industry represented by the oil sector occupies a major importance in the formation of the gross domestic product, as seen in Figure (2). This contribution differs according to the variation in the volume of production, export and prices. In the year 2020, the oil sector recorded a contribution rate of 51% in the formation of the gross domestic product. This high percentage in the oil sector is attributed to the high rates of crude oil production and prices, as Iraq's production of crude oil reached 4.1 million barrels of the aforementioned year, coinciding with the rise in prices, which reached the level of \$21,005 per barrel. In addition, the decline in the activity of other sectors in generating the gross domestic product due to the damage inflicted on these sectors as a result of the military operations, which led to oil taking the lead in the percentage of its contribution to the formation of the output (Central Bank of Iraq, the Economic Report and the General Directorate of Statistics and Research, 2003 and 2004). It is observed from the previous table, compared to 2020, the percentage of the contribution of this sector was 48% in 2004, and it continued to decline, reaching 42% and 41% in 2005 and 2006, respectively, as a result of the high percentage of the contribution of other sectors. In 2007, the percentage of contribution was 43%. This increase is due to the increase in crude oil exports, especially after the return of oil exports through the northern port, with the rise in oil prices from \$55 per barrel in 2006 to \$61 per barrel in 2007 (Central Bank of Iraq, Economic Report, and General Directorate for Statistics and Research, 2007).

In 2008, this percentage increased to 45% as a result of the unprecedented rise in crude oil prices, which reached \$147 per barrel. In 2009, this sector was affected by the global financial crisis where its contribution decreased to 44%, as oil prices declined by 33% in 2009

compared to 2008 (Central Bank of Iraq, Economic Report & General Directorate of Statistics and Research, 2009: 7). Then, the contribution of this sector to the GDP ranged between 33-44% until 2014, then it declined to 33% in 2015 due to the drop in oil prices. As for the industrial sector, its contribution rate did not exceed 3% for most of the years from 2003 to 2020, and the maximum percentage it reached was 5% in 2003. This low percentage of the industrial sector's contribution to the formation of the gross domestic product resulted from the suffering of this sector throughout the previous decades of difficulties and challenges. These challenges reduced the productivity of this sector as a result of many factors, the most important of which are the political conditions the country went through, the instability of economic policies, the aging of machinery and equipment, and factors related to administrative failures and the lack of an industrial strategy. Not to mention the damage done to this sector during the events of 2003, which led to the destruction of the infrastructure on which this industry is based. As most of the large industries deteriorated, and many public companies, production plants, and electric power generation stations were subjected to major destruction, which led to the suspension of many companies in the industrial sector; all of which led to a decrease in the productivity of this sector and a decrease in its contribution to the generation of the gross domestic product (Akram, 2015).

When examining the data of the above table regarding the contribution of the agricultural sector to the formation of the gross domestic product, it is noted that the percentage of the contribution of this sector is high compared to the percentage of the contribution of the industrial sector, as the agricultural sector recorded a contribution rate of 14%, 11%, 14% and 13%, respectively, for the years 2003, 2004, 2005 and 2006. This improvement in the percentage of the contribution of the agricultural sector during the aforementioned years is due to the improvement in productivity in this sector (Central Bank of Iraq, Economic Report and General Directorate of Statistics and Research, 2005). However, this percentage declined to 5% in 2015, and this decline continued at the same level until 2020. This decline in the proportion of the agricultural sector's contribution to the formation of the gross domestic product is attributed to: the lack of development of agricultural production requirements, the reliance on traditional methods of irrigation and agriculture, the scarcity of water, the lack of government support as well as bad weather, represented by low rates of rainfall, dust storms, high salinity, the abundance of the imported agricultural crops in the market, as well as the spread of diseases and epidemics and the failure to use modern technologies to treat them: all of these things led to weak production for this sector and a decrease in its contribution (Central Bank of Iraq, The

Economic Report, and The General Directorate of Statistics and Research, 2008). What is noted on the gross domestic product in Iraq is the low percentage of the contribution of the non-oil sectors, and that the oil sector contributes greatly to the formation of this output. Table (2) shows that the oil sector, as an average for the period 2003-2020, recorded a contribution rate of 43.16%, while the industrial sector recorded only 2.83%, as an average for the same period. As for the agricultural sector, this percentage, as an average for the aforementioned period, was 7.83%. This is evidence of the rentier nature of the Iraqi economy, which constitutes the output of a rentier sector that depends on the outside for the largest percentage in the formation of its gross domestic product (Central Bank of Iraq, Economic Report and General Directorate of Statistics and Research, 2020).

Figure 2. The sectoral structure of the gross domestic product in Iraq for the period (2003-2020)



Source: Prepared by the authors (2023).

Financial Indicators

The structure of the public revenue

The disruption of the productive structure of the economy, due to its dependence on a primary commodity for export, leads to an imbalance in the structure of the state's financial resources. In Iraq, most of its resources are covered by oil revenues because it is a rentier economy that relies mainly on oil, in addition to the inability of other financial resources to cover public revenues, as shown in Table (3) below. This table shows that oil revenues cover about 93.9% of the total public revenue as an average for the period (2003-2020). Based on the

data of this table, it is possible to know the reality of the structure of public revenue and analyze the direction of its development for the mentioned period.

Table 3. The structure of public revenue in Iraq for the period from 2003 to 2020 (million dinars)

Years	Public Revenue	Change Rate %	Oil Revenue	Percentage of Public Revenue %	Other Revenues	Percentage of Public Revenue %	Percentage of Public Revenue of the output %
2003	4,596,000	-	4,096,500	89.1	499,500	10.9	15.5
2004	21,729,106	372.7	21,434,206	98.7	294,900	1.3	40.8
2005	28,958,608	33.2	28,336,608	97.9	622,000	2.1	39.3
2006	49,232,349	70.1	48,641,120	98.8	591,229	1.2	51.5
2007	52,046,698	5.7	50,747,131	97.6	1,299,567	2.4	46.6
2008	80,252,182	54.1	79,131,752	98.7	1,120,430	1.3	51.1
2009	55,209,353	-31.2	51,719,059	93.7	3,490,294	6.3	42.2
2010	69,521,117	25.9	66,819,670	96.1	2,701,447	3.9	42.8
2011	99,998,776	43.8	98,090,214	98.1	1,908,562	1.9	46.0
2012	119,466,403	19.4	116,597,076	97.6	2,869,327	2.4	46.9
2013	103,767,395	-13.1	110,677,542	97.1	3,089,853	2.9	37.9
2014	105,386,623	1.5	97,072,410	92.1	8,314,213	7.9	40.7
2015	66,470,252	-36.9	51,312,621	77.1	15,157,631	22.9	34.6
2017	6,752,236,923	34.3	48,641,120	93.7	1,299,567	1.3	46.6
2018	71,147,582,333	35.323	50,747,131	96.1	1,120,430	6.3	51.1
2019	87,484,121,212	36.37	79,131,752	98.1	3,490,294	3.9	42.2
2020	89,672,372,232	39.2	51,719,059	97.6	2,701,447	1.9	42.8

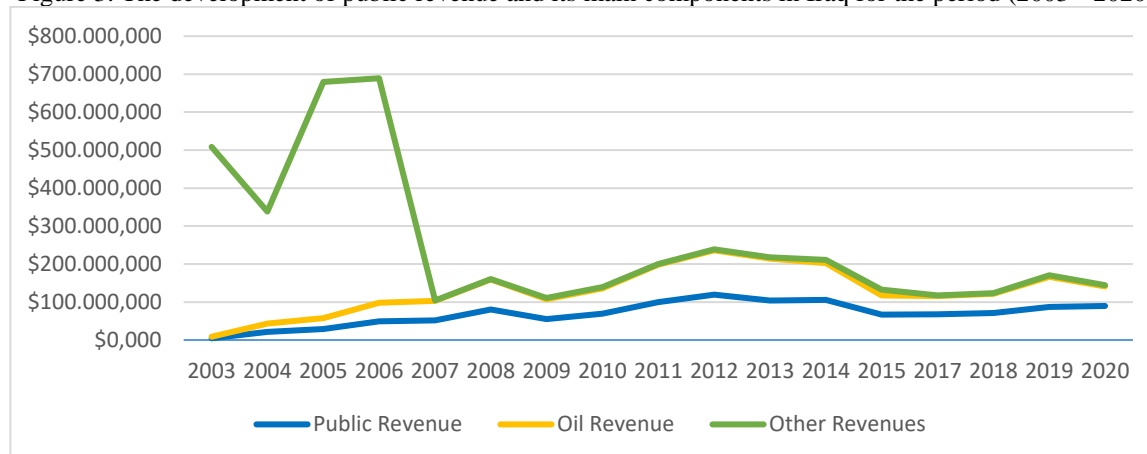
Source: Prepared by the authors (2023) based on: the Central Bank of Iraq, Annual Statistical Bulletin, General Directorate of Statistics and Research, various issues.

Through examining the data of Table (3), it is noted that the public revenue has witnessed an upward increase since the year 2003, and the public revenue recorded 4,596,000 million dinars in 2003, of which the oil revenue was 89.1%. The public revenue continued to increase until it reached 80,252,182 million dinars in 2008, at a positive annual growth rate of 54.1%. Oil revenue constituted the largest percentage of the total public revenue with a contribution rate of 98.7%, while other revenues recorded a contribution rate to the total public revenue of 1.3%. This increase in the total public revenue is related to the increase in the oil revenue, which reached 79,131,752. million dinars in 2008 as a result of the rise in oil prices; however, it declined during 2009 from the level it reached in 2008 to 51,719,059 million dinars as a result of the global financial crisis and the decrease in oil prices, as a result of that public revenue was declined to 55,209,353 million dinars, with a negative annual growth rate of -31.2%. Oil revenue recorded a high percentage of the total public revenue of 93.7%, while the percentage of other revenues of the total public revenue reached 6.3%. After prices recovered since 2010 and crossed the barrier of \$100 per barrel during the subsequent years, the public revenue rose again, as shown in Figure (3), achieving positive growth rates of 22.9, 43.8, and

19.4% for the following years 2010, 2011, and 2012, respectively. Oil revenue formed a percentage of the total public revenue, ranging between 98.1% as a maximum in 2011 and 96.1% as a minimum in 2010. In 2013, public revenue achieved a negative annual growth rate of -13.1%. This negative growth came as a result of the decline in oil revenue due to the drop in oil prices from 107 dollars per barrel in 2012 to 103 dollars per barrel in 2013 (Central Bank of Iraq, Economic Report, and the General Directorate of Statistics and Research, 2013). Despite this decline, the oil revenue constituted the largest percentage of the total public revenue reaching 77.1%. Among the measures taken by the state in light of the sharp decline in oil revenues, the most prominent of which was the increase in the collection of taxes and customs fees and the control of border crossings (the Central Bank of Iraq, the Economic Report and the General Directorate of Statistics and Research, 2015). The decline in revenues continued for the years 2017, 2018, 2019, and 2020, respectively, at rates of 1.3, 6.3, 3.9, and 1.9 (The Central Bank of Iraq, the Economic Report, and the General Directorate of Statistics and Research, 2020).

When looking at the components of the public revenue in Table (3), it is noted that there is a clear imbalance in the structure of this revenue because it depends mainly on the oil revenue, as shown in Figure (3) below. Since oil is linked to fluctuations in the global market, meaning that its price is determined by forces beyond the ability of the national economy; therefore, public revenue remains subject to volatility and instability base on fluctuations in global oil prices. This does threaten the inability to stabilize the largest funding source for public expenditure due to the lack of a future vision for oil prices in the international market. In Iraq, another factor that impacts oil revenues, aside from pricing, is the quantity produced, which is still low in comparison to the country's vast oil reserves.

Figure 3. The development of public revenue and its main components in Iraq for the period (2003 - 2020)



Source: Prepared by the authors (2023).

The structure of public expenditure

With the shift in the country's political system in 2003 and the following philosophy reflected by the necessity to switch to a market economy, it was expected that the nature of the spending orientation and the function of fiscal policy would change from being a basic tool for managing the rentier economy to be a basic tool for managing the transition towards a market economy. However, the reality indicates otherwise. As the state's spending orientation regarding fiscal policy has turned to a channel for the distribution of oil revenues through high consumer and service investment expenditure away from the conditions of economic efficiency of public expenditure, as indicated by many researches and studies. It is possible to find out the structure of public expenditure and its development for the period (2003-2020) through the following Table:

Table 4. The structure of public expenditure in Iraq for the period from 2003 to 2020 (million dinars)

Years	Public Expenditure	Change Rate %	Current Expenditure	Percentage of Public Expenditure %	Investment Expenditure	Percentage of Public Expenditure %	Percentage of Public Expenditure of the output %
2003	9,232,200	-	7,362,300	79.8	1,869,900	20.2	31.2
2004	33,657,511	264.6	28,543,333	84.9	5,114,173	15.1	63.2
2005	35,981,168	6.9	28,431,168	79	7,550,000	21	48.9
2006	50,963,261	41.6	41,691,161	81.8	9,272,000	18.2	53.3
2007	51,727,468	1.5	39,062,163	75.5	12,665,305	24.5	46.4
2008	59,861,973	15.7	44,190,746	73.8	15,671,227	26.2	38.1
2009	69,165,523	15.5	54,148,081	78.3	15,017,442	21.7	52.9
2010	84,657,466	22.4	60,980,694	72	23,676,772	28	52.2
2011	96,662,767	14.2	66,596,473	68.9	30,066,292	31.1	44.4
2012	117,122,930	21.2	79,954,033	68.2	37,177,897	31.8	46.0
2013	138,424,608	18.2	83,316,006	60.2	55,108,602	39.8	50.5
2014	163,416,518	18.1	98,793,961	60.5	64,622,557	39.5	63.1
2015	119,462,429	-26.9	78,248,392	65.5	41,214,037	34.5	62.3
2016	51,727,468	1.5	39,062,163	75.5	12,665,305	24.5	46.4
2017	59,861,973	15.7	44,190,746	73.8	15,671,227	26.2	38.1
2018	69,165,523	15.5	54,148,081	78.3	15,017,442	21.7	52.9
2019	84,657,466	22.4	60,980,694	72	23,676,772	28	52.2
2020	96,662,767	14.2	66,596,473	68.9	30,066,292	31.1	44.4

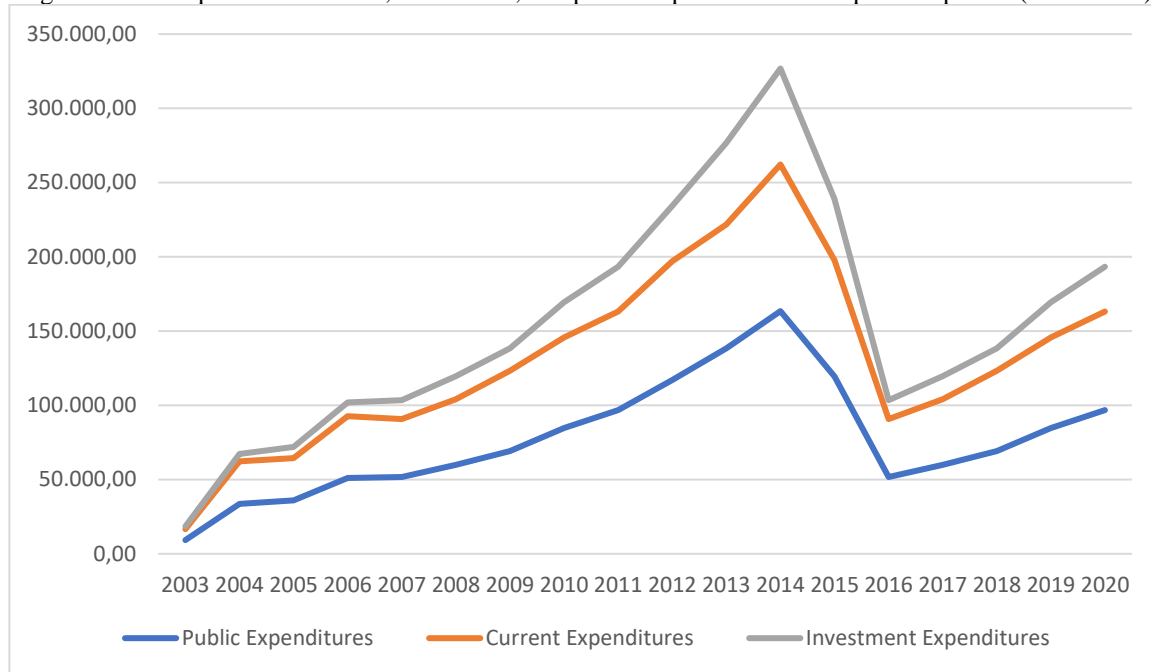
Source: Prepared by the authors (2023) based on: Central Bank of Iraq, Annual Statistical Bulletin, General Directorate of Statistics and Research, various issues.

Public expenditure in Iraq is closely related to oil export revenues. The returning of these exports to the oil market after 2003 and the increase in their foreign exchange revenues were reflected in the volume of public expenditure, especially in terms of consumer expenditure. By tracking the way of total public expenditure, as shown in Table (4), it is clear

that public expenditure witnessed a significant expansion throughout the study period. In 2003, public expenditure reached 9,232,200 million dinars, then it rose to 33,657,511 million dinars in 2004 at an annual growth rate of 264.6%. For the years 2003-2004, current expenditure was 79.8% and 84.9% of total spending, respectively. This rise is attributed to an increase in expenses by ministries following the transfer of authority, particularly the ministries of military and electricity, as well as electoral expenses (Central Bank, 2004). While the percentage of investment expenditure out of total public expenditure declined from 20.2% in 2003 to 15.1% in 2004. Then, public expenditure continued to rise throughout the years 2005, 2006, 2007, 2008. This increase in public expenditure is due to the increase in oil revenues being the main financier of public expenditure. It continued to rise for the years 2009-2011 and recorded positive growth rates of 15.5%, 14.2%, and 21.2%, with the current expenditure formed the largest proportion of that spending. During the following years, public expenditure witnessed a steady increase. In 2015, it declined significantly from 163,416,518 million dinars in 2014 to 119,462,429 million dinars, achieving a negative growth rate of -26.9%. This decline is attributed to the decline in crude oil prices, after which it began to rise until it reached 22.4% in 2019. From the foregoing, it is clear that there is an imbalance in the structure of public expenditure as a result of the almost complete dependence on oil in collecting revenues and then covering public expenditure.

From Table (4), throughout the research period, it is clear that current expenditure comprises the lion's share of total spending, whereas expenditure on investments does not have a comparable relevance to current expenditure. Despite its improvement in recent years, the ratio of this aspect of spending to total public expenditure during the study period did not exceed, at its best, 39.8% in 2014, and; therefore, the gap remained large between it and current expenditure, as shown in Figure (4). The increase in current expenditure after 2003 is attributed to the entry of additional items into the general budget, represented by the increase in public sector salaries, allocations for the social protection network, and allocations for the reconstruction of Iraq in delaying and developing fixed capital formation in the public sector (Al-Jubouri, 2012). According to the ratio of the public expenditure indicator to the gross domestic product, the data of Table (4) indicate an increase in this ratio in most years of the study as a result of the increase in public expenditure, especially in the current expenditure. The most evident indication of the size of the government and the level of its intervention in economic activity is the public expenditure and its percentage of GDP.

Figure 4. Developments in current, investment, and public expenditures in Iraq for the period (2003-2020)



Source: Prepared by the authors (2023).

Budget structure

After investigating the items of the general budget, in both aspects of the public revenue and public expenditure, it is possible to find out the overall look of the financial position of the state through the net surplus or deficit of the budget and the indicators related to it, which are shown in Table (5). Table (5) shows that the net budget recorded a deficit for most of the years of the period (2003- 2020). During the year 2003, the budget deficit reached -4,636,200 million dinars.

Table 5. Structure of the general budget in Iraq for the period from 2003 to 2020 (million dinars)

Years	Public Revenue (1)	Public Expenditure (2)	Net Budget (3)	Net Budget Ratio of Output (4)	Ratio of Deficit or Surplus to Public Expenditure (5)	Public Revenue Coverage of public Expenditure % (6)
2003	4,596,000	9,232,200	4,636,200-	-15.6	-50.2	49.8
2004	21,729,106	33,657,511	11,928,405-	-22.4	-35.4	64.5
2005	28,958,608	35,981,168	7,022,560-	-9.5	-19.5	80.4
2006	49,232,349	50,963,261	1,730,912-	-1.8	-3.3	96.6
2007	52,046,698	51,727,468	319,230	0.2	0.6	100.6
2008	80,252,182	59,861,973	20,390,209	12.9	34.0	134.1
2009	55,209,353	69,165,523	13,956,170-	-10.6	-20.1	79.8
2010	69,521,117	84,657,466	15,136,349-	-9.3	-17.8	82.1
2011	99,998,776	96,662,767	3,336,009	1.5	3.4	103.4
2012	119,466,403	117,122,930	2,343,473	0.9	2.0	102.0
2013	103,767,395	138,424,608	34,657,213-	-12.6	-25.0	74.9
2014	105,386,623	163,416,518	58,029,895-	-22.4	-35.5	64.4
2015	66,470,252	119,462,429	52,992,177-	-27.6	-44.3	55.6

2016	49,232,349	50,963,261	1,730,912-	-1.8	-3.3	96.6
2017	52,046,698	51,727,468	319,230	0.2	0.6	100.6
2018	80,252,182	59,861,973	20,390,209	12.9	34.0	134.1
2019	55,209,353	69,165,523	13,956,170-	-10.6	-20.1	79.8
2020	69,521,117	84,657,466	15,136,349-	-9.3	-17.8	82.1

Source: Prepared by the authors (2023).

The decline continued until 2006, which is attributed to the deficit rate due to the rise in crude oil prices, which was reflected in the increase of oil revenues, the main financier of the budget, which explains the high percentage of revenue coverage of spending of 96.6% in 2006. While examining the data of the above table, it is noted that the deficit turned into a surplus of 319,230 million dinars in 2007, at a rate of 0.2% of the gross domestic product, and the surplus for public expenditure reached 0.6%. It is also noted that the percentage of public revenue coverage of public expenditure has increased reaching 100.6%. As a result of the unprecedented rise in crude oil prices in 2008 after it reached \$147 per barrel, the surplus rose to reach 20,390,209 million dinars, at a rate of 12.9% of the gross domestic product (GDP). It is noted that the percentage of public revenue coverage of public expenditure was 134.1%. In 2009, the public budget recorded a deficit of about -13,956,170 million dinars. This deficit is attributed to the drop in crude oil prices due to the global financial crisis in 2009, and the percentage of public revenue coverage of public expenditure reached 82.1%.

During the years 2011 and 2012, the net public budget achieved a surplus of 3,336,009 and 2,343,473 million dinars, respectively, with a percentage of GDP amounting to 1.5% and 0.9%, while the surplus of public expenditure was 3.4% and 2.0%, respectively. It is also noted during the aforementioned years that the percentage of public revenue coverage of public expenditure increased, which reached 103.4% and 102.0%, respectively. During the years 2013-2015, the net public budget shifted from surplus to deficit, reaching a maximum of -58,029,895 million dinars during the year 2014 and -52,992,177 million dinars during the year 2015, due to the drop in oil prices during the second half of 2014. It continued in declining below the level of \$50 per barrel in 2015. The rate of increase in public expenditure reached 0.6 and 34.0 for the years 2018 and 2019), respectively, to re-record a deficit in the years 2019 and 2020, with ratios of -20.1 and -17.8, respectively.

Table (5), which shows the status of the general budget in Iraq for the period (2003-2020), demonstrates that the final position of the general budget represented by the ratio of deficit to GDP has registered a deficit for most of the years of the current study to reach -16.2% as an average for the period from 2003 to 2020; this is a clear indication of exaggeration in

allocations, especially operational ones, and non-compliance with the available financial resources. Thus, the Iraqi economy became dominated by the consumer over the producer, whether at the level of the general budget or even at the level of the balance sheet in the behavior of the family unit. This confirms the behavior of the general budget in increasing its operating expenses and the predominance of the consumerist nature financed by oil revenue resources (Al-Jubouri, 2021).

The Second Aspect: An Analysis of the Relationship Between Oil Price Volatility and the Structure of Public Expenditure in Iraq

The general nature of the expenditure policy in Iraq after 2003 was the main tool for influencing the level of economic activity at this stage. In light of the phenomenon of oil rents, which constitutes the largest proportion of the gross domestic product due to the failure of development efforts aimed at addressing the general structural distortion, the high spending performance of the fiscal policy (consumer or operational) coincided with the intensification of the unilateralism of the economy and the rise that witnessed oil prices in the international market as well, as shown in Table (6). In light of the decline in other financing sources beyond the oil sector to cover the growing spending rates, the decline in oil revenues carries a full and necessary burden on fiscal policy to reduce public expenditure, which limits the effectiveness of this policy in achieving growth and development. Unilateralism and rentierism prevent fiscal policy and public expenditure in particular from playing the required role and adapting effectively to financial crises. The trend and evolution of the relationship between oil price fluctuations and public expenditure variables can be analyzed in Table (6), which reviews developments in public expenditure, growth rates of both current and investment expenditures, as well as the relative importance of both in terms of forming the public expenditure.

By examining the data of the table below, it becomes clear that both expenditures witnessed a remarkable development, as the current expenditure increased in 2004 to 28,543,338 million dinars and achieved a positive annual growth rate of 287.6% with a relative importance to the total public expenditure of 84.9%. Investment expenditure also recorded an increase in value of 5,114,173 million dinars, with an annual growth rate of 173.4% and a relative importance of 15.1%. This increase in both aspects of public expenditure came as a result of the rise in oil prices, which rose from \$28.8 per barrel in 2003 to \$36 in 2004. In 2005, current expenditure declined to a level where it achieved a negative annual growth rate of -0.3%, with a public expenditure rate of 79%. This decline is attributed to production problems

in many sectors due to the poor security situation during the year 2005 (Central Bank of Iraq, Economic Report and General Directorate of Statistics, 2005: 2). However, investment expenditure recorded a positive growth rate of 47.7% and a relative importance of 21% to total public expenditure. In the year 2006, the current expenditure increased significantly, reaching 41,691,161 million dinars, then decreased again in 2007 to achieve a negative annual growth rate of -6.3%. Then it witnessed a positive growth rate of 13.1% in 2008. The increase in both expenditures is attributed to the developments in oil prices, especially after the annual average price of crude oil reached \$61 per barrel in 2009.

Table 6. Oil prices and public expenditure (current and investment) in Iraq for the period from 2003 to 2020 (million dinars)

Years	Oli Price (1)	Public Expenditure (2)	Annual Growth	Current Expenditure (3)	Annual Growth	Ratio 2/3	Investment Expenditure (4)	Annual Growth	Ratio 2/4
2003	28.8	9,232,200	-	7,362,300	-	79.8	1,869,900	-	20.2
2004	36.0	33,657,511	264.6	28,543,338	287.6	84.9	5,114,173	173.4	15.1
2005	50.6	35,981,168	6.9	28,431,168	-0.3	79	7,550,000	47.7	21
2006	61.0	50,963,261	41.6	41,691,161	46.7	81.8	9,272,000	22.9	18.2
2007	69.1	51,727,468	1.5	39,062,163	-6.3	75.5	12,665,305	36.7	24.5
2008	94.4	59,861,973	15.7	44,190,746	13.1	73.8	15,671,227	23.7	26.2
2009	61.0	69,165,523	15.5	54,148,081	22.5	78.3	15,017,442	-4.1	21.7
2010	77.4	84,657,466	22.4	60,980,694	12.7	72	23,676,772	57.7	28
2011	107.5	96,662,767	14.2	66,596,473	9.2	68.9	30,066,292	26.9	31.1
2012	109.5	117,122,930	21.2	79,954,033	20.5	68.2	37,177,897	32.6	31.8
2013	105.9	138,424,608	18.2	83,316,006	4.2	60.2	55,108,602	48.2	39.8
2014	96.2	163,416,518	18.1	98,793,961	18.5	60.5	64,622,557	17.2	39.5
2015	49.5	119,462,429	-26.9	78,248,392	-20.8	65.5	41,214,037	-36.3	34.5
2016	61.0	50,963,261	41.6	41,691,161	46.7	81.8	9,272,000	22.9	18.2
2017	69.1	51,727,468	1.5	39,062,163	-6.3	75.5	12,665,305	36.7	24.5
2018	94.4	59,861,973	15.7	44,190,746	13.1	73.8	15,671,227	23.7	26.2
2019	61.0	69,165,523	15.5	54,148,081	22.5	78.3	15,017,442	-4.1	21.7
2020	77.4	84,657,466	22.4	60,980,694	12.7	72	23,676,772	57.7	28

Source: Prepared by the authors (2023).

Nevertheless, this expenditure accounted for the largest percentage of the total public expenditure, reaching 78.3. This indicates a state of imbalance in the structure of public expenditure at the expense of investment expenditure. This imbalance in the structure of public expenditure is a permanent feature of fiscal policy in the of oil rents economies. The inability to rein in public expenditure when crude oil prices increase and the inability minimize it during a sharp decline in oil prices give little opportunity for maneuvering or dealing with the issue in flexible and efficient manner (ECB, 2015).

Oil dependent countries are generally described as: low efficiency in managing public resources, wasteful of little benefit expenditure, the influence of illegitimate interests, and laziness in developing resources from non-oil sources. Public expenditure per capita in oil-producing countries is usually much higher than that of non-oil countries for the same stage of development. It is worth noting that an expenditure review is necessary to tackle the sharp decline in revenues; however, this review must begin with an assessment of efficiency, with the goal of revealing the possibility of achieving the same goals or maintaining the volume of performance with fewer resources. Reducing spending, due to a lack of finance resources, is a policy that loses a chance for improvement. It is always possible to finance new activities by reducing the costs of existing activities, and when the administration lacks this interest, a major crisis can be postponed by paying more resources to the government work machine with the continued decreasing rate of achievement to costs, and failure accumulates until collapse (Ali, 2015).

According to Table (6) data, by examining the current expenditure data, it is noted from the subsequent years that current expenditure continues to dominate the total public expenditure, as shown in Figure (5): it achieved positive growth rates throughout the years from 2010 to 2014 and it increased from 60,980,694 million dinars in 2010 to 98,793,961 million dinars in 2014. In 2015, crude oil prices collapsed to \$49.2 per barrel, after it was \$96.2 per barrel in 2014. As a result, both current and investment expenditures decreased. However, it is noted that the rates of reduction in investment expenditure exceeded their counterparts in current expenditure, and thus investment expenditure achieved the highest negative annual growth rate of -36.3%, falling from 64,622,557 million dinars in 2014 to 41,214,037 million dinars in 2015, at a negative annual growth rate that reached -20.8%. Then, the oil price rose again in 2018, reaching \$94.4 per barrel. Consequently, both current and investment expenditures rose, achieving an annual growth rate of 13.1% (Joint Arab Economic Report, League of Arab States and others, Arab Monetary Fund, 2020:102)

Figure 5. Oil price with the current, investment, and public expenditures in Iraq for the period from 2003 to 2020



Source: Prepared by the authors (2023).

By examining the trends of public expenditure throughout the study period based on the data of Table (6), it is found that the ratio of current expenditure exceeds that of investment, and this is an indication of exaggeration in allocations. The increase achieved in oil revenues as a result of the rise in oil prices prompted the state to expand its obligations and activities, especially wages, salaries and public services, which increased the cost of purchasing goods and services. This increase in revenues allowed for a significant increase in public expenditure, as there were no controls or strategies to direct that spending through adopting ambitious programs that enhance the infrastructure of human and material resources and achieve economic achievements that contribute to diversifying the domestic production base. This spending orientation of the state has transformed the fiscal policy into a channel for distributing oil revenues through high consumption spending and service investment spending away from the conditions of economic efficiency of public expenditure and the criteria for evaluating economic policies according to specific goals and development plans (Hassan, 2016).

The correlation between public expenditure and oil export revenues is one of the main problems facing public expenditure policy in the Iraqi economy. If one examines the trend of that spending, it will be noted that it follows fluctuations in oil prices, in addition to its similarity in the trend highlighted by the decline in crude oil prices in 2015, as shown in Table (6). It is clear that the ease of financing public spending with the oil resource, due to its political and social satisfactions, causes institutional weakness in the difficulty of securing revenues beyond

oil. The greater the number of pressure groups on the financial decision in Iraq and the consensual formations of the authorities, the public expenditure expands in a pattern called the effect of gluttony or gluttony of spending, and its efficiency decreases. In that political environment and the known characteristics of the rentier (oil) economy, the high price of oil stimulates more spending, while the government faces great difficulties that do not allow it to be reduced to appropriate levels when crude oil prices drop (Ali, 2015).

These policies were evident in the public expenditure in Iraq, where the increase in oil revenues as a result of the rise in crude oil prices allowed the economy to adopt ambitious spending programs that enhanced the infrastructure of human and material resources and achieve great economic achievements and leaps. However, the large influx of oil rent resources helped the state's expansion capability to find channels to distribute the revenues of this rent in various aspects, foremost of which is government employment as well as increasing salaries, wages and social benefits until the general budget became the main source of jobs and employment, as it expanded with the expansion of the oil resource in eras prosperity and economic growth as well as in times of recession and economic downturn, which increased the financial crisis in the country. Over the past years, successive governments have practiced a policy of employment that is not linked to actual needs or existing or potential economic capabilities. The statistics estimate that the number of government workers is approximately 3 million employees, in addition to the number of retirees exceeding 2 million, so the total salaries and allocations in the general budget are approximately 44 billion dollars annually, representing the almost fixed article of the general budget. This confirms that the operating budget on its spending side has become constrained by fixed or annual salary installments, which reflects the low flexibility of current and future public expenditure. Also, these spending patterns borne by the general budget have restricted the possibility of expansion on the investment spending side, with the exception of allocations for fixed capital formation for infrastructure. As far as other investment trends are concerned, such as the construction of residential and government buildings and the development of other non-oil sectors, spending in such areas is proceeding at a modest and irregular pace due to the lack of success of such types of investments by the state, and thus the continued dependence on oil revenues to satisfy various needs without a real ability to diversify other revenue sources. Thus, it can be said that if the fiscal policy continues to operate under the umbrella of oil rents, investment expenditure will not follow the footsteps of operational or current expenditure, and the structural imbalance of public expenditure will continue to deepen at the expense of investment expenditure (Hassan, 2016).

Despite the remarkable improvement in investment expenditure growth rates and its relative importance to total public expenditure during the recent years of research, many economists confirm that it suffers from low implementation rates. The process of listing investment projects in the general budget is carried out according to the proposals received by the ministries and executing agencies without relying on economic feasibility studies. This means that those agencies suggest allocations inaccurately, and this matter reflects the weakness of the executing agencies in assessing their abilities and capabilities in implementing these projects, which leads to inflation in the size of the investment budget as a result of inefficiency in allocation and low implementation rates, and thus the high opportunity cost of investment allocations (Jaafar, n.d).

It must be noted that the general budget is witnessing an unstable financial phenomenon, represented by the increase in operating expenses and the achievement of financial surpluses in the investment budget due to the deviation of the utilization of the investment budget allocations. This means that the absorptive capacity of the operating budget expenditures has flexibility and high ability to absorb, benefit and implement financially. However, the absorptive capacity of investment projects deviates from the real and financial utilization rates by no more than 50%. The surplus in the deviation of the utilization level of the absorptive investment capacity in the general budget has become an extra financing factor within the annual expansion of the operating budgets. This contradiction in the annual absorptive capacity between the highly flexible operating budget in exchange and implementation and the weakly flexible investment budget is now burdening the monetary policy with the deviation of the restricted investment absorptive capacity and the absorption of its surpluses into a consumer spending power added to highly flexible expenditures that constituted a burden on foreign reserves that are depleted by the high exchange flexibility. In operating expenses, their high growth rates, and the high consumption demand they add, the national economy cannot face them with a real and immediate supply to avoid the problems of inflation. Thus, foreign reserves are affected by an increase and decrease in the level of deviation in the absorptive capacity of operational expenditures concerning investment expenditures, building productive capacities, and developing supply powers in the economy (Saleh, 2020).

CONCLUSION

The study demonstrates that the volatility and instability of oil prices have been a constant feature since the emergence of the oil commodity. Economic, political, and military

factors have interacted and overlapped to shape the pattern of oil prices, leading to permanent volatility, fluctuations, and cyclical nature of this vital commodity. The imposition of embargo on some producing countries also played a significant role in determining the pattern of oil prices. The political scene has become dominant over the economic scene in numerous cases in determining oil prices. This has resulted in complicated economic issues for oil economies, including the sample country, as they confront waves of declines in crude oil prices and oil revenues. The study highlights that the expansion and consolidation of the rentier economy leads to a gradual decline in the productive economy in industry and agriculture, as well as a decline on all economic, social, and political levels. The growth of the rentier economy creates a culture of its own, known as the rentier culture. This culture also creates forces and social groups that embrace and protect it, leading to a decline in the mentality of labor, production, and creativity. Furthermore, public finances in oil economies follow a special pattern that tends to disrupt the efficiency of public performance and limit the flexibility of the tools of the financial portfolio in achieving growth and economic stability.

The study finds that the ease with which the oil resource can be used to finance public expenditures due to its political and social advantages creates an institutional vulnerability in securing revenue apart from oil. The high price of oil stimulates more spending in the political environment and recognized characteristics of the rentier economy. However, when the price of oil declines, the government confronts significant difficulty in reducing public expenditure to suitable levels. This leads to sacrificing investment spending whenever government budgets suffer from fiscal deficits as a result of low oil prices caused by the inflexibility of reducing current expenditure. Finally, the study concludes that oil rents induce inefficiency, increase the centralization of power, and encourage the increase in public expenditure in patterns that lead to a decrease in its efficiency and become an unstoppable practice. The fiscal policy pursued by oil rent countries, after the rise in oil prices in the seventies of the last century by increasing public expenditure with the goal of increasing the national production, has no effect serving this goal despite the huge allocated financial resources. Therefore, it is important for oil economies, including the sample country, to find alternative sources of oil revenue and to adopt policies that promote economic development and productivity, rather than relying solely on oil revenues.

Based on the findings of the study, the recommendations made include the need to adhere to the budget by continuously evaluating compliance with budget items to ensure the rationalization of public expenditure. Additionally, it is important to develop transparent and

flexible principles to ensure real economic growth in Iraq. Diversification of the economy's sources is also critical to preventing volatility in prices or the end of the oil era. This can be achieved by raising the proportion of tax revenues, increasing investment expenditure, and not relying solely on oil. Furthermore, the study recommends the reinvestment of surplus oil income in other productive sectors such as industry and agriculture to improve the balance of payments. These measures will help to reduce the impact of the rentier economy and promote economic growth and development in Iraq. In conclusion, the study emphasizes the need for Iraq to diversify its economy and reduce its dependence on oil. The recommendations provided in the study offer practical solutions to address the challenges faced by the country due to the volatility of oil prices. The implementation of these recommendations will promote sustainable economic growth and development in Iraq, leading to a more stable and prosperous future.

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