

Fiscal Policy Amid Oil Price Shocks: Challenges and Responses

العنوان: السياسة المالية في ظل صدمات أسعار البترول: تحديات واستجابات

Dr. SAFI Ahmed^{1*}; Pr.Dr. BENABED Mokhtar²

¹Lecturer (B); Institute of Applied Sciences and Techniques, University Oran1, Ahmed Ben Bella; Algeria. Laboratory: Local Communities Management and Local Development, University of Mascara (LCMLD).

safi.ahmed@univ-oran1.dz

safi.ahmed@univ-mascara.dz

²Full professor, Tindouf University, Algeria. Laboratory:(DELODEP).

mokhtar.benabed@cuniv-tindouf.dz

Received on:10/10/2024

Accepted on:17/10/2025

published on: 15/12/2025

Abstract:

Fiscal policy faces significant challenges in light of oil price shocks that directly impact public revenues and expenditures, especially in countries dependent on oil revenues.

This study aimed to highlight the impact of oil shocks on economic growth and public finance in Algeria and to review the responses and policies adopted to mitigate the effects of these shocks. The study results concluded that oil price shocks are among the most important factors influencing fiscal policy and the national economy in Algeria, and that fiscal policy faced difficulties in maintaining a balance between public spending and revenues during periods of low oil prices, and that the absence of economic diversification increased the fragility of public finances in the face of oil fluctuations.

Keys words:Fiscal policy; Oil price shocks; Challenges; Repercussions; Economic stability.

JEL classification codes:E62; Q43; E60; E63; O55.

ملخص:

تواجه السياسة المالية تحديات كبيرة في ظل صدمات أسعار البترول التي تؤثر مباشرة على الإيرادات والنفقات العامة، خصوصاً في الدول المعتمدة على العائدات النفطية.

هدفت هذه الدراسة إلى إبراز أثر الصدمات البترولية على النمو الاقتصادي والمالية العامة في الجزائر و استعراض الاستجابات والسياسات المتبعة للتقليل من آثار تلك الصدمات وتوصلت نتائج الدراسة إلى أن صدمات أسعار البترول تُعد من أهم العوامل المؤثرة على السياسة المالية والاقتصاد الوطني في الجزائر وأن السياسة المالية واجهت صعوبات في الحفاظ على التوازن بين الإنفاق العام والإيرادات خلال فترات انخفاض أسعار النفط وأن غياب التنويع الاقتصادي زاد من هشاشة المالية العامة أمام التقلبات البترولية.

الكلمات المفتاحية:السياسة المالية؛ صدمات أسعار البترول؛ التحديات؛ التداعيات؛ الاستقرار الاقتصادي.

تصنيف JEL:62E; 63Q; 60E; 63E; 55O.

Corresponding author: SAFI Ahmed^{1*}, e-mail: safi.ahmed@univ-mascara.dz

1- Introduction:

Fiscal policy is one of the most important tools that countries rely on to achieve economic stability and confront cyclical fluctuations. However, rentier countries, led by Algeria, face significant difficulties when oil price shocks occur due to their heavy reliance on oil revenues as a primary source of financing.

Fiscal policy is one of the fundamental pillars upon which countries rely to achieve economic stability and counter cyclical fluctuations affecting economic activity. However, rentier economies, most notably Algeria, remain more vulnerable to fluctuations resulting from oil price shocks, given their heavy reliance on oil revenues as the primary source of funding for the general budget.

The global oil market has witnessed sharp price fluctuations in recent decades, which have directly affected public revenues and government spending and balances. Faced with these challenges, fiscal policy finds itself required to adopt flexible and proactive strategies to mitigate the effects of these shocks and achieve a balance between development requirements and financial stability.

Hence, the importance of studying fiscal policy in light of oil price shocks, to reveal its ability to address current challenges and review the most important responses and reforms adopted by Algeria and some other oil-producing countries.

From here the problem of the study crystallized in:

What are the most prominent challenges you faced, and the responses you adopted to ensure the stability of the national economy in light of these fluctuations?

1-1- Study hypotheses :

Algeria's fiscal policy relies heavily on oil revenues, making it vulnerable to oil price fluctuations.

Oil price fluctuations pose a major challenge to financial stability, as they lead to an imbalance between revenues and expenditures.

The Algerian government has adopted a range of financial and economic responses, such as temporary austerity policies and the activation of new financial instruments such as the Revenue Regulation Fund and domestic borrowing, to mitigate the impact of oil shocks.

The limited diversification of the national economy is one of the most prominent challenges, as the oil sector remains the primary source of funding for the budget, while other productive sectors remain weak contributors to national income.

Algeria's fiscal policy seeks to achieve a balance between economic stability and sustainable development, through structural reforms aimed at boosting non-oil revenues and rationalizing public spending.

1-2-The importance of the study:

This study is of great importance as it sheds light on one of the most significant economic issues facing rentier states, particularly Algeria, given their heavy reliance on oil revenues. It also contributes to understanding the relationship between fiscal policy and oil fluctuations and highlights the national economy's readiness to confront global financial crises.

In addition, the results of this study help decision-makers formulate more flexible and sustainable financial policies.

1-3-Study objectives :

- Analysis of the concept of fiscal policy, its tools and mechanisms of action in the economy.
- Highlighting the impact of oil shocks on economic growth and public finance in Algeria.
- Diagnosing the challenges facing Algerian fiscal policy in light of oil price fluctuations.
- Reviewing responses and policies adopted to mitigate the effects of these shocks.
- Proposing solutions and future prospects to support financial stability and diversify the national economy.

2- Previous studies :

- **A study by Khalid Bin Azza Mohammed entitled “The Impact of Oil Price Shocks on Household Consumption in Algeria.” This study aimed to analyze the impact of oil price shocks on household consumption using annual data spanning from 1975-2020:**

The study relied on the Autoregressive Variable Regression (VAR) model approach. The study results indicated a unidirectional causal relationship, moving from both oil price variables and GDP toward household consumption. The results of the impulse response function analysis also showed that the impact of oil price shocks on household consumption is greater in the short term than in the long term, which is consistent with economic theory.

- **A study by Ayad Hanan and Ben Issa Amina entitled “The Impact of Oil Price Shocks on Inflation in Algeria”: An Econometric Study During the Period (1990-2019):**

This study aimed to study and analyze the impact of oil price changes on the inflation rate in Algeria during the period (1990-2019), using the structural autoregressive (SVAR) model, structural response function analysis, and structural variance components analysis. The study model is based on the following variables: inflation rate IF (dependent variable), oil prices oilp, and gross domestic product (GDP) (independent variables). Through this study, we concluded that there is a unidirectional causal relationship from oil prices to inflation in Algeria, i.e., there is a relationship between oil price shocks and

changes in the inflation rate, but at a weak rate. In addition, there is a relationship between GDP shocks and oil price shocks. This justifies the fact that the Algerian economy is a quartile economy par excellence and is subject to fluctuations in oil prices.

3- Fiscal policy :

3-1-The concept of fiscal policy:

Fiscal policy can be defined as an analytical study of the financial activity of the public sector and the resulting effects of this activity on various sectors of the national economy. It includes, among other things, a quantitative adjustment of the volume of public spending and public revenues, as well as a qualitative adjustment of the aspects of this spending and the sources of these revenues, with the aim of achieving specific objectives, foremost among which are advancing the national economy, driving development, spreading stability throughout the national economy, achieving social justice, and providing equal opportunities for the citizenry by bringing together the social classes and reducing disparities among individuals in the distribution of income and wealth. Fiscal policy is also defined as a program deliberately planned and implemented by the state, using its revenue sources and spending programs to bring about desirable effects and avoid undesirable effects on all variables of economic, social, and political activity, in order to achieve societal goals.(Nourredine & FARAJI, 2018, p. 203)

Fiscal policy is a method used by the state to employ public spending and revenue tools to direct macroeconomic activity by influencing key indicators such as gross domestic product, employment opportunities, and investment levels, thus achieving desired economic goals.(DAHAWI, 2015-2026, p. 02)

3-2-Fiscal Policy objectives :

Through its various public policies, the state seeks to achieve specific goals related to achieving development and stability. Fiscal policy is one of the most important of these policies, given its direct and profound impact on economic activity. All countries, both developed and developing, rely on it as a primary tool for achieving their economic and social goals. The most prominent objectives that fiscal policy seeks to achieve can be summarized as follows:

- Achieving economic efficiency in allocating resources: This goal is based on the optimal use of available economic resources in society, directing them toward areas that achieve the greatest possible benefit and the least amount of waste or harm. Within this framework, the state intervenes to distribute resources among various sectors according to carefully considered priorities, ensuring the public interest and raising the level of economic performance to achieve a balance between needs and available resources.

- **Achieving price stability:** Fiscal policy also works to mitigate sharp fluctuations in the general price level, whether inflationary or deflationary, due to their negative economic and social impacts. To contain these fluctuations, fiscal authorities tend to adopt contractionary policies in cases of inflation. These policies involve reducing government spending, particularly on non-essential consumption, while maintaining spending directed towards increasing productive capacity. They may also resort to increasing tax revenues or achieving a general budget surplus when necessary to ensure price stability and maintain the purchasing power of the currency. Through these mechanisms, fiscal policy seeks to create a stable economic environment that promotes balanced and sustainable growth.

- **Achieving full operational level:** This goal, which aims to ensure full utilization of society's available productive capacities, has been a top priority of fiscal policy since the Great Depression of the 1930s, when fiscal policy became vital in combating unemployment. This goal is achieved by increasing government spending, reducing taxes, or a combination of both, with the goal of raising the level of effective aggregate demand. Increased aggregate demand directly leads to increased demand for labor and higher levels of real national income, given the direct relationship between the size of aggregate demand and the employment rate. Increased demand leads to higher expected revenues and increased production, which in turn increases the need for labor and improves employment levels.

The government plays a compensatory role here in addressing the shortfall in private demand by increasing public spending, particularly investment spending, which raises national income and leads to increased employment opportunities. These measures, commonly known as expansionary fiscal policy, aim to address the shortfall in aggregate demand and stimulate economic activity.

- **Achieving economic growth:** Economic growth has become a long-term goal of fiscal policy, particularly after real production rates in industrialized countries slowed to less than 2% between 1913 and 1938. This slowdown was a result of the economic damage caused by wars and the urgent need to rebuild and develop national economies. Therefore, governments intervened to enhance their productive capacities and increase production capacity by raising production levels, stimulating investment, and developing material and human resources. This contributed to achieving continuous increases in production capacity and sustainable economic growth.

- **Income redistribution:** Fiscal policy seeks to adjust income distribution within society, particularly in developing countries, with the aim of addressing economic, social, and political inequalities. From a social perspective, a fair distribution of income contributes to stability among various segments of society

Title: Fiscal Policy Amid Oil Price Shocks: Challenges and Responses

and reduces protests, demonstrations, and strikes. From an economic perspective, it increases the incomes of those with low and limited incomes, which raises the marginal propensity to consume and stimulates economic activity, production, and investment, benefiting the economy in the long term.

In this context, the state uses fiscal policy tools to provide public services to low-income groups, such as housing projects, health improvements, free education, and subsidies for basic foodstuffs. It also imposes taxes, despite the weakness of some tax systems, with the aim of bridging the gap between social classes. These tools include progressive taxes on high-income earners, inheritance taxes, sales taxes, and other policies that help redistribute wealth and achieve social justice.

- Achieving economic stability: This clause aims to ensure consistent economic performance and prevent sharp fluctuations in production, income levels, and prices, without implying stagnation or stagnation in economic activity. Economic stability enables balanced and sustainable growth, reduces risks that threaten the continuity of production and employment, and ensures a stable economic environment that promotes comprehensive development.(Samia, 2021-2022, pp. 19-21)

3-3- Fiscal policy mechanism :

Fiscal policy tools are employed in the economy as a primary means of addressing the recessionary gap and the inflationary gap. Their mechanism of action varies depending on the state of the economy:

➤ Section One - The Economic Depression:

This situation indicates an excess of aggregate supply compared to aggregate demand, leading to an accumulation of products without the ability to sell them, in addition to a shortage of job opportunities and varying levels of unemployment. Under these conditions, the economy suffers from a slowdown in growth. To overcome this crisis, the government resorts to what is known as expansionary fiscal policy, which aims to stimulate aggregate demand and stimulate production.

Expansionary fiscal policy takes several forms, the most prominent of which are:

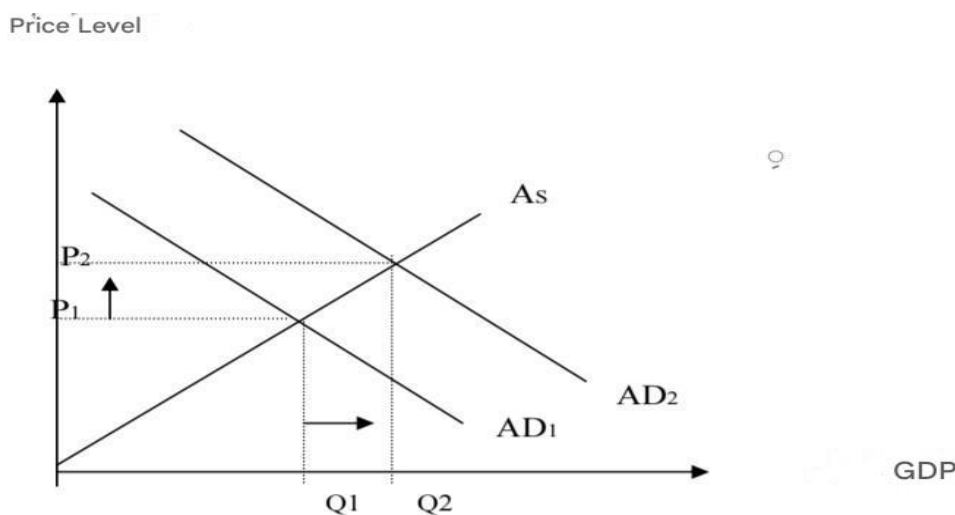
Increasing public spending: This involves directly increasing government purchases of goods and services, or by raising individual incomes through financial transfers and support policies. Higher individual incomes lead to increased demand for products and services. This, in turn, prompts businesses to increase their production levels to meet increased demand, which necessitates hiring additional workers, thus contributing to addressing unemployment and driving the economy toward recovery and growth.

Tax Reductions and Exemptions: As an alternative or complement to increased spending, the government may reduce taxes on individuals and businesses or offer tax exemptions, increasing citizens' disposable income. Lower tax deductions free up individuals' resources for consumer spending and savings, which leads to increased aggregate demand, including investment and consumer demand, and thus stimulates economic activity.

Using both tools together: In some cases, the government resorts to combining increased public spending with simultaneous tax cuts. This dual policy works to boost aggregate demand more efficiently, accelerate the economy's recovery from recession, and drive economic development and growth forward.

The following figure shows how expansionary fiscal policy addresses recession through the following chart:

Figure N° 01: illustrates expansionary fiscal policy.



Source: (Mohamed, Financial Policy and its Role in Activating Investment, University of Algiers 3, 2010-2011, p. 06).

- Where AS is the total supply.
- Where 1AD is the aggregate demand before adopting an expansionary policy.
- Where AD2 is the aggregate demand after following an expansionary policy.

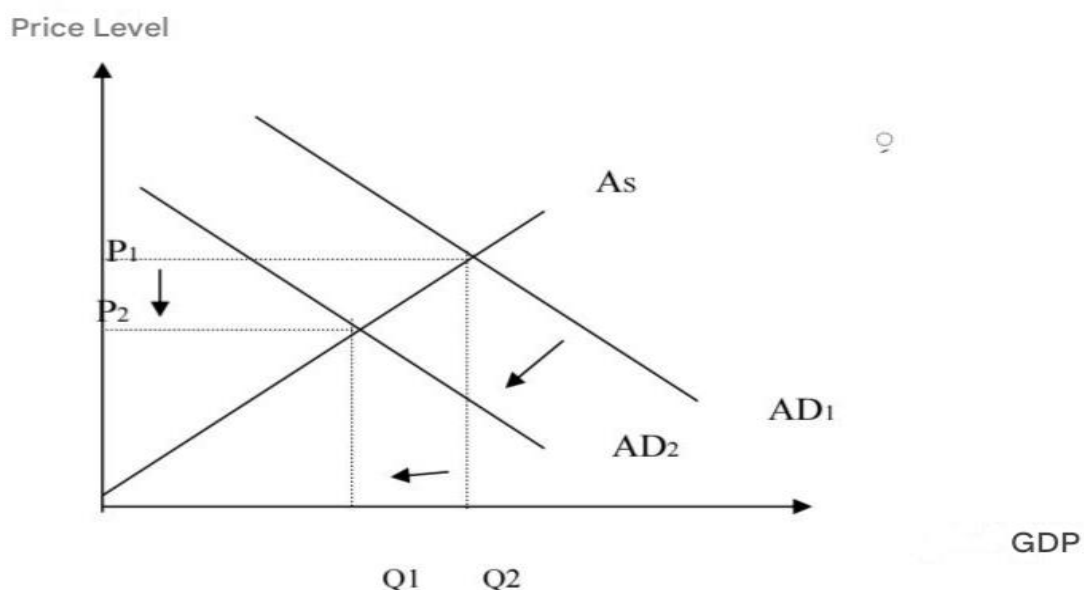
➤ Section Two: The State of Economic Inflation:

Inflation is an economic phenomenon characterized by a sustained rise in the general price level, leading to a decline in the purchasing power of the currency. In such a situation, fiscal policy seeks to address the imbalance by

reducing aggregate demand to mitigate price pressures. This is achieved by adopting a contractionary fiscal policy aimed at controlling economic activity through a set of tools, most notably:

- Reducing public spending: Reducing government spending reduces the volume of total consumption due to the multiplier effect, which contributes to a decline in aggregate demand and thus to limiting price increases.
- Tax increase: Tax increases contribute to reducing individuals' disposable income, reducing their purchasing power and decreasing demand for goods and services, which contributes to stabilizing the general price level.
- Combining the two tools: implementing a dual policy of reducing public spending and raising taxes simultaneously, with the goal of achieving economic balance and escaping inflation in a more effective manner.
- The following diagram represents how contractionary fiscal policy works to combat inflation, illustrating the relationship between a decline in aggregate demand and price stability in the economy.

Figure N° 02: illustrates the contractionary fiscal policy.



Source: (Mohamed, Financial Policy and its Role in Activating Investment, University of Algiers 3, 2010-2011, p. 06).

Figure (02): illustrates how contractionary fiscal policy works to limit inflation, as reducing spending and increasing taxes shifts the aggregate demand curve from AD to AD2, resulting in a decrease in the general price level from P to P2. Thus, this policy seeks to reduce spending in society, control aggregate demand levels, and limit price increases.

However, fiscal policy cannot perform its role effectively unless it is a rational policy based on well-studied foundations that take into account the specificities of the national economy. There are also a number of factors that determine the nature and effectiveness of fiscal policy in each country, including the general economic situation, the size of public revenues, the level of the budget deficit, and the efficiency in managing the country's financial resources. (Mohamed, 2010-2011, pp. 05-07)

4- Oil price shocks :

4-1- Definition of oil price shocks :

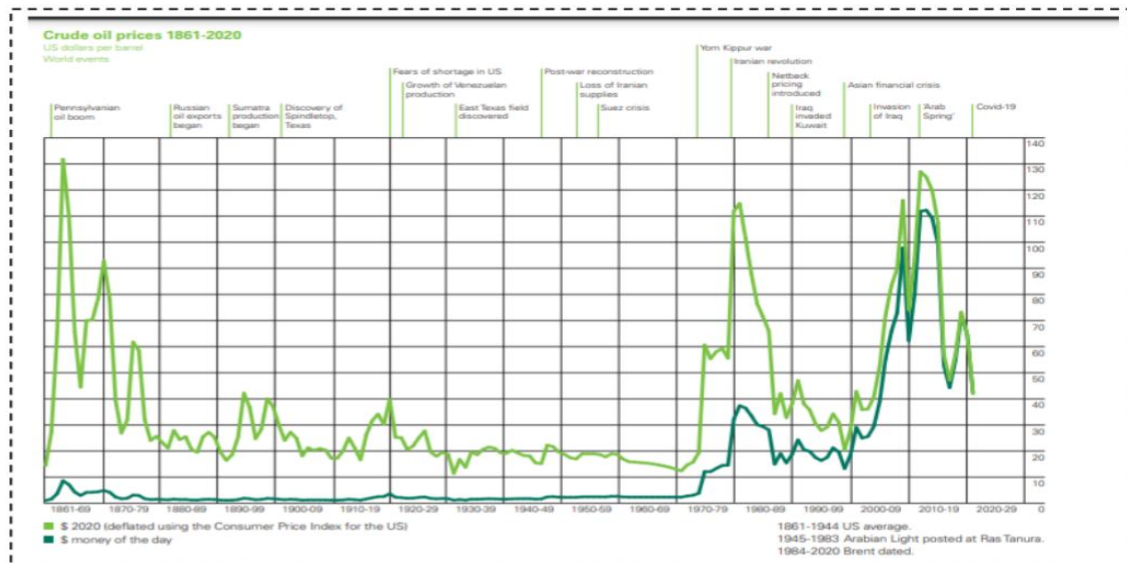
Oil shocks can be defined by defining the scope of the study and establishing a methodological framework that is subsequently used in the associated economic analysis. In this context, several researchers have offered multiple definitions of these shocks. Hamilton (2005) considered oil shocks to represent any sharp change, whether an increase or a decrease, in real oil prices, resulting from supply and demand being affected by factors internal to the economy, leading to broad effects at the macroeconomic level, despite their external source. For his part, Shoko (2012) believes that these shocks represent sudden and unexpected changes in global oil prices, resulting from external factors, which are likely to have a direct impact on some internal economic variables. (Razika, 2024-2025, p. 02)

An economic shock is defined as an unexpected event that causes a broad and sudden change in the performance of an economy and the behavior of fundamental economic variables. This shock may be positive, contributing to improving economic indicators and stimulating growth, or negative, leading to declining performance and the emergence of economic crises. In the oil market, shocks are represented by a sudden imbalance between supply and demand, causing sharp fluctuations in oil prices, either rising or falling. (GHOUL, 2024, p. 899)

4-2- Historical development of oil shocks:

This section of the study examines the events associated with significant changes in oil prices. To facilitate the research and analysis process, we relied on the timeline presented by Hamilton in his documentation of the most significant price shifts during the period 1973-2010. The focus will be on the period from 1973 to 2020, where a graphical study of the most important events and factors that led to the emergence of oil shocks is conducted, to provide a clear and comprehensive understanding of their impact on the macroeconomy.

Figure N° 03: Historical development of oil shocks for the period from 1960-2020.



Source: (Mouaisi, The Impact of Oil Price Shocks on Unemployment and Inflation in Algeria, University of Algiers 3, 2024-2025, p. 06)

The figure above shows that the price of oil experienced significant fluctuations that coincided with a series of events that we will highlight in an analysis of successive time periods beginning in the 1970s:

4-3- Analysis of the period from 1973 to 1996: The OPEC era:

The early 1970s witnessed a combination of factors that contributed to a significant rise in oil prices. The United States experienced a decline in its oil production, reaching its lowest levels in 1972. Although large quantities of oil were available in the Middle East to offset the American decline, the transition from a global market centered on the Gulf of Mexico to one centered on the Arabian Gulf did not proceed smoothly. The depletion of American oil fields, coupled with the collapse of the Bretton Woods system and the United States' abandonment of its commitment to convert the dollar into gold, significantly impacted the value of the dollar and raised the prices of most internationally traded commodities. Furthermore, negative real interest rates, where the interest rate is lower than the rate of inflation, contributed to the rise in commodity prices, including oil.

1973-1974: OPEC Embargo: On October 17, OPEC's Arab member states announced an embargo on oil exports to certain countries deemed supportive of Israel, reducing OPEC's total production by 1 million barrels per day in November, equivalent to 07.5% of global production. Although production increased in some other countries, such as Iran, this only partially offset the

losses, prompting the Gulf states to significantly double oil prices on January 1, 1974.

1978-1979: The Iranian Revolution The 1973 Arab-Israeli War was only the beginning of a volatile decade in the Middle East. In Iran, defying Arab states, oil production increased during the 1973-1974 blockade. However, the public protests that erupted in 1978 extended to the oil sector by the fall of that year, leading to a drop in Iranian oil production of 04.8 million barrels per day, equivalent to 07% of global production at the time, between October 1978 and January 1979. About a third of this decline was offset by production increases in Saudi Arabia and other countries.(Razika, 2024-2025, p. 07)

Analysis of the period 1980-1981: The Iran-Iraq War:After the Iranian Revolution, Iran's oil production recovered to nearly half of its previous levels by 1979. However, this recovery was short-lived, as the country experienced a new shock with the outbreak of the Iran-Iraq War in September 1980. This war led to a significant decline in oil production from both countries, with the combined decline amounting to approximately 06% of total global production during that period. Although some of this deficit was compensated for within a few months by other producing countries, the war's impact on the stability of the global oil market was clear. From this perspective, the Iranian Revolution and the Iran-Iraq War can be viewed as two separate shocks, but together they constituted a long phase of ongoing oil turmoil in the region.

Analysis of the period 1981-1986: The Great Crash in Prices:The Iran-Iraq war lasted for several years, and oil production in both countries recovered very slowly. Conversely, consuming countries responded strongly to the high oil prices of the 1970s, leading to a significant decline in global oil demand in the early 1980s. However, Saudi Arabia attempted to support prices by reducing its production by about three-quarters between 1981 and 1985. However, this step was insufficient to prevent prices from falling by 25% in nominal terms and even more in real terms. In 1986, Saudi Arabia abandoned its policy of reducing production and began increasing it again, causing prices to collapse from \$27 per barrel in 1985 to around \$12 at their lowest point in 1986.

This sharp decline was the result of a combination of several factors, most notably the increase in oil production from Saudi Arabia, the United States, and the Soviet Union, which led to a global surplus in supply, along with the slowdown in global economic growth and sharp fluctuations in exchange rates, which in turn contributed to the further decline in oil prices.(Razika, 2024-2025, p. 08)

Analysis of the period 1990-1991: The First Gulf War:By 1990, Iraq had managed to restore its oil production levels to those of the late 1970s, but the outbreak of the Gulf Crisis in August of that same year completely changed

the equation. The Iraqi invasion of Kuwait and the subsequent strict international sanctions led to a sharp decline in production in both Iraq and Kuwait, which together accounted for approximately 09% of global oil production. These developments raised serious concerns that the conflict would spread to neighboring countries, especially Saudi Arabia, heightening anxiety in global markets and increasing oil price volatility during that period.

It doubled within a few months, but this surge was short-lived. Saudi Arabia quickly intervened, using the spare production capacity it had maintained over the previous decade, allowing the market to rebalance and global production levels to return to pre-conflict levels by November.

1997-2010: The modern industrial transformation phase: During this period, the world witnessed a widespread transition from traditional agricultural economies to advanced industrial economies, which brought about a qualitative shift not only in living standards but also in the structure of the global oil market. A group of newly industrialized countries accounted for only 17% of total global oil consumption in 1998, but they were responsible for approximately 69% of the increase in global oil demand since that date, reflecting the growing role of these economies in determining market trends.

Analysis of the period 1997-1998: The East Asian crisis: Before the Asian financial crisis, countries such as South Korea, Thailand, and others were achieving astonishing growth rates that impressed economists, becoming known as the "Asian Tiger Miracle." Although these countries' oil consumption was not high compared to the rest of the world, future forecasts based on the Hotelling principle predicted continued strong growth for these economies, reinforcing the belief that oil prices could rise in the mid-1990s.

However, the summer of 1997 brought radical changes, as East Asian economies were hit by severe financial crises, beginning in Thailand with the collapse of its currency, and then spreading to South Korea and a number of neighboring countries. These crises caused a loss of confidence in Asian financial markets and generated concern among global investors about the sustainability of growth in the region. As a result, demand for oil declined significantly, and the price of a barrel fell to less than \$12 by the end of 1998, its lowest level since 1972 and a historic low that is unlikely to be repeated in the near future. (Razika, 2024-2025, p. 09)

Analysis of the period 1999-2000: Resumption of growth: Shortly after the Asian crisis, the region's economies regained their productive capacity and industrial activity, contributing to a resurgence in global oil demand during 1999. By the end of the year, prices had recovered to their pre-1997 levels, and continued to rise by approximately 38% until November 2000, before declining again due to the slowdown in global economic growth.

Analysis of the 2003 period: Venezuelan unrest and the Second Gulf War: The oil market experienced temporary disruptions due to the general strike in Venezuela, which shut down production by approximately 02.1 million barrels per day. This coincided with the US invasion of Iraq, which resulted in the loss of an additional 02.2 million barrels. Despite a short-lived price increase, the impact remained limited due to the shortfall being compensated for by other sources. Experience has shown that prices are more affected by persistent economic and geopolitical factors than temporary shocks.

Analysis of the period 2007-2008: growing demand and stagnant supply: This period was characterized by strong global economic growth, which increased demand for oil by 03% annually, while supply remained limited after 2005. This imbalance led to a significant increase in prices from \$55 to over \$140 per barrel in 2008, driven by investment flows and speculation in commodity markets. This surge is considered one of the largest oil shocks since World War II.

Analysis of the period 2010-2020: Weak global demand and price volatility: This period saw sharp fluctuations in oil prices due to weak demand and increased supply, especially after the expansion of US shale oil production. In 2014, the price of a barrel fell to less than \$80 due to OPEC's decision not to cut production, then rose temporarily due to the Libyan war. Between 2014 and 2015, prices fell by half due to overproduction and slowing growth in China and Brazil. A stronger dollar also contributed to increased pressure on prices.

In 2020, the COVID-19 pandemic led to a collapse in global demand and a more than 65% drop in prices, before they gradually began to recover at the end of the year thanks to the OPEC+ agreement to cut production and improved consumption with the lifting of health restrictions.

Libyan conflict ignites oil market (2011): The outbreak of the civil war in Libya in 2011 represented one of the most significant shocks to the global oil market during the second decade of the millennium. Libya, a major OPEC producer, exported significant quantities of oil to Europe, but with production almost completely halted due to internal fighting, the market lost approximately 01.5 million barrels per day.

This sudden disruption caused prices to rise by nearly 35%, peaking at around \$127 per barrel in March 2011. This surge was not only linked to the shortage of Libyan supplies; it also increased tensions in the region as the Arab Spring spread to other countries, deepening concerns about the stability of oil supplies in the Middle East and North Africa.

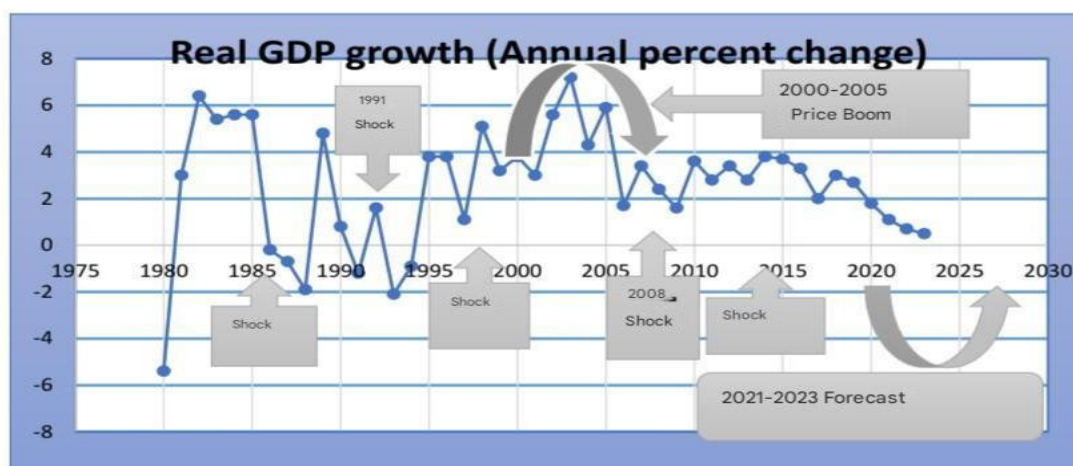
Although markets were later able to compensate for the shortfall through additional production from other countries, the Libyan crisis once again

confirmed the fragility of the oil market in the face of geopolitical events and the extent to which prices are affected by the slightest disruption in producing countries. It also highlighted the limitations of OPEC's ability to intervene quickly in light of the political divisions and economic pressures that accompanied that period. (Razika, 2024-2025, pp. 06-11)

4-4- The impact of oil shocks on Algerian economic growth:

The hydrocarbon sector is the primary and dynamic driver of the national economy, given its significant contribution, exceeding 95% of total exports and, at times, reaching nearly 75% of public revenues, in addition to nearly 45% of the gross domestic product. The following figure highlights the path of economic growth during the period from 1980 to 2020, with the aim of studying the relationship between the development of economic growth rates and fluctuations in oil prices.

Figure N° 04:Shows the development of real growth rates for the period (1980-2020) with forecasts until 2023.



Source:Razika, The Impact of Oil Price Shocks on Unemployment and Inflation in Algeria, University of Algiers 3, 2024-2025, p. 37.

Actual changes in economic growth rates reflect a state of volatility and instability, as they are closely linked to developments in oil prices. It is noteworthy that each oil shock had a direct impact in line with its direction. For example, the reverse shock of 1986, characterized by a sharp decline in oil prices, led to negative growth rates of -01.9% in 1986, -0.7% in 1987, and 0.2% in 1988.

During the 1990s (1990-1999), real economic growth was marked by marked ups and downs. Between 1990 and 1993, which coincided with the first and second Stand-By Arrangements (SBAs) with the International Monetary Fund (IMF), negative growth rates were recorded due to the complex economic, social, and political conditions the country was experiencing at the time, along

with the slow pace of economic reforms, which were hindered by the absence of political reforms, the lack of transparency in the privatization process, and the limited performance of the private sector.

The second half of the 1990s, which coincided with the implementation of the economic stabilization programs (1994-1995) and the structural adjustment programs (1995-1998), known as the second-generation reforms, witnessed a significant improvement in economic performance. Average growth during this period reached approximately 03.7%, reaching more than 6% in 1998. This improvement is attributed to the success of these reforms and the government's commitment to implementing them, in addition to the improvement in oil prices and the availability of a number of supporting factors, such as debt rescheduling and the subsequent improvement in external debt servicing, and the increase in oil production to 800,000 barrels per day in 1996. Furthermore, improved climatic conditions had a positive impact on the agricultural sector, as its contribution to GDP increased from 15% in 1995 to 21.3% in 1996.

During the second decade of the new millennium, the national economy experienced relative stability, benefiting from the significant rise in oil prices in global markets. This encouraged the adoption of a new development policy through the Economic Recovery Support Program (2001-2004). This period recorded high growth rates averaging 05%, peaking in 2003 at 07.2%, driven primarily by improvements in the hydrocarbon sector in what became known as the "oil price revolution." With the implementation of the Supplementary Growth Support Program (2005-2009), growth rates stabilized at an average of 03%. However, they witnessed a significant decline in 2009 to 01.6% as a result of the repercussions of the 2008 global financial crisis, which led to a decline in global demand for oil and a drop in its prices.

The second decade of the new millennium was marked by the continued implementation of growth programs, dubbed the Growth Consolidation Programs, within the framework of the first (2010-2014) and second (2015-2019) five-year development plans. The first plan recorded positive growth rates averaging approximately 03.2%, while the second plan recorded an average rate of 02.06%. However, the latter plan was characterized by a downward trend in growth rates, which gradually declined to approximately 01% in 2019, affected by the significant collapse in oil prices. This prompted the government to adopt a policy of rationalizing public spending and reducing funding for investment projects, focusing only on high-priority operations. This negatively impacted the achievement of the goal of increasing the rate of economic growth.

As the oil shock continued, the COVID-19 pandemic further deepened the crisis, leading to widespread paralysis in global economic activity and a significant decline in oil demand, which in turn impacted national revenues and production levels. As a result, the economy experienced a significant contraction

in 2020, with a negative growth rate of approximately -05.1%, bringing to the forefront the debate about the volatility of economic growth and its connection to oil shocks.

To understand the dimensions of this problem, it is necessary to address the group of factors that have contributed to attempts to address these fluctuations and mitigate their effects.

➤ **Uncertainty of the economic growth path:**

Since 1982, the Algerian economy has entered a new phase characterized by a lack of clarity in its economic vision. This was accompanied by the dismantling of national institutions and the search for an alternative model to the "manufactured industries" model, which was based on major public investments. These transformations occurred in the context of a severe financial crisis that the country experienced in 1986, resulting from the significant collapse in oil prices. This prompted the adoption of the market mechanism without clearly defining the features of the new economic model to be followed. Instead of focusing on building the intellectual and economic foundations upon which development policies were based, successive governments were preoccupied with attempting to manage a market that was not yet qualified to absorb the rules of a liberal economy.

The economic environment lacked the components of this type of market, such as private sector readiness, a mature financial market, and a clear economic vision for defining competitive areas. As a result, structural contradictions within the national economy worsened between the requirements of a market economy on the one hand, and the continued extensive state intervention through its fiscal policies and the general budget on the other. This deepened the state of uncertainty that had characterized the path of economic growth for decades.

➤ **Economic conditions resulting from oil revenues:**

Sustainable economic growth relies on diversifying the production base and achieving balance across various sectors. However, the Algerian economy has remained overly dependent on the hydrocarbon sector, which accounts for approximately 95% of exports and nearly 75% of government revenues. This overdependence has made economic performance dependent on fluctuations in global oil markets, with oil prices determining the fate of growth and the country's financial balance.

High oil revenues, in some periods, led to a "rentier dependency" mentality among decision-makers, with growth becoming more tied to oil surpluses than to actual productive capacity. This resulted in a circumstantial and temporary nature of growth, as it was not the result of a sustainable development path but rather a direct reflection of fluctuations in oil prices.

The mismanagement of growth programs also contributed to the fragility of the economic structure, making Algeria vulnerable to external fluctuations and weak financial independence.

➤ **Sources of growth in the Algerian economy:**

The added value of various economic sectors is the primary driver of national growth, reflecting each sector's contribution to the gross domestic product (GDP). Available data demonstrates that certain sectors—such as hydrocarbons, agriculture, manufacturing, and services—represent the cornerstones of economic growth. However, these contributions remain unbalanced, with the hydrocarbons sector remaining dominant, while other sectors have a limited impact despite their importance in achieving true economic diversification, ensuring sustainable growth and reducing dependence on oil resources.

Table N° 01: Contribution of economic sectors to the total added value for the period (2000-2020)Unit %.

Year	Agriculture	Fuels	Industries	Construction and Public Works	Market Services	Non-Market Services
2000	09	41.9	07.5	08.7	21.9	11
2001	10.5	36.7	08	09.1	23.5	12
2002	10.1	35.7	08.1	09.9	24.2	12
2003	10.6	38.6	07.3	09.2	22.9	10.6
2004	10.2	40.7	06.8	08.9	22.9	10.6
2005	08.2	47.4	05.9	08	21.5	08.9
2006	08	48.5	05.6	08.4	21	08.5
2007	08	46.4	05.4	09.4	21.8	09.1
2008	07	48.1	05	09.2	20.3	10.3
2009	10.1	33.6	06.2	11.8	25.4	12.9
2010	09	37.2	05.5	11.2	23	14.1
2011	08.6	38.2	04.8	09.7	21.4	17.3
2012	09.4	36.6	05	09.9	21.9	17.4
2013	10.7	32.6	05.4	10.6	25	16.5
2014	11	29	05.2	11	26	17.6
2015	12.1	19.6	05.7	12	28.4	22.2
2016	12.7	18	05.8	12.3	28.7	22.5
2017	12.2	20.4	05.7	12.1	28.4	21.1
2018	12.3	23.1	05.6	11.9	27.8	19.4
2019	13.4	21.1	06.2	13.2	29.3	16.8
2020	15.4	15.2	06.8	14.2	28.5	19.9

Source: Razika, The Impact of Oil Price Shocks on Unemployment and Inflation in Algeria, University of Algiers 3, 2024-2025, p. 40.

The previous table demonstrates a significant disparity in the contribution of various economic sectors to value added. The hydrocarbon sector holds the

first place in terms of importance, but its contribution witnessed a significant decline during the second decade of the millennium. After exceeding approximately 41% during the first decade, its contribution fell to 26.4% due to the sharp decline in global oil prices. In 2020, it reached only 15.2%, ranking fifth.

In contrast, the services sector—both market and non-market—emerged as one of the largest contributors to added value, followed by the construction and public works sector in fourth place, then the agricultural sector, whose contribution ranged between 07% and 15% over time. Meanwhile, the industrial sector came in last, with a share not exceeding 06%, a result of the structural imbalances that the Algerian economy continues to suffer from, most notably the lack of productive diversification and the shortcomings of local manufacturing.

In general, it can be said that Algeria's economic growth is not based on actual increases in productivity and economic efficiency. Rather, it relies heavily on public investments directed towards expanding infrastructure, making it more expansionary than intensive. The hydrocarbon sector also remains the primary driver of other economic sectors, as development policies remain subject to its fluctuations. This deepens the fragility of the national economy and limits its ability to achieve sustainable and independent development.(Razika, 2024-2025, pp. 36-40)

5- Challenges and Responses :

5-1- The impact of oil price shocks on government spending in some countries and Algeria:

The decline in oil prices has broad economic repercussions, most notably a decline in oil revenues and a decline in government spending, which in turn leads to a slowdown in economic growth. Many studies have devoted special attention to examining the impact of oil revenues on public spending, particularly in countries that rely heavily on oil revenues as the primary source of budget financing.

- A study examining the impact of oil price fluctuations on seven macroeconomic variables in the Kuwaiti economy during the period from 1984 to 1998 demonstrated a clear causal relationship extending from oil prices and revenues to government development and current spending, subsequently affecting other economic variables. The empirical results also showed that oil price shocks and the resulting changes in oil revenues have a tangible impact on the volume of public spending, a finding confirmed by researchers Eltony and Al-Awadi (2001).

- In another context, researcher Guajardo, through his study of the temporal relationships between oil royalties, taxes, government spending, and GDP in

Mexico during the period 1981-1998, concluded that there is a reciprocal interaction between oil royalties and tax revenues. He found that tax revenues are unable to compensate for temporary declines in oil revenues, reflecting the fragility of public finances in the face of oil price fluctuations.

- Reyes-Loya studied the importance of oil revenues in the formation of Mexico's public finances, analyzing monthly time series covering the period from 1990 to 2005. He relied on three different models to determine the nature of the impact of global oil price fluctuations and government revenues from oil exports on Mexican fiscal policy. The results showed an inverse relationship between oil revenues and tax revenues, meaning that an increase in oil revenues is accompanied by a decline in tax revenues, and vice versa.

- In Tunisia, RafikJbeir and Sonia ZouariGhorbel (2009) found that oil price shocks do not have a direct impact on overall economic activity, but rather their effects are transmitted indirectly, and the government spending channel is the primary means through which these shocks are reflected in economic performance.

- In the same context, researcher Mohammad Reza Farzaneghan (2011) analyzed the dynamic impact of oil shocks on the components of Iranian government spending during the period 1959–2007. His results showed that military and security expenditures interact strongly with any change in oil revenues, while social expenditures remain less responsive to such shocks.

- HelmyHamdi (2013) also examined the relationship between oil revenues, government spending, and economic growth in the Kingdom of Bahrain, seeking to verify whether extensive government spending has contributed to boosting economic growth. Using a joint data analysis model to correct for variables for the period 1960–2010, the study concluded that oil revenues constitute the main source of growth and the basis for financing government spending.

- Rahma Al-Siddiq and a number of researchers studied the impact of oil price shocks on the Sudanese government's budget, relying on quarterly data covering the period from the first quarter of 2000 to the second quarter of 2011. The results showed that lower oil prices lead to a significant decline in oil revenues and current expenditures, and a rise in the budget deficit, while price increases did not show a tangible impact on budget variables. This indicates that the impact of oil price shocks on public finances in Sudan is asymmetric, with the government reacting more strongly to negative shocks than to positive ones.

- The study, published in the International Monetary Fund's Working Papers (IMF Working Papers, Sadeghi, 2017, WP/17/287), examined the impact of government size on the response of government production and spending to oil price shocks in 28 oil-exporting countries over the period 1990–2016. The

results highlighted that government size plays a crucial role in determining the extent to which the effects of oil price shocks are transmitted to national economies, as both public spending and non-oil production increase with unexpected increases in oil prices, and this response is greater in countries with larger governments. It also showed that sudden price increases typically lead to a significant expansion in government spending.

- In Nigeria, Adebayo Adedokun (2018) studied the impact of oil shocks on government expenditures and revenues using data covering the period from 1981 to 2014. He found that oil price shocks do not explain changes in government spending in the short run, while oil revenue shocks have strong predictive power in both the short and long runs. The results also showed that the effects of these shocks spill over to other macroeconomic variables through fiscal policy channels, especially in the long run.

- As for Algeria, the study by BoualkourNourredine and Soufan Al-Eid (2017) concluded that oil prices are one of the main determinants of government spending, both in the short and long term, and that Algerian fiscal policy is cyclical in nature, meaning that an increase in oil prices leads to an increase in government spending, while a decrease in oil prices causes a decline in this spending.

- A study by Jaber, Fatima Zahra, and Elias Al-Hanai Farah (2018), which used data from 1987 to 2013, demonstrated a long-term relationship between the price of oil, public revenues, and the effective exchange rate, on the one hand, and government spending, on the other. The most influential factor was found to be the price of oil, as government spending responds directly to any change in global prices, which is consistent with the nature of the Algerian economy, which relies on oil rents.

- In a quantitative study conducted by BouamraJoudi (2015) on the impact of oil price fluctuations on public spending policy in Algeria for the period 1990-2013, it was found that the relationship between oil prices and government spending is one of the strongest relationships among the country's macroeconomic variables. It was found that 84.92% of changes in government spending are attributed to oil price fluctuations, and that every one dollar increase in the price of oil leads to an increase in public spending of about 1.547316 billion Algerian dinars, and the opposite is true in the case of a decrease in prices.(BENAMOURA & MAZHOUD, 2020, pp. 07-08)

5-2- Algeria's economic challenges facing the modernization of the national economy and the volatility of oil prices:

As part of Algeria's efforts to integrate into the global economy, the country has embarked on profound economic reforms aimed at achieving sustainable growth and internal and external economic stability. These reforms

entailed a shift from a planned economy to a market economy, through cooperation with international financial institutions, most notably the International Monetary Fund (IMF), which imposed a set of structural measures to correct economic imbalances.

Algeria took its first steps in 1989 with an agreement with the International Monetary Fund to obtain a short-term loan worth \$200 million to address its balance of payments deficit. This was followed by the signing of international agreements to protect foreign investments, and the issuance of the Monetary and Credit Law in 1990, which brought about fundamental changes to the financial and commercial system. In 1991, a second agreement was concluded with international financial institutions, which included the establishment of two mechanisms: the first to support economic institutions through development funds, and the second, the "social network" to mitigate the effects of price liberalization.

However, the decline in oil prices in the early 1990s exacerbated the financial crisis, as external debt rose and foreign currency reserves declined. This forced Algeria in 1994 to reschedule its debts and resort to a structural reform program. The program aimed to restore economic balance through a set of measures, the most important of which were: restoring growth and financial stability, controlling inflation, rebuilding reserves, liberalizing foreign trade, controlling prices, modernizing the financial system, and reforming the social protection system.

Between 1999 and 2014, Algeria benefited from a boom in oil prices, which had a positive impact on the national economy. Gross domestic product (GDP) saw a significant increase, reaching approximately 17 trillion dinars. Average per capita income also rose from \$01,801 in 2000 to approximately \$5,764 in 2013, while the guaranteed minimum wage increased by more than 130% over 15 years.

This increase in oil revenues has enabled Algeria to achieve continuous trade surpluses since 1996, with the exception of a temporary decline in 1998. The surplus peaked between 2005 and 2014 before being affected by the collapse in oil prices at the end of the period.

This financial abundance was reflected in the volume of basic investments, as the state directed a large portion of oil revenues to building a strong infrastructure that supported the national economy, including the completion of numerous major projects, such as:

- Construction of 13 desalination plants and 72 water dams, and expansion of the railway network to more than 3,800 km, instead of 01,769 km in 2000.

Title: Fiscal Policy Amid Oil Price Shocks: Challenges and Responses

- Maintenance of 12 ports and modernization of 25 air facilities.
- 9,000 km of new roads were completed with a budget exceeding 3.1 trillion dinars, bringing the total length of the road network to more than 117,000 km.
- Air Algérie's fleet renewal is estimated at 600 million euros.
- Improving purchasing power and raising wages of public sector workers.
- Completing 02.7 million social housing units and creating job opportunities with a budget of nearly 260 billion dinars to combat unemployment.
- Strengthening foreign exchange reserves, which amounted to about \$180 billion by the end of 2014.(BAHIH, 2018, pp. 402-403)

6- Conclusion :

The study of fiscal policy in the face of oil price shocks highlights that the Algerian economy, as a rentier economy, remains vulnerable to fluctuations in global oil markets. It demonstrates that the dependence of public finances on oil revenues makes every price shock a significant factor influencing economic and social stability. Despite the significant challenges faced, Algeria has sought to adopt a set of reforms and fiscal policies aimed at containing the effects of these shocks by rationalizing public spending, activating domestic resource mobilization mechanisms, and striving to diversify the economic base.

The research findings confirm that achieving sustainable financial stability requires a long-term strategic vision based on profound structural reforms and diversifying sources of income to reduce dependence on the oil sector.

6-1- Study results :

- Oil price shocks are one of the most important factors influencing fiscal policy and the national economy in Algeria.
- Fiscal policy has struggled to maintain a balance between public spending and revenues during periods of low oil prices.
- The lack of economic diversification has increased the fragility of public finances in the face of oil fluctuations.
- The reforms adopted by Algeria partially contributed to mitigating the effects of the shocks, but they did not bring about a profound structural transformation in the structure of the economy.
- The need to activate modern financial tools, expand the tax base, and direct spending towards productive investment rather than consumption.

6-2- Future prospects :

- Achieving effective diversification of the national economy through developing the industrial, agricultural, and tourism sectors.

- Enhancing transparency and governance in the management of financial and energy resources.
- Continue financial reforms to increase the effectiveness of collection and expand non-oil revenues.
- Encouraging local and foreign investment to strengthen the production base and create new sources of financing.
- Building flexible financial policies based on accurate forecasts of oil markets and long-term planning.

6-3- Study recommendations :

- The need to reduce dependence on the oil sector by diversifying sources of national funding.
- Restructuring fiscal policy to ensure the sustainability and effectiveness of public spending.
- Directing investments towards productive sectors that contribute to creating added value and jobs.
- Establish a permanent national mechanism to monitor oil price fluctuations and assess their impact on the local economy.
- Improve the management of the Revenue Adjustment Fund or establish alternative sovereign funds to ensure budget stability during times of crisis.
- Developing fair and effective tax policies that stimulate the private sector and increase non-oil revenues.
- Adopting a forward-looking approach that integrates fiscal, economic, and social policies to achieve balanced and sustainable development.

7- Citations:

1-Ariallah Mohamed, 2010-2011, Fiscal Policy and its Role in Activating Investment, Faculty of Economics, Business and Management Sciences, University of Algiers 03.

2-BahihAbdelkader, Challenges of the Algerian Economy in the Face of Oil Price Fluctuations between the 1986-2015 Crisis, Journal of Finance and Business Economics, 2018.

3-DjegloulSamia, Asia Continent, 2021-2022, The Impact of Fiscal Policy on GDP in Algeria (1990/2020) An Econometric Study, Faculty of Economics, Business and Management Sciences, University of Mohamed Boudiaf - M'Sila.

4-Dahawi Arabiya Sa'ad, 2015-2016, The Impact of Oil Shocks on Fiscal Policy Variables, Faculty of Economics, Abu BakrBelkaid University - Tlemcen, Algeria.

5-Samia Ben Amoura, HajarMazhoud, The Impact of Global Oil Price Shocks on Algerian Government Expenditures for the Period 1997-2017, The Third International Conference on Arab Oil Economies in the Face of the Challenges of Global Oil Market Fluctuations, February 24-25, 2020.

6-Ayad Hanan, Ben Issa Amina, The Impact of Oil Price Shocks on Inflation in Algeria: An Econometric Study During the Period (1990-2019), Knowledge Groups Journal, Issue 01, 2023.

7-Nadia Ghoul, The Impact of Oil Price Shocks on Monetary Policy Variables in Algeria, Journal of Finance and Business Economics, Issue 02, 2024.

8-NourredineAbdelkader, BelhajFaraji, Challenges of Fiscal Policy in Light of Oil Price Fluctuations in Algeria: An Analytical Study of the Period from 1980 to 2017, Maghreb Journal of Economics and Management, Issue 01, 2018.

9-MoaisiRazika, 2024-2025, The Impact of Oil Price Shocks on Unemployment and Inflation in Algeria, Faculty of Economics, Business and Management Sciences, University of Algiers 03.

10-MaqouraKhaled, Ben Azza Mohamed, The Impact of Oil Price Shocks on Household Consumption in Algeria, Journal of Horizons of Management and Economic Sciences, Issue 02, 2022.