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RESEARCH ARTICLE

The role of petroleum taxation in Algeria's public budget during the period: (2014–2024)

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Abstract

The study analyses the role of petroleum taxation in financing Algeria's general budget over the period 2014–2024 within the framework of a rentier economy highly exposed to international oil price volatility. It adopts a descriptive-analytical and comparative approach, using official budget data and international financial reports to examine the evolution of public expenditure, public revenues, and the budget balance. The results show that petroleum taxation has remained the primary source of public revenue, with its share rising in some years to more than 50% and reaching about 90% by the end of the period. Despite some improvement in ordinary (non-oil) taxation, it has not been sufficient to offset fluctuations in hydrocarbon revenues or to significantly reduce dependence on oil prices. Public expenditure, particularly current spending, has followed an upward trajectory that outpaced revenue growth, thereby entrenching persistent and widening fiscal deficits. The analysis confirms that episodes of rising oil prices tend to translate into higher spending rather than being systematically channelled into reserves or diversification-supporting investments. Consequently, the study underscores the vulnerability of Algeria's public finances to external shocks such as the 2014–2016 oil price collapse and the 2020 crisis. It recommends redefining the function of petroleum taxation as a transitional instrument, directing a larger share of oil-related surpluses toward sovereign and productive investment funds. It also calls for deepening reforms of ordinary taxation, broadening the non-oil tax base, and accelerating economic diversification in order to strengthen fiscal sustainability and reduce exposure to hydrocarbon price cycles

Citation

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Introduction:

Petroleum taxation is one of the most fundamental pillars of financing the general budget in Algeria, as it constitutes the main financial resource on which the state depends to ensure the continuity of public expenditure and to finance development programmes across various economic and social sectors. This heavy reliance on revenues derived from hydrocarbons is a salient characteristic of the Algerian economy, which is classified as a rentier economy, thereby rendering fiscal policy vulnerable to fluctuations in global oil markets. The importance of examining this topic lies in the need to understand the relationship between petroleum taxation and the equilibrium of public finances, particularly during the period from 2014 to 2024, which was marked by volatility in international oil prices and the ensuing direct effects on public revenues and on the state's capacity to manage its budget efficiently and sustainably.

Research significance:

The significance of this research stems from its attempt to analyse the position of petroleum taxation within the structure of public financing and its role in achieving the fiscal equilibria of the Algerian state. It also sheds light on the impact of changes in oil prices on the ability of public finances to meet economic and social obligations. In addition, it contributes to enriching the economic literature on petroleum tax regimes in rentier states and on how such regimes can be employed to achieve financial and economic stability.

Research problem:

The central problem addressed in this research is encapsulated in the following main question:

To what extent has petroleum taxation contributed to financing the Algerian general budget during the period 2014–2024, and how have fluctuations in oil prices been reflected in the performance and sustainability of public finances?

Research objective:

This research aims to study and analyse the role of petroleum taxation in financing the Algerian general budget during the period 2014–2024, by determining its contribution to covering public expenditure and assessing its implications for the state's fiscal balance. It also seeks to identify the degree of the budget's dependence on oil prices and to propose fiscal approaches that may help to reduce reliance on hydrocarbons and strengthen the diversification of national income sources.

Research hypotheses:

The research is based on a set of core hypotheses, the most important of which is that there exists a strong and direct relationship between petroleum taxation and the level of public expenditure in Algeria, and that changes in oil prices are clearly reflected in the state's ability to finance its budget without resorting to alternative financing instruments. The study also assumes that the limited diversification of the national economy constitutes a key factor in deepening the vulnerability of public finances to fluctuations in petroleum revenues.

Scientific methodology adopted:

This research relies on the descriptive-analytical methodology through the collection and analysis of data related to petroleum revenues and general budget indicators, with the aim of explaining the relationship between petroleum taxation and the performance of Algerian public finances during the period under study. It also employs the comparative method to trace the development of this relationship over the years and to compare its results with those observed in certain other rentier states, in addition to using statistical and financial tools that make it possible to estimate the impact of petroleum taxation on the variables of the general budget in a precise and scientifically grounded manner.

Study sections:

The research is divided into two main axes. The first axis examines petroleum taxation in Algeria during the period 2014–2024, while the second axis addresses the contributions of petroleum taxation to Algeria's general budget over the same period, 2014–2024.

First: Petroleum taxation in Algeria during the period 2014–2024.

The petroleum tax system in Algeria during the period 2014–2024 constituted a fundamental basis for understanding the performance of public finances, given the central position of hydrocarbon revenues in financing the state budget. International reports, including those of the International Monetary Fund, indicate that hydrocarbon proceeds continued to account for the largest share of public revenues, which has made fiscal policy highly dependent on the global oil price cycle. This high degree of dependence is accompanied by a relative weakness in ordinary taxation and by the insufficiency of the non-oil tax base to meet rising public spending needs, placing petroleum taxation in a decisive position within the equation of macroeconomic equilibria.

During the period 2014–2016, the Algerian economy was hit by a severe oil shock that led to a marked decline in petroleum tax revenues, as an analysis of fiscal and tax dynamics shows that the fall in oil prices since mid-2014 resulted in a sharp drop in hydrocarbon receipts and a rapid widening of the budget and current account deficits. Data from international financial institutions further indicate that, during this phase, the authorities resorted to drawing down the balance of the Revenue Regulation Fund, which had originally been established to absorb oil shocks, before its role diminished as a consequence of successive fiscal deficits and the absence of strong alternative revenue sources outside the hydrocarbon sector. In contrast, ordinary taxation was unable to offset this decline, which deepened the fragility of public finances and reinforced the rentier nature of the budget.

From 2017 onwards, and with the relative improvement in oil prices and their stabilization at higher levels, petroleum taxation began to regain part of its role in financing the budget, although this improvement occurred in a domestic context characterized by a continued rise in public expenditure, particularly the wage bill and social transfers, which limited the corrective impact of higher petroleum revenues on addressing the structural imbalances in public finances. Analyses of fiscal sustainability have shown that the relationship between public spending and petroleum revenues has remained strongly positive, such that periods of rising prices tend to expand the scope for expenditure rather than channel surpluses towards building reserves or adequately supporting economic diversification.

During the period 2020–2022, global disruptions in energy markets and the rise in demand for Algerian gas contributed to a noticeable increase in hydrocarbon revenues, which was reflected in a relative improvement in public finance indicators and a reduction in the budget deficit compared with the initial shock years. However, this improvement was regarded as more circumstantial than structural, as assessments of revenue-mobilization policies showed that the tax structure remained concentrated around the hydrocarbon sector, and that the efforts made to strengthen non-oil taxation and to reform the tax system had not yet reached a level that would ensure a reduction in dependence on a single, highly volatile source of revenue.

At the legislative level, the promulgation of Law 19-13 on hydrocarbon activities at the end of 2019 marked a turning point in the tax framework governing the sector. The legislator sought to redesign the fiscal system by easing the tax burden and improving the terms of revenue sharing between the state and companies, with the aim of attracting new investment and preserving production capacity over the medium term, This law revived contractual arrangements such as production-sharing agreements and introduced amendments to the structure of taxes and royalties, allowing greater flexibility in the development of high-cost fields or marginal reserves, while maintaining a significant contribution of petroleum taxation to the budget through taxes on profits and revenues, These reforms reflect an attempt to strike a balance between two interrelated objectives: ensuring the sustainability of petroleum tax revenue flows and enhancing the attractiveness of the investment climate in the energy sector.

Studies examining the dependence of Algerian public finances on hydrocarbon exports confirm that, during the period 2014–2024, petroleum taxation remained the main driver of public expenditure and one of the determinants of the stability of macroeconomic indicators. At the same time, however, it increased the budget's exposure to external shocks linked to factors beyond the control of domestic policies, foremost among them price volatility in global markets, Analyses of the determinants of public expenditure have also shown that the continued linkage of spending policies to the oil cycle hinders the development of a counter-cyclical fiscal policy capable of playing a stabilising role over time. This situation calls for a redefinition of the function of petroleum taxation in the direction of channeling a substantial share of surpluses towards sovereign funds and productive investments that would pave the way for genuine diversification in the structure of the economy.

In light of the above, it can be said that petroleum taxation in Algeria during the period 2014–2024 clearly embodied the fundamental paradox facing a rentier economy. On the one hand, it constitutes the main guarantor of budget financing and the preservation of social stability, while on the other, it represents a structural source of fragility for public finances owing to their dependence on a price trajectory that cannot be controlled domestically. This situation means that any reform strategy is compelled to treat petroleum taxation as a transitional instrument whose proceeds must be directed towards the creation of a more diversified and sustainable productive and tax base.

Second: Contributions of petroleum taxation to Algeria's general budget during the period 2014–2024.

Algeria relies heavily on petroleum tax revenues to finance the state budget, which has made it highly sensitive to fluctuations in oil prices determined by global markets. With the decline in oil prices beginning in mid-2014, the share of petroleum tax revenues in total public revenues fell, and the previous tax system was unable to offset this shortfall in state revenues through ordinary taxation.

1- Developments in Algeria's general budget:

The financial returns collected by the state constitute the fundamental pillar for supporting its economic and development programmes, which makes it necessary to take appropriate measures to confront future challenges by diversifying income sources and strengthening the role of other sectors. In Algeria, these sources are reflected in the various public revenues that the state seeks to mobilise in order to cover its multiple public expenditures and thereby achieve the economic, social, and developmental objectives it has set.

1.1 Developments in public expenditure:

The Algerian economy during this phase of the study was characterised by a continual increase in public expenditure. The legislator divided this expenditure into two main categories: operating (current) expenditure, allocated to the functioning of the state's administrative apparatus, including staff wages and the maintenance costs of government buildings, and capital expenditure, which is distributed according to the state's annual development plans.

Table 1: Evolution of total public expenditure of the general budget during the period "2014–2024".

Years / Item	Public expenditure					Growth rate (%)
	Current (operating) Expenditure		Capital (equipment) expenditure		Total expenditure	
	Value (billion dinars	Share (%)	Value (billion dinars)	Share (%)		
2014	4714.4	62.03	2941.7	37.97	7656.1	11.28
2015	4972.2	66.93	3885.7	33.07	8858.0	15.69
2016	4807.3	60.21	3176.8	39.79	7984.1	-9.86
2017	4591.8	61.81	2291.3	38.82	6883.2	-13.78
2018	4584.4	53.13	4043.3	46.87	8627.7	25.34

2019	4954.5	67.99	3602.6	32.13	8557.2	-0.81
2020	4893.4	62.55	2929.6	37.65	7823.1	-8.57
2021	5314.5	65.50	2798.5	34.50	8113.0	3.70
2022	6346.9	64.38	3546.9	35.97	9858.4	21.51
2023	9 767.5	70.9	4 019.3	29.1	13 786.8	39.8
2024	12 465.9	81.6	2 809.3	18.4	15 275.2	10.8

Source: Prepared by the researchers based on:

- Official Gazette, various issues.

The table data show that overall public budget expenditure followed an upward trajectory during the period 2014–2024, with episodes of slowdown or relative decline in some years, followed by strong surges in others. In the first half of the period, and despite some decreases in total expenditure (such as between 2016 and 2017), the overall level remained high, with fluctuations in the relative weight of current expenditure compared with capital expenditure; the figures indicate that current expenditure accounted for a larger share of the total in most years, while capital expenditure remained below the level required to bring about a qualitative transformation in the economic structure. The episodes of relative decline or slowdown in expenditure growth in certain years can be linked to tighter fiscal conditions associated either with falling tax revenues or with a reduction in other receipts (such as resource rents or indirect taxes), in addition to efforts to contain the deficit by curbing the pace of spending, particularly under the headings of capital outlays and public investment.

In the second half of the period, especially from 2018 onwards, there is a clear acceleration in the growth of expenditure, with substantial jumps in the total recorded in 2023 and 2024, when expenditure rose to around 13.8 billion and then 15.27 billion, while current expenditure remained at roughly one third of the total and more than two thirds of spending was directed towards capital expenditure in 2023 and 2024. This shift reflects a move towards strengthening public investment and expanding development programmes, and can be interpreted as an adjustment of public finances to a phase of economic recovery following earlier shocks (including the effects of the pandemic and fluctuations in commodity prices), supported by wider fiscal space that allowed for higher spending on infrastructure and productive sectors. It may also reflect the role of expansionary policies in supporting growth and employment, although it simultaneously entails risks associated with a rising budget deficit and increased recourse to domestic or external financing if it is not accompanied by a parallel improvement in public revenues.

2.1 Development of public revenues:

Public revenues in Algeria constitute a fundamental pillar for financing the state's economic activity, and it is observed that a significant share of these revenues relies heavily on petroleum taxation, which represents the main source of public income. Over the period from 2014 to 2025, Algeria experienced a distinct phase of implementing economic development programmes, which clearly affected the structure of public revenues. An analysis of this period highlights the evolution of both petroleum taxation and ordinary taxation, in addition to the variation in their respective contribution rates to total revenues, as shown in the following table.

Table 2: Evolution of total public revenues over the period (2014–2025) .

years	Public revenues				Total
	Public revenues		Petroleum taxation		
	Value (billion dinars)	Percentage (%)	Value (billion dinars)	Percentage (%)	
2014	2267.4	53.75	1577.7	37.40	4218.1
2015	2465.7	52.34	1722.9	36.77	4684.6
2016	2722.6	57.34	1682.5	35.36	4747.4
2017	2845.3	54.54	1781.1	34.14	5216.4
2018	3033.0	45.17	2776.2	41.34	6714.2

2019	3041.4	46.73	2714.4	41.70	6507.9
2020	3046.8	48.44	2200.3	34.98	6289.7
2021	2651.7	49.76	1919.2	36.02	5328.1
2022	3290.4	49.93	3298.4	50.06	5983
2023	4232.5	41.64	3298.4	41.74	4232.5
2024	3512.3	38.5	4117.2	45.2	4520
2025	4156.8	48.76	3454	40.52	8523

Source: Prepared by the researchers based on:

- The Official Gazette, various issues.

1.3 Evolution of the budget balance:

The data in the table show that total public revenues followed an overall upward trend during the period 2014–2025, with phases of marked expansion and others in which growth slowed or recorded a relative decline. Over the initial years (2014–2017), the total increased from about 4.22 to 5.22 thousand billion dinars, driven mainly by an improvement in ordinary taxation, whose value rose from approximately 2,267.4 to 2,845.3 billion dinars, alongside a gradual decline in the relative weight of petroleum taxation from 37.40% to 34.14% of total revenues. This pattern reflects an initial attempt to reduce the degree of dependence on oil revenues in favour of broadening the base of ordinary taxation, whether through better tax collection or by expanding the tax base on non-oil activities. However, the increase in petroleum taxation from 2018 onwards (2,776.2 billion dinars and a share of 41.34%) indicates that public finances benefited from a relative improvement in oil prices or export volumes, which led to a jump in total revenues to around 6,714.2 billion dinars, before the total declined slightly in 2019 and 2020 under the impact of external shocks, most notably oil price fluctuations and the repercussions of the Covid-19 pandemic on economic activity.

From 2021 onwards, revenues follow a volatile yet subsequently recovering path; the total falls to 5,328.1 billion dinars in 2021, then rises to 5,983 billion dinars in 2022, with an almost perfect balance between petroleum taxation (50.06%) and ordinary taxation (49.93%), which reflects, on the one hand, favourable conditions in energy markets and, on the other hand, an improvement in the collection of ordinary taxes. In 2023, however, the total registers a clear decline to 4,232.5 billion dinars despite the petroleum tax take remaining relatively high, a development that can be linked to renewed pressures on global prices or production cuts, in addition to restraint in some ordinary revenue items. Thereafter, an improvement is recorded in 2024 as the total rises to 4,520 billion dinars, followed by a strong surge in 2025 to 8,523 billion dinars, with a substantial increase in ordinary taxation to 4,156.8 billion dinars (around 48.76%) and a continued contribution of petroleum taxation of about 40.52%. This latest leap may be explained by the combined effect of a recovery in oil prices, an upturn in domestic economic activity, and tax reforms that help broaden the tax base, while at the same time confirming the continued sensitivity of public revenues to energy-related fluctuations, which makes it necessary to deepen efforts to diversify income sources away from oil rents over the medium term.

Table 3: Evolution of the budget balance over the period 2014–2024.

Unit: Billion dinars.

Years	Budget revenues	Budget expenditures	Budget balance	Rate of change of the budget balance (%)
2014	2418.1	7656.1	-3438.0	12.3
2015	4684.6	8858.0	-4173.4	21.3
2016	4747.4	7984.1	-2936.7	-29.6

2017	5216.4	6883.2	-1666.8	-43.2
2018	6714.2	8627.7	-1913.5	14.8
2019	6507.9	8557.2	-2049.3	7.09
2020	6289.7	7823.1	-1533.4	-25.17
2021	5328.1	8113.0	-2784.9	81.61
2022	6588.8	9858.4	-3269.6	17.40
2023	9105.3	13786.8	-4681.5	43.2
2024	8523	15275.2	-6752.2	-44.25

Source: Prepared by the researchers based on:

- The Official Gazette, various issues.

balance remains persistently negative across all years, with the magnitude of the deficit oscillating between relative containment and marked deterioration. The deficit, estimated at around -3,438 in 2014, rises to -4,173.4 in 2015, before gradually narrowing to -1,666.8 in 2017, reflecting a relative reduction in the gap between public expenditure and revenue. Subsequently, the deficit re-enters an upward path from 2020 onwards, reaching -6,752.2 in 2024, which underscores the structural difficulty of achieving a durable equilibrium in public finances despite improvements in revenue over time. Moreover, the growth rates of the budget balance exhibit pronounced volatility, with some years recording improvements (positive values), followed by years of severe deterioration (high negative values), particularly at the end of the period (2023–2024), signalling an accelerated deterioration in fiscal balance.

In most years, the growth of public expenditure outpaces the growth of revenues, with total expenditure increasing from 7,656.1 in 2014 to 15,275.2 in 2024, compared with an increase in revenues from only 2,418.1 to 8,523 over the same period, thereby entrenching a widening fiscal gap toward the end of the period. Periods of deficit improvement (such as 2016–2017) may be associated with the adoption of expenditure rationalization measures or with temporary gains in tax revenues, whereas episodes of sharp deterioration (from 2020 onwards) are indicative of the impact of potential macroeconomic shocks, including health crises, slower growth dynamics, or rising subsidy and debt-servicing costs. These developments contribute to an escalation in both current and capital expenditure, outstripping the revenue system's capacity to adjust. In this context, the widening deficit toward the end of the period can be interpreted as the outcome of accumulated fiscal commitments and escalating pressures for social and investment spending in a constrained macroeconomic environment, coupled with limited scope for mobilizing additional resources at the required pace.

2- Analysis of the structure of petroleum taxation over the period 2014–2024.

Oil represents a fundamental pillar of the Algerian economy, and Algeria is considered one of the early and established producers in this sector. The evolution of both actual and projected oil revenues has been closely tied to fluctuations in international oil prices. These price dynamics are shaped by a complex set of interrelated factors affecting both supply and demand, driving prices upward or downward and, in turn, generating significant repercussions for petroleum-related tax revenues. Accordingly, this section aims to analyze the evolution of oil prices and petroleum revenues and to assess their implications for the configuration and performance of petroleum taxation.

1.2 Dynamics of oil prices over the period 2014–2024.

The fluctuations in oil prices on global markets underscore the inherent instability characterizing this strategic sector. This study seeks to trace the main phases and turning points in oil price dynamics over the period extending from 2014 to 2024, with a particular focus on identifying the key determinants shaping their trajectory and overall trends. It should be noted that oil prices over these years experienced a sequence of pronounced fluctuations, marked by alternating phases of increases and declines. These developments, along with their main underlying drivers, will be presented and examined in greater detail in the subsequent table, which summarizes the principal patterns of volatility and their most salient causes.

Table 4: Developments in oil prices in Algeria over the period 2012–2022.
Unit: 1 US dollar

YEARS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Oil price	100.2	53.1	45.0	54.1	71.3	64.4	42.1	72.7	103.7	83.6	**82**
Condensate price	100.0	52.7	44.2	51.9	65.6	56.1	38.6	73.2	84.4	86	**75**

Source: Prepared by the researchers based on:

- Statistics of the Bank of Algeria, various issues.

- World Bank reports, various issues.

Table 4 reflects a volatile trajectory of oil and condensate prices in Algeria over the period 2014–2024, as prices start from high levels close to 100 dollars per barrel in 2014, then fall sharply in 2015 and 2016, before gradually regaining part of their strength to reach a peak of about 103.7 dollars for crude oil in 2022, and then decline moderately to around 82 dollars in 2024. The condensate data exhibit almost the same pattern, as prices drop from 100 dollars in 2014 to 38.6 dollars in 2020, then rise again to 86 dollars in 2023 before falling to 75 dollars in 2024, reflecting their close linkage to fluctuations in the global fossil fuel market.

The pronounced collapse in prices during 2015–2016 and again in 2020 can be associated with the impact of shocks in the global oil market, such as the supply glut in the middle of the previous decade and the effects of the Covid-19 pandemic on global demand in 2020, which drove crude oil prices down to about 42.1 dollars and condensate prices to 38.6 dollars. By contrast, the strong rebound in prices over the period 2021–2022 reflects the recovery in global energy demand and a relative tightening of supply, which pushed oil prices in Algeria to levels exceeding 100 dollars per barrel in 2022, before entering a phase of relative downward correction in 2023–2024 amid a comparatively more stable market and a gradual global shift toward more diversified energy policies. This pronounced price volatility largely explains the instability of petroleum tax revenues and overall public receipts, and underscores the fragility of excessive reliance on hydrocarbon resources in budget financing.

2.2. Evolution of oil revenues :

Public revenues in Algeria depend heavily on hydrocarbon proceeds, which constitute the main source of financing for the public treasury. However, these revenues are inherently unstable because they are directly affected by fluctuations in global oil prices, so that price changes are transmitted to petroleum taxation and, consequently, to overall economic performance. The following table presents the evolution of oil revenues over the period 2014–2024 and their relationship with movements in global oil prices.

Table 5: Evolution of oil revenues in Algeria over the period 2014–2024.

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Average annual oil price (dollars)	100.2	53.1	45.0	54.1	71.3	64.4	42.1	72.7	103.7	83	80
Total oil revenues (million dollars	5255.5	3721.2	2913.5	3220.5	3723.2	3123.3	2076.3	3122.8	4006.7	50000	45000

Source: Prepared by the researchers based on:

- Reports of the Bank of Algeria (various issues)

The data reported in Table 5 display a volatile, yet overall declining, trajectory of Algeria's oil revenues over the period 2014–2024, with an evident association between the trend of international oil prices and the magnitude of the revenues generated. Following an annual average oil price of approximately 100.2 USD per barrel in 2014, which yielded about 5,255.5 million USD in revenues, the years 2015–2016 experienced a pronounced collapse in prices, to 53.1 and 45 USD per barrel, respectively, accompanied by a marked contraction in revenues to 3,721.2 and subsequently 2,913.5 million USD, thereby illustrating the pronounced sensitivity of hydrocarbon receipts to price shocks in the global market.

Notwithstanding the relative improvement in prices during the period 2017–2019, when they fluctuated between 54.1, 71.3, and 64.4 USD, revenues did not revert to their earlier levels, remaining in the range of 3,220.5 to 3,123.3 million USD, which may reflect the influence of additional determinants such as production volumes, operating costs, or developments in external demand. The downturn intensified in 2020, as the price declined to 42.1 USD per barrel and revenues contracted further to 2,076.3 million USD, before the period 2021–2022 witnessed a substantial recovery driven by an increase in prices to 72.7 and then 103.7 USD per barrel, which, in turn, raised revenues to 3,122.8 and 4,006.7 million USD, respectively.

The figures reported for 2023 and 2024 (50,000 and 45,000 million USD, respectively) point to an exceptional surge in revenues compared with the preceding years, even though the average price in those two years (approximately 83 and 80 USD) does not, in itself, suffice to explain such a sharp escalation. This situation suggests either a fundamental modification in the accounting methodology, a substantial change in the volume of exports, or the inclusion of additional income streams related to petroleum activities under the same heading. In all cases, the table clearly underscores the rentier nature of the Algerian economy and its pronounced dependence on fluctuations in the international oil market, whereby any decline in prices leads to an immediate contraction in state financial resources, while price improvements do not necessarily compensate for previous losses, which reinforces the need to diversify both the productive and fiscal base so as to reduce the vulnerability of public finances to energy market volatility.

3- Contribution of Petroleum Taxation to the General Budget during the Period 2014 –2024:

The state has accorded considerable attention to the oil sector in view of its pivotal role in underpinning national economic development, as it represents a principal source of public revenue through petroleum taxation. It should be noted that, in the aftermath of independence, the contribution of this sector to the state budget did not exceed 3% of total revenues, a situation largely attributable to French colonial policies that conferred extensive privileges upon foreign, particularly French, companies, in addition to systematic manipulation of statistical data and misleading declarations that were characterized by a lack of credibility and accuracy.

3.1 Contribution of Petroleum Taxation to the Operating Budget: The operating budget reflects the total expenditures allocated by the state to ensure the continuity of its various institutions, and it includes employees' wages, operating expenses, and the necessary equipment. Given the close relationship between petroleum taxation and fluctuations in global markets, it became necessary to decouple this revenue source from operating expenditures, as the latter are financed primarily through ordinary taxation, which is relatively stable and subject to state control. Nevertheless, the presence of petroleum taxation within the operating budget cannot be ruled out, since it is generally used to cover deficits when ordinary resources prove insufficient, especially as the operating budget often amounts to twice the capital (equipment) budget, which makes the contribution of petroleum taxation to it both constant and indispensable.

3.2 Contribution of Petroleum Taxation to the Capital (Equipment) Budget: The capital (equipment) budget represents those expenditures that the state allocates to productive investments, such as industrial plants, as well as social investments, such as hospitals, in addition to other forms of investment. During the first three development plans, the state's focus on the petroleum sector was primarily motivated by the need to secure foreign currency, which constituted the main lever for propelling the development process, and, accordingly, most investments were directed toward this sector in order to expand the volume of investment, particularly in a context of rising oil prices. Since the nationalization of hydrocarbons, all oil revenues have been channeled to finance the capital budget, as that period was characterized by a very large volume of investment.

To clarify the extent of the contribution of petroleum taxation to the formation of budgetary revenue in Algeria, the evolution of Algerian petroleum tax revenues over the period 2014–2024 will be presented in the following table.

Table 6: Contribution of Petroleum Taxation to Algerian State Revenues over the period 2014–2024.

Unit: (billion DZD). Years	Total revenues	Petroleum taxation	Petroleum taxation as a share of total revenues (%)
2014	4218.1	1577.7	37
2015	4684.6	1722.9	37
2016	4747.4	1682.5	35
2017	5216.4	1781.1	34
2018	6714.2	2776.2	41
2019	6507.9	2714.4	42
2020	6289.7	2200.3	35
2021	5328.1	1919.2	36
2022	5983	3298.4	55
2023	4232.5	3298.4	78
2024	4520	4117.2	91

Source: Prepared by the researchers based on:

- The Official Gazette, various issues.

The table illustrates that the contribution of petroleum taxation to Algeria's public revenues is characterised by marked fluctuations, essentially reflecting the sensitivity of public finances to fluctuations in oil prices and export volumes. During the period 2014–2017, total revenues remained within the range of approximately 4.2–5.2 trillion DZD, with the petroleum component accounting for between 34% and 37%. This indicates a significant yet relatively "controlled" level of dependence compared with subsequent years. From 2018 onwards, total revenue rose to 6,714.2 billion DZD, while petroleum taxation reached 2,776.2 billion DZD (41%). The figures then stabilised relatively in 2019 and 2020, with a slight decline in the relative weight to 35% as a result of the oil price shock and the COVID-19 pandemic, leading to a decrease in total revenue to 6,289.7 billion DZD in 2020 (Mansouri, 2016).

However, the most striking development appears from 2022 onwards, as the share of petroleum taxation increased from 36% in 2021 to 55% in 2022, then surged to 78% in 2023 and 91% in 2024, while the total remained between 4,232.5 and 4,520 billion DZD. This means that by the end of the period, most revenues were derived from oil. This transformation reflects, on one hand, a temporary improvement in petroleum revenues driven by favourable prices or production volumes; on the other, it reveals the structural fragility of non-oil revenues and their inability to keep pace with the requirements of public expenditure. Such a trend amplifies the exposure of the budgetary balance to external shocks. Moreover, the rise of the oil-related share to more than 90% in 2024 implies that any future downturn in energy markets could swiftly translate into severe pressures on public finances, thereby underscoring the crucial importance of policies aimed at diversifying income sources and deepening fiscal reforms beyond the hydrocarbons sector.

Conclusion:

The study of the role of petroleum taxation in financing Algeria's public budget over the period 2014–2024 reveals that public finances remain highly dependent on hydrocarbon revenues, despite repeated attempts to diversify sources of public income. Quantitative indicators of expenditure, revenue, and budget balance demonstrate that periods of rising oil prices are directly reflected in higher petroleum tax revenues and a relative easing of the fiscal deficit, whereas periods of price decline lead to widening fiscal imbalances and increased pressure on budgetary equilibrium. Furthermore, data on the evolution of ordinary taxation indicate that, although some improvement has been observed in certain years, it remains insufficient to offset the volatility of petroleum taxation or to reduce dependence on it to a level ensuring greater fiscal sustainability.

This reality reflects the persistence of rentier characteristics within the Algerian economy, where the hydrocarbon sector continues to play a pivotal role in financing public expenditure and sustaining social policies, amid rapidly growing spending — particularly current expenditure compared with capital expenditure. Accordingly, the findings suggest that any serious reform trajectory requires a redefinition of the role of petroleum taxation within the fiscal system, by allocating an increasing share of its revenues towards productive investment and building fiscal reserves, while simultaneously deepening reforms of ordinary taxation and broadening its base. Such measures would mitigate the vulnerability of the budget to oil price cycles and reinforce the foundations of fiscal and developmental sustainability over the medium and long term.

Research Findings:

The study reached the following conclusions:

1. The persistence of a high dependency on petroleum taxation in financing the public budget, with contributions exceeding 50% of total revenues in certain years and reaching nearly 90% by the end of the period.
2. The growth of public expenditure at a pace surpassing that of revenues, which resulted in a continued budget deficit throughout most of the study years, with a noticeable worsening in some periods.
3. The limited capacity of ordinary taxation to meet the demands of public spending, despite some relative improvement in certain years, reflecting the insufficient diversification of the productive and fiscal base.
4. A clear dependence of public finance indicators on global oil price cycles, as the shocks of 2014–2016 and 2020 were accompanied by significant declines in petroleum revenues and widening fiscal deficits.
5. The dominance of current expenditure within the overall structure of public spending, contrasted with relatively insufficient capital expenditure levels to induce a deep transformation of the economic structure in the long term.

Research Recommendations:

Based on these findings, the study proposes the following recommendations:

- Redirecting a significant share of petroleum tax revenues towards long-term savings and investment funds or mechanisms, rather than primarily using them to finance current expenditures.
- Strengthening ordinary taxation by broadening the tax base, improving collection mechanisms, and reviewing certain exemptions and facilitations that reduce the efficiency of the fiscal system.
- Adopting a more rational expenditure policy that links spending expansion to the real economy's capacity to generate sustainable resources, while containing the growth of current expenditures in favour of productive capital spending.
- Accelerating national economic diversification programmes by supporting export-oriented industrial, agricultural, and service sectors, thereby reducing the sensitivity of the public budget to oil market fluctuations.
- Developing a clear legal and institutional framework that explicitly defines the role of petroleum taxation within the broader financial strategy, linking its use to objectives of macroeconomic stabilization and long-term sustainable development.

Ethical Considerations

This study is based exclusively on secondary data obtained from publicly available sources, including official Algerian government budget documents, reports issued by international financial institutions, and published statistical databases. No primary data collection involving human participants, personal information, surveys, interviews, or experimental procedures was conducted. Consequently, ethical approval from an institutional review board or ethics committee was not required. The authors adhered to principles of academic integrity, transparency, and responsible data use throughout all stages of the research. All sources of data and information were appropriately acknowledged, and the analysis was conducted in accordance with internationally recognized standards of ethical research and publication.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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