The Contribution of the Oil & Gas Industry to the Romanian Economy

(3rd edition, updated and extended)

Laurian Lungu

Consilium Policy Advisors Group (CPAG)

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Main findings

The term **"oil & gas industry/sector"** used in the context of this paper comprises the companies included in this analysis. These are those presented in Table 1.1. Although these companies together account for a very large share of the sector's total, there are some other companies operating in the oil & gas sector – especially in midstream, downstream or among contractors – which were not included in the analysis. As such, the results of this analysis underestimate the true impact of the Romanian oil and gas sector in the economy.

- The contribution of the oil & gas sector to Romania's GDP growth has increased substantially since 2020, when its performance was negatively influenced by the low demand during the pandemic. Apart from the increase coming from higher production volumes, a significant part of this gain is attributed to the rise in oil and natural gas prices. Oil & gas sector represented 3,8% of GDP in 2022. In comparative terms, in the referred period, the contribution of the oil & gas sector to GDP represents:
  - 250% of the "Financial Intermediation & Insurance" sector contribution to GDP,
  - 105% of the contribution to GDP attributable to the "Arts, Entertainment and Recreational Activities" sector, or
  - 99% of the "Construction" sector contribution to GDP, or
  - 55% of the either the "IT&C" sector or the "Real Estate Transactions" sector contribution to GDP
- The total impact of the oil & gas sector in the economy (i.e., including direct, indirect and induced effects) is even more significant. This has increased from 3,2% of GDP in 2020 to 4,2% of GDP in 2021 and 7,9% of GDP in 2022.
- Employment effects are also considerable. At the end of 2022, the number of jobs directly supported by the oil & gas sector was almost 64.000. Accounting for the indirect and induced effects, this becomes 152.000, 3% of Romania's total employment.
- Total fiscal contributions paid by the oil & gas sector to the government consolidated budget, amounted to RON 30,1 Bn. in 2021 and RON 48,8 Bn. in 2022, representing 7,9% and 10,6% respectively of total government revenues.
- Following the increase in both quantities and prices, royalties and windfall taxes paid by oil and gas sector reached a record high in 2022. Together they amounted to RON 16,0 Bn., the equivalent of 3,5% of total government revenues in 2022. Solidarity contribution paid by the sector in 2022 was estimated at RON 3,1 Bn.
- The oil & gas sector paid VAT and fuel excises amounting to RON 17,6 Bn. in 2020, RON 21,0 Bn. in 2021, and RON 21,1 Bn. in 2022, the equivalent of 19,2% and 18,4% and 16,3% respectively of the revenues the government collected in VAT and excises.
- Investments made by the oil & gas companies went up significantly in 2022, supported by high oil and gas prices. The sector invested RON 6,6 Bn in 2020, RON 4,7 Bn. in 2021, and RON 11,1 Bn. in 2022, the equivalent of 2,5%, 1,5% and 2,9% of total economy investments respectively. In 2023 the sector plans to invest RON 10,7 Bn.

Introduction

01

The third edition[1] of the oil and gas sector's contribution to Romania's economy updates and extends the previous analysis by including more companies whose activities depend, overwhelmingly, if not entirely, on the oil and gas sector. The results of the current analysis reveal the growing importance of the oil and gas sector in the economy. This comes at a time when global energy prices are at elevated levels, with Europe in particular, facing higher natural gas and power prices, amplified to a large extent due to the conflict in Ukraine. Although a significant part of the recent growth is contextual, being attributable to the rise in energy prices, part of it is owing to the so-called "base effect", as the sector was bouncing back from the low demand incurred during the pandemic.

The recent energy crisis has showed that the economic role of the oil & gas sector remains very important. Higher than forecast fiscal contributions paid by the oil and gas companies have allowed the authorities to redistribute this income towards supporting energy related financial measures. Hence, the fiscal contributions paid by the oil and gas sector represent an important part in maintaining the budget deficit trajectory on its required downward adjustment path.

Given the current economic and geopolitical context, changes in energy prices look increasingly likely to become structural rather than temporary. In response to the invasion of Ukraine by Russia, the European Union (EU) put forward in May 2022 the REPowerEU plan intended at reducing EU's dependence of Russian oil and gas imports[2]. The plan builds on the previous European Green Deal proposals aimed, among other actions, at replacing fossil fuels by accelerating the roll-out of renewable energy.

However, any EU country can determine its own energy mix subject to taking into consideration the EU's climate target goals. This is important because countries, which still have oil and gas reserves, like Romania, could set out plans to exploit them, thus ensuring the availability of future production capacities. Moreover, according to the IEA, the demand for fossil fuels is still expected to grow this decade. In Romania, the majority of companies operating in the oil and gas sector have already put forward plans aimed at meeting climate transition goals. As a consequence, actions directed towards reducing carbon emissions[3] would need to complement investment decisions in both production capacities that support oil and gas production as well as those that use substitute technologies and fuels, especially renewable energy. At the COP 27 meeting, which concluded at the end of November 2022, there was a lack of consensus over commitment to

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[1] Compared to the previous edition the current analysis covers the period 2020-2022 and includes an additional three companies. As a consequence, this changes slightly some of the results for the years 2020 and 2021.

[2] At the end of November 2022, the EU proposed a new temporary instrument to limit excessive gas price spikes, consisting of a so-called "safety price ceiling".

[3] Reality shows how ambitious the goal of limiting global warming to 1.5 degrees Celsius in the Paris agreement is. In fact, global emissions are still growing, with many countries, who signed the Paris agreement, failing to meet their emissions cut targets. See, for instance, "Goodbye 1.5 degrees Celsius" – The Economist, November 3rd 2022.

phase down fossil fuels, however, parties agreed to keep the 1,5 degrees Celsius alive and thus, on the need to bring down carbon emissions.

Regulatory requirements, including the price of CO2 certificates, and the availability of finance would shape the path of future investments in the oil and gas sector. More broadly, financing sources include, among others, the Recovery and Resilience Facility and companies' own funds, obtained either through borrowing or retained earnings.

In Romania, the adoption of changes in the Offshore Law in May 2022, has been an important step towards enabling additional investments required to bring the gas onshore from the proven reservoirs.

The Aim of the Report

The purpose of this paper is to update and extend the results of the previous analysis, which looked at quantifying the impact of the oil & gas industry on the Romanian economy - in terms of its contribution to GDP, employment, investments and taxes paid to the consolidated government budget. Although the structure of this report has been kept virtually the same, the results of the analysis are not directly comparable with those from the previous report. This is due to two reasons. First, the pool of the companies surveyed is different, it has been augmented by the inclusion of more contractors. Also, the estimated impact contains more companies operating in downstream, notably the filling station operators. Second, the multipliers used to estimate the economic impact of the oil and gas sector come from a more recent version of the I/O tables, corresponding to the year 2019, and thus they depict more adequately the current structure of the economy.

In the light of recent developments regarding the evolution of energy prices, especially in Europe, the results of the study could be used, as before, to aid policy design in the domestic oil and gas sector over the next decade. This should focus on the very large role the oil and gas companies have in contributing to the government revenues and how the climate change transition would affect the path of tax contributions cashed in from the companies operating in the sector. It could also help to support further work that would address the identification of the necessary policy measures in order to build up/maintain the desired domestic production capacity for natural gas, power and oil in order to ensure an adequate supply-demand energy balance in the medium and long term.

Methodology

As in the previous report, individual company annual data on turnover, taxes & dividends paid to the state, investments and employment, covering the period January 1st, 2020- December 31st, 2022, was obtained through a survey . The GDP and economic impact analyses were performed by using economic multipliers from the 2019 I/O table. Additional complementary data was obtained from publicly available sources such as the National Bank, the Ministry of Finance, the National Institute of Statistics, annual company financial reports.

[4] See Appendix 1 for the survey questionnaire.

The surveyed sample is deemed to be representative as it comprises most of the upstream, midstream, downstream and contractors' activities in both oil and gas sectors. However, the estimated impact clearly underestimates the true impact the oil and gas sector has on the Romanian economy, given that some large companies operating in the sector were not part of the survey[5].
The companies surveyed are those presented in Table 1.1 below:

Table 1.1 – Oil & Gas Companies Included in the Analysis

	Upstream	Midstream	Downstream	Contractori
OMV Petrom SA (includes affiliates)	X		X	
SNGN Romgaz SA[a]	X	X	X	
Transgaz SA		X		
Conpet SA		X		
Depogaz SA		X		
Amromco Energy SRL	X			
Prospectiuni SA				X
Foraj Sonde SA Videle				X
Hunt Oil Company Romania SRL	X			
J. Christof E&P Services SRL				X
Endurance Lift ELSI				X
Bonatti Spa Parma SRL				X
Stratum Energy Romania LLC Wilmington Sc Bucharest	X			
Rohrer Oil & Gas Services SRL				X
Rohrer Servicii Industriale SRL				X
MOL Romania			X	
Schlumberger				X
Vadeco				X
BSOG	X			
Filling Station Operators[b]				X

a - Incomplete data in the questionnaire. Missing data was estimated/taken from publicly available sources; b - Estimated across the whole sector by extrapolating from a surveyed sample – deemed to be representative for the whole subsector.

The following sections of the analysis quantify the impact of the oil & gas sector on: state budget and its various revenue components, investments, GDP and employment. The analysis also briefly touches upon labour productivity in the oil & gas sector.

[5] For instance, Rompetrol or Lukoil. Only these two companies, together, could add an important additional impact on direct employment effects, with a potential similar impact in GDP.

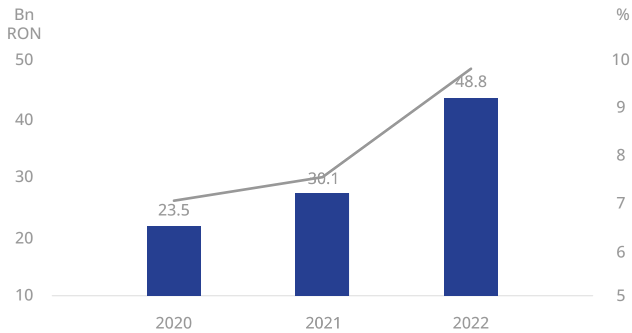
Contributions of Surveyed Oil & Gas Companies to the Government Budget

02

Total fiscal contributions[6], including dividends paid to the state, rose by 28% in 2021 compared to 2020 to RON 30,1 Bn., the equivalent of 7,8% of total government revenues (see figure below). However, in 2022 the budgetary impact of O&G Co. was significantly higher, aided to a large extent by elevated oil and gas prices[7]. In 2022, the sector contributed to the government general budget with RON 48,8 Bn., 62% higher compared to 2021 and more than double the amount paid in 2020.

Total Fiscal Contributions of Surveyed O & G Co. between 2020 - 2022, including Dividends

Bn RON
As a share of total government revenues, % (RHS)



Source: Survey data and Ministry of Finance

This represented 10,6% of total government revenues in 2022, a disproportionately large percentage (see also Table 2.2 below), with the whole O&G sector emerging as a strong contributor to the budget of almost a systemic importance. The high level of fiscal contributions paid currently by the O&G sector allows the authorities not only to redistribute part of these revenues across the economy – thus supporting the implemented energy price caps – but also to maintain the budget deficit on its required downward adjustment path[8]. Given that domestic economic growth is forecast to slow down over the coming quarters, the stability of revenue streams coming from the O&G sector will become even more important to the government budget in the existing economic environment.

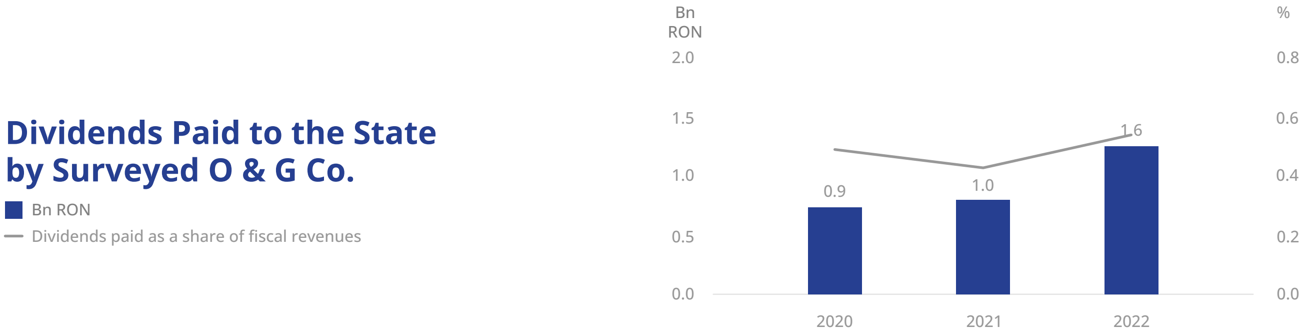
Dividends paid to the state by surveyed O&G companies averaged close to RON 1 Bn. per year for 2020 and 2021 but they rose to RON 1,6 Bn. in 2022 (see figure below). As a share of fiscal revenues, they rose to 0,7% in 2022 from 0,5% a year before.

[6] Total taxes include profit tax, all employee/employer-related taxes and contributions, sector-specific taxes and fees, VAT, excises as well as other local taxes. These account for the direct impact only. Including the indirect and induced effects would yield a much higher impact on the consolidated budget. See Annex 1.

[7] Turnover also rose, partly driven by inflation, from RON 46.3 Bn in 2020 to RON 64.2 Bn in 2021 and RON 96.8 Bn in 2022.

[8] Romania is currently under the excessive deficit procedure of the EU and needs to bring down its deficit to under 3% of GDP by 2024 from 6.7% of GDP in 2021.

Dividends Paid to the State by Surveyed O & G Co.



Source: Survey data and Ministry of Finance

Table 2.1 below summarises consolidated data regarding the financial contributions:

Table 2.1 - Total fiscal contributions paid by surveyed O & G Co. to the state, including dividends. All sums are expressed in Bn RON.

		2020	2021	2022
Total fiscal contributions, including dividends paid to the state, of which:		23,5	30,1	48,8
	CIT	0,6	0,9	3,1
	SSC and payroll taxes	2,2	2,2	2,5
	VAT & Excises	17,6	21,0	21,1
	Royalties (oil & gas)	0,9	1,7	4,4
	Windfall tax (oil, gas, power)	0,8	2,4	11,6
	Dividends paid to the state as a shareholder	0,9	1,0	1,6

Source: Survey data. Excises data estimated from government data[9]. Errors due to rounding.

[9] Consolidated survey excises data yielded a lower value compared to actual excises data paid by the oil and gas sector due to the omission of several large contributors of excises from the survey. As such, excises data paid by the oil and gas sector which has been used in this analysis was estimated from government sources. The fiscal budgetary strategy for the period 2022-2024 published by the ministry of finance provides a graph with monthly excises data paid by the energy sector during the period 2020 – Jan-Oct 2021. This data was subsequently adjusted by removing coal and electricity excises, multiplying the corresponding excise value with annual quantities obtained from the Institute of National Statistics data. Excise duty on energy data is also available on the European Commission's Taxation and Customs Union website.

All components in the table above follow an upward trend. Notably, royalties and windfall taxes, especially for natural gas, have increased considerably in nominal terms – partially driven by high natural gas prices in Europe. There is also a so-called base effect – year 2020 was influenced by restrictions imposed due to the pandemic.

Table 2.2 below shows expressed as a share of their corresponding budgetary revenues. Total fiscal contributions paid by the O&G sector rose steeply in 2022, reaching 10.6% of total government revenues - as mentioned before.

Table 2.2 Select fiscal contributions paid by surveyed O&G Co., as a percentage of their corresponding budgetary revenues, %

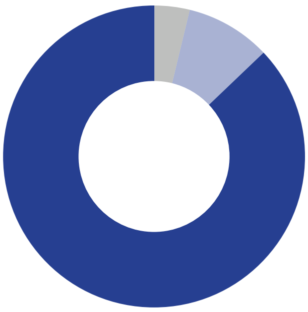
	2020	2021	2022
Total fiscal contributions as a share of total government revenues, %	7,3	7,9	10,6
CIT, % of government CIT revenues	3,7	4,4	11,6
SSC and payroll taxes, % of government revenues from SSC & income tax	1,6	1,4	1,4
VAT & Excises, % of government cumulative revenues of VAT and excises	19,2	18,4	16,3

Source: Survey data

Corporate income tax contributions (CIT) paid by the oil and gas sector rose at an accelerated pace, from RON 0,6 Bn. in 2020, RON 0,9 Bn. in 2021 and RON 3,1 Bn. in 2022. Higher energy prices have strong redistributive effects across economic sectors impacting significantly companies' financial performances. Partly as a consequence of this, the share of corporate income tax, paid by the oil and gas sector, in government profit tax revenues, rose to 11,6% in 2022, almost than three times higher compared to 2021.

Tax contributions on CIT, SSC and VAT & Excises

The oil & gas sector accounted for 19,2%, 18,4% and 16,3% in 2020, 2021 and 2022 respectively of **the Value Added Tax (VAT) and Excises** collected by the government. In nominal terms, the value of VAT and excises paid by the oil and gas sector rose from RON 17,6 Bn. in 2020 to RON 20,9 Bn in 2021, in line with the general trend observed at the level of government VAT and excises revenues. While excises paid by the oil and gas sector rose faster than the overall level of excises paid to the budget, the VAT advanced marginally slower. At the economy level VAT revenues rose by 30%, partly as an effect of changing consumer buying habits triggered by the pandemic. As a consequence, the share of VAT & excises paid by the oil and gas sector in total government VAT & excises revenues fell marginally in 2021. In 2022 the value of VAT paid by the oil and gas sector fell compared to 2021 as a couple of companies, which previously made large investments, were supposed to have some VAT reimbursed.

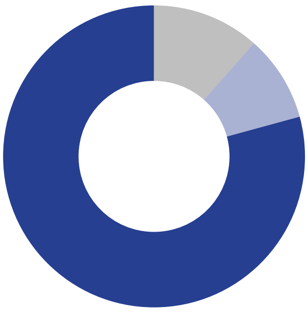


Tax Contributions of Surveyed Oil and Gas Companies to the Government Budget in 2021

CIT -
RON 0.9 Bn., 4.2% of the government revenue CIT

SSC -
RON 2.0 Bn., 1.6% of the government revenue SSC

VAT & Excises -
RON 20.9 Bn., 18.4% of the government VAT & excises



Tax Contributions of Surveyed Oil and Gas Companies to the Government Budget in 2022

CIT -
RON 3.1 Bn., 11.6% of the government revenue CIT

SSC -
RON 2.5 Bn., 1.4% of the government revenue SSC

VAT & Excises -
RON 21.1 Bn., 16.3% of the government VAT & excises

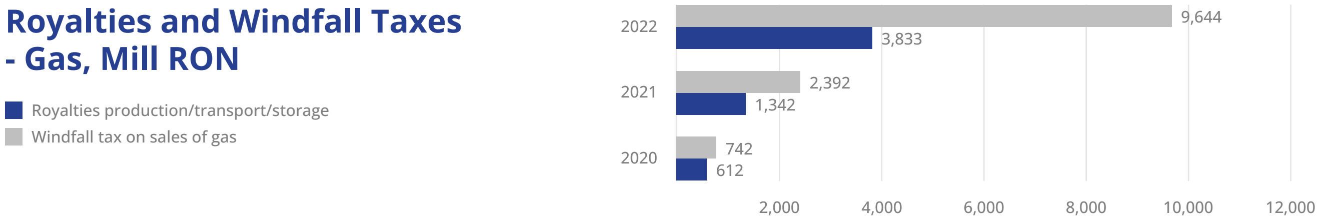
Source: Survey data and Ministry of Finance

The oil & gas companies' ability to collect both VAT and excises and then transfer them to the state budget remains a relevant aspect given that Romania's VAT compliance gap rate stood at around 35% in 2019, remaining the highest in the EU.

Social security contributions (SSC) and payroll taxes paid to the budget amounted to RON 2,0 Bn. in 2020, RON 2,2 Bn. in 2021 and RON 2,5 Bn. in 2022. representing, on average, 1,5% of total SSC and income tax raised at the economy wide level. Despite the relatively higher level of gross wages in the oil & gas sector, the percentage of SSC is smaller compared to those of either CIT or VAT & excises. This is explained by the relatively low share of oil & gas sector employment in total employment (see the Employment section).

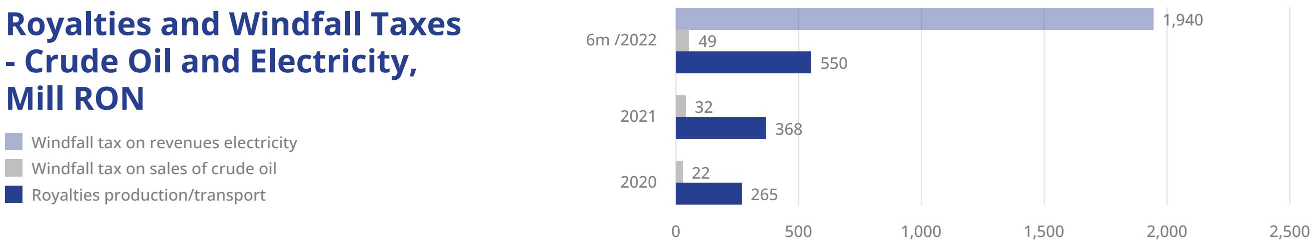
Sector-specific taxes such as **contribution and tariffs to regulatory authorities, windfall taxes on sales of oil & gas & electricity and royalties** are presented in the figures below:

Royalties and Windfall Taxes - Gas, Mill RON



Source: Survey data and Ministry of Finance

Royalties and Windfall Taxes - Crude Oil and Electricity, Mill RON



Source: Survey data and Ministry of Finance

Royalties and windfall taxes paid by oil and gas sector reached a record high in 2022. Taken together they amounted to RON 16 Bn., the equivalent of 3,5% of total government revenues. The windfall tax on sales of gas alone were over RON 9,6 Bn. in 2022, the equivalent of 2,1% of total government revenues. These represent sizable amounts, accounting for a substantial share of the transfers to the rest of the economy, thus allowing the authorities to support the redistribution effects implied by the energy price caps. Natural gas continues to bear the largest share of this fiscal burden, underpinned by high natural gas prices. However, the erosion of domestic natural gas production has accelerated more over the last three years, partly due to lower investments as the overall level of taxation, especially of gas production, remains high.

The Economic Impact

03

3.1 The impact on GDP

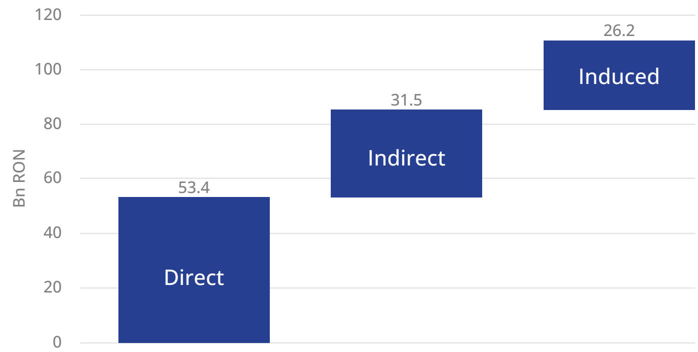
The economic impact of the oil and natural gas industry comprises of both operational impact – due to acquisitions of intermediate inputs, payments of labour compensation, dividends and a string of other sector specific taxes – as well as its capital investment impact. This requires the estimation of three types of effects which, cumulated, yield the total impact of the oil & gas sector in the economy. The three types of effects are related to the:

- **Direct impact** which is measured as value added within the oil & gas industry.
- **Indirect impact** which is measured as value added occurring throughout the supply chain of the oil & gas industry.
- **Induced effect** which is measured as value added resulting from household spending of labour and companies' income earned either directly or indirectly from the oil & gas industry's spending.

The estimated figures pertaining to the first half of 2022 are presented in the graph below:

Surveyed Oil & Gas Companies

Total GVA Effects in the Economy, 2022



Source: Own calculations

The direct impact[10] rose steeply in 2022 to an estimated RON 53.4 Bn., the equivalent of 3,8% of Romania's GDP[11]. Over the last two years the oil and gas sector have been gradually recovering after the lows reached during the pandemic. This has been reflected in the economic impact figures with the sector's direct effects estimates advancing from an estimated 1.7% of total economy GVA in 2020 to 2,2% 2021 and 4,2% in 2022.

Quantifying both indirect and induced effects of the oil & gas sector in the economy yields a much more significant impact. For instance, in 2022, indirect effects amounted to 2,5% of GVA while induced effects were 2,0% of the economy's GVA (see Table 3.1 below). Altogether, the cumulative direct, indirect and induced effects of the oil and gas sector in the economy were the equivalent of 8,7% of the economy's GVA in 2022 (or 7,9% of the GDP).

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[10] Direct impact includes also the 0,5 RON/liter fuel discount contribution which the authorities imposed on the sector for several months in 2022. It also includes the solidarity contribution paid by the sector, amounting to RON 3,1 Bn.
[11] This is the equivalent to 3,9% of total Gross Value Added (GVA). The difference between GDP and GVA is given by net taxes, which is a sizable amount. In 2022 net taxes represented 9% of GDP.

Table 3.1 – The GVA Effects of Oil & Gas Sector, % of Economy GVA

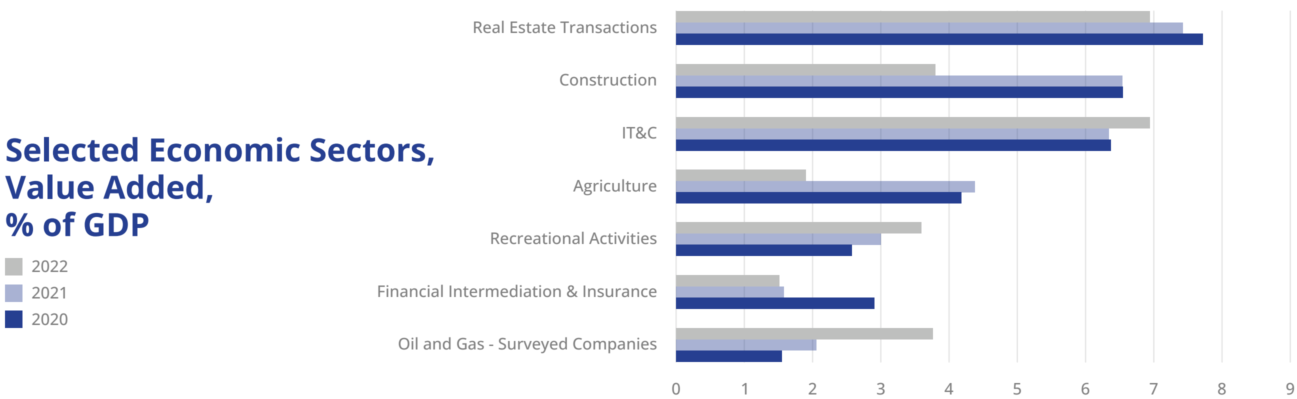
The Effects of Oil & Gas Sector, % of Economy GVA/GDP	2020	2021	2022
Direct	1,7	2,2	4,2
Indirect	1,0	1,3	2,5
Induced	0,8	1,1	2,0
Total (% of GVA)	3,5	4,7	8,7
Total (% of GDP)	3,2	4,2	7,9
Direct Effects (% of GDP)	1,5	2,0	3,8

Source: Survey data and own calculations. Differences may be due to rounding.

In relative terms, compared to other sectors in the economy the oil & gas sector has outgrown a number of sectors in the economy reaching a sizable impact on GDP (see figure below). For instance, its contribution to GDP in 2022 represents:

- 250% of the Financial Intermediation & Insurance sector contribution to GDP, or
- 200% of the Agricultural sector contribution to GDP, or
- 105% of the contribution to GDP attributable to the Arts, Entertainment and Recreational Activities sector, or
- 99% of the Construction sector contribution to GDP, or
- 55% of the IT&C sector contribution to GDP, or
- 55% of the Real Estate Transactions contribution to GDP.

Selected Economic Sectors, Value Added, % of GDP



Source: Own calculations and INSSE. For the oil and gas sector direct effects only.

As such, the importance of the oil and gas sector to the economy has grown gradually over the last two years. In terms of GVA it is now 2,5 times the size of the "Financial Intermediation & Insurance" sector, having an almost similar contribution to the whole economy GVA as the "Arts, Entertainment and Recreational Activities" or "Construction" sectors. It represents more than half of the "IT&C" or the "Real Estate Transactions" sectors' contribution to GDP.

3.2 The Employment Effect

At the end of 2022, the oil & gas sector employed almost 64,000 people[12] (Table 3.2 below). The pandemic took a toll on the sector's employment, which lost around 4,5% of its workforce compared to 2020.

Table 3.2 The Employment Effects of the Surveyed Oil & Gas Companies (persons) and as a % of total employment

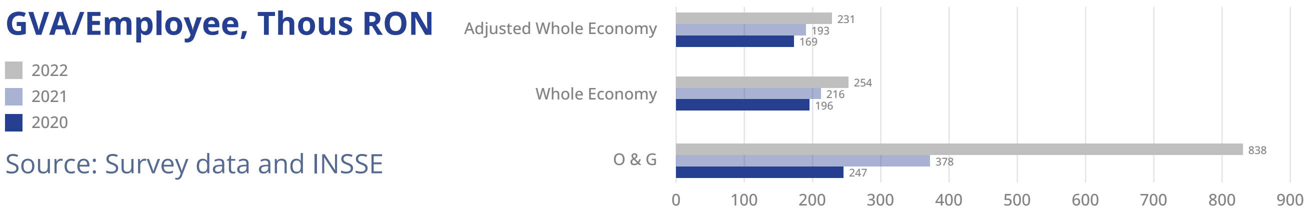
	2020	2021	2022
Direct	66.819	63.896	63.740
Indirect	54.123	51.756	51.629
Induced	38.087	36.421	36.332
Total employment effects	159.029	152.072	151.700
Total employment effects as a % of total employment	3,3	3,0	3,0

Source: Survey data and INSSE

Taking account of the indirect and induced effects, the employment impact is larger. The estimated number of jobs in the economy supported by the oil and gas sector activities was close to 152.000 in 2022, or 3% of Romania's total employment.

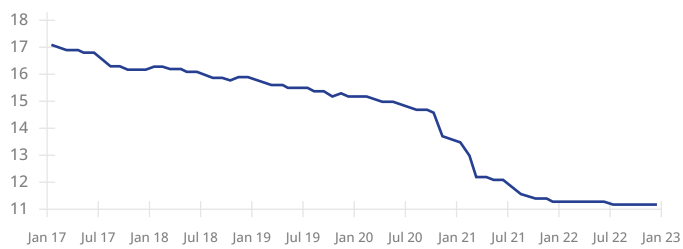
At around 838 thousand RON/employee, the productivity of employees in the oil & gas sector was 3,3 times higher than the average economy labour productivity in 2022[13] (see the GVA/employee figure below). However, this marked improvement in labour productivity was triggered by exogenous factors, namely by higher oil and gas prices. The average economy labour productivity was calculated in two ways, depending on the assumptions made on the total number of employees in the economy.

GVA/Employee, Thous RON



Source: Survey data and INSSE

Number of Employees in the Extraction of Oil and Gas Sector, Thous



Source: INSSE

[12] As mentioned before, this figure underestimates the true impact of the oil and gas sector employment.
[13] Labour productivity of the oil and gas sector was significantly higher in the first edition of this analysis. The reason why this is now lower is due to the inclusion of filling station operators. They increased the total number of employees in the sector while their wages do not usually command the same wage premiums observed across the most specialised activities performed in the oil and gas sector.

According to official statistics, the total number of employees was close to 5 million at the end of 2022. The labour productivity calculated using this figure corresponds to the "Whole Economy" data in the productivity figure above. The "Adjusted Whole Economy" considers the number of active employees and full-time contracts - which is larger, a little over 10% higher[14]. A higher number of employees would lower labour productivity for the same value of GDP.

A small part of the increase in labour productivity in the oil & gas sector from 247.000 RON/employee in 2020 to 378.000 RON/employee in 2021 can be attributed to the falling number of employees. The effect of the pandemic is clearly observed in the extraction of oil and gas sector. Between January 2020 and January 2021, the sector's workforce diminished by 11%, falling to 13.000 employees. This decline has continued throughout 2021 and stabilised in 2022. Even so, between 2017 and 2022 the extraction of oil and gas sector lost more than a third of its workforce.

3.3 The Oil & Gas Sector Effects on Investments

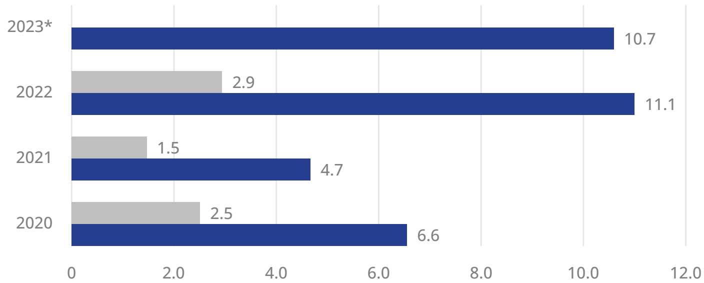
Investment data from surveyed oil and gas companies revealed an acceleration of investments in 2022. They rose to RON 11,1 Bn. from RON 4,7 Bn. in 2021 reversing the fall incurred during the pandemic. Investment decisions in the sector are related to the oil price.

Average oil prices were low in 2020, a year when global oil demand collapsed due to the imposition of lockdowns during the pandemic. As a consequence, investments in 2021 – based on decision taken during 2020 – were lower.

Oil and Gas Sector Investments

As % of total economy investments
Bn. RON

Source: Survey data and Ministry of Finance. 2023* represents planned investments as per questionnaire data



However, with oil and natural gas prices already on a rise at the end of 2021, oil and gas companies' investment plans for 2022 received a boost. Their share in total economy investments almost doubled, to 2,9% from 1,5% in 2021. Moreover, the sector plans to continue to invest, the surveyed oil and gas companies forecast to spend RON 10,7 Bn. in 2023 on capital.

To a certain extent investment decisions will also depend on the regulatory framework. But their scope is also important. There are investments that support the green transition and their

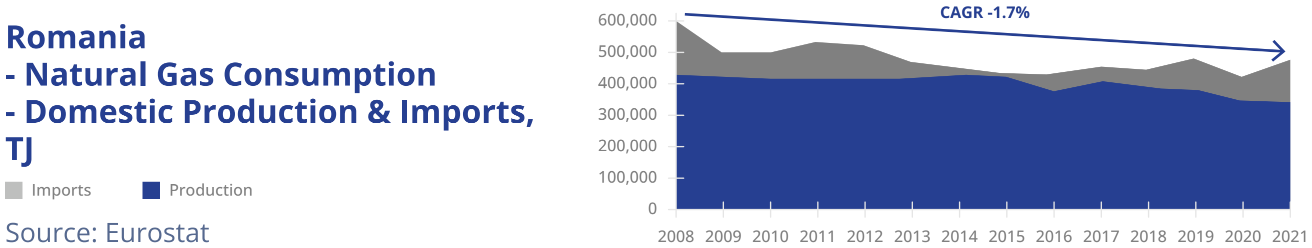
[14] There are a significant number of additional employees – most of them working in the various departments of the public sector, i.e., defence, secret service, which are not included in the official statistics. Taking them all into account would lower even more the average economy labour productivity.

associated targets, which many companies operating in the oil and gas sector already committed to. These will help to decarbonise their operations and their value chains. Other types of investments could be aimed at production capacities that address fossil fuels, notably natural gas as this is considered to be a transition fuel.

3.4 The Romanian Gas Sector Production Continues to Shrink

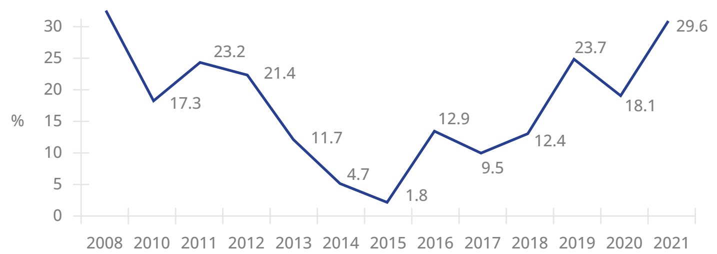
The domestic natural gas production continued to trend downwards, accelerating its decline. From 2008 to 2022 natural gas consumption has been falling at an annual rate of 1,7% (see figure below). This is a consequence of several factors, among them increased energy efficiency, the changing structure of the economy and the high level of taxation. Gas royalties and windfall taxes on sales of gas increase, in effect, the marginal cost of producing natural gas, with a negative impact on long-term production.

Romania
- Natural Gas Consumption
- Domestic Production & Imports, TJ



Source: Eurostat

Romania
- Natural Gas Dependency Ratio



Source: Eurostat

Natural gas import dependency ratio, calculated as a ratio of imports to inland consumption, has been rising since 2015, from 1,8% to close to 30% in 2021. However, this situation is likely to change in the near future as offshore gas production from the Black Sea will increase over the next years[15].

The adoption of changes in the Offshore Law in May 2022 has been an important step toward enabling additional investments required to bring the gas onshore from the already proven reservoirs in the Neptun Deep perimeter, for instance.

[15] In 2022 the Black Sea Oil and Gas SA, a Romanian based energy company, has already started to produce offshore natural gas from its Black Sea reservoirs.

Concluding Remarks

04

The results of this analysis show that the importance of the oil and gas sector to the economy has grown gradually over the last two years, as the economy recovered from the lows recorded during the pandemic. Its contribution to GDP reached 3,8% in 2022 and it is now 2,5 times the size of the "Financial Intermediation & Insurance" sector, having an almost similar value-added contribution to the whole economy as the "Arts, Entertainment and Recreational Activities" or "Construction" sectors.

The oil & gas sector remains a very large contributor to the government consolidated budget. Total fiscal contributions paid by the sector rose steeply in 2022, reaching 10,6% of total government revenues. The windfall tax on sales of gas alone were over RON 9,6 Bn. in 2022, the equivalent of 2,1% of total government revenues. These sizable amounts made much easier the authorities' task of implementing the energy price caps and other energy related financial measures across the economy.

As the current energy crisis has shown, the need for further investments in the oil and gas sector remains paramount. Made in conjunction with objectives to reduce greenhouse emissions, these will increase domestic production capacities, bolstering national energy security.

Appendix 1

Survey Questionnaire

	2020	2021	2022
Company Name			
Identification Code			
CAEN code main			
- all amounts in RON			
Turnover			
Investments			
Taxes, levies and contributions to State, local or different authorities' budgets			
Earnings before interest, taxes, depreciation and amortisation (EBITDA)			
Corporate Income Tax (CIT)			
Employer and employee payroll taxes and social contributions (SSC)			
VAT			
Excises			
Customs taxes			
Local taxes			
Royalties production/transport - oil			
Royalties production/transport/storage - gas			
Windfall tax on sales of crude oil			
Windfall tax on sales of gas			
Windfall tax on revenues electricity			
Contributions & tariffs to Regulatory Authorities (i.e. ANRE, ANRM, ACROPO, etc.)			
Solidarity contribution (only for the year 2022, if applicable)			
Other taxes, levies and contributions			
Average number of employees			
What is the value of the planned investments for 2023			