RESPONSIBILITY AND PERFORMANCE IN THE OIL INDUSTRY

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Abstract

In this paper we highlight the role of non-financial information contained in sustainability reports for a complex analysis of a company's performance structured on the three main components: economic, social and environmental. In order to achieve this goal, we set out to analyse the overall performance of a company in the oil industry, as this field of activity involves more complex responsibilities on the part of companies operating in this sector and is therefore more relevant.

Key words: *responsability, performance, oil industry, non-financial information,*

Jel Classification: *M41*

I. INTRODUCTION

The increasingly pronounced phenomenon of globalization and implicitly of business internationalization involves increasingly complex challenges and responsibilities for companies that are engaged in this process. Today, the main goal of companies is no longer just to maximize profits, as was previously considered by researchers in the field of corporate finance (Ciobanu A, 2006). Companies are also obliged to pay increasing attention to the social and environmental issues involved in carrying out their activities in order to be able to meet the requirements of all stakeholders. The challenges of today's business management are to reconcile the diverse and sometimes contradictory interests of all those who are directly or indirectly involved in their work. This context also poses new challenges in providing the most accurate and complex information possible to all stakeholders. In order to achieve this goal, it is necessary for large companies to provide information on everything that involves their activity, not only those related to economic and financial activity. For this reason, non-financial information that complements financial information is becoming increasingly important. In order to be as much complex as possible and to give a more accurate picture, the analysis of a company's performance must include, in addition to the economic component, the social and environmental component.

The paper is structured around three objectives. The first objective is to make a foray into the history of the oil industry, as a core component of the economy both globally and nationally, highlighting its importance at every level. We also want to highlight the challenges that the oil industry faces at European Union (EU) level, but also the issue of industrial pollution as a consequence of oil exploitation.

The second objective is focused on the synthesis of the main approaches regarding the key concepts used in the paper, namely responsibility and performance. We set out to address the two concepts from a global perspective, on the three fundamental components, namely economic, social and environmental, also presenting the main indicators for measuring global performance, but also how to report it.

II. RESULTS AND DISCUSSIONS

One of the most developed and important components of the world and national economy is the oil industry which has a great impact on other industries and, implicitly, on the development of the global economy. At present, although rightly considered one of the most polluting industries, it is still proving to be indispensable for the economy, society and the modern lifestyle in general. From this perspective, in our study we will start from the hypothesis that as the situation is at the moment, the oil industry can be defined by an opportunity-vulnerability paradigm: opportunity by the fact that the oil industry still proves to be fundamental for good progress. of the current economy and vulnerability through the problems it creates on the environment and for which it is responsible. It is almost impossible to imagine today's world without the existence of oil. The modern world today is dependent on oil, and most likely, it will continue to do so for a long time to come, even as progress and research is made to replace it with less polluting alternatives with less impact on the environment. surrounding. In view of these considerations, through this section we have set out to present some aspects of the oil industry, beginning with the manner and timing of its emergence and development over time, the challenges facing the oil industry. Within the EU, the importance of the oil industry for the Romanian economy, but also the issue of the impact of the oil industry and oil exploitation on the environment to highlight in this way the high degree of responsibility of oil companies in environmental degradation.

The evolution of the oil industry worldwide

Also nicknamed "black gold" by virtue of its qualities and advantages, oil has become, especially in the last century, an extremely sought-after product, essential for the development of modern economic life, an expression of wealth and economic independence. Oil is also an important factor in world politics, proving indispensable in times of war, often leading to economic and diplomatic conflicts, creating various tensions and suspicions between states and nations (Buzatu, 2016).

A multi-million dollar industry today, the global oil industry dates back to ancient times, with the first oil wells being drilled in China as early as 347 AD. The beginning of the modern history of the oil industry is marked by at least two defining moments. The first such moment is in 1846, the year in which the Canadian geologist Abraham Pineo Gesner refined a liquid from coal, oil shale and bitumen called by him "kerosene".

The second moment is in 1847, marked by the discovery of the Scottish chemist James Young, who observed oil leaks in the Riddings coal mine, oil which he distilled into both lamp oil and denser oil used for lubrication. As a result of these two discoveries, the world's first oil refinery and oil mill in Scotland was founded in 1850, founded by James Young and his partner William Binney, and in Canada Abraham Pineo Gesner founded the Kerosene Gaslight Company. to light up the streets of Halifax and then the United States. So these are the first oil companies in the world (Ali, 2019).

As for the large companies that still dominate the oil industry today, they were founded in the late nineteenth and early twentieth centuries. These include Standard Oil, founded in 1865 by John D. Rockefeller (https://www.history.com/topics/industrial-revolution/oil-industry, August 21, 2018 Accessed on 8.05.2022), who is also the first baron in the oil industry, and then ExxonMobil, which emerged with the dissolution of Standard Oil, as well as Royal Dutch Shell and Anglo-Persian Oil, later British Petroleum.

Since the end of World War II, oil has established itself as the dominant source of energy in the world, both by increasing production at a low price and by being easy to transport and store. In the global energy supply, the share of oil has increased considerably compared to other energy sources, in all sectors, but especially in transport and electricity production (Pop V, 2017).

A turning point, we could say, in the evolution of the oil industry is the formation of the Organization of the Petroleum Exporting Countries (OPEC) initially formed by Iran, Iraq, Kuwait, Venezuela and Saudi Arabia. OPEC is a permanent intergovernmental organization and was established at the Baghdad conference on September 10-14, 1960, in response to the "Seven Sisters" multinationals, which included ExxonMobil, Shell, and British Petroleum. OPEC currently comprises 13 member countries, representing approximately 44% of global oil production and 81.5% of world reserves (https://www.etoro.com/ro/markets/oil/stats, Accessed on 19.05.2022).

OPEC's stated mission is to coordinate and unify the oil policies of its member countries and to ensure the stabilization of oil markets in order to ensure an efficient, economical and regular supply of oil to consumers, a stable profit for producers and a fair return on capital, for investors in the oil industry (https://www.opec.org/opec_web/en/about_us/24.htm, Accessed on 8.05.2022).

The peak of oil production was reached in 1970, which led to a sharp rise in the price of oil, in 1973 it rose from $ 2 a barrel to $ 12, six times more practical. The rise in prices has led to a drop in oil demand, creating major problems for OPEC member countries(Umar, A, 2019). Oil has thus become the most sought after fuel

even for electricity production. By comparison, methane gas began to be used only in the 1980s in competition with oil. The peak in oil prices at that time was reached in 1979-1980 when the price rose to $ 32 a barrel, then dropped to $ 20-25 by the year 2000. The price of oil is currently quoted at $ 107, according to eToro.

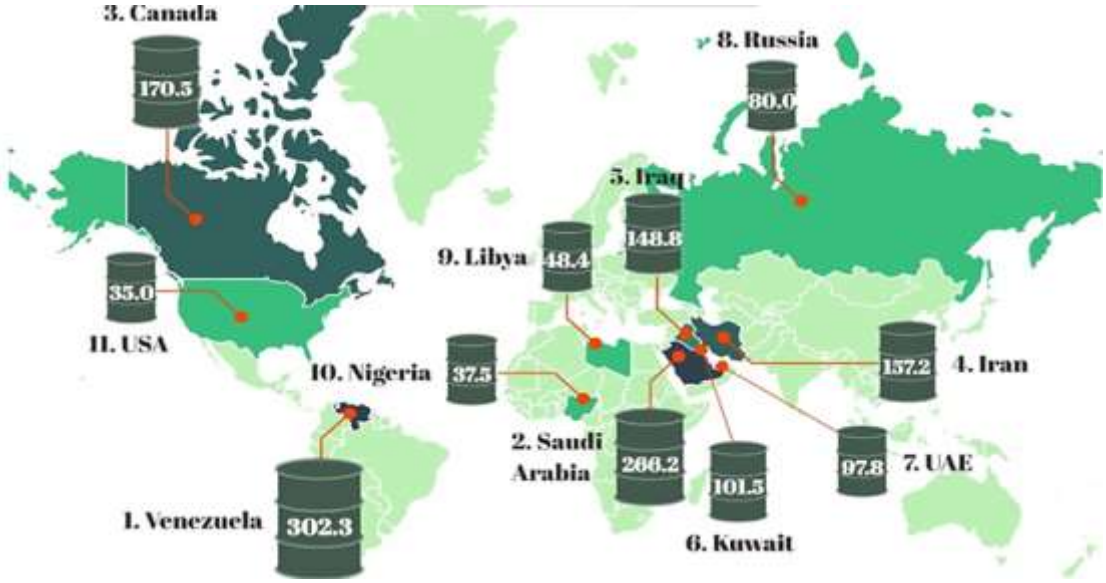

Figure no. 1, The world's largest oil reserves in 2018
Source: Taken from https://www.tonymappedit.com/6-maps-that-show-the-top-countries-by-oil-reserves-revenues-production-consumption-export-import/

At the international level, in terms of trade, the share is held by energy, energy trade is growing, both globally and regionally. It can therefore be said that energy is a determining factor in globalization. On the other hand, this fact means that any crisis that occurs in the energy industry in general, and in the oil industry in particular, has major implications for the development of the economy, which in turn can lead to social and political crises. For example, the 1973 oil crisis I mentioned earlier had an impact on developed countries, including the United States. This was triggered by OPEC's dissatisfaction with the low level of oil prices and had profound economic and social implications in Western countries, leading to reductions in oil fuel consumption and in industry and transport. The oil crisis of 1985 led to the collapse of the USSR, the world's largest oil producer at the time. Two more periods of crisis in the oil industry were recorded in 2008-2009 as a consequence of the global economic crisis as well as in the period 2015-2017, both being materialized by a decrease in oil prices. However, fluctuations in oil prices can also have a positive effect on the world economy. The fall in oil prices, for example, led to a rapid growth of the world economy between 1990 and 2007 and beyond after 2010, with oil consumption in 2010 being about three times higher than in 1986 (Pop V, 2017).

Currently among the largest oil-producing countries in the world are: Saudi Arabia, Russia, Mexico, OPEC member countries (Stroe A, 2020). Starting with 2020, the USA also falls into this category, which in addition to being one of the largest consumers of oil, has also become one of the largest producers (https://www.etoro.com/ro/markets/oil/stats, Accessed on 19.05.2022).

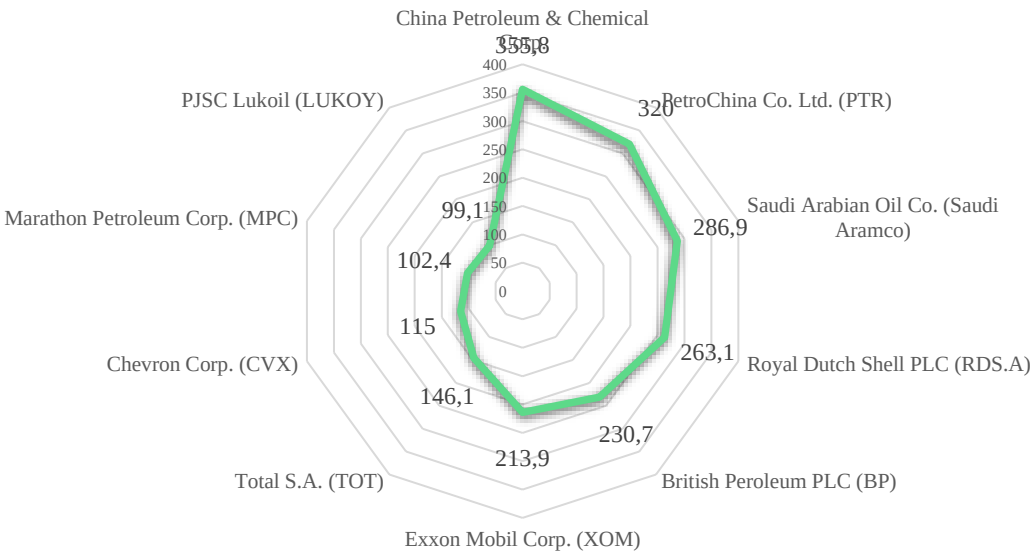

Chart no. 1, Top 10 largest oil companies in the world by profit (billion dollars)
Source: Author processing according to data available on https://www.investopedia.com/

In Chart no. 1 shows the top 10 largest oil companies in the world. This is based on the profits made by the companies, the data being related to 2020 and are taken from YCharts (Reiff N, 2020). We note that the strongest companies in the field come from China, Saudi Arabia, Great Britain, the United States of America, France and Russia. In 2018, the largest proven oil reserves were located in Venezuela, Saudi Arabia, Canada and Iran.

The evolution of the oil industry in Romania

Regarding the evolution of the oil industry in Romania, from the very beginning it should be noted that Romania is one of the first producers in the world, occupying the first place in Europe and among the first countries in the world until the 19th century. Archaeological discoveries have shown that oil has been used in Romania since the third century AD. The first written work that demonstrates a scientific approach to oil resources in Romania was the work "Descriptio Moldaviae" written by Dimitrie Cantemir in 1714.

One of the oldest oil production areas in Romania is designated Păcureți, in a paper written by the Russian count Demidov in 1837. The first oil distillery in Romania where kerosene was produced for public lighting was built by N Choss in Lucăcești in Bacău County in 1840. But 1857 is considered the official beginning of the Romanian oil industry (Stoicescu M, Ionescu M., E, 2014). The main stages in the development of the Romanian oil industry between 1857 and 1944 are presented in Figure no. 2.

The next period, between 1947 and 1989, which corresponds to the communist era, has as its main feature the nationalization of all private companies, their assets being then exploited by the Sovrom Petrol company owned by the Romanian state in partnership with Russia. The maximum production of 15 million tonnes was reached in 1976 after which it decreased. After the fall of the communist regime in 1989, the activities of oil exploitation and production in the country were taken over by the state company called Compania Română de Petrol. In 1997 it became SN Petrom and includes two refineries, namely Arpechim and Petrobrazi (https://www.omvpetrom.com/ro/despre-noi/istoric, Accessed on 9.05.2022).

It included all 10 refineries that were in operation in Romania at the time, most of the extraction fields, warehouses and PECO stations.

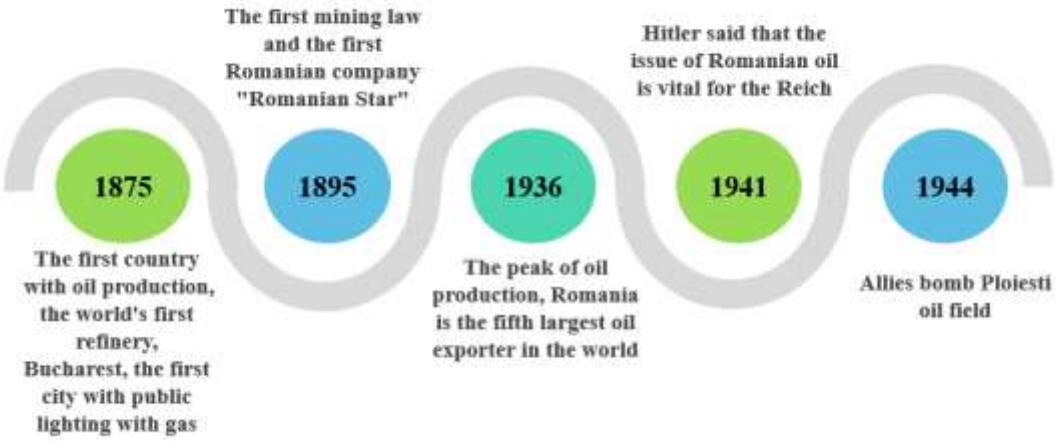

Figure no. 2, The main stages in the evolution of the Romanian oil industry between 1875-1944
Source: Takeover and adaptation after Isărescu M., *Oil and the lion as sources of Romania's modernization, The destiny of a parallel*, Petrol-Gas University, Ploiești, December 11, 2019

Subsequently, 8 of the 10 refineries were organized as individual companies, being destined for privatization. Instead, the Petrobrazi Ploiești and Arpechim Pitești refineries, the pipeline system and the distribution network will come together in the form of the Petrom National Petroleum Company (S.N.P.). This was the time when the privatization of the oil industry began to grow rapidly. The main privatizations in the oil industry are presented in Figure no. 3.

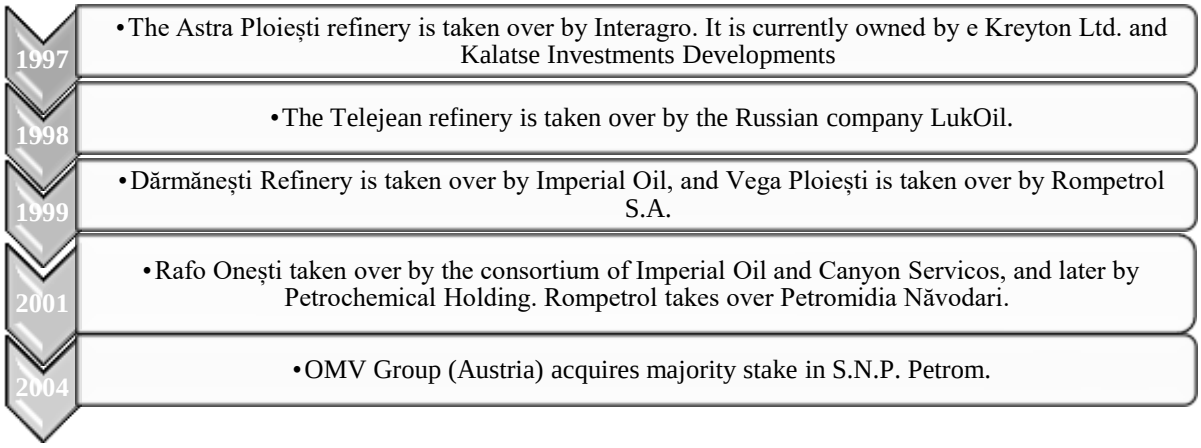

Figure no. 3, Major privatizations in the oil industry after 1990,
Source: Author processing after Murgescu B. et al., *The history of energy in Romania*, New Media Print, Bucharest, 2012, p.94

Romania can therefore be considered a true pioneer in the field of oil, as it is the first country in the world to switch to industrial oil extraction, thus managing to become an important player in political games at European level, as fossil resources are still a major resource. important component of geopolitics (https://radiochisinau.md/rolul-industriei-de-petrol-si-gaze-din-romania-in-ultimii-100-de-ani-jocurile-geopolitice-tin-cont-inca-de-resursele-fosile---79480.html, Accessed on 9.05.2022).

Romania currently ranks 45th in the world in terms of oil reserves, the local market having reserves of 600 million barrels of oil, being in this respect at a level similar to Turkmenistan and represents the equivalent of 0.036% of total world reserves (Roșca C, n.d.).

An analysis conducted in February 2021 with the financial support of the Federation of Employers of Oil and Gas (FPPG) and conducted by the Consilium Policy Advisors Group (CPAG) highlighted the fact that the oil industry has a major contribution to Romania's GDP growth, although in recent years This contribution has been declining over the years due to a number of factors, including a number of policies adopted to discourage the use of fossil fuels, both at national and EU level. In the period 2017-2019, oil and gas companies generated 1.8% of GDP, which represents half of the contribution of the entire energy sector, having a significant total impact on the

economy, representing between 5.3% and 5.9 % of GDP. During the period, they paid taxes and dividends of about 16 billion lei per year to the state, on average, representing the equivalent of 6% of budget revenues.

Another way in which companies in this sector contribute to the development of the national economy is their ability to collect VAT and excise duties, but also the large number of employees in this sector. The investments of these companies are also substantial, in 2019 they invest over 6.7 billion lei, the equivalent of 16% of public sector investments. The pandemic crisis has exposed the oil and gas sector to risks and uncertainties. The imposition of restrictions has led to a collapse in demand and transport activity, with a direct impact on oil finances (Lungu L, n.d.).

The challenges of the oil industry in the European Union

The EU's oil refining capacity is over 14 million barrels per day, which is about 14% of total global capacity, making the EU the third largest refining market after the US and China (https://ec.europa.eu/energy/topics/oil-gas-and-coal/oil-refining_en, Accessed on 9.05.2022).

Despite this, a study conducted in 2018 by Eurosta(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Main_Page, Accessed on 19.05.2022) showed that at EU level, the production of energy from renewable sources is predominant, having at that time a share of 34.2% of total primary energy production, as shown. remarks also in Figure no. 4. However, in terms of primary energy production from non-renewable resources, it totaled 635 million tonnes of oil equivalent (Mtoe) in 2018, generally following a downward trend, either as a result of declining reserves of raw materials or as a result of interest decreasing number of producers in terms of exploitation of limited resources considered unprofitable. However, the EU is still a major consumer of non-renewable energy products, which it imports to a large extent. The production of energy based on crude oil in 2018 represented a share of only 3.4%, the share of natural gas being higher than 9.3%, and the main producers are Denmark with 5.8 Mtoe, Italy with a production of 4.7 Mtoe and Romania which recorded a production of 3.4 Mtoe (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Main_Page, Accessed on 19.05.2022).

The EU's situation is therefore not favorable in this respect, as it is a major importer of energy. In 2018, imports exceeded exports by 886 Mtoe, practically half of the EU's energy needs coming from imports. The main products exported by the EU are petrol and fuel oil.

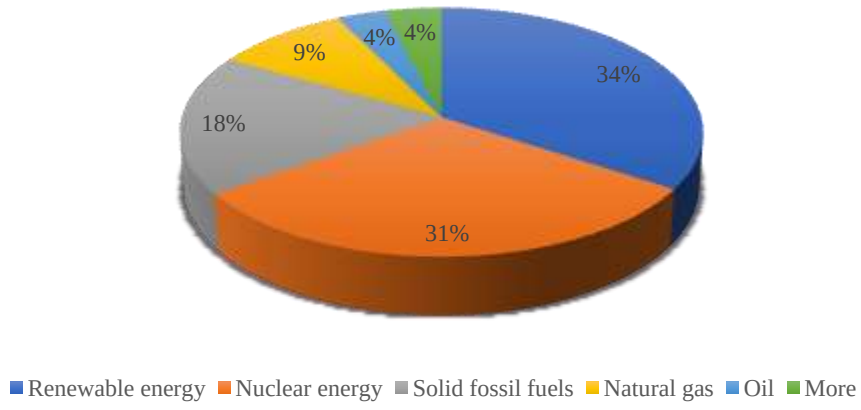

Figure no. 4, EU primary energy production in 2018,
Source: Taken from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Main_Page, Accessed at 19.05.2022

The main supplier of primary energy products to the EU and crude oil is Russia, followed by Iraq, Saudi Arabia, Norway, etc. The situation of crude oil imports by country of origin at the end of 2018 is represented graphically in Figure no. 5. Imports of crude oil are the most important component of imports of petroleum products, supplemented by manufactured products such as diesel, naphtha (Unrefined essence, light or heavy, a raw material for the cracking of hydrocarbons; (impr.) crude oil, crude oil. (<fr. naphta) ", according to https://dexonline.ro/, Accessed on 16.06.2021), liquefied petroleum gas and kerosene fuel. It is found that imports from Russia, which are in 1st place, are more than 3 times higher than those from Iraq, the EU's second largest supplier of crude oil. Given that a large share of imports comes from a relatively small number of suppliers, the security of the EU's primary energy supply is threatened. In order to balance this situation, the European

Commission presented in 2014 the Energy Security Strategy which aims to ensure a stable and abundant energy supply. The share of each type of energy in total EU primary energy production in 2018 is presented in Figure no. 4.

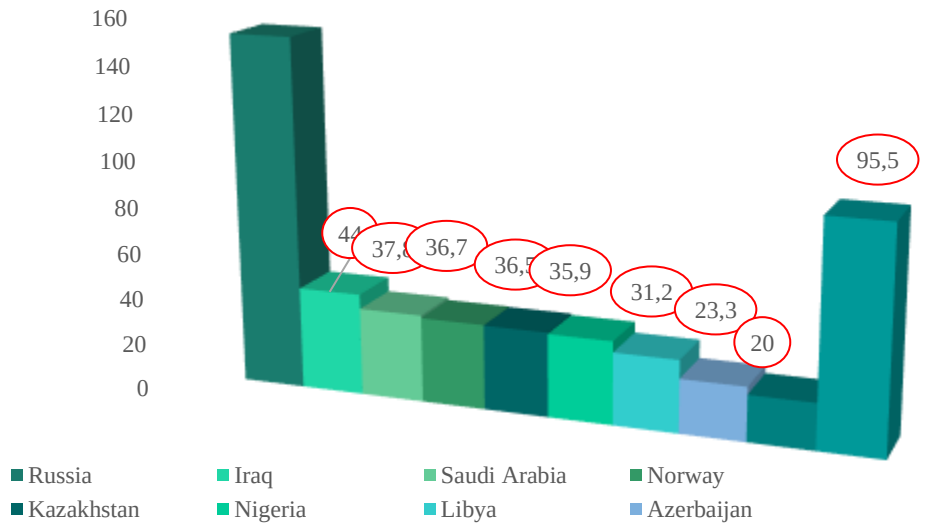

Figure no. 5, EU crude oil imports by country of origin in 2018 (million tonnes), Source: Taken over and adapted after https://ec.europa.eu/eurostat/statistics-explained/images/3/38/Crude_oil_imports_by_country_of_origin%2C_EU-27%2C_2000-2018_%28million_tonnes%29.png, Accessed on 19.05.2022

We note from the above that the EU's energy situation is not very favorable, but that steps are being taken to improve it so that its dependence on energy imports from third countries can be reduced over time. The largest energy producer in the EU, Denmark, whose oil production in 2019 was 103,000 barrels of oil, has chosen to end the new exploration of oil and gas in the North Sea to phase out the extraction of fossil fuels, however that the 55 oil and gas extraction platforms under the control of the Danish state will still be able to extract fossil fuels, but the search for new reserves has been stopped. The goal is to end the fossil fuel era. In order to support oil workers, Minister Dan Jørgensen plans to re-employ them in the wind energy sector . At the same time, large oil companies and their industrial groups have spent at least 251 million euros from 2010 to 2018 to lobby the EU to weaken environmental policies, as the bloc is known to be a global leader in the fight against climate change (https://www.theguardian.com/business/2020/dec/04/denmark-to-end-new-oil-and-gas-exploration-in-north-sea, Accessed on 19.05.2022).

Consumption of oil products is declining globally, however there are still sectors that use oil products on a large scale, being even dependent on them. The largest share of total oil consumption in the EU in 2018 is in the road transport sector, respectively 48%, which means almost half of the total. The situation of oil products consumption at the level of activity sectors within the EU for 2018 is represented graphically in Figure no. 6. We observe a lower consumption in terms of non-energy use of oil which, although almost three times lower than in the road transport sector, is higher than the consumption in maritime transport, aviation or industry. Non-energy use refers to the use of other petroleum products such as white alcohol, paraffin wax, lubricants, bitumen and others. In the field of energy, the consumption of petroleum products has a share of only 5%. The lowest share of oil consumption is found in the fisheries sector.

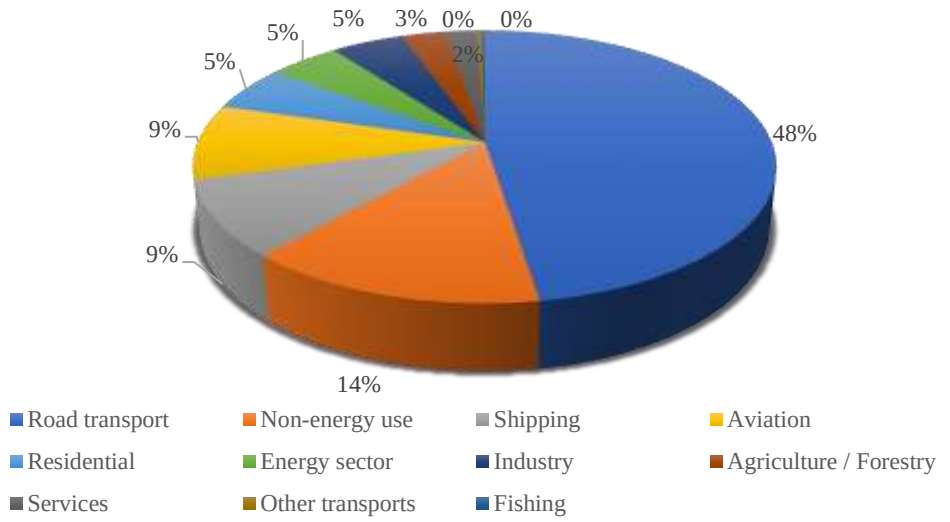

Figure no. 6, Consumption of petroleum products at EU level in 2018 by activity sectors, Source: Taken over and adapted after https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Oil_and_petroleum_products_-_a_statistical_overview

The challenges for the oil industry in the EU are numerous and are caused by a number of different factors. On the one hand, there is a long-term downward trend in oil products in the EU due to structural changes in the economy, the more efficient use of these types of products or their substitution with biofuels or electricity, on the other hand. an imbalance in supply and demand, in the sense of increasing the demand for diesel and aircraft fuels and reducing the demand for petrol.

Industrial pollution - a consequence of oil exploitation

In our opinion, the current context of the oil industry can be defined, as we mentioned at the beginning of this paper, by a vulnerability-opportunity paradigm. The oil industry is marked, on the one hand, by energy security (http://www.interenerstat.org/definitions/results.asp?id=168&Type=Flows, Accessed on 11.05.2022) problems materialized by a decline in global oil supply in the face of rising demand, which is an opportunity, as it highlights the importance and dependence of the current economy on the oil industry. However, this is due to the vulnerability caused by growing environmental concerns caused by climate change as a result of global warming, as well as local problems with deteriorating air quality. Although global oil demand has suffered recently as a result of the Covid-19 pandemic (https://www.zf.ro/companii/energie/industria-petroliera-se-afla-in-fata-unui-val-de-inchideri-de-productie-de-dimensiuni-istorice-19036887, Accessed on 11.05.2022), the oil industry remains one of the core industries of the modern economy. Given this context, in this section we have set out to highlight the issues related to vulnerability, respectively the issue of air pollution and implicitly the deterioration of the environment as a result of oil exploitation (https://www.zf.ro/companii/energie/industria-petroliera-se-afla-in-fata-unui-val-de-inchideri-de-productie-de-dimensiuni-istorice-19036887, Accessed on 11.05.2022).

Concern about environmental issues arising from industrial activities is not new, as it has been manifesting itself worldwide since the middle of the twentieth century (https://ro.wikipedia.org/wiki/Poluare, Accessed on 1.06.2022) and has materialized through the establishment of laws designed to repair previous damage caused. uncontrolled pollution and at the same time to prevent future environmental contamination. For example, if the concentration of CO2 levels in the atmosphere has been constant for thousands of years, it has risen sharply with the development of the modern industrialized economy (Henriques I., Sadorsky P., n.d.). A graphic representation of how the concentration of CO2 has increased worldwide over more than 2000 years, starting from the year 1 AD. until 2018 is presented in Figure no. 7 and shows a major increase since 1500. Practically over a period of more than 500 years, the concentration of CO2 in the air has increased by 70%.

According to a report presented by the European Court of Auditors in 2018 on air pollution, the main sources of air pollutants at EU level are home heating, road transport, the energy sector, industry, agriculture, etc., the most affected areas being urban areas (https://www.eca.europa.eu/Lists/ECADocuments/SR18_23/SR_AIR_QUALITY_RO.pdf, Accessed on 14.05.2022). Taking into account the main uses of oil and petroleum products, namely transport, industrial energy, heating and lighting (https://ro.warbletoncouncil.org/para-que-sirve-petroleo-2714, Accessed on 14.05.2022), we note that almost every source of pollution presented above is more or less related to the oil industry. The main

types or levels at which pollution occurs are presented in Figure no. 8, the biggest danger being air pollution. According to the WHO, air pollution will be the main cause of death of 7 million people in 2021, which is also responsible for the large number of deaths caused by Covid-19. According to a 2020 study by the Eco Jungle community, the top 5 most polluting industries in 2021 include the energy industry, based mainly on oil and coal, and the transportation industry, which is also largely dependent on oil. agriculture, fashion industry and retail (Omondi, B, 2021).

Another study conducted this time by Eco Experts, founded in 2009 based in London, which has as its theme a ranking of the most polluting industries, highlights a number of 7 industries as one of the most polluting. Although they have a different ranking from the previous study, both highlight the fact that among the most polluting industries are the transport industry, the fashion industry, agriculture and retail.

III. CONCLUSION

The oil industry is recognized as extremely polluting, both in its extractive and processing industries (https://blumenfield.ro/grija-pentru-mediul-inconjurator-in-industria-petroliera-o-industrie-cu-risc-ridicat-de-poluare/, Accessed on 14.05.2022).

Although the causes are similar in all areas where these companies operate, the size of the pollution may differ from area to area, depending on the technologies used by the companies and how each company intends to comply with environmental regulations in force (Albu M, n.d.). Oil companies need to consider responsible, efficient and innovative management in order to be able to monitor and have ongoing control over environmental issues so that they can ultimately ensure business sustainability.

Therefore, the monitoring of environmental issues must be a major concern for companies in the field, being integrated in the sustainable development strategy of each company. Companies need to create long-term value through responsible business management. The main objective in terms of sustainable development is to find a balance between the economic, social and environmental components, respectively. Environmental management must be an integral part of the overall management of oil companies. This is the only way in which companies in the field can respond successfully and adapt accordingly to the current context characterized by the influence of the two somewhat antagonistic factors, namely the challenges posed by the impact of oil activities on the environment, in relation to the current economy. oil and, by default, oil products.

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