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Requirements for achieving economic sustainability of strategic extractive projects and their role in promoting local development

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Abstract---This study aims to highlight the role of strategic extractive projects in promoting local development in remote areas, while examining the requirements for achieving the sustainability of these projects. It addresses the issue of the extent to which extractive investments contribute to sustainable development, with a particular focus on its economic dimension. The study puts forward the hypothesis that achieving such development is possible if these projects are accompanied by economic diversification strategies and investment in human capital. This study adopts a descriptive approach through the review of a wide range of previous studies addressing this topic, along with an analysis of selected international experiences such as Norway, Botswana, Malaysia, Venezuela, and South Africa. The findings reveal that countries which have relied on good governance, institutional independence, financial transparency, as well as the adoption of economic diversification policies and the establishment of sovereign wealth funds, have succeeded in achieving economic, social, and environmental sustainability.

Keywords---Sustainable development, strategic projects, extractive projects, resource curse, rentier economy.
Jel Classification Codes: XNN; XNN

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Introduction

Regional imbalances are among the challenges faced by economic policymakers in various countries. Creating economic development, improving living conditions in these areas, and providing appropriate public facilities encourage citizens to settle and avoid migration. However, relying solely on the public sector to develop these regions is not a sufficient solution; it burdens the public treasury on the one hand, and on the other hand, it is not a permanent solution. In times of crises and external shocks, governments often resort to reducing spending, which negatively affects these regions. Therefore, encouraging both public and private investment in such areas is considered one of the effective solutions for creating sustainable development and providing permanent and diversified sources of income.

Algeria, like other developing countries, suffers from regional disparities, as there is a significant imbalance between different regions of the country in terms of value creation and benefiting from economic development programs. The large size of the country, the remoteness of these areas, and their geographical and climatic characteristics have created a major challenge for decision-makers in terms of breaking their isolation. Since independence, the state has adopted plans and policies aimed at developing remote regions and ensuring regional balance, either through the programming of major public projects such as road construction and railway lines, or through allocating financial resources to implement these projects via the creation of special funds such as the Southern Development Fund and the High Plateaus Development Fund.

Encouraging investment in these areas is considered one of the effective solutions to break their isolation on the one hand, and to involve them in value creation for the nation on the other hand. Recently, the state has scheduled some strategic projects in these regions, such as the Gara Djebilet project, which contains huge reserves of iron ore. This project, long awaited by Algerians in general and the residents of this border region in particular, is considered one of the proposed solutions for promoting this area, as it represents a key driver of local development through its direct and indirect contributions to improving various economic indicators, especially employment and economic growth.

However, despite the great importance of such projects, there are several challenges that must be overcome, the most prominent of which is the issue of sustainability in all its economic, social, and environmental dimensions. This is especially true since extractive projects depend on natural resources that are finite; the lifespan of the project is linked to the availability of the extracted material. Therefore, it is necessary to develop strategic plans to ensure the sustainability of economic development in these regions on the one hand, while taking into account possible scenarios after the depletion of these resources in order to avoid negative impacts and preserve the rights of future generations in general.

I.1 – Problem statement:

Through this research paper, we will attempt to study the contribution of investments in extractive projects to creating local development in the regions where these investments take place, while identifying the requirements for ensuring sustainability in its various dimensions. This is particularly important since this type of investment ends with the exhaustion of the raw material being extracted. Accordingly, we address the following problem:

What are the requirements for achieving economic sustainability in projects focused on extractive investments, and to what extent do these projects contribute to the development of the regions where they are located?

I.2 – Hypotheses:

- Developing plans and strategies aimed at diversifying sources of income is a key determinant of economic sustainability.

- Encouraging investment in complementary projects to the main investments maximizes the benefits of these projects.
- Applying governance principles in management based on transparency and accountability reduces the undesirable side effects of these projects.
- Utilizing the revenues from these projects to improve living standards, with a focus on human capital development.
- Investments in extractive projects contribute to creating local development in investment areas both directly and indirectly.

I.3. Literature Review:

The issue of sustainable development has attracted the attention of many economic researchers, institutions, and international organizations since the second half of the twentieth century up to the present day, particularly in light of the devastating effects of the irrational exploitation of natural resources on the environment, society, and even the economies of developing countries that have fallen into the "resource curse" trap. In this regard, we find:

The study by Farnham et al. (2020), conducted in three African countries (Burkina Faso, Mozambique, and Tanzania), addressed the issue of health inequality among communities surrounding mining projects. A sample of citizens in these countries was surveyed, and the study concluded that extractive projects in these countries significantly contributed to creating health disparities. Moreover, the positive economic impacts were not distributed fairly among different social groups. Accordingly, governments should take into account several environmental, social, and economic factors before granting exploitation licenses.

In the study by Giglio (2021), which examined extractive industries and their environmental and social impacts in South American countries, with a focus on lithium mining industries in the Lithium Triangle located on the borders between Bolivia, Chile, and Argentina, the study concluded that this industry had a catastrophic environmental impact, particularly in terms of water consumption and pollution. This, in turn, negatively affected the health and social conditions of indigenous populations, leading many of them to be displaced and to abandon their lands.

As for Nhabinde and Heshmati (2020), who addressed the impact of extractive industries on economic growth in Southern African Development Community (SADC) countries, the study's results showed that extractive industries had a direct negative effect on economic growth in most countries, with the exception of South Africa, Botswana, and Namibia, where positive effects were observed. Regarding indirect effects, extractive industries had no significant impact on GDP, as their influence on manufacturing, human capital, public expenditure, economic openness, exchange rates, and inflation was minimal. This indicates that these countries have fallen into the resource curse trap.

Several researchers have also addressed the factors behind the success of resource-dependent economies (particularly oil and gas), such as Holden (2013), who examined the Norwegian experience. He attributed Norway's success to the fact that, during the oil discoveries in the late 1960s, the country had a stable political system and strong institutions, in addition to clear and transparent economic policies and sound management of hydrocarbon revenues, particularly through the establishment of a sovereign wealth fund. Furthermore, Norway involved local companies in oil extraction activities.

In a study by Emma and Elissaios (2015), the issue of extractive industries and development was examined across micro, meso, and macro levels, discussing the impact of natural resources on different levels of national economies. The study highlighted the resource curse resulting from persistent dependence on natural resources and the lack of diversification of income sources, particularly in countries with weak institutions.

To test the resource curse hypothesis, Zhang, Muhammad, Dai, Khan, and Ahmad (2024) conducted an econometric study on eight Asian countries (Nepal, Sri Lanka, Maldives, Bhutan, Pakistan, India, Afghanistan, and Bangladesh) over the period 1996–2022. Using multiple linear correlation models, unit root tests, and cointegration techniques, they examined the effect of resource revenues on economic performance. The results indicated a weak and, in some cases, negative effect of natural resource revenues on short-term economic growth, as well as a negative impact on investment. This suggests that these countries suffer from the resource curse. The study emphasized the need for improved governance of natural resource exploitation, the adoption of economic diversification strategies, and policies encouraging investment in renewable energy to achieve sustainable development.

Many researchers also argue that the abundance of natural resources in developing countries may act as a constraint rather than a driver of development. In a study by Paul Fenton, Elissaios, and Lorenzo (2024), the growing role of transparency in governing natural resource exploitation in Latin American countries was examined. The study discussed the Extractive Industries Transparency Initiative (EITI), adopted by several Latin American countries, and how it can help mitigate the resource curse and reduce the negative social, economic, and environmental impacts of extractive industries. This is particularly relevant for countries such as Peru and Colombia, which have long suffered from the resource curse, mainly due to a lack of transparency, widespread corruption, and weak governance.

To assess the environmental impact of extractive projects on surrounding areas, Sandro and Hannah (2023), in a study titled The Local Economic Impact of Metal Mining in Africa: Evidence from Four Decades of Satellite Imagery, analyzed one million satellite images of regions across Africa from 1984 to 2019. The study examined the impact of extractive industries on urban growth and local development around mining sites. The images revealed urban development within approximately 20 km of open-pit mines; however, the study also showed population outflows from areas where resources had been depleted and mines closed. This indicates that economic growth is closely tied to the lifespan of the mine. Additionally, the study found that extractive industries significantly contributed to the emergence of conflicts and social tensions, particularly in authoritarian regimes where governance is weak.

Through this research paper, we aim to derive the requirements for achieving sustainability in its various dimensions, particularly the economic dimension, in areas where extractive projects are established and in surrounding regions. This will be done by reviewing and synthesizing the relevant literature on the subject, as well as examining both successful and failed international experiences in order to identify the causes of failure. These insights will then be applied to the Algerian context, with the aim of avoiding the resource curse or so-called "Dutch disease," and mitigating the negative impacts of such projects on the stability of macroeconomic indicators (due to shocks), as well as on the environment and the social fabric.

II – Methodology and Tools:

To study the requirements for achieving economic sustainability in extractive projects, this paper adopts a descriptive approach through a comparative analysis between a leading experience that has greatly benefited from extractive projects, namely Norway, which we will discuss in detail given its status as one of the leading oil-producing countries in achieving various forms of sustainability. In contrast, we will examine the experience of a rentier economy that has suffered significantly from the problem of the resource curse, specifically Venezuela, as one of the most prominent global examples of a country rich in resources yet unsuccessful in achieving economic development and escaping the trap of economic underdevelopment and dependency.

II.1 – The Norwegian Experience:

The Norwegian experience is considered one of the leading examples among oil-producing countries that managed to avoid falling into the resource curse. The discovery of oil and gas dates back to the

1960s, particularly in the North Sea. Norway adopted a strict economic policy in managing its resources, especially oil and gas revenues. In 1971, the Norwegian Parliament approved what is known as the "Ten Oil Commandments," which constitute a cornerstone for achieving sustainable development and the optimal exploitation of resources without falling into the Dutch disease problem. Many researchers have highlighted the Norwegian experience as a model that achieved significant economic growth through investments in extractive sectors (oil and gas)

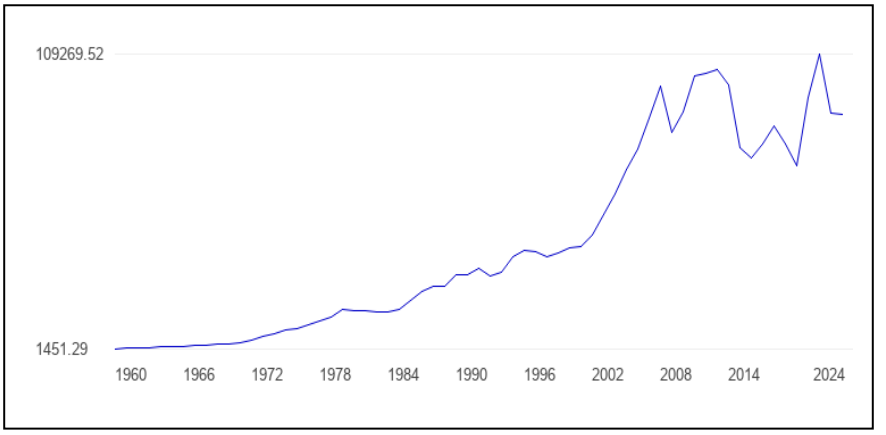

Figure 1: GDP per capita in Norway, in US dollars
Source: TheGlobalEconomy.com,
https://www.theglobaleconomy.com/Norway/gdp_per_capita_current_dollars/

From Figure 1, it is evident that GDP per capita has increased significantly, particularly following the years of oil discovery. Moreover, Norway has maintained the stability of its macroeconomic indicators, as illustrated in Figure (2).

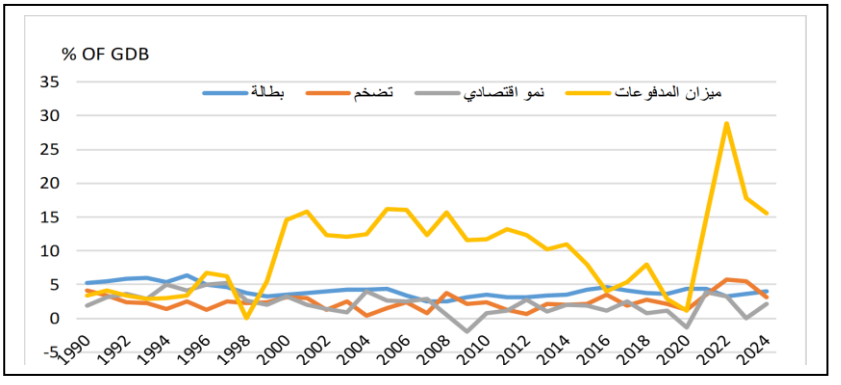

Figure (2): Performance of Norway's macroeconomic indicators
Source: Prepared by the researchers based on World Bank data

From the figure, it can be observed that Norway has maintained long-term stability in its macroeconomic indicators, with optimal levels particularly in relation to unemployment, inflation, and economic growth. In addition, the country has recorded high surpluses in the balance of payments in several years, reflecting the strong overall performance of the Norwegian economy. Norway's success in achieving sustainable development through extractive-sector investments can be attributed to several factors, the most important of which are summarized below:

II.1.1 – Transparency, accountability, and institutional independence:
Norway's political system is a constitutional monarchy with a parliamentary democracy, in which the King holds a symbolic role. The Parliament represents the legislative authority, with its members elected by the people. The executive branch, represented by the government (the Prime Minister and ministers), is appointed based on the parliamentary majority.

Norway is characterized by strong institutional independence, particularly judicial independence, which has positively influenced transparency and accountability, reflecting the application of good governance principles. As a result, Norway has consistently ranked among the top countries in corruption indices in recent years, being considered one of the least corrupt countries, as shown in the following figure.

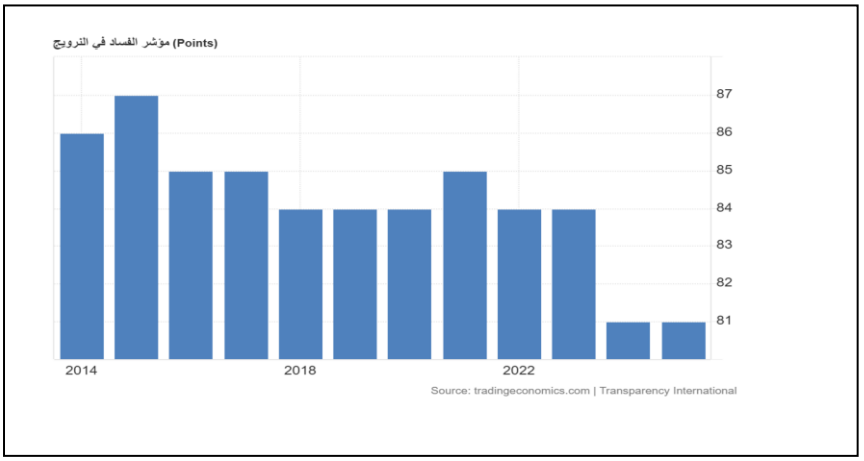

Figure (3): Corruption Perceptions Index (CPI) in Norway
Source TRADING ECONOMICS
https://ar.tradingeconomics.com/norway/corruption-index

From the figure, it is observed that Norway has achieved highly positive results in the Corruption Perceptions Index over recent years. According to Transparency International, Norway consistently ranks among the top countries globally as one of the least corrupt. In 2024–2025, it ranked fourth worldwide with a score of 81/100 (Transparency International, 2024). The reduction of corruption, along with transparency in public financial management and accountability mechanisms, has significantly contributed to the optimal allocation of resources.

II.1.2 – Sound resource governance and economic diversification strategies:
Based on the "Ten Oil Commandments" approved by the Norwegian Parliament in the 1970s, discussed earlier, Norway established strict rules for fiscal policy and avoided excessive public spending based solely on oil revenues. In order to prevent the so-called Dutch disease, Norway adopted a strategy of diversifying budget revenues and reducing reliance on oil income as a primary source. This is because dependence on oil and gas revenues exposes the economy to the negative effects of external shocks resulting from fluctuations in global energy prices.

Furthermore, Norway established a sovereign wealth fund to invest hydrocarbon revenues, with the aim of ensuring the long-term sustainability of these resources and allowing future generations to benefit from this non-renewable wealth. The fund was created in 1990 under the name Government Petroleum Fund and was later renamed the Government Pension Fund in 2006.

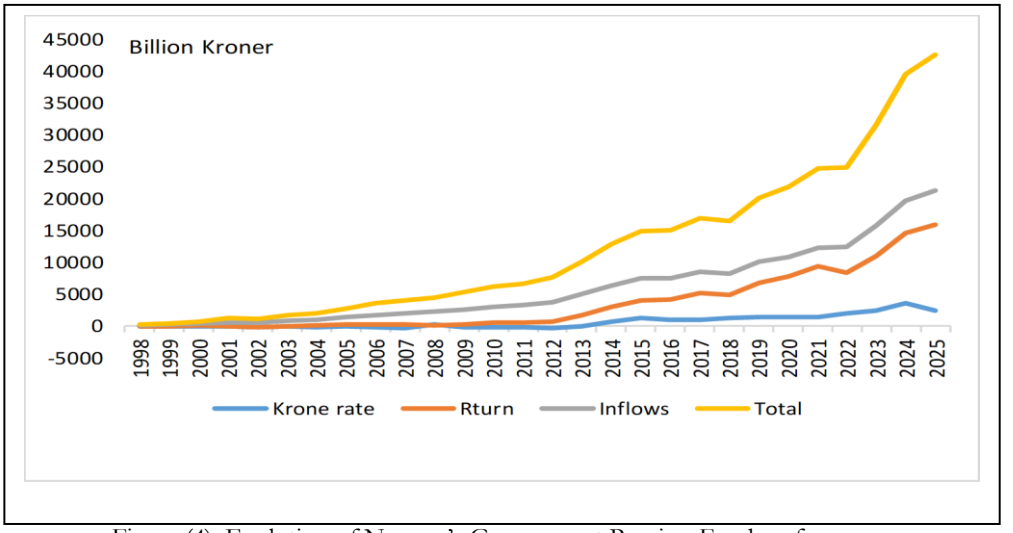

Figure (4): Evolution of Norway's Government Pension Fund performance
Source: Prepared by the researchers based on data from the Norges Bank Investment Management (NBIM)

The Government Pension Fund is considered one of the largest sovereign wealth funds in the world, with assets exceeding two trillion dollars in 2025. It invests in more than 3,000 global companies and is managed by the Ministry of Finance through the Norges Bank Investment Management (NBIM). This fund is regarded as one of the most successful global models. Despite its substantial revenues, the fiscal rule (Norge's Handelshøyskole, 2026) requires that withdrawals from the fund to finance public spending must not exceed the expected real rate of return, set at 4%. This ensures intergenerational equity in resource distribution.

Norway has also adopted a long-term strategy for economic diversification, reducing dependence on hydrocarbons. It has developed several sectors; for example, in fisheries and aquaculture, Norway is among the world's largest exporters of salmon (Espinasse et al., 2023), with export revenues exceeding 18 billion USD. In addition, Norway has developed strong non-oil industries, including shipbuilding and maritime logistics. It operates oil, gas, and car carriers as well as specialized vessels, and possesses the fourth largest merchant fleet in the world (The International Trade Administration, 2024).

Moreover, Norway has a highly developed financial sector, hosting hundreds of banks and financial institutions, including several foreign entities. It is also known for its advanced insurance industry, particularly in marine insurance (Laura, 2025), which plays a significant role in employment generation, value creation, financing economic activities, and attracting global capital.

II.1.3 – Emphasis on research and development and human capital development:
Norway is among the countries most committed to research and development globally. This is reflected in its substantial R&D expenditures, which exceed 89 billion Norwegian kroner annually (Statistics Norway, 2025). The country places strong emphasis on research related to renewable energy, environmentally friendly industries, maritime sectors, software, and other technological fields (The Research Council of Norway, 2025).

Norway also prioritizes human capital development, considering it its true wealth. According to the World Bank's Expanded Human Capital Index (2026), which measures countries' performance across the life cycle from birth to age 65, and includes three sub-indices—health, education, and on-the-job training—Norway has achieved very high results.

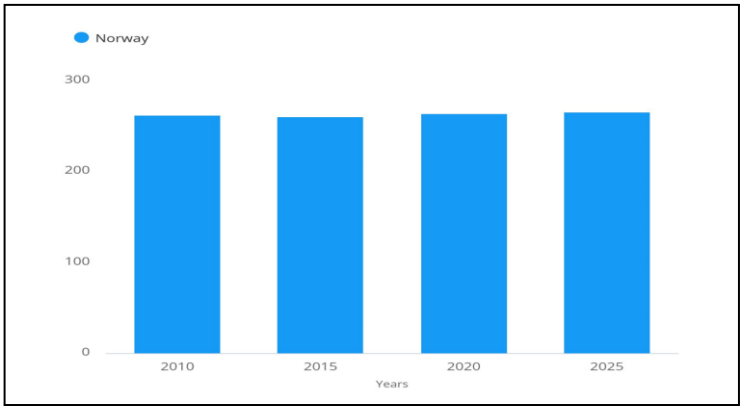

Figure (5): Performance of Norway's Expanded Human Capital Index (HCI+).
Source: World Bank Group

According to this indicator, in recent years Norway has achieved a very high level of performance for more than 15 years. For instance, it recorded a score of 265.93 out of 325 in 2025. This reflects the strong emphasis that the Norwegian state places on human capital development.

II.1.4 – Strengthening regional balance and developing extractive-project regions:
Article six of the "Ten Oil Commandments" states that oil extracted from the continental shelf must be landed in Norway (Kristin, 2026). The main objective of this provision is to establish domestic petroleum industries. Instead of exporting crude oil directly from extraction sites, this rule ensures that the Norwegian economy maximizes the benefits of oil and gas resources through the development of local industries such as petroleum refining, as well as the utilization of raw materials in various industrial sectors. It also promotes the development of oil-related services, including transport and insurance, among others.

This approach has significantly encouraged local development, particularly in coastal regions adjacent to oil extraction fields. As a result, this policy has contributed to the emergence of highly developed urban centers that previously suffered from harsh climatic and living conditions. It has also transformed small and isolated areas into advanced cities that have become global hubs in various fields such as finance, business, and research. Examples include Stavanger, Bergen, Hammerfest, and Kristiansund (Jan, 2025).

II.1.5 – Reducing carbon emissions and promoting environmentally friendly industries:
Article five of the "Ten Oil Commandments" stipulates that flaring of exploitable gas on the Norwegian continental shelf is only permitted for short experimental periods. This aims to prevent resource waste and, at the same time, to encourage oil companies to develop technologies that reduce carbon emissions resulting from gas combustion and its environmental impacts.

Norway is among the countries with the lowest carbon emissions, achieved through laws and regulations that require companies to reduce emissions and promote research and industries in renewable energy, particularly hydropower and wind energy. Policy instruments include carbon taxation and reverse taxation mechanisms on carbon capture activities.

Norway has also implemented the Norway's Climate Action Plan for 2021–2030, a policy framework adopted in 2021 aiming to reduce emissions by 50% by 2030 compared to 1990 levels, and to reach very low emission levels by 2050 (Norwegian Ministry of Climate and Environment, 2022). All these measures have contributed to mitigating the environmental impacts of fossil fuel use.

II.2 – Study of the Venezuelan Experience:

Venezuela is a country located in Latin America, specifically on the northern coast, with an area of approximately 916,445 km². It is rich in natural resources and biodiversity due to its geographical location, which includes rainforests, the Andes Mountains, and the Llanos plains. This makes it suitable for agricultural production such as coffee, cocoa, rice, maize, vegetables, and fruits. It also has abundant livestock resources, including cattle, as well as strong potential for fisheries and aquaculture due to its river network and its access to the Caribbean Sea and the Atlantic Ocean.

In addition, Venezuela is rich in mineral resources such as gold, iron, and coal. Oil and gas represent its most important wealth, and the country holds one of the largest proven hydrocarbon reserves in the world. However, despite these abundant resources, Venezuela has failed to achieve sustainable economic development and is often cited as a classic example of the resource curse.

II.2.1 – Manifestations of the resource curse in Venezuela:

Venezuela has experienced deep economic and political crises and has not been able to escape underdevelopment despite its natural wealth, particularly in the hydrocarbons sector, which has become a burden on development. The country has fallen into the so-called resource curse trap, which is reflected at the economic, social, and environmental levels.

II.2.1.1 – The resource curse at the economic level:

The irrational exploitation of natural resources and the strong dependence of the Venezuelan economy on hydrocarbons created rapid transmission channels for external shocks into the domestic economy. As a result, Venezuela experienced very weak macroeconomic performance, leading to severe economic crises that lasted for decades and contributed to the collapse of its economic and social system.

The manifestations of the resource curse on the Venezuelan economy include a sharp decline in oil production: after exceeding 3.4 million barrels per year in 1998, production fell to below 1.3 million barrels in 2016, prior to U.S. sanctions. This negatively affected GDP and per capita income.

Inflation also rose dramatically, pushing the country into a hyperinflationary spiral that eroded currency value and destroyed confidence in the national currency. According to IMF data, inflation surged to extremely high levels over several decades. For example, in the late 1980s it reached 84.5% in 1989. During the 1990s it fluctuated between 40% in 1990 and over 90% in 1996. In the early 2000s it stabilized somewhat between 16% in 2000 and over 30% in 2008. However, from 2013 onward, Venezuela re-entered hyperinflation, with rates reaching three digits between 2015 and 2017. The peak crisis occurred in 2018–2019, when inflation reached five-digit levels, an unprecedented global phenomenon.

Historically, these inflation surges are closely linked to declines in global oil prices, as state revenues depend heavily on the hydrocarbon sector. When revenues fall, policymakers often resort to excessive money creation.

As for unemployment, it also reached very high levels, as shown in the following figure, noting the absence of data for several years due to the authorities' reluctance to publish statistics amid worsening economic conditions.

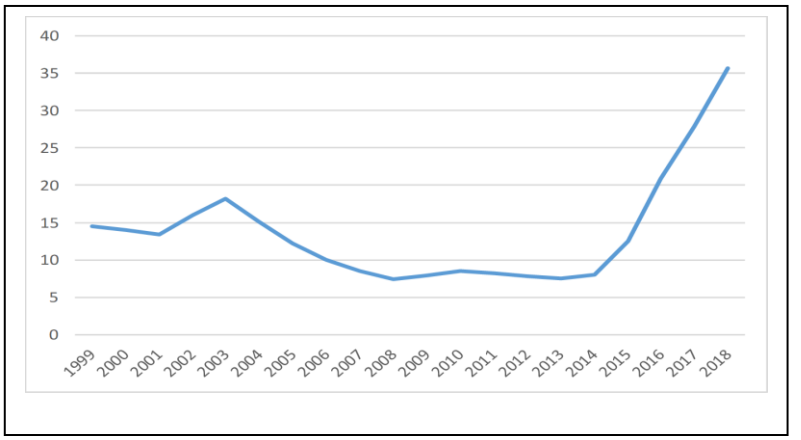

Figure (6): Unemployment rate in Venezuela
Source: International Monetary Fund

In addition, Venezuela has experienced a decline in per capita income and prolonged economic stagnation. This is further compounded by external debt exceeding 170 billion USD, according to the latest IMF reports, as well as worsening debt servicing problems, which have led to difficulties in meeting repayment obligations. This provides a brief overview of the main features of the economic crisis affecting Venezuela.

II.2.1.2 – The resource curse at the social level:
At the social level, economic conditions have significantly affected the living standards of Venezuelans. Rising unemployment, declining incomes, and the severe depreciation of the currency due to hyperinflation have led to the erosion of household wealth and a sharp increase in the cost of living. All of these factors have had devastating effects on Venezuelan society. According to recent statistics (Statista, 2026), more than 73% of the Venezuelan population lives below the poverty line, while 36.5% live in extreme poverty.

The economic crisis has also led to the deterioration of public services, particularly education and healthcare. Infant mortality rates (under five years old) have risen to over 40%, and the lack of vaccination programs has contributed to the spread of infectious diseases. In addition, social problems such as crime and organized crime have increased significantly. The crisis has also contributed to family breakdown and rising migration rates, both internally and externally, with estimates indicating that more than seven million people have left Venezuela.

II.2.1.3 – The environmental dimension of the resource curse in Venezuela:
Oil exploration and extraction in Venezuela dates back to the early twentieth century. The country holds the largest proven oil reserves globally, and Venezuelan crude is mostly heavy oil, which generates higher carbon emissions compared to lighter grades. This is compounded by gas flaring caused by deteriorating oil infrastructure.

Oil extraction activities have also negatively affected rivers and water systems due to oil spills and pollutants, threatening Venezuela's biodiversity. Forest cover has also declined significantly; between 2001 and 2024, Venezuela lost approximately 2.6 million hectares of forest (Global Forest Watch, 2026). In addition, drinking water contamination has increased due to the mixing of wastewater with clean water sources.

II.2.2 – Factors behind Venezuela's failure to avoid the resource curse:
This section examines the reasons why Venezuela has failed to achieve economic development despite its abundant natural resources and favorable geographical position. Several studies, including (Raphaellee, Moody, & Gunardi, 2023) and (Francisco, 2021), as well as multiple reports, attribute this failure to a set of key factors:

II.2.2.1 – Corruption, lack of transparency and accountability, and weak state institutions:
Political corruption has played a major role in Venezuela's economic collapse. According to Transparency International reports (Transparency Venezuela, 2024), Venezuela ranked among the lowest globally in the Corruption Perceptions Index (positions 180, 178, and 177 in 2025, 2023, and 2022 respectively out of 182 countries). The report also notes that although a legal and institutional framework for anti-corruption exists, it is largely ineffective.

Venezuela's CPI performance has remained extremely low over recent years, with an average score of 19.5/100 between 1995 and 2025, and its lowest recorded score of 10/100 in 2024. This is mainly due to the lack of judicial independence, as the judiciary is reportedly subject to political influence. There is also a lack of transparency in public financial management, with unclear implementation of fiscal policy. Public sector employment is largely driven by patronage rather than merit, and accountability mechanisms are weak. Public funds are often misused for private interests, and legal protections for whistleblowers are absent, exposing them to intimidation and coercion. Furthermore, Venezuela has limited cooperation with the international community in implementing global anti-corruption standards and governance principles.

II.2.2.2 – Weak economic policy discipline and lack of strategic planning:
Venezuela's economic policy performance has been extremely weak, as reflected in its severe socio-economic conditions. This is the result of long-term poor planning, lack of policy consistency, and weak adherence to fiscal discipline.
According to the Bertelsmann Transformation Index (BTI, 2026), fiscal discipline scored only 3/10, reflecting weak performance. The budget is highly dependent on hydrocarbon revenues (78%), making the economy highly vulnerable to external shocks from oil price fluctuations. Supplementary budget allocations reached 23% of total expenditure in 2022, indicating poor fiscal reliability, alongside persistent budget deficits.

Monetary stability scored even lower at 2/10, reflecting hyperinflation and repeated currency devaluations, including the removal of multiple zeros from the currency. This is largely due to the lack of independence of the central bank and excessive reliance on monetary financing of fiscal deficits.
Economic policy has been driven more by political objectives than by macroeconomic stability. In addition, there is a lack of long-term strategic planning and structural reforms, leaving the economy highly dependent on hydrocarbons and exposed to chronic imbalances.

II.2.2.3 – Dominance of the public sector and weak investment climate:
Since the presidency of Chávez, Venezuela has adopted a socialist-oriented economic model characterized by strong state control over productive sectors. A broad nationalization policy was implemented, affecting oil, banking, and other industries. This policy had severe consequences for economic output (Çakir, 2020).
In the oil sector, Petróleos de Venezuela (PDVSA) became the dominant operator. However, due to the heavy nature of Venezuelan crude, deteriorating infrastructure, lack of expertise, and insufficient investment, oil production declined from over 3 million barrels per day in 1998 to around 1 million barrels per day.

The investment climate deteriorated significantly due to high political and economic risk. According to COFACE (2026), Venezuela was rated E for country risk and E for business environment, both

extremely low scores, driven by political instability, weak macroeconomic performance, restrictive economic policies, and widespread corruption. This led to a decline in foreign investment and capital flight.

In summary, these factors explain Venezuela's failure to avoid the resource curse, along with weak investment in human capital and research and development. This has contributed to significant emigration as citizens seek better opportunities abroad, as well as insufficient attention to local development and environmental governance.

II.3 – Comparison between the Venezuelan and Norwegian experiences:
In the following section, a comparison between the two experiences will be conducted by highlighting the main similarities and differences between Venezuela and Norway in dealing with the resource curse or Dutch disease, presented in a concise table to emphasize the key factors of success and failure in both cases.

Table (1): Comparison between the Norwegian and Venezuelan experiences.

Venezuela	Norway	Success and Failure Factors
Weak performance	Strong performance	Transparency and good governance
Very high	Low	Administrative and political corruption
Weak	Strong	Institutional independence
Uncontrolled and inefficient public spending	Establishment of a sovereign wealth fund	Management of oil revenues
Weak fiscal discipline	Strong fiscal rules in place	Fiscal discipline policies
Weak independence	High independence	Central bank independence
Lack of local development policies and regional imbalance	Strong regional and local development and territorial balance	Local development
Weak performance	Strong performance	Human capital development
Closed economy with strong state monopoly	Open economy with economic freedom	Economic openness and state intervention
Unattractive with capital flight	Attractive with high FDI inflows	Investment climate
Weak environmental control and high pollution levels	Strong environmental control and low emissions	Environmental regulation and compliance

Similarities Between Norway and Venezuela
• Both Norway and Venezuela are oil-producing countries with large global hydrocarbon reserves. • Both economies rely primarily on hydrocarbons to finance development programs. • Both countries assert national sovereignty over their hydrocarbon sectors. • Both possess abundant natural resources and favorable geographical conditions.

Differences Between Norway and Venezuela		
Venezuela	**Norway**	**Success and Failure Factors**
Weak performance	Strong performance	Transparency and good governance
Very high	Low	Administrative and

Differences Between Norway and Venezuela		
Venezuela	**Norway**	**Success and Failure Factors**
		political corruption
Weak	Strong	Institutional independence
Uncontrolled and inefficient public spending	Establishment of a sovereign wealth fund	Management of oil revenues
Weak fiscal discipline	Strong fiscal rules in place	Fiscal discipline policies
Weak independence	High independence	Central bank independence
Lack of local development policies and regional imbalance	Strong regional and local development and territorial balance	Local development
Weak performance	Strong performance	Human capital development
Closed economy with strong state monopoly	Open economy with economic freedom	Economic openness and state intervention
Unattractive with capital flight	Attractive with high FDI inflows	Investment climate
Weak environmental control and high pollution levels	Strong environmental control and low emissions	Environmental regulation and compliance

Source: Prepared by the researchers based on the findings of the study.

III – Results and Discussion:

The comparative study between Norway and Venezuela shows that the mere abundance of natural resources is not a determining factor for achieving economic development. While Norway has achieved excellent performance in economic, social, and environmental indicators by relying on hydrocarbon revenues, Venezuela has suffered significantly from the resource curse across economic, social, and environmental dimensions, despite both countries being richly endowed with natural resources, particularly oil and gas.

The results obtained indicate that the success and failure factors can be attributed to the following elements:
Transparency and accountability play a crucial role in ensuring that executive authorities adhere to rules and regulations when designing and implementing economic policies, while promoting rational and efficient use of public funds. In contrast, the absence of transparency fosters various forms of corruption and prioritizes political objectives over economic development, leading to irrational resource allocation and waste of public funds.

Rational exploitation of natural resources, combined with investment in complementary economic projects alongside extractive industries, plays a key role in maximizing benefits and ensuring economic sustainability. Furthermore, channeling revenues from these projects into economic diversification strategies—by supporting and promoting various sectors—and establishing sovereign wealth funds to invest extractive revenues helps mitigate external shocks that negatively affect economic activity.

The existence of fiscal discipline rules obliges executive authorities to design development-oriented policies rather than politically driven ones. Such rules may include limits on the reliance on extractive revenues for budget financing, ceilings on public expenditure, and clear constraints on budget deficits and their financing methods. Ensuring central bank independence and coordination between fiscal and monetary policies contributes to macroeconomic stability.

The Norwegian experience has demonstrated that using hydrocarbon revenues to develop regions near extractive sites and remote areas contributes to local development and regional balance, reducing excessive population concentration in specific areas and the resulting economic and social problems.
Economic openness, while maintaining national sovereignty over natural resources, alongside improving the business environment, supports foreign investment inflows, which are essential for development and technology transfer, as well as for gaining access to advanced production techniques and managerial expertise.

Investment in human capital is a fundamental pillar of sustainable development, achieved through the development of education, healthcare, and workforce skills. In addition, investment in research and development is a key driver of long-term sustainable growth.

Accordingly, the study demonstrates that differences in economic development between Norway and Venezuela are not primarily due to differences in natural resource endowment. On the contrary, some countries with fewer resources have succeeded in escaping underdevelopment and reducing dependence on a single sector. Thus, economic development depends mainly on embedding principles of good governance in the management of a country's economic resources in all their forms.

IV – Conclusion

Promoting investment in extractive projects is one of the development options relied upon by many countries, particularly as these resources represent a key source of foreign currency reserves necessary for financing development programs and plans. However, excessive dependence on these resources may lead to the resource curse problem. The lack of optimal exploitation of natural resources, combined with unrestricted extraction by investment companies, can result in severe environmental, social, and economic consequences, especially when these resources are depleted or when external shocks occur. This is a common problem faced by many developing countries that rely heavily on primary commodity exports.

Therefore, when designing development strategies based on extractive projects, it is essential to consider the post-resource phase by planning for future generations, creating alternative development pathways, and extending the lifespan of extractive projects as much as possible. Public spending should not be excessively dependent on natural resource revenues; instead, these revenues should be invested through sovereign wealth funds, which have proven effective and efficient, particularly during periods of crisis, and serve as a means of diversifying national income sources.

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