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Master's Thesis

FUELLING POWER: THE EVOLUTION OF OIL AND NATURAL GAS AS ECONOMIC AND POLITICAL WEAPONS

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ABSTRACT

From the origins of their industries, oil and natural gas have demonstrated their extraordinary potential in both the economic and the geopolitical spheres. Spanning from individuals' everyday life to military applications, the development of petroleum-based technology accelerated rapidly, becoming increasingly interwoven in state affairs. By discussing how each era developed distinct modes of resource weaponization, this research explores how oil and natural gas have dynamically influenced industrial development, global markets, and state power. The timeframe considered in this research extends from the nineteenth century to the present, with the purpose of highlighting how these resources not only fuelled economic growth, but also constituted a pivotal factor in reshaping geopolitical strategies. This study will examine how oil and gas have become advanced instruments of coercive statecraft, insisting on the principles of economic vulnerability and military capacity.

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ABBREVIATIONS

AGIP: *Azienda Generale Italiana Petroli* (General Italian Oil Company)

AIOC: Anglo-Iranian Oil Company

ARC: Anatolian Railway Company

ASEAN: Association of Southeast Asian Nations

Bcm: billion cubic meters

Btu: British termal units

ESG: Environmental, Social, and corporate Governance

EU: European Union

IEA: International Energy Agency

LNG: Liquified natural gas

MENA: Middle East and North Africa

OAPEC: Organization of Arab Petroleum Exporting Countries

OECD: Organization for Economic Co-operation and Development

OPEC: Organization of the Petroleum Exporting Countries

U.S.: United States

U.S.S.R.: Union of Soviet Socialist Republics

USD: United States dollar

WWI: War World I

WWII: War World II

INTRODUCTION

From the origins of their industries, oil and natural gas have demonstrated their extraordinary potential, in both the economic and the geopolitical spheres. Spanning from individuals' everyday life to military applications, the development of petroleum-based technology accelerated rapidly, becoming increasingly interwoven in state affairs.

Nowadays, oil and natural gas together fulfil 70% of global energy requirements, with oil alone supplying 45% - and natural gas 25% (Vasudevan et al., 2023). As various events – both directly and indirectly - related to energy security have occurred throughout recent history, from the 1973 oil shock to the 2022 Russian full-scale invasion of Ukraine, it has become increasingly evident that studies related to energy security today represent a key factor in policymaking. These topics concern also – if not especially – energy-producing countries, as "[…] since the advent of fossil fuels, the global hegemon has been the largest or one of the largest producers of the dominant energy source and the leader in producing that source's related technologies" (Ediger & Bowlus, 2018, p. 433). In fact, that was the case in the 19th century, with the United Kingdom's affirmation empowered by its coal reserves, and in the 20th century, with that of the United States, underpinned by vast oil reserves. In the words of Colgan (2021, p. 2), "[t]he fact that oil has not had any meaningful commercial substitute makes the politics of oil special". A wealth of literature has been written on the topic, generally falling into three categories. In the first, attempts are undertaken to understand how oil influences international security. Works belonging to the second, instead, examine the relationship between oil and coercion. Lastly, there is a branch of research that focuses on how the Organization of the Petroleum Exporting Countries (OPEC) affects oil prices, and the effect that this interaction has on the economy of oil-consuming countries (Hughes & Long, 2014, pp. 157-158).

By discussing how each era developed distinct modes of resource weaponization, this research explores how oil and natural gas have dynamically influenced industrial development, global markets, and state power. The timeframe considered in this research extends from the nineteenth century to

the present, with the aim of shedding light on the fact that these resources have not only fuelled economic growth, but also reshaped geopolitical strategies. This study will examine how oil and gas have become advanced instruments of coercive statecraft, insisting on the principles of economic vulnerability and military capacity.

This study is divided into four main chapters, each analysing a different historical period. The first chapter aims at analysing the impact that oil had on international economics and diplomacy prior to the onset of the Great War. The first section begins with the so-called "kerosene era", with a particular emphasis on the United States. The oil market will also be analysed from an economic standpoint, with an understanding of the dynamics related to supply and demand, as well as international trade. The second section will go on to integrate the developments of the industry outside of the United States, highlighting geopolitical and diplomatic contentions among countries. The third section will delve into the boom and dissolution of the U.S. Standard Oil Company, examining the influence the Company had on U.S. foreign policy. The final section will examine the diplomatic and technological developments that led to oil's so-called "age of energy" and how security concerns related to oil supply and transport infrastructure dramatically influenced relations among states, shaping dynamics that would later be reflected during the Great War. The second chapter examines the years of the two World Wars, emphasizing the importance of the oil transition and the struggles over its production and transport. The first section draws attention to the period of the Great War, analysing the question of oil supply and the sabotaging strategies. The second section will then present a case study on Venezuela, in relation to the 1922 discovery of significant oil reserves in its territory, and discuss early international economic and geopolitical developments in Latin America. The third part of this chapter will then focus on the interwar years, particularly from an industrial and military perspective, including the testing of petroleum alternatives, the development of Russian industry, colonial research for African oil, and the establishment of emergency oil stocks. In the fourth section, the attention is focused on the Second World War. The discussion will be centred on wartime strategies related to naval blockades, oil field conquest, the spread and development of military

technology, and the growing importance of the Middle East. Finally, the fifth section will proceed to examine the topic of natural gas, including the development of the industry and market up to 1945. Natural gas will not be thoroughly scrutinized until this point, as, up to the end of the Second World War, it had not yet emerged as a strategic instrument of statecraft. The third chapter examines the period of the Cold War, underscoring the intensification of oil weaponization during that time. The first section investigates the nexus between post-war reconstruction and the shift in the balance of power, where the final stages of the transition from coal to oil played a pivotal role. The second section provides an analysis of the Global South and the affirmation of "petro-nationalism", providing an understanding of the circumstances that led to the end of the "Golden Age". The following section will consecutively synthetise the events related to the funding of OPEC and the two 1970s oil crises, drawing a relation with the concurring global rise in oil consumption. The fourth part of this chapter will go on to address the operations adopted by the Soviet Bloc, examining how it developed its relations mainly with the Middle East and Europe. The last section will explore the financial aspects of energy control and security, mainly analysing the birth of the "petrodollar" and the development of emergency oil stocks. The final chapter of this work outlines the dynamics of the "modern" era, beginning with the end of the Cold War. The first section provides an analysis centred on U.S. unipolarity and its energy security strategies, including the shale revolution and its impact on the global energy market. The following section goes on to address China and Russia, examining the effects that recent market shifts had on them, how their relationship evolved - both between each other and with other actors, mainly in the Middle East and in Asia. The third part synthetised the developments of the European Union, especially in light of the 2022 Russian invasion of Ukraine, and more broadly, of the transition towards renewable energy. The last section will draw together observations and key insights on more recent developments in emergency oil stocks, also considering strategic programs outside the aegis of the IEA.

Methodology

This research employs a mixed-method approach, and draws from sources that can be grouped mainly into four categories. An extensive historical and academic literature review provided the groundwork for further research, which was followed by a comparison between historical information and economic data, processed from reports and databases to draw evidence-based insights. On this basis, 38 graphs and tables have been elaborated and are available in Appendix A. The analysis further examines declassified dispatches and other diplomatic material from the Italian, British and U.S. archives: these sources have provided extensive information about governments' key priorities, and have also pointed out new details, chiefly about the use of oil and gas as instruments of coercion in inter-state interactions. For reference, the twelve Italian diplomatic dispatches that have been integrated into this research have also been translated in Appendix C. Lastly, the analysis is reinforced by the meaningful contributions of the nine experts which have been interviewed, all operating in the fields of energy companies, intergovernmental organisations, research, and journalism; the topics of discussions begin nearly in 1973, the year of the most recent analysed diplomatic dispatch. Six of these interviews have also been fully transcribed and reported in Appendix B.
To illustrate the main findings, some of the central points raised during the interviews are presented here. Fabrizio Maronta, Scientific Advisor and International Relations Manager at Limes, drew attention to the question of the effectiveness of oil sanctions, and provided significant observations about the 1973 oil crisis. Alfio Rapisarda, Head of Global Security at ENI, discussed the interaction between countries' foreign policies and the strategies of energy companies, and provided key insights into the future of the energy market. Nicola Saldutti, Editor-in-chief of the Economics section at *Corriere della Sera*, raised a series of considerations about the pre-2022 relationship between Europe and the Russian natural gas industry. Ciro Sbailò, Member of the Scientific Committee of Med-Or (Leonardo Spa Foundation) and founder of the Geodi Study Center (Research Center for Geopolitics and Comparative Law), touched upon the evolution of energy security, and examined how energy-

importing countries started changing their attitude towards the market in the final decades of the 20th century. Roberto Sommella, Editor-in-Chief of Milano Finanza, notably highlighted the critical aspects of the European natural gas market. Matteo Villa, Senior Research Fellow at ISPI, drew a comparison between the 1973 oil crisis and the energy market disruptions related to the 2022 Russian invasion of Ukraine, before offering some important security insights about the transition towards renewable energy. Alfonso Dell'Erario, former Editorial Director of the Gruppo 24 Ore and former Director of the Communications Department at Confindustria, articulated several arguments on the evolution of the geopolitical role of oil throughout the last century, drawing attention to the role of Saudi Arabia as a stabiliser of the oil market. Finally, Nadim Abillama and Matthew Van der Beeuren, of the MENA Desk at the International Energy Agency, discussed the centrality of oil supply in the foreign policy of oil-producing countries, and raised interesting observations about the role of the IEA in a world characterised by shifting energy consumption habits.

CHAPTER I: THE 1850S "REDISCOVERY" OF OIL AND ITS ECONOMIC, DIPLOMATIC AND MILITARY CONSEQUENCES

I A. The kerosene era

Tracing the origins of oil in exact terms could be quite cumbersome: proof of this material being used dates back to ancient Mesopotamia. Throughout history, oil has been used for various ends, ranging from infrastructure development to medicinal applications (Maugeri, 2008, p. 3). For this reason, this Thesis, and this section in particular, will focus on its rediscovery and use in recent history. Specifically, given the purpose of this work, the analysis will commence from the point at which oil began to significantly interact with the industrial sector. As this chapter will show, within this framework, the invention of kerosene, which occurred in 1854, is the first historic event to be considered.

Just as with the vast majority of inventions, kerosene was developed to address a problem: in this case, it was the growing demand for a reliable and affordable alternative to traditional lighting sources. As Beaton (1955, p. 29) reported, whale oil had been the most "satisfactory" lighting material for at least 200 years; however, extensive utilisation of this substance contributed to the depletion of the species from which it was derived. Following predictable market dynamics, as supply decreased, prices soared, reaching in 1850 a price per gallon of 0.75 to 2.50 USD depending on the quality of the whale oil. This historical juncture held notable social and economic significance, as lamps prior to that moment were already considered to be badges of social distinction (Daum, 1959, p. 22): besides the cases of warm-temperate countries such as Italy and Greece, where vegetable oil suitable for lighting was readily and inexpensively produced, and lamps had long been accessible across social classes, the use of candles was widespread (Ansted, 1862, p. 80).

In this context, scientific progress was being made in oil-related research, with oil shale already being produced on a large scale in several European countries from the late 18th century onward,

continuing into the following one. Some of the most important production sites were located in the United Kingdom, France, Estonia, and Germany (Douet, 2020, p. 8). However, at that time, oil was considered to have little intrinsic value: according to Lea (2018, p. 72), “oil finds in Britain, Europe and America were likely to be used as an ingredient in quack medicines but it was already being considered for addition to coal gas, to improve illuminating power”. A significant development occurred in 1850 when Scottish chemist James Young patented a method for extracting naphtha and paraffin from coal; eight years later, he had identified oil shale as a viable alternative feedstock for the same refining process. (Douet, 2020, p. 8; Harvie, 2010, p. 356).

On June 27, 1854, the United States Patent Office issued three patents to Abraham Gesner, assignor to the Asphalt Mining and Kerosene Gas Company: they were, namely, U.S. Patents No. 11,203, 11,204, and 11,205. These documents formally recognised the invention of kerosene. He described the substance as a “new liquid hydrocarbon” made from petroleum, maltha (or soft mineral pitch), and asphaltum (or bitumen), suitable for illumination and “other purposes”. As a matter of fact, after managing to refine kerosene into “three different qualities or proofs”, namely *A*, *B*, and *C* kerosene, he went on to test the possible applications of these substances, and for instance, he reported C kerosene to be “very good as a lubricant for machinery where it has been tried”. (Gesner, 1854a, 1854b, 1854c).

Maugeri opened his 2008 book “The age of oil” with the following sentence: “Oil slipped abruptly into modern life by a back door”. And this is nothing but true. In response to the aforementioned lighting oil crisis, paraffin and kerosene emerged as the first hydrocarbon-derived alternatives to vegetable and whale oils (Lea, 2018, p. 73). Lea also noted that paraffin and kerosene soon became of widespread use, therefore also playing a role in the democratisation of indoor lighting; Daum (1959, p. 22) went as far as to define the 1850s as “the most revolutionary decade in illuminating history”.

The development of the oil market was the result of a complex interplay between economic interests and fortuitous circumstances. A petroleum-derived oil for lamps, called “Carbon oil”, was

introduced to New York store shelves in 1857; this commercially crucial step was the result of a producer's disgrace nearly 500 kilometres away. As a matter of fact, that oil was imported from an old salt extraction facility at Tarentum, where the well started yielding petroleum, to the point of seriously interfering with salt production (Gesner, 1865, p. 21). During the early phase of the petroleum-based illuminating oil market, when large-scale commercial supply had not yet emerged, coal oil served as a precursor, having been produced for almost a century beforehand (Gesner, 1865, p. 8). Given that coal oil started being used in the U.S. only three years before petroleum was commercialised (Gesner, 1865, p. 21), in 1856, only three companies existed in the U.S. coal oil industry: in the following years, the related market would boom to such an extent that by 1859, nearly sixty refineries would be present on U.S. soil. At that point, the three major refining centres were located, in order, in New York, Boston, and Pittsburgh (Daum, 1959, p. 25). These developments were reflected in the prices of oils and illuminating fluids, at least in the short term: in 1858, in the U.S. State of Massachusetts, where Boston is located, a gallon of these materials would sell for as low as 0.719 USD, representing a 25-year low based on available data, as can be seen on Figure 1.2 (Wright, 1889, pp. 135-136)[1].

At that point, the potential of oil had become clear: not only did it revolutionise the lighting sector, causing a major social paradigm change, but it also gave a new impetus to the American industry and retail sector. In fact, oil at the time also contributed to the development of distribution channels, supporting the activity of retail and wholesale grocers and druggists (Daum, 1959, pp. 25-26). Given what has been described up until this point, it can be concluded that by 1859, the future of the oil market had become promising for investors. This has been further argued by Dickey, who put forward three main points:

[1] In relation to this last claim and to the related elaborated figure, the analysed average prices generally refer to low-grade materials, in order to assess market accessibility.

> There was: (1) a large and growing demand for kerosene which could not be satisfied with the existing raw materials; (2) a high price of oil; and (3) a well-developed refining technology, based partly on oil shale and coal but to a considerable extent on asphalt and crude oil. The growth in demand, which has continued to this day, was responsible for the sudden start and rapid growth of the oil industry. (Dickey, 1959, p. 19)

The problem of the oil supply shortage was addressed that same year. On August 30, 1859, at Titusville, following two months of drilling, Colonel Drake succeeded in yielding oil from a well specifically projected for that purpose. The discovery was so unexpected that he had to fetch whiskey barrels from the countryside. The price of a gallon of oil at that moment was 1.25 USD, and Colonel Drake's oil well managed to extract several hundred gallons per day. The news began to spread, and many people became interested in the business of oil extraction: the so-called "Oil Rush" period finally began. In a matter of a few days, investors started buying farms, whose prices soared to "fabulous" levels. The rise in supply, however, was too large for the capacity of the transportation and refining systems; after a brief period, the oil price dipped to 25 cents/gal. The case of Seneca Oil Company – the one which hired Drake for drilling purposes in the first place (Jang, 2024, p. 233) - which dissolved in 1864 due to financial pressure, suggests the extent of this shock: when the oil price had dipped to 25 cents per gallon, the 12-cent-per-gallon royalty obligation seriously hurt the business of the company. Moreover, the outbreak of the Civil War brought workforce and material scarcity. However, starting in 1862, infrastructure would catch up to the volume of oil production, and oil exports helped sustain the industry for the remainder of the War. (Giddens, 1947, p. 36; Dickey, 1959, pp. 24-26; The New York Times, 1934).

The significance of these years for the development of the U.S. economy and society can be assessed through the growth in demand and production in that period: as Table 1.1 shows, U.S. oil production in the 1860s and 1870s was characterised by the two highest average annual growth rates until at least 1990. This illustrates that as the industry was born, it witnessed a boom whose extent

has not been replicated to this day. As the law of supply and demand would suggest, this large increase in production had been matched by an equally significant rise in consumption: in the 1870s, the consumption average annual growth rate stood at 75.5%, which has remained unreplicated as well. With regard to the effect such a macroeconomic development had on the life of U.S. citizens, the oil and illuminating fuel market remains one of the most significant proxies available: up until 1860, the decade-by-decade average cost of these materials never went below 1.05 USD per gallon. In 1860, petroleum oil and its derived products were already much cheaper than alternatives such as wax candles, paraffin candles, and whale oil. The cost of one hour of lighting using kerosene was less than half that of lard oil, respectively amounting to 0.91 USD cents compared to 2.10 USD cents. Table 1.2 offers a detailed insight into the costs of lighting in that year. However, thanks to the growing oil extraction and the commercialization of new materials, illumination became significantly more accessible. On average, a gallon of kerosene in Massachusetts cost 0.30 USD between 1861 and 1880, reaching a low of 0.19 USD between 1881 and 1883 (Wright, 1889, p. 178). That means that in the last period, an hour of lighting using kerosene cost only about 0.141¢.

Up to this point, the level of U.S. domestic oil consumption has been highlighted. However, Table 1.1 reveals one more detail about the oil industry in the decade of the 1860's: production exceeded consumption. In fact, U.S. oil was also exported during that period, thereby constituting a national source of income for the first time. Gésner & Gésner (1865, p. 25) reported the volumes of such exports between 1862 and 1864, shedding light also on the trade growth each year. In 1862, 10,887,701 gallons were exported. This figure almost tripled in the following year, reaching 28,250,721 gallons. In 1864, oil exports further grew to 31,755,687 gallons.

U.S. exports, *in toto*, would boom in the following years: after a long period of persistent trade deficit, the United States started running a trade surplus in 1870, a condition that lasted for nearly one century. These dynamics coincided with the Second Industrial Revolution, which featured capital-intensive mass production of manufactured goods and machinery. This phenomenon was driven, in the post-Civil War context, by the development of manufacturing methods and railroads, and caused

a contraction in domestic imports and a rise of exported manufactured goods (Reinbold & Wen, 2019). Focusing on the period leading up to the outbreak of the First World War in this chapter, oil emerged as a critical factor in shaping these dynamics. Figure 1.3 illustrates that in 1882, petroleum and its derived products accounted for 7% of the total U.S. merchandise exports. In the following years, this value fluctuated, averaging 6.2% between 1882 and 1913. The significant proportion of total exports constituted by petroleum products drew significant political attention, both at the domestic and international levels. The next section will explore how the international society responded to the emergence of this newly prominent industry.

I B. Oil production in the rest of the world and the first oil-related diplomatic tensions

Besides the U.S. oil market and industry, other countries in the same time period have shown very relevant developments. Figure 1.4 extends the analysis of oil production to the whole American continent: until the end of the 1800s, the second biggest oil producer on the continent was Canada, which was surpassed by Mexico nearly at the turn of the new century. However, there are traces that suggest Mexico had already been a promising country in terms of oil production for decades. In fact, Mexico may be among the earliest examples of a country where oil reserves were a key factor in determining political strategies. More specifically, while the American Civil War took place between 1861 and 1865, Mexico underwent French intervention between 1861 and 1867[2]. In the case of Mexico, which had just undergone a civil war, one specific factor triggered increasing military interest from the side of Britain, France, and Spain: in 1861, Mexican President Juárez ruled a two-year freezing of repayments for the country's foreign debt, which amounted to a staggering $82,315,446 for the three European powers alone. Therefore, taking advantage of the internal dissent

[2] As argued by Long & Schulz (2025), these events unfolded in a specific moment in history characterised by a "global reordering", caused by technological shifts related to the telegraph, electricity, steamships and railways. These technological developments, joined to shifting power dynamics, led to "accelerated imperial expansion".

in Mexico, these countries opted to coordinate a military intervention to enforce repayment (Miller, 1973, p. 6)[3]. As the United States was trying to assess the best strategy to apply to this conflict, its diplomatic agents were also employed for gathering information. One of the most relevant documents in this context was a diplomatic dispatch, dated September 7, 1866, that a U.S. diplomat serving in Paris addressed to the then-Secretary of State. This document, which analysed information provided by the French press to the public regarding the French intervention, also cited a Parliamentary discussion on Mexican affairs: at that point, the French Government was pushing for granting the Europe-backed regime in Mexico a new loan to stimulate public trust and investment. The following is a translated excerpt from an article published on August 23 on Le Temps:

> […] The minister of state followed, with a pretty picture of immense immigration, banks, joint stock and steamship companies, factories, gold, silver, iron, and coal mines, oil wells—to be discovered and worked. "As to the finances," said the minister, "has not the report of the Hon. Mr. Corta convinced the House of the abundant resources of the country?" And the House answered, "Yes! yes!" (cfr. Bigelow, 1866).

This level of attention paid to Mexican resources further motivated the United States to intervene, in application of the 1823 Monroe Doctrine, according to which, among all, any attempt by European states in the American continent would be seen as a hostile act against the United States (The Editors of Encyclopaedia Britannica, 2025a). Even in these circumstances, where the United States officially adopted a neutral doctrine to avoid direct confrontation with France, U.S. Generals Ulysses S. Grant and Philip Henry Sheridan initiated secret operations along the Texas-Mexico border in support of the forces of Mexican President Juárez. This further pressure on French forces

[3] The operation began in December of the same year, and while Spanish and British forces withdrew in the following April, leaving the task of collecting debts to diplomats, French troops remained in the territory, extending their control. In 1865, when the American Civil War ended and the United States was left with vast arm supplies, whose prices had dropped significantly, and a number of soldiers that turned to Mexico to work as mercenaries (Miller, 1973).

eventually contributed to the withdrawal of French forces, which took place between November 1866 and November 1867 (Office of the Historian, n.d.a). Beneath the apparently calm diplomatic relations between the U.S. and France, archival sources reveal that the latter was also involved in measures detrimental to the U.S. oil industry. As John H. Flagg - attorney for the American Petroleum Export Association, Standard Oil Company, and other actors (Bayard, 1885) – wrote in a letter to Thomas Francis Bayard, the then U.S. Secretary of State, in 1885 (Office of the Historian, n.d.b):

> Touching the question of recent importations into France of petroleum distillates from Russia, under the false classification of "crude petroleum" […] I have the honor to state that recent importations of such Russian distillates have been admitted into France […] at the same duty as is imposed in France on American crude petroleum, […] and that the same is now being worked by the French refiners at Marseilles, Cette, Dunkirk, and other points. The flagrant injustice which is thus being done to the exporters of American crude petroleum into France (in which country the rate of duty on refined petroleum is virtually prohibitory), not to mention the manifest frauds upon the revenues of the latter country, would seem to warrant a vigorous protest on the part of the Government of the United States against further evasion of the law by the Russian dealers, which I trust you will see your way clear to assert without unnecessary delay (Flagg, 1885).

Following these events, a multitude of oil-related tensions can be identified in international relations; this historical period arguably marks one of the earliest instances in which oil emerged as a widely traded commodity, laying the groundwork for the development of oil diplomacy. In fact, even if the United States was the largest oil producer during that period, several countries had also begun extracting significant quantities of oil.

As Figure 1.5 shows, the United States accounted for a substantial proportion of oil production in the American continent at least up until 1910. Europe constituted the second largest oil-producing

continent, even surpassing North America for a short period at the turn of the 20th century. That overtaking was almost entirely due to Russia, which provided for nearly the entirety of European oil extraction until 1905. The birth of the Russian oil industry proved to be extremely interesting, given that the unfolding of related events was much more politicized than it was in the United States. In fact, prior to Colonel Drake's successful drilling for oil in 1859, Russia had already achieved that result. Oil historians generally agree that the first oil well had actually been constructed in 1846 at Bibi-Heybat (Bibi-Eibat), near Baku in Azerbaijan. Scientific relevance was given to this discovery, as the Russian delegation brought samples of Azerbaijani oil to the Great Exhibition in London in 1851. However, even if by the end of the decade an oil refinery had also been constructed in the area, the Russian regime decided to prohibit oil exploration. For this reason, not many developments would take place in Russia, at least until the mid-1880s: in 1886, the first sea-going oil tankers to export Russian oil were constructed. These developments, along with an "imitation" incident, were not received positively by W. K. Libby, an agent of certain U.S. oil companies (Cox, 1886). In a letter addressed to the United States Legation in Constantinople, dated March 27, 1886, he penned the following – relevant, and at times sardonic - statements:

> The prehistoric sacred fires of Baku, which for many and many a century have summoned the faithful from afar, appear at last to be losing their vitality, and today are appealing to practical utilization in the locality and are no longer more than an occasional magnet to attract the pagan worshiper. […] The future of the Russian petroleum industry is principally contingent upon a continued large and economic production of the Balakhani territory; increased transportation facilities, the extent of Government subsidy or support, and, finally, upon the hope of diminished production and higher prices in America. Among the elements of its weakness is the very natural probability that when this circumscribed territory shall in due time diminish in productiveness or maintain its productive power at a greatly added cost, that no new territory of corresponding value as to economic development and convenient location

> may be substituted. […] The Russian refining interest at Baku has found itself embarrassed by inadequate railway transportation to the Black Sea, traceable not alone to insufficiency of tank wagons but to restricted possibility of transport over the Suramme Pass, about 3,100 feet above the level of the sea. […] If imitation [is] indeed the sincerest form of flattery, our acknowledgments must be extended to our Russian friends. Not content with copying to the extent possible every detail of American package and packing, they have paid to the high reputation of one of the prominent American brands (Pratt's Radiant) a most embarrassing compliment; as I do not wish to use the word "counterfeiting," some more conservative synonym must he imagined. (Libby, 1886)

In the same letter, Libby also highlighted that Russian crude oil was much less pure than the American one: according to him, 70% of Russian oil was constituted by residuum, which would be removed during the refining process. The American material instead contained approximately only 25-30% residual content. Lastly, he also emphasised that Russia favoured the development of its domestic oil industry by imposing a "prohibitive tariff" on American oil. However, he added that this advantage had been offset by heavy domestic competition, which, in the case of an attempt of further expansion, would be thwarted by high interest rates.

In this context of growing geopolitical competition, however, earlier limited oil extraction in Europe did not stop scientific research on the matter: in 1853, the first kerosene lamp was invented in Poland. Soon after, in 1857, industrial developments enabled Bucharest to become the first city in the world to use refined oil for street lighting, with the installation of one thousand oil lamps. A few decades later, between 1897 and 1907, a pipeline was constructed from Baku to Batum, a Georgian city on the Black Sea. At the time, this pipeline was the longest in the world. It should be noted that in 1883, a railroad – financed by the French branch of the Rothschild family - connecting Baku to the Batum port had already been completed, therefore already providing an access point to world markets for Russian oil. In the decade of the 1880s, Moscow already began reducing the U.S. primacy in the

European kerosene market, and in the following decade, the same happened in Asian markets: by 1892, Russian oil departing from Batum had started sailing through the Suez Canal and heading towards the Far East. These shipments were operated by what would become, in 1987, the Shell Transport and Trading Company: the relevance of their operations led, in the same period, King Edward to make its British founder, Marcus Samuel, a Lord (Douet, 2020, pp. 7-8, 13; Wołkowicz et al., 2016; Maugeri, 2008, p. 12).

Figure 1.6 provides further insight into this topic, showing that Poland and Romania also represented a significant share of production. In this context, Italy and Germany were also minor oil suppliers. These two countries were the first in northwestern Europe where oil was discovered. In the case of the first, it occurred in 1859 near Hannover, while the second followed in 1860, with extraction carried out in proximity to Ozzano, in the province of Parma. From that decade onwards, the development of oil production in Italy was driven by investments in the Majella site in Abruzzo, thanks to detailed studies and the introduction of mechanised drilling (Craig et al., 2018, p. 8). Italy's lack of coal reserves and investments in oil production will be relevant in the military field at the end of the century, as the last section of this chapter will detail.

As can be seen in Figure 1.7, Asia also provided for discrete oil extraction, disposing of three main oil-producing territories: the first was the then Dutch East Indies, which had been a colony of the Netherlands until 1949. Today, those territories are under the state of Indonesia (The Editors of Encyclopaedia Britannica, 2025b). The second biggest Asian oil producer was the territory encompassing Burma, corresponding to today's Myanmar, and India. Lastly, the islands of Japan and Taiwan also provided a conspicuous oil supply, at least in comparison to the rest of the continent. On the other hand, the rest of the world would provide for minor oil extraction, as shown by Figure 1.8.

Even if no major production had been recorded at the time in the Middle East and North Africa (MENA) region, international attention focused on Egypt in the second half of the 1880s. U.S. diplomatic correspondence shows that at the time, an oil deposit had been found near Suez. More specifically, according to an enclosed article from the Constantinople journal "the Advertiser", dated

April 2, 1886, the "recent" discovery was made by a Belgian explorer, who had been employed by the Egyptian Government for months with the aim of developing oil wells. The article ended with the following remark: "Fuel is power; but a self-stoking fuel in the torrid zone should be power combined with luxury" (cfr. Cox, 1886).

On the whole, multiple reasons have been provided as to why the American oil industry succeeded to the extent it did. Douet (2020, p. 14) proposed a geological explanation - arguing that the vast majority of American wells were gusher holes -, along with a psychological reason, as "[t]he founders of the first [U.S.] oil companies were different to their colleagues from Central and Eastern Europe, notably in their scale of thinking and business organization". Further observations can be made regarding the industrial context in which these dynamics took place: as a matter of fact, the development of infrastructure, in terms of pipelines, railway transport, and extraction material, was notably rapid in the case of the United States. Lastly, it could be argued that the U.S. oil industry also enjoyed strong diplomatic and intelligence support: intense correspondence had already been carried out between the U.S. Department of State, its diplomats and representatives of American oil companies. Besides the examples already provided, during the second half of the 1880s strong tracing and negotiation activities were carried out, mainly focused on the Netherlands, China, and France. Oil taxation in The Hague was discussed with the Minister of Foreign Affairs when an increase thereof was being surveyed, to compensate the deficit in the colonial budget (Bell, 1885). Further issues arose with regard to China, when it was found that two top officials – i.e., the Viceroy of the two Kuangs and the governor of Canton - demanded the prohibition of the importation of kerosene oil, for the safety of its own citizens. On that occasion, American interests could have been particularly affected due to petroleum being the U.S. product most exported to China, in a context in which the balance of trade between the two countries was already unfavourable for the United States (Flagg, 1888). Denby, an official serving at the Legation of the United States in Peking, commented in a diplomatic dispatch that he did not anticipate "that any notice [would] be taken of this stupid memorial" (Denby, 1888). In 1890, the then U.S. Secretary of State, William F. Wharton, also paid

attention to European affairs when France contemplated a rise in oil taxation, triggering a "positive and direct discrimination against the United States and in favour of Belgian products until January 1, 1892", given a trade deal that had been signed between the two powers in question. The matter, however, did not give rise to significant concerns in relation to Moscow's competition, given that "France [did] not import crude oils from Russia, they being unsuitable for illuminating purposes" (Wharton, 1890).

I C. The global-scale boom and bust of Standard Oil

In the words of van der Linde (1991, p. 71), "[b]etween 1860 and 1900, the oil industry had completed a full growth cycle". Even if this work is mainly aimed at analysing international dynamics, attention must be given to the U.S. domestic affairs in this period, as they marked a pivotal moment in the oil industry as a whole, given the level of political and social attention it attracted. As mentioned in the first section of this chapter, price competition became an extremely difficult strategy to achieve given the lack of opportunities for cost decreases. This dynamic was further exacerbated by John D. Rockefeller, who has been called "one of the most genial and merciless fathers not only of the oil industry but of modern industry as a whole" (Maugeri, 2008, p. 6).

The Rockefeller vision envisaged asserting control over the critical industrial bottlenecks - i.e., the downstream segments of the oil market - which primarily consist of refineries and transportation infrastructure. His strategy started being put into practice in 1870, when he founded a corporation called Standard Oil. After two years spent giving momentum to this newborn industry actor, he carried out the first major aggressive step: the so-called Cleveland Massacre. This operation consisted of buying 22 out of the 26 oil refining companies in Cleveland, Ohio. He would soon continue pursuing this strategy nationwide, also striking deals with railroad operators: in this case, the offensive was organised on two different levels, as the Oil Company would be given a 20-30% discount on their shipments, and an additional fee would also be imposed on their competitors. Efforts

to counter infrastructural pressures, such as the building of the Tidewater Pipeline, which was the first long-distance pipeline ever, did not stop the success of Rockefeller, who in the early 1880s already controlled the quasi-totality of the U.S. oil industry. (Maugeri, 2008, pp. 7-9).

Linking the critical elements identified thus far, it becomes evident that even in this early time frame, a large amount of power in the oil industry was concentrated in two main companies: Standard Oil and the Shell Transport and Trading Company. Market dynamics seemed to alter geopolitics profoundly, as they corroborated a general, even if debated, thesis of international economic studies, which postulates that "globalization challenges the importance of the nation-state and alters the balance of power between states and markets in favor of the latter, and that the major beneficiaries of this phenomenon are multinational corporations" (Frank, 2009, p. 16). This interaction between state and non-state actors generated numerous conflicts in a system ill-equipped to handle such politically sensitive matters. One of the most notable examples was the so-called "Petroleum War", which began in 1910, involving primarily the Standard Oil Company and Austria-Hungary. As both Washington and Vienna were large oil-exporting powers, Rockefeller's company soon decided to react to the growing domestic and international pressures by trying to "standardise" the Austro-Hungarian industry, where new oil deposits had also recently been found. Their operations were carried out under the name of an affiliated entity, the Austro-Hungarian subsidiary called Vacuum Oil Company, which by 1910 had invested nearly 3 million USD in manufacturing plants and equipment in Austria-Hungary. In that year, extreme competition and overproduction threatened domestic producers. The government responded by implementing measures aimed at stimulating both supply and demand, including the creation of the largest oil refinery in non-Russian Europe and the conversion of state railway transport from coal to petroleum. When the extent of the aggressiveness of American practices became clear, the Austro-Hungarian Government intervened, imposing measures that put financial stress on Vacuum Oil, denied it access to strategic infrastructure, and restricted its transportation to nighttime hours. Even if Standard Oil was going through serious legal issues in its home country, the U.S. Department of State judged the Austro-Hungarian operations as "unfair

attacks on an important U.S. business interest". These tensions would soon spread to Paris, as the Limanowa oil company, incorporated in Austria-Hungary but owned by French stakeholders, was believed to collude with Vacuum, both by the Austrian government and by the international press. Vienna extended the retaliatory measures to Limanowa, rendering the diplomatic relations between the two European powers more tense: France dismissed the Austro-Hungarian diplomacy's argument according to which "France's interests not only are not injured by [Austro-Hungarian] measures [against Limanowa], but are, rather, identical to ours, since France certainly has no reason to support the creation of a global monopoly whose impact would affect its economic life as much as [Austria-Hungary's]". Fearing the institution of French tariffs against Austrian oil, the Austrian government and Limanowa reached a deal, according to which Austrian retaliatory measures would be removed in exchange for the commitment not to cooperate with Vacuum's illicit activities. This diplomatic and industrial conflict came to an end in 1912, when the Vacuum Oil company agreed to drop all of its lawsuits against Austria-Hungary and limit its sales within the territory of the country, in exchange for the lifting of all sanctions imposed (Frank, 2009, p. 19-27, 33-37; The New York Times, 1911).

While many eyes were set on Europe, the Asian market also faced a new oil competitor: in 1890, the Royal Dutch Company was incorporated, which began extracting oil in the Dutch East Indies. At that point, the U.S. Standard Oil Company began facing serious international competition, with a saturated Asian market. Further pressures had been recorded in China, particularly in the southern region of the country. Between 1905 and 1906, a boycott against American goods took place, an event generally attributed to opposition to the 1894 Gresham-Yang Treaty, which regulated U.S.-China migration flows to the detriment of the Chinese people. Among the U.S. industries most severely impacted by this phenomenon was Standard Oil, which lost nearly 80% of its Chinese exports between May and November 1905, declining from an average of 90,000 shipped cases to 19,000. Similar effects were also observed in Thailand, also driven by Chinese actors (Ts'ai, 1976; King, 1905). Moreover, further strain would be put on the company also domestically due to the rise of local competitors, fuelled by the discovery of a number of oil extraction sites in the southwest of

the United States (Maugeri, 2008, pp. 13-14). However, the end of Rockefeller's monopoly would be the outcome of a political and social phenomenon: the Antitrust Movement against Standard Oil. The origins of the Movement trace back to a campaign launched by oilmen in Pennsylvania, whose voice soon resonated nationwide - leading to the passing of the Sherman Anti-Trust Act in 1890. However, the Standard Oil Trust had been created eight years prior to that moment, and no particular effect related to the Sherman Act encumbered their practices. One of the reasons for this development was that the Act failed to define critical terms such as trust, conspiracy, and monopoly. Their activity continued until 1911, when the U.S. Supreme Court ordered the dismantling of Standard Oil: even if the monopoly did not hurt the general public by raising prices, it was argued that "the savings from the efficient processes were not handed down to the consumer" (Jang, 2024; US National Archives, 2022).

I D. The advent of oil's age of energy and the beginning of the oil quest in the MENA region

As technology developed and new extraction sites were discovered, countries began considering the integration of oil into the military field. This shift was revolutionary, as it marked the culmination of oil's integration into international affairs. Up until that point, as detailed in the previous sections, petroleum consumption was considered a highly relevant resource for social development, international trade, and diplomatic leverage. However, in light of its large-scale availability and technological potential, it soon became evident that it would also serve as a reliable energy source. Perhaps, Winston Churchill in 1913 offered one of the best-expressed geopolitical reasons for this shift:

> On no one quality, on no one process, on no one country, on no one route and on no one field must we be dependent. Safety and certainty in oil lie in variety and variety alone. (cfr. Ediger & Bowlus, 2018, p. 427)

One of the first traceable signs that pointed to the energetic potential of oil was in 1860, when the first commercial version of an internal combustion engine was patented in France. Engineering research continued in Germany, and in 1901, the first modern autocar was invented, finally demonstrating that oil could be used for powering transportation. With the introduction of the Model T in 1908 by the American Henry Ford, cars became a product available for mass consumption, introducing oil as a transportation fuel to the lives of one million people by the end of 1914. In 1910, the volume of gasoline sales overtook that of kerosene and other lighting oils: this social evolution, which was mirrored in the military field, could be considered as one of the first signals of the advent of oil's "age of energy" (Maugeri, 2008, pp. 20, 22). After a series of engineering experiments and the dismantlement of Standard Oil – a move that provided greater security of oil supply -, the U.S. Navy officially mandated the exclusive use of oil as fuel for battleships (Ediger & Buwlus, 2018, p. 444). As the United States advanced its oil strategy in military terms, it simultaneously developed its capacity to wield it as an instrument of power. A declassified Italian diplomatic dispatch sheds light on one of the many strategies employed by the U.S. in the framework of the establishment of the Military Government of Cuba, which was occupied by the former between 1898 and 1902 (Knight, & Levinson, 2025). Specifically, Consul Beauregard (1901)[4] reported that the United States resorted heavily to tariff-related strategies, including increasing duties on petroleum entering Cuba, which was "already extremely expensive", "while electric light and gas, in the hands of American companies, [were] downright overpriced".

[4] For reference, the diplomatic dispatch has been fully translated in Appendix C.

In the meantime, during the 1860s, Russian scientists started considering oil as a fuel for inland water transport. The first oil devices were successfully tested on three navy ships at the beginning of the following decade; however, the Russian Government started consecutive tests for these ends only at the beginning of the 1880s. In 1894, it was ruled that water-tube steam boilers were to be integrated into all future ironclad warships of the Black Sea fleet, as they were 2.5 to 4 times more efficient when operating on oil than on coal. A further advantage, proven later, was that loading oil took one twelfth of the time it took for coal[5], that warships could be loaded also while moving, and that with an equivalent fuel load, the use of oil enabled them to cover twice the distance achievable with coal (Movsumzade, 2000, pp. 142-143).

Just as Russia, the United Kingdom began scrutinizing the idea of converting its navy ships to oil consumption in the 1860s: during that period, the fear that its coal reserves would run out started to emerge. Faced with the lack of a domestic oil supply, the country realised it could not rely solely on its Burma concessions, since production there was inadequate. Comparing Figures 1.5 and 1.7 reveals the infinitesimal nature of oil production in that area, in comparison to that of major oil-producing powers. The United Kingdom was also aware that it could not strategically rely neither on U.S. imports, nor on Russian ones. In 1900, the deal that the Shell oil company signed for marketing Russian oil expired, leading to a crisis that culminated in its merger with the Royal Dutch in 1907. Moreover, due to the loss of the Russo-Japanese War and domestic unrest, which involved the sabotage of oil extraction facilities, Russian oil extraction plunged in 1905, and it would have taken years to recover. Russia's share of global oil exports declined from 31% to 9% between 1904 and 1913. These shifts weighted heavily from a financial standpoint, as between 1898 and 1903, 85% of total foreign investment in the Russian oil industry was provided by the British (Ediger & Bowlus, 2018, pp. 433, 439; Maugeri, 2008, pp. 13-14; Ediger & Buwlus, 2019, p. 9).

[5] Specifically, it was calculated that 3,276 tons of oil could be loaded onto a ship in just one hour, whereas loading the same quantity of coal would require twelve hours.

New petroleum basins were made accessible to the industry in 1901, when British banker D'Arcy gained an oil, asphalt, and natural gas concession in Persia. According to Li & Molina (2014, pp. 13-14), D'Arcy bribed Persian officials for these ends. It is known that he agreed to provide the Persian government 20,000 pounds sterling in cash, along with stocks of his future oil company, and 16% of the profits. After minor oil traces were found in 1905, the first significant deposit was found in 1908. The first pipeline was inaugurated in 1911, and during the following year, a refinery started operating at the tidewater terminal of Abadan. At that historical juncture, the plant was the largest in the world: it had the capacity of processing 120,000 tons of oil per year. In 1909, the Anglo-Persian Oil Company (APOC) was founded by D'Arcy; he directed it until his death, which happened in 1917 (Degolyer, 1951, p. 119; Li & Molina, 2014, pp. 13-14). In the meantime, the United Kingdom also started exploiting petroleum fields in Egypt, which had been under British domination since 1882; as mentioned before, during the second half of the 1880s oil had been found in the country. In July 1911, the Anglo-Egyptian Oilfields company was registered: in that year, 21,000 barrels of oil were produced in Egypt. Respectively, during the two following years, production rose to 214,000 barrels and then declined to 98,000 (Hopwood et al., 2025; Gerretson, 1957, p. 242; American Petroleum Institute, 1949, p. 447). In 1912, the United Kingdom inaugurated the production of the first battleship operating on oil fuel, under the strong influence of Admiral Fisher, who argued that "in war speed is everything". One significant issue, however, confronted the British Empire: in 1913, its territorial holdings produced less than 2% of the world's oil supply (Engdahl, 2007, p. 2047).

The British oil strategy can only be fully understood if put in relation to that of another country: Germany. The two European powers, at the time, were converting their navy ships from coal to oil consumption with the objective of maintaining superiority at sea. Throughout the second half of the 19th century, this antagonism unfolded across the whole industrial landscape: in this period, Germany overtook the United Kingdom in steel output, and in quality of machine and electrical goods and

chemical products. Berlin also carried out negotiations with the heavily indebted Ottoman Empire[6], in a quest for raw material sources and an industrial export outlet. The Sultan of the Ottoman Empire, Abdul Hamid II, accepted developing ties with Germany in order to add a source of new capital and a counterweight to the extensive French and British influence over the economy of the Empire (Ediger & Bowlus, 2018, p. 430; Engdahl, 2007, pp. 2041-2042, 2049). In 1888, Germany secured the first Ottoman railroad concession, and construction work on the Berlin-Baghdad Railroad began. Within this framework, the Anatolian Railway Company (ARC) was established. Aware of the German interest in Mesopotamian oil, which the railroad in question would have helped take control over, Sultan Abdul Hamid II began centralising control over oil wealth, onto his Civil List, in 1889. The German Deutsche Bank group obtained an oil concession in Mesopotamia only in 1903, and it officially started exploring its territory the following year. However, British Diplomat Maunsell, serving in the Ottoman Empire, had already managed to obtain a copy of a German map displaying oil reserves in Mesopotamia in 1903. Moreover, Russian diplomacy, in collaboration with France and the United Kingdom – an agreement which would culminate in 1907 with the forging of the *Triple Entente* -, managed to seriously slow down railway construction: in the 1890s and 1900s the activity was blocked in Persia, over growing concerns that such infrastructure would threaten the Russian oil market in Europe and Asia. Moreover, German railroad construction from Ankara was blocked from 1896 due to security concerns, as the line would facilitate military deployment near the Russian border. The United Kingdom also managed to block the development of German infrastructure in the Gulf by signing a bond with Kuwait in 1899, which made any transfer of territory to foreign powers

[6] The Ottoman Empire had recently relinquished part of its economic sovereignty in order to repay its debts, which were owed primarily to the United Kingdom and France. Engdahl (2007, pp. 2049) provided the following account on the matter:

> The situation in Ottoman Turkey had become so extreme that the Sultan had been forced by his French and British creditors to put the finances of the realm under the control of a banker-run agency in 1881. By the Decree of Muharrem (December 1881) the Ottoman public debt was reduced from £191,000,000 to £106,000,000, certain revenues were assigned to debt service, and a European-controlled organization, the Ottoman Public Debt Administration (OPDA), was set up to collect the payments. The OPDA subsequently acted as agent for the collection of other revenues and as an intermediary with European companies seeking investment opportunities. Its affairs were controlled by the two largest creditors – France and Britain, the French being the larger.

conditional upon British consent. Despite financial and diplomatic difficulties, negotiations between the Sultan's Civil List and the ARC continued, and in 1904, the so-called Zander contract was signed: among all, it established that if oil had been found feasible to extract, the ARC would have obtained a 40-year-long extraction concession. However, after years of inconclusive research – due to German financial and technological limitations - and negotiations, the Civil List terminated the contract in March 1907, as it also had opened talks with the British during the previous year (Ediger & Buwlus, 2019; Hamm, 2013, pp. 884-885, 896).

The policy undertaken by Germany, called "*penetration pacifique*", was ultimately undone in 1908, with the Young Turk revolution: as a result, an imperial decree mandated that the estates and lands under the Sultan's ownership were to be reassigned from the Imperial Treasury to the Ministry of Finance. What remains remarkable is that such a revolution had been backed by British intelligence, which was "actively engaged in pushing events along". If at the beginning the German strategy was regarded with a degree of tolerance by the United Kingdom, France, and Russia, the judgment had completely turned in a matter of a few decades. When acting to preserve the European balance of power, the tipping point was probably represented by the end of the reign of Abdul Hamid II. The revolutionary party, called "Committee of Union and Progress", featured a number of members who studied in Western European universities, chiefly in Paris. The closing phase of this series of diplomatic and economic confrontations took place between 1912 and early 1914, when the (British) Turkish Petroleum Company was reorganized: share capital was doubled, out of which 50% went to the APOC, 25% went to the Anglo-Dutch Royal Dutch Shell group, and the final 25% went to the Deutsche Bank group, who also received an exclusive oil concession on either side of the Baghdad rail line[7]. (Engdahl, 2007, pp. 2041-2042, 2052-2055; Ediger & Buwlus, 2019, p. 10).

In 1914, however, Britain also secured a monopoly over Mesopotamia, effectively nullifying Germany's efforts in the region. Eventually, these dynamics, which resulted from oil aspirations,

[7] Gulbenkian, eventually, also received 5% of the total shares, equally provided by Shell and the APOC (Engdahl, 2007, p. 2055).

were extremely influential on European diplomacy: on the brink of WWI, the powers of the *Triple Entente* were provided a unique occasion to strengthen the united front against Germany, thereby driving it toward closer alignment with Austria-Hungary (Maloney, 1984, pp. 9, 15). Concerning the ongoing developments in the United Kingdom, Engdahl (2007, p. 2055) provided the following account:

> In June 1914, just days before outbreak of war, the British Government, acting on First Lord of the Admiralty Winston Churchill's urging, bought the majority share of the stock of Anglo-Persian Oil Company and with it she took automatically APOC's major share in Deutsche Bank's Turkish Petroleum Company. London left nothing to chance.

The Berlin-Baghdad Railway, at that point, remained a concerning security and military issue for the United Kingdom. In a Memorandum, the India Office warned that the Railway would be completed within five years, thereby creating infrastructure that could be used by foreign powers for military deployments. Potential future conflicts with Russia were likewise examined, adding a cautionary note regarding the potential militarization of northern Persia by Russia (India Office, 1914, folio 344).

On the whole, as the world was on the brink of the start of the Great War, countries were investing increasing resources in oil exploration and technological development. Generally speaking, they had one factor in common: the oil supply was not sufficient for advancing to the extent they aimed to, including in the United States. Moreover, one of the factors that caused a slow transition to oil among the then main powers was arguably the dependence on coal. By 1900, Italy, a country lacking domestic coal supplies, had become the most successful in the oil transition, with most of its torpedo boats operating on oil. (Ediger & Buwlus, 2018, pp. 437, 444). Figure 1.9 shows the distribution of oil production in the largest oil-producing countries during the five years preceding the start of WWI, excluding North America, which was by far the leading region in this regard. As

Figure 1.10 shows, in a matter of only a few years, the production gap between the latter and Europe (including Russia), the second largest producing region, rose markedly. In the case of the United States, between 1909 and 1913, oil production rose from to 183 to 248 million gallons (American Petroleum Institute, 1949, pp. 444, 450). These figures, representing a 36% growth rate, were in sharp contrast with what the rest of the world was experiencing.

CHAPTER II: THE TWO WORLD WARS: THE OIL TRANSITION, THE THIRST AND THE DEPENDENCY

II A. The advent of oil's age of energy and its impact on the Great War

As mentioned in the previous chapter, in 1910, the volume of gasoline sales overtook that of kerosene and other lighting oils, marking a pivotal moment in the advent of oil's "age of energy". The United States continued to account for more than half of the global oil production in the decades that followed (Figure 2.1). Figure 2.2 and 2.3 provide further significant data on the years of the Great War: North America was the only region in the world with a solid growth in oil extraction, as in that period even Europe witnessed a stagnating, and later declining, oil industry. The United States was the driving force behind such levels of North American production.

Generally speaking, oil had been considered a strategic asset for the Great War belligerent countries since the beginning: for instance, within the first three weeks after its onset, Ottoman authorities planned "either to requisition large quantities of American petroleum belonging to the Standard Oil Company and the Vacuum Oil Company or to control the prices at which it [could] be sold" (Nathan, 1914). Constantinople would soon suffer as a result of the conflict: within one year, it experienced a shortage of coal, petroleum, and grain, contributing to the emergence of neutralist perspectives and exacerbating anti-Italian sentiment (cfr. Cucchi Boasso, 1915). Bulgaria, on the other hand - which sided with Germany, Austria-Hungary, and the Ottoman Empire - was subjected to oil sanctions: the export of oil from Romania was prohibited, despite the signing of other agreements with Central Powers. To put these matters into perspective, in 1915, the Russian Empire produced 68 million and a half barrels of oil, Romania 12 million, while Germany only 703,000 (Fasciotti, 1915a; Fasciotti; 1915b[1]; American Petroleum Institute, 1949, pp. 444-449).

[1] For reference, these two diplomatic dispatches have been fully translated in Appendix C.

Throughout the Great War, Persia provided just 15% of the fuel required by the Royal Navy, while the rest was primarily supplied by the United States. Also due to these factors, the main objective of British strategies in the Middle East between 1914 and 1917 was the protection of communications with India. Shortly after the United Kingdom declared war on the Ottoman Empire in November 1914, the former dispatched a small detachment to secure the Abadan naval fuel refinery in Persia and sent the Mesopotamian Expeditionary Force to protect the port city of Basra on the Persian Gulf; both choices were made to strengthen the protection of India against attacks. In June 1915, the De Bunsen Committee reiterated the importance of "maintaining the Persian Gulf as a British sphere of influence for the land defense of India": these considerations would be of extreme relevance during the secret Sykes-Picot negotiations, in which Britain claimed Mesopotamia up to Baghdad, while Mosul was allocated to France. Another important factor in British decision-making was that the high levels of oil production in the United States were matched by equally high domestic demand. This trend was noted by the United Kingdom, which, in the midst of the Great War, assessed its relevance in the international oil market. The UK Foreign Office eventually determined that the Anglo-Persian Oil Company would have faced significant challenges in securing full oil rights over any part of the Turkish Empire, had it sought to do so. With these considerations at hand, the United Kingdom acquired a new – albeit confidential – goal:, bringing the Royal-Dutch Shell group under British influence. Fuelling this objective could have also been the fact that, between 1911 and 1915, more oil was extracted in the Netherlands East Indies than in Persia and India (including Burma) combined. The British position toward Shell deteriorated further when evidence emerged that the Company was providing oil to both the Central and Allied Powers (Kelanic, 2020, pp. 84-85; American Petroleum Institute, 1949, pp. 444-449; De Bunsen, 1916; Jones, 1981, p. 182).

It's hard to summarise the events that ultimately reshaped the British strategy concerning oil and the broader trajectory of the Great War. The following is an account by Kelanic (2020):

> Everything changed in February 1917, when Germany strengthened its blockade of Great Britain by resuming unrestricted submarine warfare against merchant shipping in the North Atlantic. The Germans had tried this tactic on a much smaller scale in 1915, but the backlash it provoked from the United States and other neutral countries forced them to abandon the campaign. By the start of 1917, however, Germany was so desperate to end the war that its leaders were willing to run grave risks. Targeting raw material shipments crucial to Britain's war effort, they believed, offered Germany the best chance of forcing Great Britain to the negotiating table. The Germans fully recognized that the resumption of unrestricted U-boat warfare would bring the United States into the war against Germany, but they gambled that if they could interdict enough tonnage, they could knock Britain out of the war before the Americans could mobilize. The bet almost paid off. (Kelanic, 2020, p. 86)

The loss of oil supply was the most impairing to the United Kingdom's army, as nearly 90% of the country's oil supply was provided by the United States. The U.K. Admiralty official, Clarke, by July claimed that the Royal Navy "was practically the sole user of oil fuel" in the country; in the same month, it was established that without an appropriate oil supply, the British fleet would be immobilised by September. The then U.S. President, Woodrow Wilson, strongly criticised the British strategy; in a confidential address he stated that since the beginning of the Great War he had been "greatly surprised at the failure of the British Admiralty to use Great Britain's great naval superiority in an effective way [, as in] the presence of the present submarine emergency they [had been] helpless to the point of panic". Eventually, the United Kingdom managed to survive this crisis thanks to a rise in U.S. oil exports, combined with British technical precautions and developments. The United Kingdom fully recognized the critical importance of U.S. assistance at that juncture; also, arguably, oil coercion had never been exerted so extensively. In the aftermath of the Great War, London had come to appreciate the strategic value of oil, and the interwar years proved pivotal in preparing for a future mechanized conflict (Kelanic, 2020, pp. 86-88; cfr. Lansing, 1917).

While European policymakers found themselves increasingly entangled in the oil question during the Great War, parallel dynamics were unfolding on the opposite side of the Atlantic Ocean. Minister to Mexico Cambiagio (1917)[2] reported to the Italian Government that Mexico had been progressively affirming itself as a possibly influential actor in the conflict, even if it was not directly engaged in it. In fact, it was one of the principal oil-exporting countries, shipping more than 40 million barrels abroad in 1916 alone. In particular, Cambiagio warned that the Mexican government, "known for its Germanophile leanings", could have been upholding the idea of blocking the shipment of any aid or war materials to the belligerent nations. The dispatch went on specifying what follows: "[t]he Germanophiles, who still constitute the vast majority here, anticipated even stronger support from the Mexican Government for the Germans against the hated United States, including a ban on oil exports […]". According to Cambiagio, one of the reasons why the Mexican Government eventually pursued a policy of the "most rigorous and strictest neutrality" was that it was aware that any form of support in favour of Germany would have caused strong reactions from the neighbouring United States.

Significantly, it could be added that the peace conditions that Germany tried to impose on Romania in the summer of 1918 also encompassed the granting of a monopoly on petroleum exploitation and sales, which French, British, Italian, and U.S. diplomatic representatives denounced as "yet another form of unlimited war indemnity" (Bonin, 1918)[3].

All of these dynamics reinforced the notion that belligerent powers in the First World War enjoyed limited security in their oil supply chains, a vulnerability that became increasingly apparent in the final years of the conflict. On the whole, the Great War left extensive impact on world politics, witnessing, among all, the emergence of the *politique de pétrole* ("politics of oil"), a strategic approach focused on energy security (Conlin, 2020).

[2] For reference, the diplomatic dispatch has been fully translated in Appendix C.

[3] For reference, the diplomatic dispatch has been fully translated in Appendix C.

II B. The 1922 discovery: Venezuela and the plague of oil market reliance

Although this section will not exactly analyse a case of oil weaponization, it will develop the theme of the industry's impact on the national economy, elaborating further on the ways in which these dynamics are deeply interwoven with international economic processes and geopolitical structures.

This work so far has shown that at least up until the end of the Great War, the major oil-producing country in Latin America was Mexico. The interwar period in the region represented a critical juncture in the development of the oil market; as Figure 2.4 shows, oil extraction in Mexico reached a peak at the turn of the 1920s, followed by a rapid decline. Between 1921 and 1931, oil production in Mexico declined by 82.9%, and the discovery of crude oil in Venezuela in 1913 set Caracas on the path toward becoming an oil-based economy. In the 1920s, oil production - carried out primarily through concessions granted to foreign companies - played a significant role in accelerating Venezuela's development. Extraction grew so much that in 1928 it surpassed Mexico, becoming the largest oil-producing country in Latin America (American Petroleum Institute, 1949, pp. 444-449; Restuccia, 2021, p. 495).

According to Rudolph (2023), despite the first oil findings, Venezuela would not have received such a level of exploratory interest and attention if it had not been for the 1917 change of the Mexican Constitution, which declared that national mineral resources belonged to the Mexican people rather than to the actors that were involved in their development. This was taken as a sign of unreliability, causing foreign capital to flee the country. According to a U.S. diplomatic dispatch, Venezuela was a country lacking domestic capital, creating the ideal conditions for granting concessions to foreign companies. Moreover, Dictator General Gómez emerged as a reassuring figure for investors: facing the proposals of his Minister of Finance, who sought to restrict concession sizes and even proposed limiting foreign participation – specifically, though prohibiting foreign interests from participating actively in the exploitation of petroleum concessions -, he replied in strong support of foreign interests

(McGoodwin, 1920). Rudolph further elaborated on the impact of the Gómez regime, expressing the following considerations:

> Perversely, although typically for Latin America, Venezuela's primary appeal had its source in the nation's repressive regime, which was more stable than other, less repressive governments. (Rudolph, 2023)

These operations led to the discovery, on December 14, 1922, of a major gusher. More oil companies soon applied for concessions, and extracting operations increased significantly. In June 1925, the Venezuelan Congress approved a new Constitution that transferred full authority over mining and oil concession approval from Congress to the Executive. By 1926, the entire Maracaibo Basin was under exploration, and eight oilfields in the areas had been discovered: Mene Grande, La Rosa, Ambrosio, El Mene, La Concepcion, La Paz, Rio Palmar, and Rio de Oro. The implemented Oil Laws included provisions to protect both local populations near oil fields and the government's interests, requiring companies to avoid specific practices (namely improper drilling and the abandonment of wells) in order to prevent fires and avoid losses. However, soon the issue of environmental damages emerged: contamination stemmed largely from negligent company practices, including allowing oil-soaked debris to settle into the lake, causing uncontrolled gushers such as the one-week-long spill from Lago's well No. 444, and overlooking spills during tanker loading and discharges of oily ballast water from returning ships, as well as carelessly handling storage tanks. These issues were assessed by a Government Commission in January 1928, as authorities carried out an inspection of several areas around Lake Maracaibo and discovered widespread oil pollution. The shoreline was coated in thick layers of oil, and water was not usable for local residents. Reacting to the assessment of these issues, U.S. Consul Alexander K. Sloan argued that documentation even understated the severity of the damage. These findings led the Congress to pass the *Ley de Vigilancia* in July 1928 to prevent water pollution from oil. Not only did companies consider the law fair, but it

proved effective, as spillages had significantly declined by April 1929. By that year, Venezuela had also become the second-largest oil producer in the world, surpassed only by the United States, relying on oil for half of its revenues and three-fourths of its foreign trade income. A deep crisis would hit the country with the onset of the global depression, which lasted from 1929 to 1933. Oil demand dipped, and in 1932, the United States even implemented tariffs, which further aggravated the situation. Venezuela has been estimated to have suffered the harshest economic consequences amid these events. The country would then shift its strategy to international promotion, and by the start of WWII, it provided for 40% of oil consumption in the United Kingdom (Rudolph, 2023; McBeth, 2009, pp. 162, 171-173; Nature, 1926).

Evoking International Economics theory, it could be inferred that Venezuela in this period suffered from the Dutch Disease, a phenomenon which can be defined as follows:

> The deindustrialization of an economy as a result of the discovery of a natural resource, so named because it occurred in Holland after the discovery of North Sea gas. The discovery of such a resource lifts the value of the country's currency, making manufactured goods less competitive; exports therefore decline and imports rise. (Law, 2009, p. 192)

Roy & Cheatham (2024) argued that the Dutch Disease had already made its way into the Venezuelan economy by 1935, the year of the death of Dictator General Gómez. To support this claim, they argued that “the Venezuelan *bolívar* had ballooned, and oil shoved aside other sectors to account for over 90 percent of total exports”. The financial situation of Venezuela in this period, therefore, relied heavily on oil trade. The national economic structure that emerged during this period would continue to influence Venezuela for decades.

II C. The inter-war period and the birth of emergency oil stocks

Besides Venezuelan affairs, the interwar period was marked by significant developments in the oil industry. Following the events of WWI, which highlighted the strategic importance of oil, national strategies have become increasingly aligned with the oil transition. The airplane industry, which at the beginning of the Great War was still in an "embryonic phase", saw a massive jump in production: in the United Kingdom, ten aircrafts per month were being produced at the beginning of the war, and in 1918, weekly production had risen to 2,688. In the United States, 10,000 airplanes had been constructed by the end of the war. The United Kingdom, driven by a post-war desire for self-sufficiency, also acquired 7,000 tractors from Ford, with the aim of boosting agricultural productivity. From a global perspective, oil production quadrupled in the interwar years, increasing from 503 million barrels in 1918 to over 2 billion barrels in 1939 (Johnstone & McLeish, 2020, pp. 6-7; American Petroleum Institute, 1949, pp. 444-449). The oil market developed in the 1920s, also due to the transformation and growth of the American automobile industry. Yearly vehicle production more than doubled throughout the decade, and by 1929, American companies had managed to produce 5 million units. Such an evolution in the interwar years not only managed to accelerate the transformation of the U.S. society from an agrarian to an urban-industrial one, but also generated "a strong, dynamic manufacturing base that would be ready when called on at the end of the next decade when the country needed to mobilize its industrial resources for World War II" (Mazzeno, 2021).

It may be added that in this period, British government support was given to the research of petroleum alternatives: two results of these efforts were a power alcohol and a "petrol-from-coal" (Johnson et al., 2016), the latter being a substance that, as will be explained shortly, was also being produced by Germany. Competition over oil resources also played a significant role in determining interstate relations, and deeply influenced the structure of the oil market and European strategies in the Middle East. These events have been summarised as follows:

> Before the First World War, Britain controlled only 5% of the world's oil production, but by the war's end Britain had acquired 50% of the world's known oil reserves […]. France and the UK struggled for control over Middle Eastern oil resources, and in April 1920 the San Remo Agreement was reached between the two countries. Here, "Britain conceded a share of the oil in exchange for a general agreement, effectively granting France a 25 percent share of petroleum in exchange for Mosul" […]. This locked out foreign companies from being able to control oil production in the British Empire. The USA retaliated with similar measures, using the Mineral Leasing Act of 1920 to prevent any company from a nation that was excluding American oil companies in the Middle East from gaining access to US oil fields. New oil discoveries in Texas in 1924 eased this geopolitical tension. However, the new thirst for oil and wartime experiences of oil shortages had resulted in an 'exploration boom' […]. This led to low prices which risked the stability of the global oil industry. […] Germany was economically and politically weakened after the First World War and could not acquire oil reserves. A key part of their strategy was to pursue petroleum synthesized from coal. […] The oil strategy of the UK also had its limitations during this period of 'frenzy' however. The UK put considerable effort into securing Middle Eastern oil supplies, and while in 1929 the USA produced more oil than any other country, 41% of oil production outside of the US was produced by British companies (Johnstone & McLeish, 2020, p. 7).

The erosion of U.S. oil production primacy, even if slight, is also visible in Figure 2.1: by the beginning of World War II, nearly 60% of total oil production was attributed to the United States, whereas 15 years earlier, the share had amounted to over 70%. The most surprising growth was perhaps achieved by Russia, whose oil production increased by nearly 700% between 1918 and 1939. Figure 2.4 shows the steepness of the Russian oil industry development. The first step that was undertaken in this context was of historic proportions: in 1918, Russia became the first country to nationalise foreign direct investment in oil production. Despite the ongoing battles regarding

compensation and restitution, in view of the collapse of the Soviet regime, international actors began expanding their portfolios through the acquisition of U.S.S.R. oil shares. Speculators in this context included the Standard Oil Company, which had never previously invested in the Russian industry. Facing predictions of imminent exhaustion of U.S. reserves, conspiracies began to emerge that American actors had been excluded from foreign investments, a theory also backed by official reports. These dynamics would result in "a film of mistrust" over U.S.-U.K. relations. The Great Depression would soon harshly hit the Soviet economy: as demand dropped, prices plunged. The competitive entry of Soviet crude at the expense of leading market suppliers, achieved largely through aggressive pricing strategies and competitive undercutting, played a significant role in generating financial setbacks for nearly all leading petroleum corporations. These measures were commonly labelled as "dumping" practices, aimed at intensifying the Great Depression. However, the pursuit of greater export volumes, even under unfavourable pricing conditions, was necessary for thr U.S.S.R. in order to secure the foreign exchange required to finance the crucial imports underpinning the Five-Year Plan. When they peaked in 1932, Moscow's oil exports were oriented primarily towards European markets; since the following year, up to the outbreak of the Second World War, Soviet oil production continued to rise, but exports steadily declined to the point that, by the late 1930s, they no longer constituted a significant factor in global oil trade. This contraction resulted from production increases falling short of expectations, the extraordinary growth of domestic demand, and the reduced necessity for foreign exchange under the Second Five-Year Plan (Kobrin, 1984; Heymann, 1948, pp. 304-305, 312-313, 315).

Among Asian countries, as represented in Figure 2.5, two territories were particularly relevant in those years: the Netherlands East Indies and Iraq. In the case of the latter, oil extraction started in 1927, and in the following year, a major international Accord would be signed also involving its reserves. As a matter of fact, the Middle East region has been at the centre of diplomatic and financial attention during that period. The most important step, perhaps, was the 1928 Red Line Agreement: signed in July 1928, it reconstructed the prewar Turkish Petroleum Company, under the aegis of the

Anglo-Persian Oil Company, the Royal Dutch Shell Company, the Compagnie Française des Pétroles, and a Standard Oil consortium composed of five companies. While 5% of the shares were allocated to an Armenian entrepreneur, a partial stakeholder in the Turkish Petroleum Company, the remaining shares were equally divided among the aforementioned four entities. The Agreement derives its name from the red lines, physically drawn on a map, indicating the boundaries of the dismantled Ottoman Empire: according to this Agreement, the signatory companies, the most powerful in the oil business, were obligated to refrain from independently pursuing oil concessions within the 'Red Line' territory beyond the domain of the Turkish Petroleum Company (Stivers, 1983, p. 23; Office of the Historian, n.d.c).

In 1926, the Fascist regime in Italy implemented a pivotal energy security strategy aimed at achieving greater autonomy from British and German coal imports, as well as Western oil in general. This was primarily achieved through the creation of *Azienda Generale Italiana Petroli* (General Italian Oil Company, AGIP). AGIP acquired a controlling 90% stake in two Romanian oil enterprises, undertook the importation and domestic distribution of Soviet petroleum, and initiated exploration activities in Northern Italy and across Italian colonies, namely Libya, Eritrea, Ethiopia, and Somalia. Albania, which had been an Italian protectorate since the end of the First World War, had also been included in these exploration activities: however, between 1920 and 1925, diplomatic tensions arose between Italy and the United Kingdom concerning Albanian oilfields, as the latter also sought to secure access to them. Eventually, Italy lost the diplomatic battle, and Albania, which had been manipulated by the two contending powers, retained its position as one of the most underdeveloped countries in Europe (Bini, 2014, p. 146; Sette, 2020, pp. 122, 138). These aspirations were also present in earlier times, as witnessed by a 1919 letter written by the President of the *Sindacato Italiano per Imprese nell'Africa Occidentale* (Italian Union for Enterprises in West Africa), who documented as follows:

> The recent Colonial Congress in Rome unanimously approved, as published in the Italian press, an agenda signed by a large number of congressmen, and illustrated by me with factual data, affirming the desire that Italy, while respecting Portuguese sovereignty in Angola, should complement its colonizing work, and that, in consideration of the Italian interests already established and the greater ones still in the process of being created in West Africa, Italy should take part in the replacement of Germany in those very rich regions, and obtain at least an outlet for its commerce in West Africa. (Solari, 1919)[4]

Just a few months later, Italian Minister Crespi penned a memorandum addressed to the President of the Council, Orlando, which stated that:

> Italy's monthly requirement for coal can be estimated at one million tons. As soon as the transformation and transition from war industries to peace industries is completed, there is no doubt that this [demand] can only increase. On the other hand, if [such a supply] were not possible [to be achieved], there would be a considerable contraction in production, with consequent unemployment and repercussions on public order. […] It is today a concern of Italian statesmen to lessen the anxieties that Italy experienced during the war because of its total lack of coal. The relief Italy would derive from the possibility of possessing its own coal deposit could represent, from a certain point of view, a principle of partial indemnity for the serious economic and financial damages borne during the war. (Crespi, 1919)[5]

While these shifts were underway, addressing the issue of oil supply, another factor emerged in the field of energy security: emergency oil stocks. These can be defined as petroleum reserves maintained by public authorities or by private entities under governmental mandate, with the primary

[4] For reference, the dispatch has been fully translated in Appendix C.

[5] For reference, the diplomatic dispatch has been fully translated in Appendix C.

objective of guaranteeing energy security and stabilizing supply in the event of disruptions, such as supply chain disruptions or price shocks.

A "rudimental" procedure aimed at "saving up" oil, carried out in the United States between 1909 and 1924, consisted of setting aside territories known to have petroleum reserves in order to guarantee fuel supply of the U.S. Navy. In the interwar years, European countries also acted in these regards, but with more technically sophisticated stockpiling strategies. For instance, in 1925, France implemented import licensing requirements under direct state regulation: in this framework, license holders were required to stockpile oil. In the following decade, Italy invaded Ethiopia: the international crisis that stemmed from the Italo-Ethiopian War, which lasted between October 1935 and May 1936, also forced Italy to prepare against the possibility of an oil embargo (Frøland & Ingulstad, 2020, pp. 90-93; Sbacchi, 1976, p. 123). During the second month of the invasion, Mussolini wrote to the Italian Ambassador in Washington that "the question of oil [was] absolutely essential" (Mussolini, 1935)[6], and discussions on foreign oil resale had been tabled with Japan by the end of the same month (Suvich, 1935)[7]. In February 1936, it had been established that any sanctions would be rendered "practically ineffective" by the size of Italian oil reserves: in August 1935, Italy had imported a greater quantity of oil than in the entire previous year (Bova Scoppa, 1936)[8]. The stockpiles in question began to be regulated in late 1933, when minimum storage requirements were introduced for the domestic oil industry. In February 1934, the *Legge Petrolifera* (Petroleum Law) no. 367 was passed, introducing additional regulatory measures for minimum stock reserves (Frøland & Ingulstad, 2020, p. 92).

[6] For reference, the diplomatic dispatch has been fully translated in Appendix C.

[7] For reference, the diplomatic dispatch has been fully translated in Appendix C.

[8] For reference, the diplomatic dispatch has been partly translated in Appendix C.

II D. The price of "black gold": how oil shaped the Second World War

It was a war begun as a fight for oil and ended by the lack of it.

- Japanese newspaper Asahi Shimbun, September 1945 (Goralski & Freeburg, 2021, p. 311)

The Second World War was "a global conflict with a marked increased dependence on oil compared to the First World War". During the interwar period, the United Kingdom established an oil supply chain independent of the United States, drawing primarily on Venezuela, the Dutch West Indies, Iraq, and Persia. However, during WWII, this system was swiftly destabilized due to the vulnerability of the associated shipping routes, leading to the United Kingdom having to rely on U.S. oil for 90% of its oil needs. At the beginning of the 1940s the United States developed further domestic oil transportation infrastructure, and the United Kingdom undertook the Government Pipelines and Storage System, which progressively extended in size, reaching eventually airfields to supply aviation fuel. The opposing belligerents were equally focused on developing a solid oil strategy: Germany aimed at securing access to oil resources through territorial expansion. One of the reasons that have been identified for its invasion of the Soviet Union was the quest for oil in the Caucasus; conversely, the Allied Oil Campaign aimed at destroying German oil infrastructure and refining capacity (Johnstone & McLeish, 2020, p. 8).

Delving into further details about the German question, several key points are worth noting. Germany faced a partial disruption of its oil supplies as early as in 1939, in the form of a blockade imposed by the United Kingdom and France: this strategy was in part circumvented by a Russo-German economic pact. Germany's victories in 1940 failed to resolve its shortages of raw materials; instead, they aggravated the situation by bringing under German control oil and coal-importing regions. A significant advantage, however, accrued from Romania's accession to the Axis in November of that year: between 1940 and 1944, Germany imported 8.82 million tons of petroleum from Bucharest. Moreover, in June 1940, in the aftermath of the victory over France, German experts

began designing what would have been the European post-war "New Order", which encompassed coal, foodstuffs, and, obviously, oil supply chains independent from the United Kingdom, the United States, and the Soviet Union. German oil supply and reserves were a critical weakness at the beginning of the war: during the first six months of World War II, reserves of gasoline, diesel, and naval fuel oil dropped from 870,000 to 438,000 tons. On the other hand, aviation fuel reserves rose from 442,000 to 480,000 tons. In July 1940, Alfred Bentz, Germany's top oil geologist, claimed that the issue of oil undersupply could be solved in two ways: either by intensifying synthetic fuel production or by boosting production. He believed that the Middle East would be the easiest region in which to carry out this strategy. In his words, "[the] self-supply of European area from European oilfields [was] entirely out of the question", and "it was 'absolutely necessary' that Europe secure the crude oil reserves of the Middle East, 'the only territory in close proximity to Europe within which major production increases [were] possible'". Oil shortages proved capable of generating tension and bargaining within the Axis powers. Facing a scarcity of the resource, Rome warned Berlin that it would exhaust its oil reserves by May 1941. In February of that year, German officials speculated that Italy might abandon the war if it were not promptly supplied with 214,000 tons of petroleum. In March 1941, the *Kontinentale Ölwas* was officially founded. Formally, it was a private oil company, but *de facto* it was under the control of the Third Reich, whose mission was "the acquisition and utilization of all fuel reserves within Central Europe". However, ultimately, it never obtained the "great prizes that [laid] just beyond the grasp of the Third Reich" (Toprani, 2014; Toprani, 2019, pp. 200-210; Edgerton, 2015, p. 131).

At the exclusion of the United States and the U.S.S.R., which were oil-producing countries, Germany was far better placed than most belligerents: in July 1940, the closeness to Romania, the largest European oil producer after Moscow, enabled Germany to appoint a pro-German director as the head of Astra Romana, the Romanian subsidiary of Shell. This move culminated in the establishment of a 50-50 partnership between Astra Romana and Konti in May 1941 (Edgerton, 2015, p. 141; Toprani, 2014, p. 961).

Japan, on the other hand, secured a major oil supply through military conquest. Until 1940, its main oil supplier was the United States; these resources enabled it to invade China in 1937 and to accumulate significant stockpiles. From 1940, the United States, the United Kingdom, and the Netherlands began implementing gradual economic sanctions, culminating in a full oil embargo in 1941. The embargo (jointly with the wider issue of Japan's dearth of natural petroleum) served as the chief impetus for Japan's invasion of the Dutch East Indies and Malaya, starting the Pacific War, with the campaign reaching completion on 7 March 1942 after almost three months. While Royal Dutch/Shell successfully destroyed the Balik Papan (Borneo) facility, the largest refinery at Pladju (Pelambang, Sumatra) fell to Japanese parachute troops before it could be sabotaged. Right after these victories, Japan proceeded to invade Burma. In March 1942, as Japanese forces advanced on Rangoon, British troops destroyed the refineries and storage facilities at Syriam to prevent their use following Japanese capture. During the progression of the war in Burma, Allied forces depended on fuel from the Yenangyaung oilfields, which became the target of a major Japanese offensive. Only when further retreat proved unavoidable did the British set fire to these installations, denying again their use to the enemy:"[a]bout 100,000 barrels of stored crude oil alone went up in a huge pall of smoke, one of the few completely successful Allied demolition efforts undertaken in Southeast Asia before facilities fell into Japanese hands". By 1943, Japan had restored 75% of the crude production and 40% of the refinery output of those territories, approximately matching pre-war Japanese imports. That same year, the Allied powers intensified pressure on Japan by implementing a naval blockade, ultimately halting its oil imports. Due to U.S. attacks, primarily damaging its tankers, Japan was then forced into employing cheap oil alternatives, at times mixed with petroleum. Among these materials, there were vegetable oils (such as soybean, peanut, coconut, and castor oil), industrial substances (including methanol, ethanol, acetone, butanol, crude rubber, and wood turpentine), and foodstuffs (for instance, potatoes, sugar, and rice wine); these resources were diverted away from an already starving population. Ultimately, these measures and resource shortages greatly weakened the Japanese military capacity. While conventional narratives emphasize firebombing and atomic attacks

as decisive in Japan's surrender, it has also been inferred that the critical factor in this regard was Moscow's invasion of Manchuria on August 9, 1945, as eventually "the Soviet invasion dashed any last hopes that Japan could trade Manchuria for oil and Soviet neutrality". Japan formally surrendered on August 15, 1945 (Edgerton, 2015, p. 143; Kelanic, 2020, pp. 60-66; Goralski & Freeburg, 2021, pp. 156-157).

The Middle East was also deeply involved in World War II's oil dynamics. Possibly, the most relevant step taken by the United Kingdom in this territory was the invasion of Iraq in April 1941, and the subsequent occupation. This strategy was implemented in response to the British exclusion from the Basra oilfields, a measure introduced under the leadership of the allegedly pro-German Prime Minister Rashid Ali Gilani. With such a strong British presence, Reza Shah's stances became even more unsustainable: "[h]is demands for compensation during the war showed that he would make access to the oil conditional, which could potentially hinder wartime demands". By the end of the summer of the same year, the United Kingdom and the Soviet Union, as Allied powers, had decided to cooperate in an invasion of Iran. British forces managed to penetrate Iranian territory from the south, while the Red Army did so from the north, reaching Tehran. Reza Shah abdicated on September 17. The British consolidated control over southern Iran, particularly Khuzistan and its oil installations, through military coercion, under the Persia and Iraq Command (based in Baghdad), and political oversight via the Legation in Tehran and an expanded consular network. Khuzistan was a constant attention point for British authorities, and significant resources were allocated to the protection of the local oil industry. The relevance of the region for British policymaking becomes even clearer when considering that London, in 1942, deemed Abadan to be of greater strategic importance than Egypt, owing to the presence of its vast refinery and oil fields. As a matter of fact, due to the loss of oil production infrastructure in Burma and in the Dutch East Indies, Abadan became the major oil source for British imperial forces in the Middle East and India. The region was expanded during the war to supply 100-octane aviation fuel to the U.S.S.R. via pipeline and railway, an

operation financed and equipped by the United States (Elling & Abdul Razak, 2021, p. 6; Edgerton, 2015, pp. 144-145).

As the war was taking place, U.S. experts undertook exploration missions in the Middle East to find further future oil supplies. One of the most notable examples was that of American Geologist Everytt Gower: when he returned from Saudi Arabia in 1944, he argued that petroleum resources in the region were the "greatest single prize in all history". As the end of the war was approaching, Roosevelt and Churchill negotiated over future oil supplies. However, in Roosevelt's secret meetings with Abdul Aziz ibn Saud it was convened that Saudi oil would remain outside British control, and within the American sphere of influence instead. This decision - reinforced by subsequent agreements - proved pivotal in reshaping global energy trade and geopolitics (Johnstone & McLeish, 2020, p. 8).

It became increasingly evident that the question of oil supply would have been a decisive factor regarding the outcome of the war. The following passage provides an overview that further illustrates the centrality of fuel resources to wartime dynamics:

> The upshot was that the Allied armies were fully motorized, requiring vast tonnages of petrol and lubricants to keep them going - tanks, lorries, jeeps and motorcycles were everywhere, as were aircraft. Warships could steam at will. By contrast, the German and Japanese armies were horse- and human-powered, reflecting enormous disparities not only in fuel, but in other materials too. These differences were radically increased toward the end of the war as vast Allied forces went into action, and the Axis powers were deprived of more and more oil products. […] [T]he Japanese were unable to move their oil from 1944. By 1944 Germany had lost Romanian supplies, and their synthetic oil plants were under sustained and successful attack […]. The upshot was that at the end of the war there were spectacular differences between the belligerents. In November 1944 just one large USAAF bomber raid on Germany attacking synthetic oil plants, used more than 34,000 barrels of aviation spirit; in that month total Luftwaffe consumption was down to 12,500 a day.49 In the summer of 1944 the US Fifth Fleet

> in the Pacic used 93,000 barrels of various fuels and lubricants, excluding aviation spirit, every day. This compared with total Japanese consumption, military and civilian, in all theatres, at 103,000 barrels per day. (Edgerton, 2015, p. 145)

By the end of the Second World War, the oil industry had established itself as a consistent economic force across multiple sociotechnical systems. In the concerned countries, at that point, energy, food, and mobility were governed by a "meta-rule": the use of oil, which led to a dependence on it (Johnstone & McLeish, 2020, p. 11).

II E. The birth and development of the natural gas market until 1945

Natural gas has not been thoroughly scrutinised until this point as up to the end of the Second World War it had not yet emerged as a strategic instrument of statecraft. During this period, its role was largely confined to that of a domestic industrial fuel. Therefore, this section serves the purpose of tracing its early development, and establishing the historical foundations necessary to understand how and why natural gas could later become a geopolitical weapon. In the first place, it would be useful to provide an understanding of what natural gas is: borrowing the words of Riva et al. (2025), natural gas is a "colourless highly flammable gaseous hydrocarbon consisting primarily of methane and ethane, [constituting] a type of petroleum that commonly occurs in association with crude oil". Regarding their reservoirs, they stated the following:

> Natural gas is often found dissolved in oil at the high pressures existing in a reservoir, and it can be present as a gas cap above the oil. In many instances it is the pressure of natural gas exerted upon the subterranean oil reservoir that provides the drive to force oil up to the surface. Such natural gas is known as associated gas; it is often considered to be the gaseous phase of the crude oil and usually contains some light liquids such as propane and butane. For this reason,

associated gas is sometimes called “wet gas.” There are also reservoirs that contain gas and no oil. This gas is termed nonassociated gas. Nonassociated gas, coming from reservoirs that are not connected with any known source of liquid petroleum, is “dry gas.” (Riva et al., 2025)

Although the history of natural gas and its exploitation dates back to antiquity, the rise of its use as an energy source began with the First Industrial Revolution, when it was primarily used as a synthetic city gas. During the 20th century, the discovery of major gas reservoirs and the development of its transportation infrastructure, chiefly in the form of natural gas pipelines, favoured the development of its market as a whole: by the 1930s, it had become a high-value fossil fuel (Bauer, 2016). Focusing on distinct geographical areas, the European hydrocarbon market had been flourishing by the second half of the 19th century to the point that at that time oil and gas, produced primarily from shale and coal – gas derived from the latter was called “town gas” -, could not satisfy regional demand. In Britain, the first commercial discovery of natural gas happened in August 1896, when an attempt to extract groundwater for railway locomotives unexpectedly led to the finding of a gas deposit. This happening sparked a widespread search for gas reservoirs, which lasted until 1910. In 1937, significant natural gas reserves were discovered in southern Scotland by D’Arcy. These resources proved valuable during the Second World War, as the gas was transported via pipeline to supply the local gasworks (Craig et al., 2018, pp. 7-13). In the United States, one of the earliest significant applications of natural gas occurred in a village in the State of New York, where it was used as early as in 1821 for illumination purposes. The U.S. natural gas market, however, would have to wait until 1859 for its boom: that was the year in which Colonel Drake famously struck petroleum in Pennsylvania with the oil well. The associated natural gas, which was initially flared, would soon be monetised, being transported through “primitive pipes”. By 1890, the year of the invention of leakproof pipeline coupling, Pittsburgh had become the centre of the U.S. natural gas market. In the meantime, natural gas established itself as a fuel for both industrial and domestic uses, constituting a growing form of competition in artificial illumination to kerosene, alongside electricity. In the 1920s

the pipelines were further developed, rendering long-distance gas transportation practical. Between 1927 and 1931, over ten major transmission systems were built in the United States, each extending for more than 320 kilometres (Barnes et al., 2006, pp. 5-6; Riva et al., 2025; Williamson et al., 1966, pp. 384-385). Figure 2.6 shows the development of the U.S. energy market between 1899 and 1949, reporting the supply of coal, crude oil, natural gas (marketed production), and water power in those years. From the figure, it emerges that even though energy production was still heavily reliant on coal during that period, the supply of the latter was subject to significant fluctuations over those years, ultimately becoming nearly equal to the oil supply by 1949. Oil and gas supply, instead, grew consistently, representing the development of the industry. Natural gas owed much of its demand to its cheapness, ultimately leading to the development of the distribution infrastructure. Supply could not match demand during the years of the development of the transportation infrastructure, as in a number of cities it was simply not yet available. A number of studies have been carried out on U.S. natural gas consumption data, and the following is one of the most relevant findings related to the topic:

> The 1918 budget study shows that in several of the cities served by natural gas the consumption of gas in thousands of cubic feet was two to four times the national average for families in the same income groups; in heat units the difference would be even larger. (Rees et al., 1961, p. 108)

Moreover, Federal legislation was introduced in the United States in 1938 to regulate the sale of natural gas in interstate commerce. The Natural Gas Act underscores the significant role that natural gas had assumed at the time, stating that “the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest”. The importance of state intervention is then remarked in the Act, adding that “Federal regulation in matters relating to the transportation of natural gas and the sale thereof in interstate and foreign commerce is necessary in

the public interest". The Act served to regulate natural gas prices, primarily for the protection of consumers. However, its introduction was favoured by the involved companies: as natural gas prices plunged due to overproduction, regulation guaranteed profit margins. The 1938 Natural Gas Act ultimately gave the Federal Power Commission authority over the material's prices, which were to be kept at "just and reasonable" levels (Lewis, 2023; Natural Gas Act of 1938, 1938).

CHAPTER III: THE COLD WAR AND THE INTENSIFICATION OF ENERGY WEAPONISATION

III A. The Western World between the Marshal Plan and the "Golden Age"

The years that followed the Second World War were extremely significant for the oil industry. As mentioned in the previous chapter, by the end of WWII, oil-consuming countries had become extremely reliant on petroleum. The resource, whose consumption had been extremely boosted in the energy, food, and mobility fields, had become a critical factor in people's everyday lives. As cars, tractors, and highways started revolutionising infrastructure related to transport and agriculture, playing a particularly important role in sustaining the high levels of U.S. employment, plastic production also began rapidly spreading across the United States, helping producers in dealing with supply and production issues. Nearly at the turn of the 1950s, petroleum became the largest resource employed for energy production in the United States, overtaking coal. On the other side of the Atlantic Ocean, Europe faced a rather different situation, one marked by destruction: coal production had dramatically declined in the United Kingdom and Western Europe, with coal infrastructure in Germany being severely damaged (Johnstone & McLeish, 2020, p. 9; Black, 2012, p. 41). In fact, the ongoing shift in the dominant energy source – from coal to oil – in developed countries generated an evolution in the balance of power. Due to the limited autonomy of countries that lacked oil resources, such as the United Kingdom and Germany, the United States and the Soviet Union emerged as more powerful actors. While this phenomenon had already emerged during the Second World War, the consequences could also be noticed in its aftermath, chiefly regarding the decline of the United Kingdom as a great power. This concept can be developed both in geopolitical and economic terms: in the case of the former, these dynamics were reflected in the erosion of its geopolitical influence, while in the case of the latter, in the steady deindustrialization of the British economy in the 20th century. If the Pax Britannica had its roots in national industrial and military power, the shift to oil

led to a host of challenges, primarily caused by a growing lag in innovation and productivity. Moreover, British foreign policy also led to the dispersal of resources, ultimately resulting in the issue of overstretch. Ultimately, although oil did not directly cause the decline of the United Kingdom, it further exacerbated the issues it was facing and generated new ones (Toprani, 2019, pp. 253-261).

As the European continent was facing energy issues and the loss of the British geopolitical influence, it also had to deal with the destruction caused by the Second World War. European recovery was supported by the Marshall Plan, a U.S. program finalised to aid 17 Western and Southern European countries, chiefly for creating solid grounds for the establishment of democracies in the region. Lasting from April 1948 to December 1951, it is largely considered a successful operation: the involved economies saw their GDP rise by 15% to 25% during the period. The nature of this program, carried out by a country that at that point had become a superpower, reflected in its content the growing importance of oil (The Editors of Encyclopaedia Britannica, 2025c; Johnstone & McLeish, 2020, p. 10). Before delving into the details of the Marshal Plan, it is worth noting that, at this historical juncture, the Soviet Union was unable to exert power and influence through oil, rendering U.S. efforts to change European energy consumption habits even more significant. As the United States promoted oil consumption in Europe and Japan, Washington also consolidated its control on overseas oil reserves during the decade following the end of WWII. Although the Middle East was clearly closer to the Soviet Union, the United States managed to secure access to regional oil – a strategy whose roots were secretly laid during WWII, as mentioned in the previous chapter. As Table 3.1 shows, between 1945 and 1955, the Soviet Union's oil industry experienced a significant moment of development, while in terms of oil production the United States remained a dominant force. In the meantime, the Middle East continued to develop - particularly in the cases of Saudi Arabia and Kuwait. The experience of the latter is striking: although oil extraction in Kuwait began only in 1946, the country’s industry managed to overtake Saudi production in just over seven years. Turning back to the European question, oil became an economically straining issue: although by 1947 oil constituted only 10% of the continent’s energy supply, it still represented a costly imported

element. Since nearly half of the oil consumed in Western Europe was supplied by U.S. companies, a substantial proportion of the associated payments was conducted in USD. Between 1947 and 1948, the price of a barrel of crude oil shifted from 1.05 USD to 2.22 USD: the resource, which was already the largest single item in the dollar budget of most Western European countries, caused further deterioration of Europe's current dollar accounts. The United States started fearing that this dynamic could lead some European countries to economic issues and increased support for communist parties, ultimately leading to building stronger ties with the Soviet Union and hurting U.S. interests. As the United States had access to Middle Eastern oil, it was considered against national interests to import the resource, since this would have risked harming the domestic system that regulated production limits, built to stabilize oil prices. Therefore, with the aim of protecting both the outcome of the Marshal Plan and the stability of the U.S. oil market, it had been decided to redirect Middle Eastern oil to Europe. While in 1947 about 43% of the European oil supply was imported from the Middle East, in the following year the figure skyrocketed to 85%. This strategy was implemented by allocating a total of 1.2 billion USD - between April 1948 and December 1951 – to Marshall Plan countries for the purchase of crude oil and refined products. This figure exceeded 10% of the total U.S. financial effort in the program. France, the United Kingdom, and Italy were the three countries that obtained the largest amount of money, in total, for petroleum (Painter, 2009).

The reaction of the Soviet Union in these regards was already clear by 1947. In August, the Italian Ambassador in Moscow warned that the Soviet attitude towards Italy was moving from a "reserved distrust" to a condition closer to hostility (Brosio, 1947)[1]. After writing that Soviet newspapers were reporting about Italian oil concessions being granted to the U.S. Standard Oil Company – which had also been partly denied by the Italian Ministry of Industry -, he detailed why the issue was so important to the Soviet public opinion. In particular, he claimed that oil in general was a particularly sensitive topic to them, leading them to give clear political significance to any news

[1] For reference, the diplomatic dispatch has been partly translated in Appendix C.

in that regard. The Ambassador, however, considered the relations with the Soviet Union as repairable. In the dispatch, he also stated the following:

> Economic relations, the granting of oil, the claimed treaty, the granting of bases, all give us the opportunity to make them offers and precise statements, in order to demonstrate that the Marshall Plan does not prevent us from working with them, that we are not making military agreements, that we are not granting bases, nor will we so easily renounce our sovereign rights in matters of oil deposits. These would in fact be the first premises of that policy of neutrality, as well as of bilateral economic cooperation, without which there can be absolutely no hope of improving our relations with the Soviets. (Brosio, 1947)

An account has also been provided by Painter (2014), regarding the political significance of the Marshal Plan in the containment of political phenomena, both national and transnational. Specifically, he wrote as follows:

> Economic growth, in turn, was crucial to mitigating the class conflicts that had divided European and Japanese society in the first half of the century. Economic growth and prosperity undercut the appeal of Leftist parties, financed the welfare state, perpetuated the ascendancy of centrist elites, and sustained the cohesion of the Western alliance. In addition, controlling access to oil helped the United States reconcile its aim of German and Japanese economic recovery and integration into a Western alliance with that of preventing German and Japanese revanchism. To maintain access to oil in the Middle East, Latin America, and elsewhere in the Third World the United States and its allies sought to contain Soviet influence and opposed economic nationalism. (Painter, 2014, p. 189)

The Cold War intensified until 1947-1948, as, while the United States were implementing the Marshal Plan in Western Europe, the Soviet Union also implemented communist regimes on the Eastern side of the continent (Yurchenko, 2024, p. 44). The measures implemented for European reconstruction were fundamental for enabling the continent to experience the so-called Golden Age - generally identified as spanning the period from 1950 to 1973. During this period, Europe underwent unprecedented growth, in terms of both economic expansion and demographic shifts. The exceptionality of this period, which was also experienced by Japan, is proven by the fact that at no other time, either prior to or subsequent to it, have global production and international trade expanded at such a high pace and for so long without experiencing a major recession. In Europe, the average annual growth rate of the real GDP stood at 4.6%, while the population grew by 0.7% annually. The relevance of these figures stems from the fact that in its aftermath, they would collapse again: between 1973 and 1992, both the GDP and the population growth would slow down at a dramatic rate, respectively slipping to 2.0% and 0.3%. (Temin, 1997, pp. 127, 137; Vonyó, 2008, p. 221).

It must be remembered, however, that the period of the Golden Age was also characterised by a number of events and challenges that led to further changes in global oil market dynamics. The rest of this chapter is dedicated to individually analysing each of these dynamics, extending up to the end of the Cold War.

III B. The Global South and the phenomenon of petro-nationalism

While the Western world had previously maintained dominance over oil resources and secured reliable access to petroleum, this period of control was soon to come to an end. This section will delve into the developments that Global South countries faced since the 1940s, in order to provide an understanding of the circumstances that led to the end of the aforementioned “Golden Age”, ultimately caused by the two oil crises of the 1970s. The issue of petro-nationalism will be examined. A definition of this phenomenon has been provided by Griffin (2015): “petro-nationalism [consists

in] the use of the coercive powers of the state to (a) override the market as a means of the provision of petroleum and thereby (b) gain some strategic advantage at the expense of others. [… T]hese coercive powers can be manifest in a number of ways and can be utilized by both oil consuming as well as oil producing countries".

The first case that is worth mentioning is that of Venezuela. A whole section of the previous chapter was dedicated to this country, and how it became of paramount importance as an oil producer, attracting the attention and the investments of global actors. This is rendered particularly clear by the fact that by the 1930s, three foreign companies—Gulf, Royal Dutch Shell, and Standard Oil—controlled nearly 98 percent of Venezuela's oil market. For this reason, the Venezuelan ruling classes that followed Gómez sought to reform the national industry in order to capitalize on it. This agenda led to the 1943 Hydrocarbons Law, which required foreign oil companies to give half of their revenues to Venezuela. By 1948, government revenues increased by nearly 600%. The Punto Fijo Pact, which was passed in 1958 - the same year Venezuela elected its first stable democratic government after a series of dictatorships -, further cemented the general rule that revenues from the oil market should be redirected towards the state (Roy & Cheatham, 2024).

Although Venezuela was a highly significant partner for the West within South America, the Middle East presented dynamics of even greater strategic importance. U.S. and British attention had already been captured by Iran as soon as in 1947, when a law was passed committing the Government to the re-examination of the oil concession that had been granted to the Anglo-Iranian Oil Company (AIOC) back in 1933. After a period in which the United States dropped its attention on Iran, partly due to putting Iranian affairs in the hands of the United Kingdom, strategic considerations were resumed in 1950 (Marsh, 2007, pp. 27-28). The account provided by Marsh reports the following considerations:

> This shift in American thinking later became arguably the single most important reason for the Anglo-Iranian oil dispute becoming a severe test of Anglo-American relations. Initially, though,

> it helped to generate considerable agreement between British and American officials. In 1950 the US Bureau of Near Eastern and African affairs (NEA) concluded that access to the Persian Gulf was a historic Soviet objective and, were it accomplished, the U.S.S.R. would acquire advance bases for military and subversive activities that were hundreds of miles nearer potential US-UK lines of defence in the Middle East. The will of Middle Eastern countries to resist Soviet aggression would be gravely damaged and western communication and supply lines would be jeopardised, not least shipping in the Persian Gulf and continental air routes across Iran and adjacent areas. Furthermore, the Soviets would control part of the Middle Eastern oil reservoir and be able to threaten the remainder, with grave repercussions for western wartime capabilities and for peacetime economic reconstruction and rearmament. Within these considerations Iran was most significant for its oil, albeit that it later gained prominence also within ideas of a Northern Tier for Middle Eastern defence. […] Britain unsurprising joined the US in its consequent determination to protect Iranian oil supplies. However, British motivations were also intimately entwined with the government's interest in, and relationship with, the AIOC. The British government was, in fact, the majority shareholder in the AIOC – a situation that dated back to 1914. More significantly, the AIOC's operations in Iran were enormously important to Britain's economic situation, military strategy, overseas influence and prestige. In April 1951 Foreign Secretary Herbert Morrison declared that Britain's 'primary objective must be to ensure that effective control of oil operations in Persia remain with the Company'. (Marsh, 2007, p. 28)

In the meanwhile, in Iran, forces pushing for oil nationalisation kept growing stronger. An alliance of oil workers, religious political groups, the reformist-nationalist National Front, and the communist Tudeh Party – which is clandestine today – was behind these efforts. These actors considered this battle to be one for national sovereignty. On March 15, 1951, these efforts resulted in the passing of the "Single Article" bill by the *majlis*, which nationalised the Iranian oil industry. A

more detailed bill would later be passed and approved by the Shah in May. Of the same year. It has been recognised that through this piece of legislation, Iran also obtained a higher level of bargaining power. The legal effects of this law can be summarised in three points: “it cancelled the 1933 oil concession; it expropriated all the property of the AIOC in Iran relating to the oil industry; and it vested the expropriated oil industry in the new political actor, the National Iranian Oil Company”. As the crisis escalated and the United Kingdom reacted by turning the matter from an issue of international law to one of international security, in August 1951, it was provided that all British oil workers in the country be evacuated. Iranian troops even proceeded to seize the Abadan refinery in the following month, further escalating tensions (Shafiee, 2018, pp. 630-636). Ultimately, as Table 3.1 shows, these measures would lead to a plunge in Iranian oil extraction: in 1950, over 242 million barrels of crude oil were produced in Iran. This figure dropped to 123 million in 1951, and less than 8 million in the following year. The Iranian oil industry would take years to recover. Two main misperceptions emerged among Iranian officials: while some believed that this move would be successful due to the U.S. companies’ desire to obtain Iranian oil concessions again, others speculated that the United States would never abandon Iran, as it could constitute a risk of it slipping under Soviet influence. Both of these ideas were incorrect. As a matter of fact, the United States only pushed for a return to the *status quo ante*; ultimately, it decided to side with the United Kingdom and oil companies, opting for isolating Iran in order to discourage other countries from pursuing petro-nationalism. As this move weakened Iran, effects were also felt on the side of the United States and the United Kingdom. With the spread of petro-nationalism and decolonisation, the United Kingdom continued to lose its geopolitical influence, and overall, the ideological dimension of the Cold War took a dramatic turn. In 1953, the United States would start exerting covert pressures on Iran, chiefly with the goal of bringing forces to the Iranian government that would be able to suppress communist influences. Following the coup, carried out with the assistance of U.S. Operation TPAJAX, the United States began exploring new ways to reintegrate the Iranian oil industry, in order to support the new

pro-U.S. government. This last objective would be achieved through strategies like that of the 1954 Consortium Agreement (Brew, 2022, p. 116, 147-148).

Also the rest of the Middle East would be deeply involved in the Cold War and oil-related issues: the whole region, due to its large oil reserves, became a field of confrontation between the United States and the Soviet Union. Among the various industries whose development depended on oil, the military one constituted a significant example (Yurchenko, 2024, p. 47). Other Middle Eastern countries could also be brought up as an example, although not with the same geopolitical significance as Iran in this specific historical moment. Among the other cases, that of Iraq may also be quoted: after the overthrow of the Hashemite monarchy in 1958, a power struggle stemmed between the national government and the Iraqi Petroleum Company. The company, which was owned by Western powers, had long been at odds with Iraqi officials, owing to divergent views on industrial strategies - particularly with respect to the volume of oil production, the employment of the Iraqi labour force, and the royalties that the company owed to the government. These issues would eventually lead to the nationalisation of the Iraqi Petroleum Company, which happened on June 1, 1972 (Brown, 1979, p. 107).

Focusing on Saudi Arabia, it could be argued that, especially during the 1950s, the country was relatively inactive in regional politics, mainly focusing on consolidating the country in both territorial and social terms. However, in general terms, it is worth noting that since the 1970s, on average, hydrocarbon revenues have constituted over half of the Gulf monarchies' state income. In the case of Saudi Arabia, the biggest producer in the region, this figure often exceeded 80% (Richter, 2020, pp. 93, 96).

III C. The rise in oil consumption, the founding of OPEC, and the two oil crises

The Baghdad Conference - which took place from September 10 to 14, 1960 - marked an extremely important moment in Middle Eastern affairs. On this occasion the OPEC was formed[2], consisting in a "multinational organization [created] to coordinate the petroleum policies of its members and to provide member states with technical and economic aid". Since its establishment, OPEC has primarily aimed at preventing the concessionaries of member states from reducing the price of oil. Although its member states would remain sovereign over domestic production, control over oil prices would be carried out through coordination in oil production and exports. Although the Organisation was successful in preventing a decline in nominal prices during the 1960s, increases in production ultimately neutralised the efforts: the nominal price of a barrel of oil eventually slipped to 1.30 USD in 1970, while in 1955 it stood at 1.93 USD (Danielsen, 2025).

The Cold War, in the meantime, experienced significant shifts in both economic and political terms. Figures 3.1 to 3.4 illustrate oil production and consumption patterns, from 1965 to the end of the Cold War , across continents and selected significant countries. The first significant factor that may be considered is that the United States reached a peak in oil production in 1970; while oil production declined in the following years, oil consumption followed an opposite pattern. Consumption in this country reached its peak only in the 1970s, rendering it deeply dependent on oil imports. Whereas in 1965 the U.S. oil supply depended on 2.5 million barrels of non-domestically produced resources, by 1973 this figure had risen to 6.3 million barrels. As oil consumption rose between 1965 and 1973 on nearly every continent, Europe figured as the second-largest consumer, after North America. In Europe, the four largest oil consumers during this period respectively were Germany, the United Kingdom, France – which overtook the United Kingdom around 1971 -, and

[2] It was formally constituted in January 1961, with five founding members: Saudi Arabia, Iran, Iraq, Kuwait, and Venezuela. Only successively, it would go on admitting also Qatar in 1961, Indonesia and Libya in 1962, Abu Dhabi in 1967 – which would be annexed by the United Arab Emirates in the following decade -, Algeria in 1969, Nigeria in 1971, Ecuador in 1973, Gabon in 1975, Equatorial Guinea in 2017, and the Republic of the Congo in 2018 (Danielsen, 2025).

Italy. As Europe was growing as an oil consumer, North America remained the leading oil-producing region until the late 1960s, when the Middle East surpassed it (Figure 3.4). Arguably, this change laid the groundwork for one of the most significant events in the global oil market, which occurred in 1973 – and will be briefly examined.

In this period, oil consumption rose not only in absolute terms, but also relatively to other resources. From 1950 to 1972, global energy use rose by 179%, with oil maintaining a steady proportion of this growth. In fact, the share of oil in worldwide energy use increased from 29% in 1950 to 46% in 1972. In 1972 - analyzing individual countries' consumption habits - oil represented 45.6% of energy use in the United States, 59.6% in Western Europe, and 73% in Japan. As mentioned previously, as the oil market matured, the United States started importing oil in more consistent measures, thereby forfeiting a significant portion of its capacity to ensure reliable oil supplies to its allies in the event of a supply shock. Moreover, with the Suez Canal closure that occurred in 1967, oil production in Libya more than doubled, thereby increasing European reliance on the North African country (Painter, 2014, pp. 189-190; Issawi, 1978, p. 9).

It is important to note that the Arab-Israeli wars were ongoing during this period. In this setting, in October 1973, the Yom Kippur War took place, and only ten days after its start, the Organization of Arab Petroleum Exporting Countries[3] (OAPEC) – founded in 1968 - decided to dramatically reduce oil production: this strategy aimed at forcing Europe and Japan into demanding the United States to change their approach regarding the Arab-Israeli disputes. In a matter of a few days, in reaction to substantial U.S. financial and military support for Israel, OAPEC also enacted an embargo

[3] Painter highlighted that these operations were not carried out by OPEC as a whole, as often stated in academic literature. He provided the following account in these regards:

> The embargo was not an "OPEC Embargo," as it is often called in both scholarly studies and popular accounts. OAPEC, which in 1973 was composed of Saudi Arabia, Kuwait, Libya, Iraq, Bahrain, Qatar, Algeria, the United Arab Emirates, Egypt, and Syria, initiated the embargo and production cuts. Although a member of OAPEC, Iraq went its own way, joining in the embargo, but not the production cuts. Non-Arab OPEC members, including Iran, Venezuela, Nigeria, and Indonesia, did not join the embargo or cut back production and exports. They were content to profit from the price increases and even boosted production. Indeed, the shah was a leading proponent of higher prices. Labeling the embargo an OPEC embargo obscures the specific political circumstances that led to it and conflates the embargo with the pressure OPEC had been putting on prices since 1971. (Painter, 2014, pp. 190-191)

on oil exports to the United States. OAPEC also imposed an embargo on oil shipments to the Netherlands in response to its military support for Israel and subsequently extended the embargo to Portugal, South Africa, and Rhodesia. While international oil companies formally complied with the embargo, they mitigated its effects by redirecting non-Arab oil to embargoed countries, and they also distributed the cutbacks so that every country saw its oil imports decline by 16% to 18%. In this context, Arab oil prices rose from 3.01 USD to 5.11 USD a barrel – i.e., by nearly 70% - in October, and by 130% in December – up to 11.65 USD -. In March 1974, most OAPEC countries decided to terminate the embargo policy, in order to favour the ceasefire negotiations between Israel and Egypt and Syria; however, for instance, misalignment involved the country of Libya, which posed an end to the embargo only in the month of July. (Danielsen, 2025; Painter, 2014, pp. 190-194). The so-called "OPEC Price revolution", which ended with the lifting of the last form of embargo in July 1974, however, had a dramatic effect on Western economies: OAPEC measures led to a scramble for oil, and the panic caused oil barrel spot prices to reach 17 USD (Issawi, 1978, p. 16). The 1973 oil crisis also precipitated high inflation and significantly exacerbated the trade deficits of all oil-importing countries (Marcel & Taïeb, 2019, p. 20). Interesting considerations have been brought forward by Villa, who noted that market conditions in 1973 were significantly different from those of today. In particular he argued that:

> If supply greatly exceeds demand, the shock can only be limited. If, on the other hand, the market is demand-driven, as it was discovered to be the case in 1973, because the prices were regulated, the shock can be very strong. Moreover, the 1973 shock led to profound insights and realizations: the price was set by companies, so it was not a free-floating market price. Therefore, there was a sort of "inverted cartel", and that was not a "true price", but somehow a political one. So, in 1973 OPEC understood that they held "something important" in their hands. (M. Villa, personal communication, June 23, 2025)

The Iranian Revolution led to a second oil crisis, occurring between 1978 and 1979. It has been argued that also this crisis was demand-driven. The decline in Iranian oil production was relatively small compared to the first one: by January 1979, the output dropped by 4.8 million barrels per day – nearly 7% of the global production at the time. However, these events generated fear of larger supply disruptions at a global level, causing a new scramble for oil. Oil prices began to increase by mid-1979. In April 1980, the price of oil reached a value that was double that of the corresponding month in the preceding year (Graefe, 2013).

Both oil crises resulted in economic downturns: the initial one took place from 1973 to 1975, while the second happened from 1979 to 1982; additionally, in the non-communist nations, oil usage fell, as between 1979 and 1985, it shifted from 51.6 to 43.6 million barrels per day. In conjunction with these developments, the energy source portfolio in the Western world was also diversified, with the use of coal, natural gas, and nuclear energy expanding. Lastly, in these years, non-OPEC oil-producing countries also increased their production: the merged production of the United Kingdom, Norway, Mexico, and the United States rose from 17.7 to 22.6 million barrels per day. It is noteworthy that Mexico, having halted oil exports in 1968 to meet internal demand, resumed exports in 1974 in response to the sharp increase in oil prices (Painter, 2014, p. 202; Meza, 2021, p. 330). Lastly, regarding the United States, a study by Hamilton (1983) could be quoted, as he analysed the phenomenon of U.S. recessions and attempted to link it to the cost of oil. His study aimed at examining the national macroeconomic performance, and he found that, with the exception of one case, all U.S. recessions that took place after the end of the Second World War – up to 1975 - had been preceded, on average, by three-fourths of one year, by a “dramatic” increase in the price of crude petroleum. Although he specified that it could not be argued that every time this event represented the direct cause, he inferred that it could have been a contributing factor.

III D. The Soviet Bloc and the exploitation of oil and gas

As previously mentioned, the Soviet Union, at the end of the Second World War, was characterised by a severely damaged oil industry. As oil extraction plummeted, and reconstruction programs would take years to bring domestic production to previous levels, the country engaged in a number of foreign operations – generally speaking – which would temporarily help internal supply meet demand.

This was one of the points that led to WWII being considered an incubator of tensions between the major world powers at the time (Elling & Abdul Razak, 2021, p. 16). Much attention has been given in academic research to the Iranian, or Azerbaijan, crisis of 1946, which is generally considered as one of the first Cold War crises; this event saw the United States countering Soviet pretensions for obtaining a sphere of influence in northern Iran. Although the Soviet Union opted for backing down instead of resorting to an armed conflict with the United States. Some post-Cold War studies would later focus on the relationship between these events and the Cold War as a whole, claiming that "[i]nterest in oil exploitation, which was fully consistent with the aspirations of other powers - both Britain, which already had a substantial and longstanding concession in southern Iran, and the US, which now aspired to one - was the initial vehicle through which this foothold was pursued". On the other hand, also the Soviet Union hand long-term economic and strategic interests in Iran: "[h]aving failed to achieve an oil concession through diplomatic negotiations conducted with the Iranian government in 1944, the U.S.S.R. determined to employ new tactics using its position as occupier of northern Iran as part of an effort to insist on further concessions. (Fawcett, 2014, pp. 379-380, 383). In July 1946, a British diplomatic dispatch already warned that the purpose of the Communist Party was to "to destroy British influence in Persia by severing it at its roots". British diplomats also warned that there was no doubt that a Soviet Consul-General was also behind the general strike that in the same month saw the Tudeh take complete control of Abandan (Elling & Abdul Razak, 2021, pp. 15-16). However, the U.S.S.R. would manage to facilitate the creation of an Azerbaijani - and Kurdish -

Democrat Party in the areas occupied by the Soviets, leading to the formation of autonomous regional governments. The Soviets arguably employed this strategy with the aim of securing oil concessions. After showing no opposition to the central government's toppling of the recently formed governments in northern Iran, the Soviets lost the battle. In October 1947, the oil deal under negotiation was rejected with a sweeping majority on the Iranian side (Fawcett, 2014, pp. 383-384).

The U.S.S.R. also pursued extensive operations on its western border in 1946. Through military occupation by the Red Army, they managed to get their hands on the Romanian oil industry. Temporarily, they also managed to seize control of Austrian oil production. With these developments, along with investments in oil production in the Volga-Ural region, the U.S.S.R. managed to offset the issues related to oil production in the Caucasus by the end of the decade. By the mid-1950s, the Soviet Union had even become a net exporter of oil. With the subsequent building of pipeline infrastructure and industrial development, in the 1960s Eastern Europe became dependent on Soviet oil imports – a dynamic that would later extend to gas -. Although in relatively small quantities, even non-communist countries purchased Soviet oil at the time, chiefly in the cases of Finland, Sweden, and Ireland: these three countries, in 1954, absorbed nearly 75% of all exports to non-communist countries. However, purchasing powers also included Italy, France, the United Kingdom, and Germany. (Perović, 2017, pp. 9-10). While large European countries were regarded as important economic partners – also due to them being a source of hard currency -, the same did not apply to smaller European countries and those of the so-called Third War. In these cases, the U.S.S.R. often weaponised the oil trade for political ends. An account of this dynamic has been provided by Perović, who reported the following information:

> In the 1950s, for example, Finland imported between 80 and 90 percent of its oil from the Soviet Union and other socialist states in Eastern Europe.43 Finland, which shared a long border and a bloody history with the Soviet Union, was interested in good trade relationships to maintain good neighborly relations. The Finnish government was even prepared to forego economic

> assistance from the West to achieve this goal. When the Soviet Union curbed its oil exports in 1958 because it was unhappy with the composition of the new Finnish government, the government in Helsinki decided to resign and form a new administration. Rather than accepting the offer of economic assistance from the US, and shipments of oil to Finland from Western energy companies such as Shell, Finland opted to accommodate Soviet interests to achieve better relations with its big neighbor to the east. (Perović, 2017, p. 10)

Other examples of this strategy occurred in 1956, when oil exports to Israel were stopped following the Suez Crisis, in the early 1960s when oil deliveries to Beijing were suspended due to the deterioration of the relations between China and the Soviet Union. Throughout the 1950s and 1960s, oil was among the goods exported under favourable conditions to Latin America, Africa, and Asia in order to promote decolonisation propaganda (Perović, 2017, p. 11). Power dynamics between the United States and the U.S.S.R. were further exacerbated when, by the mid-1950s, the Soviets overtook their opponents' oil production. Figure 3.5 allows to analyse production and consumption patterns between the United States and CIS[4] states, providing further insight into the issue of the Soviet oil surplus, a phenomenon the United States had not encountered for an extended period. Especially in the wake of the 1973 oil crisis, the U.S.S.R. managed to increase oil exports to countries paying with hard currencies - so that by 1976 the oil industry was responsible for half of the hard currency earnings obtained by the Soviets. However, this strategy proved to be a poisoned chalice: the collapse of oil prices in 1986 led to a deep financial crisis in the U.S.S.R., playing a significant factor in "the collapse of the Soviet economy, the end of the Cold War, and the disintegration of the Soviet Union" (Painter, 2014, pp. 194, 203).

Turning to natural gas, it is worth highlighting that the resource gained significant geopolitical importance during the Cold War. While significant gas resources were discovered in Siberia at the

[4] As noted in the commentary provided with earlier Figures, the Commonwealth of Independent States, created at the end of 1991, includes the following states: Armenia, Azerbaijan, Belarus, the Kyrgyz Republic, Kazakhstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Eurostat, n.d.).

turn of the 1960s, significant lobbying efforts were made in order to discourage the development of this “new” industry. These matters took a turn in 1965, when the Soviet gas industry even obtained a ministry. In the following decade, a 5,000 km pipeline – connecting the Siberian gas fields to Europe – became a political priority. The first project approved by the Politburo was a pipeline leading to Italy, passing through countries such as Austria and France. The interest was not only related to technological development, but also to gaining more political leverage. Throughout the implementation phase of this strategy, the Soviets saw the gas market as “a type of ‘soft power’ that could be used for ‘hard’ political aims”. Contracts for gas supply had been signed, among all, with the following countries: Italy in 1967/1969, with Austria in 1968, with West Germany in 1970, and with France in 1972. The natural gas market emerged as a profitable source of income for the Soviet Union: between the mid-1970s and the early 1980s, the earnings generated from natural gas production roughly matched those derived from oil (Schattenberg, 2022, pp. 556-559, 572; Ermolaev, 2017). Lastly, Figure 3.6 illustrates the rapid expansion of the Soviet natural gas industry in comparison to that of the United States. The sharp rise in extraction within the U.S.S.R. enabled Soviet production to surpass that of the United States around 1982. While U.S. output was in decline and primarily oriented toward domestic self-sufficiency, the Soviet Union simultaneously benefited from a flourishing export sector, which, as previously noted, was particularly robust during this period.

It is noteworthy that debates concerning the U.S. natural gas supply had been taking place for several years prior to these developments. In a 1973 U.S. memorandum, it had already been signalled that U.S. natural gas production would soon fail to meet domestic demand, which was forecasted to continue growing. This phenomenon, in turn, would have created a reliance on substantial imports of Soviet and Algerian natural gas, priced at approximately five to six times the then U.S. domestic rates. In the United States, demand was skyrocketing as government regulation had been maintaining domestic gas prices at artificially low rates, thereby stimulating demand while simultaneously discouraging domestic production. It was then recommended to “remove existing price controls and

deregulate the price of natural gas. This will stimulate domestic gas exploration and domestic supplies, limit the growth of demand, and could result in future imports close to zero" (Odeen, 1973). The 1978 enactment of the Natural Gas Policy Act marked the beginning of government-led deregulation of wellhead natural gas prices – the transition period ended in 1989, when the U.S. Congress fully deregulated the wellhead natural gas price -, which had been under U.S. control since 1954, with the aim of stimulating production without leading to excessive inflation (Dahl & Ko, 1998, p. 981; Golden & Wiseman, 2014, p. 982). As shown in Figure 3.7, U.S. natural gas wellhead prices soared in the aftermath of the 1978 Natural Gas Policy Act - although they had already been gradually increasing over the previous four to five years. This evolution suggests that the policy achieved its intended outcome: reducing dependence on foreign - particularly Soviet - natural gas imports. U.S. production and consumption of natural gas remained roughly balanced until the end of the Cold War (Figure 3.6).

III E. From emergency oil stocks to the petrodollar: the finance behind energy control

The Cold War compelled both energy producers and consumers to address challenges that were unprecedented for the industry; oil shocks, dependence on energy production, and escalating tensions between the so-called First and Second Worlds were unfolding and intertwining. This section examines two key macro-level developments that arguably best illustrate the structural shifts of this period: the development of emergency oil stocks and the emergence of the petrodollar system.

While emergency oil stocks, as previously discussed, emerged already in the context of the two World Wars, they fully matured during the Cold War. The first step was taken by France, which, in response to the issues caused by the 1951 Iran crisis, passed a special decree that required all oil-importing actors to set aside the equivalent of 1/9 of the crude oil imported throughout the preceding quarter. Following the Suez Crisis, the measure was tightened: a new decree stipulated that all holders of special import authorizations for petroleum products were required to maintain reserves equal to

one-quarter of their total inland sales from the previous 12 months. West Germany, which then was a coal-based economy that still heavily suffered from oil supply disruptions, enacted in 1965 the "Minimum Storage of Mineral Oil Products Law", which required firms involved in the oil market to maintain a certain level of oil stocks. Although disputed on constitutional grounds, the law was not invalidated as oil security was considered a matter of urgent public concern. In the following decade, a public corporation was established in West Germany, tasked with storing oil products, in a measure equal to 90 days' worth of imports and production. In Italy, policymakers would produce a number of laws on the topic of oil reserves. First, a stock target was set to satisfy, at least initially, 60 days' worth of consumption. In addition, owners of storage facilities were required to maintain a minimum fill level of 20% in their tanks. Among all other examples, that of the United Kingdom results particularly interesting, as in 1958 it introduced a policy in which the burden of oil stockpiling was partly covered by the government. Specifically, oil reserves were mandated to maintain a level sufficient for four months of supply. Of these stocks, private companies were required to cover 16 weeks' worth of supply, while the government would be responsible for the remaining ten days. Although this goal was never achieved by the United Kingdom, this plan demonstrated that this major power was acutely aware of the risks posed by oil insecurity (Frøland & Ingulstad, 2020, pp. 91-93). Prior to the 1973 oil crisis, multilateral discussions on emergency oil stocks were already underway within the frameworks of NATO and the OEEC. Arguably, the most significant outcome of these multilateral agreements was the 1968 EEC binding Directive, which required Member States to maintain minimum reserves of crude oil and/or petroleum products sufficient to cover "at least 65 days' average daily internal consumption in the preceding calendar year" (Frøland & Ingulstad, 2020, p. 96; Council Directive 68/414/EEC).

In the wake of the 1973 oil crisis, the United States decided to act in order to create an organised system that would guarantee oil supply in the case of an oil shock. U.S. Secretary of State Henry Kissinger convened a conference in Washington in 1974 with the aim of creating an organization that could "counter the market power of OPEC" through "a programme for emergency burden sharing,

the conservation of energy, the development of alternative energy sources and the creation of a financial safety net" (Claes, 2022, p. 361). The U.S. stance on energy markets and diplomacy was made clear at the outset of the conference: in his opening toast, President Nixon stated that, if Europe and Japan were to fall short of following U.S. guidance on energy matters, it could encourage isolationist tendencies in the United States. (Painter, 2014, p. 193).

In order to provide a solution to the diversity of positions among oil-consuming countries, the International Energy Agency (IEA) was established that same year within the framework of the OECD. The 1974 Agreement on an International Energy Program, which formally established the IEA, stipulated in Article 2.2 that emergency oil stocks shall be maintained among Participating Countries to sustain consumption for at least 90 days in the absence of net oil imports. Eventually, the IEA's operational framework would be revised several times, particularly in response to the 1979 oil crisis, though its crisis management system has never been activated. Focusing on the modality of the implementation of the program, the IEA's initial purpose was to develop an emergency oil crisis management system, which national governments had the possibility to realize with considerable flexibility: some member states established government-managed reserves, while others relied on oil companies to maintain stockpiles. (Claes, 2022, pp. 361–362; IEA, 2018). Focusing strictly on the period of the Cold War, the IEA acted only once in order to provide aid to the oil market. In particular, in happened in 1991, in response to the first Gulf War (Van De Graaf, 2012, p. 235).

Although the IEA represented a powerful program proposed by the United States to safeguard and enhance the latter's position in the international energy market, a simultaneous initiative was also underway: the establishment of the petrodollar system. As evidenced in Table 3.8, while oil prices have experienced substantial fluctuations, they have consistently remained above their pre-1973 levels throughout the remainder of the Cold War. As the revenues of oil-producing countries soared, the term "petrodollar" became widely used, to indicate "the dollars accumulated by oil-producing countries as revenues for oil exports"; this evolution was so relevant chiefly for its effects on the global financial system, as oil-exporting nations benefitted from the related large current-account

surpluses (Basosi, 2019; Law, 2009, pp. 424-425). The explicit reference to the dollar in the term is given by the fact that OPEC states would not accept payments in any currency; as a matter of fact, they would mainly require payments to be made in USD, as it was the predominant currency in the framework of international oil trade. As the capital market saw increasing demand for USD by other oil-importing countries, these events would go on solidifying the primacy of the USD. Moreover, as OPEC countries accumulated more USD, they began investing them in the capital markets of oil-importing nations, creating the phenomenon known as "petrodollar recycling". It must also be noted that this phenomenon was initially driven by the fact that a significant share of petrodollars earned by oil-producing countries – nearly 170 billion USD between 1973 and 1977 alone – had not been absorbed by them, but rather deposited in dollar-denominated accounts in US and London banks. This strategy would strengthen especially U.S. banks' transnational business, further cementing U.S. global financial primacy. This system has been heavily criticised. Among its strongest critics, the case of Wilhem Hankel could be quoted, who even inferred - during the initial years of this phenomenon - that the end of the petrodollar system would cause the structure of interstate credit to collapse, leading to a global economic crisis (Lütkenhorst & Minte, 1979, pp. 85, 89; Basosi, 2019). A large quantity of recycled petrodollars, between 1973 and 1981, involved Saudi surpluses being invested in U.S. assets to maintain dollar-denominated oil prices. Agreements had been signed between the U.S. Treasury and the Saudi Central Bank in these regards, arguably guaranteeing the centrality of the USD after the collapse of the Bretton Woods regime. Additional quantities of petrodollars returned to the United States through Middle Eastern real estate investments, large arms purchases, and infrastructure projects granted to American contractors (Priest, 2012, p. 244).

CHAPTER IV: THE "MODERN" DAYS, BETWEEN ENERGY TRANSITION AND NEW QUESTS FOR OIL AND GAS

IV A. U.S. unipolarity and energy security strategies

After the dissolution of the Soviet Union, global power dynamics underwent a major transformation: as Russia lost its status as a superpower, academics started analysing the international system's framework, claiming that the conclusion of the bipolar period heralded a unipolar moment led by the United States (Wohlforth, 1999, p. 5). The trajectory of the U.S. energy sector, in the meantime, has undergone a shift, encompassing innovation and shifting resource dependency. Analysing these developments, one of their most important factors has been the shale gas boom; its roots trace back to the aftermath of the energy crises of the 1970s, when the United States began funding and conducting research focused on U.S. energy security. The establishment of the Energy Research and Development Administration in 1976, whose goals included "Unconventional Gas Research", stands out as one of the earliest efforts in this direction. In 2001, before the most consistent results of these initiatives would emerge, the National Research Council declared past governmental efforts for shale gas to be a substantial success. Its industrial boom, as forecasted, was imminent: in 2000, shale gas constituted nearly 1% of the U.S. natural gas supply. In 2012, this figure grew to over 25%. In 2023, about 78% of the total U.S. dry natural gas production was derived from shale. This innovation – primarily carried out through the practice of fracking[1] - is central to the broader oil and gas boom, and has played a significant role in transforming the United States into a "technology-driven petrostate". Among the correlated benefits are an increase in Gross Domestic Product, an improvement in the balance of payments, and a rise in both employment levels and fiscal revenue

[1] Golden & Wiseman (2014, p. 968-969, 971) noted that that fracking - that consists in injecting substantial amounts of high-pressure liquid into a wellbore, to fracture the rock and release the natural gas trapped within the shale - has not been proven to be economically viable, as "[e]ven with fracking, traditional vertical wells might not stimulate release of enough natural gas to justify their cost".

(Golden & Wiseman, 2014, pp. 964-968, 983; U.S. Energy Information Administration, 2024). Shale oil entered energy markets a few years later, as yet another product extracted through fracking. Being available on a commercial scale in the early 2010s, shale oil caused the 2014-2015 price collapse (Kim, 2020, pp. 544).

Figure 4.1 shows the development of the U.S. energy production since 1991. Concerning energy production, the most important developed that may be noted is that, nearly at the end of the decade of the 2000's, dry natural gas surpassed coal as the most extracted energy source in the country. Nearly six years later, also crude oil overtook coal, whose production has been steadily declining. Nuclear energy production, since the end of the Cold War, has stood in the range between 6 and 8.5 quadrillion British thermal units (Btu), while natural gas and crude oil have jumped, respectively, from 18 to 39 Btu, and from 15 to 27.5 Btu. On the other hand, since 2010, also the levels of total renewable energy production have remained nearly stationary, achieving parity in 2021 with nuclear electric power production – in Btu -.

Due to these changes at the industrial level, significant shifts occurred at the geopolitical and financial levels. Figures 4.2 to 4.4 put in relation resource consumption to its import dependence[2]. As Figure 4.2 illustrates, since 1992, the United States has experienced a significant expansion in its natural gas consumption. However, due to the implementation of fracking practices, their import dependence plunged, becoming a net exporter nearly in 2017. This happened, however, exactly one decade after its peak year in natural gas dependence – which stood at 16.45%. Figure 4.3 shows the same calculations for the years between 1949 and 1991, shedding light on the fact that only in 1958 did the United States become a net importer of natural gas. Moreover, during this entire period, it is notable that import dependence has consistently remained below 10%.

Petroleum consumption and import dependence are instead displayed in Figures 4.4 and 4.5. Although the United States became a net oil exporter in 2011, only six years before its import

[2] Import dependence, with respect to an energy source, is defined as the ratio of net imports to consumption. Regarding the consumption variable, the European Union provides data on "gross inland consumption", China on "total final consumption", and the United States on "primary energy consumption".

dependence stood at 12%. Upon further inspection, it is also interesting to note that during the Cold War period, a peak in oil import dependence was registered in correspondence with the 1973 oil crisis.

In both cases of natural gas and oil, the steep downward slopes representing "import dependence" - falling into the negative range in recent years – display the rapidly growing volume of these resources being exported by the United States, further corroborating the previous claim that the country has become a petrostate. The long-term prospects of the U.S. energy industry, however, remain uncertain. In April 2025, the U.S. Energy Information Administration declared that U.S. oil production is forecasted to peak in 2027 at 14 million barrels per day, and to start rapidly declining after the end of the decade of the 2020s. Therefore, the phenomenon of U.S. shale seems to be approaching a stage of maturity (Khan, 2025).

Besides economic considerations, the shale boom has also strengthened the U.S. position from a geopolitical perspective. Given its independence in terms of oil and natural gas supply, U.S. foreign policy has been able to employ different strategies against the interests of oil and natural gas-producing countries. Shielded by its internal production, for instance, it has been able to implement sanctions against Iran in 2012 in a more credible and effective way: these measures would indeed contribute to the signing of the Joint Comprehensive Plan of Action in 2015. In recent years, the United States has also imposed oil sanctions on Venezuela – since 2017, with the exception of the six months between October 2023 and April 2024, when the country committed but failed to organise free and fair elections -, and on Russia – both against its oil and gas industries, since the 2014 invasion of Crimea -. However, it must be noted that oil shale production only offers a medium-term buffer, not a short-term one. For this reason, Saudi Arabia has always remained central in U.S. diplomacy: on multiple occasions where oil prices risked soaring, Washington has asked Riyadh to increase oil production. The same is true also for the opposite: since when the United States have become an oil-producing country, oil price plunges have turned against its interests. For this reason, in reaction to a drop in oil prices in April 2020, U.S. President Trump struck a deal with Saudi Arabia and Russia to

lower the daily production of oil by 10 million barrels a day to aid the shale industry (Kim, 2020, pp. 552-553; Glatsky, 2024; Greene, 2021).

IV B. The China-Russia axis: shifting energy consumption and flows

China has become an extremely important player in global politics, to the point that academics have started arguing that the world is entering a multipolar order, with Beijing being a "great power competitor", comparing current dynamics to Cold War ones (Schindler et al., 2021, pp. 331-332). Although China possesses petroleum resources, it must be noted that it is generally an energy-importing country. Figures 4.6 and 4.7 display oil and natural gas consumption in the country, in relation to each resource's import dependence. China's oil consumption increased by nearly 650% between 1990 and 2022; despite this sudden growth, the country has curbed its dependency on oil imports, reducing it from 13% in 2004 to nearly zero in recent years - in 2019 and 2020, it was even a net exporter. Looking at natural gas, however, the picture is extremely different. In terms of consumption, the resource experienced a more than 1,300% increase between 2002 and 2022. Internal production was unable to keep pace with demand: China became a net natural gas importer in 2007, and by 2018, nearly 60% of its supply was imported.

In the mid-1990's, China adopted thee "Going out strategy" and the "diversification strategy on oil supply": in a historical moment in which in which it was still heavily reliant on coal, peat and oil shale (Figure 4.8), and plagued with a heavy oil import dependence, three Chinese oil companies went "seeking overseas opportunities for exploration, exploitation, production, investment and trading of oil and gas in the Middle East, Africa, Central Asia, Russia, Latin America and Southeast Asia, aiming at enlarging energy cooperation and greater participation in the international energy competition". Extensive efforts were carried out by Beijing in relation to the Middle East, to the point that by 2012, seven of the ten largest oil exporters to China were MENA countries – namely Saudi Arabia, Iran, Sudan, Oman, Iraq, Kuwait, and Libya. Also in terms of liquified natural gas (LNG),

the MENA region is the biggest supplier to Chinese markets. In those years, the “Going out” strategy led to increasing investments in MENA oil and gas, including the fields of risk exploration, plant building, pipeline laying, and port construction (Wu, 2012, pp. 59-61).

Today, for China, the question of energy security and how it is addressed has undergone a significant shift. Compared to the 1990s, China achieved a relatively strong degree of independence in oil imports, whereas the opposite trend occurred with natural gas. This shift developed nearly contemporarily with the shale revolution, which emerged in the 2000s and 2010s, as mentioned in the first section of this chapter. As both oil and natural gas prices decreased during this period, China found itself in a phase of petroleum abundance. As there is no more urgent need for state intervention to secure energy supplies today, the shale boom arguably afforded China greater flexibility in shaping its foreign policy (Kim, 2020, p. 554; U.S. Energy Information Administration, 2025f).

Lowering petroleum prices has advantaged China, but also strongly weakened Russia. Since the oil price collapse in 2015, Russia’s financial outlook has dimmed. Moreover, the medium-term oil price ceiling has been set at a level lower than necessary to achieve budgetary balance – an issue that is particularly challenging for petrostates, given that the regime's legitimacy, among other factors, derives from oil policies. The shale boom, to complete the picture, has therefore strongly weakened Russia – as opposite to China-, as “the age of energy abundance reduced Russia’s oil and gas leverage vis-à-vis China, increased its dependence on the Chinese market, and diminished its influence over Central Asia in light of China’s Belt and Road Initiative” (Kim, 2020, pp. 554-555).

Economic relations between Russia and China have strengthened since the onset of the 2022 Russia–Ukraine conflict. After 2021, Russian natural gas exports have declined significantly (Figure 4.9), with the volume of the exported resource nearly halved by 2023. However, China represented a growing trade partner: between 2020 and 2024, the quantity of natural gas imported from Moscow quadrupled. Similar dynamics, albeit less pronounced, can be observed when examining the oil industry: while there has been a general contraction in oil exports, China grew as an importer of Russian oil (Figure 4.10). A brief digression can be made regarding the case of India, as between

2021 and 2023, Indian imports of Russian oil shifted from 0.1 to 2 million barrels per day – a decision that has been one of the factors leading to the imposition of a 50% U.S. tariff on Indian imports. Petroleum trade volumes are expected to increase between Russia and China, especially in light of the new natural gas pipeline project – the "Power of Siberia 2", whose deal was signed in September 2025 -, and European sanctions – for which all Russian gas imports are expected to cease by 2027. However, it has been noted that China has been profiting from reduced Russian energy prices since the start of the war in 2022, due to the implemented sanctions, which effectively reduced its market size (Mukherjee & Verma, 2025; Mchugh & Kozlowska, 2025). A further trade partner of China and Russia, despite infrastructural limitations dictated by distance, was also found in Venezuela, a country heavily affected by Western sanctions. However, in that case, logistic issues dictated by distance limit the number of oil tankers that can operate, proving sanctions to be effective in the medium or long term (A. Rapisarda, personal communication, September 2, 2025).

IV C. The European Union between dependency and diversification

The previous chapters have already explained that European continent does not have large petroleum resources at its disposal. Figure 4.11 illustrates the changes in inland energy consumption of selected sources in the European Union (EU) since 1990 - indicating that the 1990s were marked by an increase in the use of oil and natural gas, as well as nuclear power, and that since the late 2000s, the consumption share of these three resources has been generally decreasing. Among them, the utilization of natural gas shows a notable trend: despite 2023 being the year with the lowest consumption since 1996, the use had been consistently increasing since 2014, reaching a peak in 2021. The region continues to rely heavily on energy imports, with the EU's energy import dependency rate estimated at 58.4% for 2023 (Eurostat, 2025b). On the other hand, renewable energy use has been growing steadily since 1990. As no similar trend was present in the United States and

China in this regard, it is evident that the EU has maintained a decades-long strategic imperative to enhance its energy security.

Geopolitics have significantly influenced the region's behaviour regarding energy consumption. In the post-Cold War period, the European Union and Russia had strengthened their economic ties, with the former largely benefitting from the vast Russian resources. While both the United States and Russia are self-sufficient under two fundamental aspects – namely, the energy and the food ones -, Europeans have neither of them. In fact, given the region's industrial agriculture, food self-sufficiency is *de facto* subordinate to energy supply. In May 2022, a few months after the invasion of Ukraine, the REPowerEU Plan was launched, aiming at phasing out Russian fossil fuel consumption through three main points – namely, saving energy, diversifying energy supplies, and producing clean energy. Under this strategy, the share of Russian gas imported in the EU has dropped from 45% to 19% between 2021 and 2024. Regarding the oil trade, it has been estimated that in 2025 Russian imports will drop to 3%, compared to 27% in 2022 (Siddi, 2018; F. Maronta, personal communication, June 19, 2025; European Commission, 2025). These dynamics of energy cooperation, competition and retaliation seem to be part of today's political strategies: as noted by Dell'Erario, in the contemporary context, oil no longer directly triggers conflict, but serves as a basis for competitiveness among states (A. Dell'Erario, personal communication, August 27, 2025)[3]. Figures 4.9 and 4.10, which have been previously discussed, can be mentioned again to highlight the effects of Western sanctions on the Russian energy industry. As a major driver of contraction in the Russian market, the region has consistently reduced its reliance on Moscow's energy since 2022. A few words may be spent at this point on the energy production and consumption habits within the European Union in recent years, and their relationship with the Russian energy industry. Reading the energy market dynamics in the aftermath of the Russian invasion, Maronta drew a line between that historical moment and the 1973 oil crisis, when OPEC oil production was limited as a form of retaliation, rather than a direct effect

[3] Oral interview conducted on August 27, 2025, with Alfonso Dell'Erario, former Editorial Director of the Gruppo 24 Ore and former Director of the Communications Department at Confindustria.

of wartime strategies. In other words, “there was no direct reason related to war for it to turn into an energy crisis”. He argued that “they did exactly what Putin has been doing with gas. From this point of view, the use of energy as an instrument of coercion, of economic, diplomatic, and military pressure, as modern wars are industrial and extremely energy-demanding, has not changed” (F. Maronta, personal communication, June 19, 2025). Therefore, heavy dependency on imports has inflicted conspicuous damage to the European Union since 2022, as the Russian gas supply was tied to favourable conditions. It has therefore also been argued that it was due to the Russian gas’ low price that, especially in Europe, industrial systems managed to remain competitive (N. Saldutti, personal communication, June 29, 2025).

Focusing on the domestic energy sectors of the Member States, the challenges related to dependence on Russian resources become more evident. The security of energy supply is one of the most pressing concerns for EU Member States, particularly in light of the growing demand for imported resources and the political issues associated with their supply. This last point has found one of its most important examples in the 2022 Russian invasion of Ukraine. Focusing on the years between 2014 and 2022, on average, all EU Member States have been net oil importers. During this period, the largest importers have been the Netherlands, Germany, and France. In those years, oil production has also decreased in a number of EU countries; the most striking case is that of the Netherlands, which by 2022 had nearly halved its production in comparison to 2012. In absolute terms, the largest consumers of Russian oil in the region have been the Netherlands, Germany, France, Italy, Spain, and France. When considering reliance on Russian oil – intended as the percentage of Russian oil among all imports -, the most exposed countries resulted to be Slovakia (76%), followed by Lithuania, Hungary, Romania, and Germany. Turning to natural gas, between 2014 and 2022, three EU countries saw their domestic production of this resource exceed consumption – although in relatively modest quantities - : the Netherlands, Romania, and Denmark (Topliceanu & Postolachi, 2025, pp. 336-341). However, dependency considerations on natural gas imports have been demonstrated to be complex: according to calculations carried out in a 2022 ISPI article, although

100% of the gas imported by Romania was Russian, since 90% of the national supply came from domestic fields, the country could not be considered to be vulnerable to Moscow. This analysis can assume multiple levels; for instance, Finland used to import 97% of its gas from Russia, but the resource only represented 7% of the national energy mix. Bearing these considerations in mind, it was concluded that Hungary was the most vulnerable country to Russian oil, followed by Slovakia and Latvia. Italy, on the other hand, was considered to be the country most at risk among the "biggest" ones (ISPI Data Lab, 2022). Currently, the European Union is shifting away from Russian gas imports, and a substantial evolution in the import dependence from trade partners can be observed between 2021 and 2024. Between these years, Russian gas imports declined from 150 to less than 52 billion cubic meters (bcm), and this reduction has been partly compensated by the United States - whose imports rose from 19 to 45 bcm -, Norway - from which the supply increased by almost 12 bcm -, and other trade partners. There have also been significant changes in the composition of the countries exporting oil to the European Union. In the second quarter of 2025, more than half of this source's imports came from only four countries, namely Norway (15.2%), the United States (14.2%), Kazakhstan (12.7%) and Libya (9.9%). Significant imports also came from Saudi Arabia (6.2%), Nigeria (5.3%), and Brazil (3.3%) (Council of the EU and the European Council, 2025; Eurostat, 2025c).

The EU natural gas storage system constituted one further instrument that played a crucial role in the response to the 2022 energy crisis. The 2021/2022 winter season - during which the Russian invasion of Ukraine occurred - began with storage levels at historically low levels, rendering the European Union particularly vulnerable. During the following winter, the stock levels remained above 85% of the total capacity. Generally these reserves are able to cover nearly 30% of the natural gas demands during the winter season, as each EU Member State owns reserves of different sizes. In terms of natural gas storage capacity, the most significant reserves across EU Member States are held by Germany, standing at 23.5 bcm/year, which accounted for 30% of the country's total gas consumption in 2022. Italy constitutes the second-largest country in this regard, with a capacity of 19

bcm/year, corresponding to 29% of its national gas consumption in the same year. The Netherlands can maintain a storage capacity of 13.8 bcm/year, equivalent to 51% of the total use in 2022, while France holds a capacity of 12.3 bcm/year, which equals 32% of the 2022 national consumption (Emiliozzi et al., 2024, pp. 135-136). Despite policies aimed at strengthening the EU natural gas market, weaknesses can still be spotted within the system. Sommella, for instance, pointed out the lack of integration in the energy market and advocated for a unified structure instead. He provided a rationale for his stance:

> The price set on the Amsterdam gas exchange is not entirely immune to speculation, just as the various strategies used to bypass sanctions against Russia undermine the principles of a truly free market. Alongside the euro and the single market, what is clearly needed is a unified energy market with a single buyer, similar to the approach taken with vaccine procurement. As for the Italian domestic market, it is time to reconsider the implementation of full liberalisation and to reduce the tax burden on energy bills. (R. Sommella, personal communication, July 7, 2025)

Besides centralised strategies related to the supply of energy sources, it should also be noted that private petroleum firms generally do not depend on their country's foreign policy. This is especially true in the case of the European Union, where the commonly established policies generally leave some operating freedom to the individual members. Focusing on Italy, for instance, it can be inferred that oil companies' strategies do not stem from governmental decisions. *De facto*, the dynamic is reversed, as foreign policies and industrial choices follow distinct choices, except in overriding circumstances. A particular example is that of ENI, for which, facing recent European sanctions against Russia, the case constituted "not an opportunity, but a constraint, with significant economic costs, since existing investments and supply agreements with Russia were abruptly suspended". In the words of Rapisarda, ENI "had to offset these losses through other partnerships, such as with Algeria, as well as through other agreements already in place elsewhere. It is clear that

all of this intersects with business opportunities and interests" (A. Rapisarda, personal communication, September 2, 2025).

As the transition towards renewable resources consistently takes shape in Europe, it has also been argued that such a process will render the European Union less exposed to external conditioning, although not completely. Rapisarda expressed the following words on the topic:

> The equation that determines patterns of cooperation now encompasses not only oil or gas, but also rare earths and technological know-how. From solar to wind to nuclear, every future option for energy development comes into play, thereby broadening the reference framework. It is also evident that the major power-holding states remain largely the same, although Russia may become less central due to its heavy reliance on fossil fuels. Similarly, the Gulf countries risk losing significance if they do not adapt swiftly, as their wealth has traditionally derived from oil and gas reserves. (A. Rapisarda, personal communication, September 2, 2025)

Notably, the global demand for metallic mineral resources has been steadily growing. Among the reasons, both demographic expansion worldwide and the transition towards renewable energy have been pointed out. Evident industrial and geopolitical limits are posed, however, by the fact that most metallic resources involved in these technologies have a limited supply and cannot be substituted or recycled in an economically viable manner. As EU countries lack significant critical metal resources, and the majority of global reserves are concentrated in the hands of a few countries, critical considerations can emerge in relation to energy supply and security. However, facing the growing doubts about the security of the supply of renewable energy infrastructure, it must also be noted that the lifespan of renewable energy facilities can even last in the order of decades, while petroleum consumption and stockpiling provide significantly smaller breathing room in terms of timing. Therefore, when facing the scenario of an embargo, renewable energy infrastructure

technically guarantees a markedly longer period of autonomy (Müller et al., 2024; M. Villa, personal communication, June 23, 2025).

IV D. Emergency oil stocks: current dynamics and future pathways

In recent decades, the mechanisms behind emergency oil stocks have evolved, responding to crises whose causes, developments, and impacts have been deeply intertwined with shifts in global oil consumption. The first step in this direction was taken in 1984, when the IEA Governing Board passed a regulation that allowed Member States' governments to carry out rapid and coordinated deployment of strategic stockpiles - along with supplementary interventions - in the event of a significant supply disruption. This set of regulations is called the "Co-ordinated Emergency Response Measures", and was tested for the first time in January and February 1988. From a practical point of view, since the 1990s, the IEA has reacted and coordinated emergency responses on five occasions. In the first case, it happened during the 1990-1991 Iraqi invasion of Kuwait: when on August 2 the conflict sparked, it caused the removal of 4.3 million barrels of oil per day from the global market. With the continuation of the conflict, in January 1991, the IEA Governing Board agreed on a Contingency Plan, virtually making 2.5 million barrels of oil per day available. While oil was drawn from stocks to supply, *de facto*, 80% of that quantity, the remaining 20% was indirectly supplied through measures of demand restraint, fuel switching, and increased indigenous production. The second occasion took place in September 2005, when Hurricane Katrina struck the Gulf of Mexico. IEA responsiveness was demonstrated by the fact that a collective response was agreed upon within 48 hours, making 60 million barrels of oil available to the market. The collective action period ended on December 31 of the same year. Thirdly, on June 23, 2011, the IEA declared the launch of a collective launch in reaction to Libya's light sweet crude – in addition to "anticipated oil demand increase in the third quarter, and to act as a bridge to incremental supplies from major producers" -. The 2011 strategy envisaged the injection into the market of nearly 40 million barrels of crude oil and

20 million barrels of refined products (IEA, 2014, pp. 591-594). Two more collective actions were launched in March and April 2022, in response to the Russian invasion of Ukraine. Together, the two programs accounted for 182.7 million barrels of oil, “the largest volume of emergency stocks ever released by IEA Member Countries”. When these last two actions were formally concluded, in June 2023, almost all IEA members had already returned to the 90-day oil stock threshold (IEA, 2023).

Also the fact that the IEA has been created under the framework of the OECD has proven to be a limit in recent years. The most relevant dynamics related to its relationship with non-OECD countries have been summarised with the following words:

> The organizational structure of having the IEA as a sub-entity under the OECD has become a problematic restriction as new large oil consumers have emerged outside the OECD, in particular countries such as China, India and Brazil. The IEA has tried to bypass this restriction by establishing various forms of cooperation with non-member consumer countries. The IEA and China have initiated cooperation on topics such as energy security, energy statistics, energy efficiency, energy technology in cleaner coal and carbon capture and storage (CCS) in industry, buildings and transportation. At the IEA Ministerial meeting in 2015, China became one of the first countries to activate Association status with the Agency. (Claes, 2022 , p. 362)

As a matter of fact, the status of Association with IEA was introduced in 2015, with the aim of building relationships with non-member states. Besides inclusion in certain IEA meetings, including Standing Groups and Committees, Association countries are required to take active action in energy security efforts, including the creation of emergency oil stocks (IEA, 2024). As of June 2025, IEA member countries possessed sufficient emergency oil reserves to cover their net oil imports for a duration of 621 days; for the subgroup of IEA net importers, the figure was significantly lower, standing at 141 days. Focusing on distinct areas, Europe had oil reserves for 130 days, while the Asia Pacific stocked enough for 170 days. No information was available for North America, as it is

composed of net exporter countries (IEA, 2025c). In the light of shifting dynamics, especially in relation to the global oil market – in the light of the ongoing diversification of the global energy mix and the growing energy demand in emerging and developing economies -, the IEA's geopolitical weight appears limited, particularly when it comes to shaping the decisions of governments outside its membership. In the words of two people working for the IEA's MENA desk, "saying that the rare instances where the IEA had coordinated the release of oil stocks to stabilise oil markets had an impact on decision-making beyond oil markets strictly, would be an overstatement" (N. Abillama & M. Van der Beeuren, personal communication, September 2, 2025)[4].

Besides the case of the IEA, in recent years other initiatives have emerged dedicated to oil stockpiling, chiefly at a regional level. In the case of the Association of Southeast Asian Nations (ASEAN), the average annual growth rate of oil demand between 2010 and 2019 was 2.3%, reaching 4.8 million barrels per day. With oil demand projected to increase in the next years, and an extraction industry that peaked in 2000, energy security has become an important point of the regional agenda. By 2021, all ASEAN countries had started legislating and implementing emergency oil stocks, generally leaving the stockpiling duty to private actors. Vietnam was the sole country among them with government reserves, pursuing a policy goal of establishing a 20-day stockpile by 2025. Myanmar, instead, under joint cooperation with private actors, had already achieved a 60-day stockpile. Among ASEAN countries, those that have been giving high priority to these ends are Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Thailand, and Vietnam (ERIA Study team, 2022, pp. 1-10).

One further example developed in the European Union. The EU Council Directive 2009/119/EC, enacted in 2009, constituted a key measure aimed at achieving regulatory convergence

[4] Oral interview conducted on September 2, 2025, with Matthew Van der Beeuren, Energy Analyst (MENA Team) at the International Energy Agency; written remarks were received on September 13, 2025. Nadim Abillama, Clean Energy Transition Programme Officer (MENA Team) at the International Energy Agency, also contributed to the additional written remarks.

with the International Energy Agency. Among all, the Directive set forth the following regulations in relation to oil stockpiling:

> Member States shall adopt such laws, regulations or administrative provisions as may be appropriate in order to ensure, by 31 December 2012, that the total oil stocks maintained at all times within the Community for their benefit correspond, at the very least, to 90 days of average daily net imports or 61 days of average daily inland consumption, whichever of the two quantities is greater. (Council Directive 2009/119/EC, Art. 3.1)

In a mid-term evaluation carried out in 2017, the EU Council Directive 2009/119/EC was found to have been "broadly successful in achieving or progressing towards its main objectives" (European Commission: Directorate-General for Energy & Trinomics, 2019, p. 26).

CONCLUSION

Overall, this research articulated the substantive points that underpinned the evolution of oil and natural gas as economic and geopolitical weapons, demonstrating how in different historical periods they have assumed different uses – spanning from instruments of military enablement to tools of coercive financial leverage -, when employed to serve governmental interests.

The first chapter has examined the role of petroleum before the two World Wars, providing an understanding of the boom that occurred and the related technological advancements. The analysis of diplomatic dispatches has shed light on generally overlooked aspects of this period, such as the weaponisation of oil in the context of U.S. strategic interests in Cuba, prior to the latter becoming a protectorate. Regarding the period of the two World Wars, the research developed in detail the role of oil as a strategic asset in the context of colonialism and of private investments in Latin America, marking the beginning of energy as a pivotal factor in the trajectory of the Global South. Wartime strategies have also been detailed, ultimately proving the essential role of oil in determining the outcome of the two World Wars. The third chapter, focused on the Cold War, has explored the developments of the energy market across multiple continents, highlighting the motivations and constraints behind various major strategies. Perhaps - besides the analyses related to the causes, developments, and effects of the two 1970s oil crises -, one extremely interesting passage in this chapter was the U.S. memorandum warning against the risk of buying Soviet natural gas, which preceded the liberalisation of the U.S. natural gas market, resulting in the curbing of demand. The concluding chapter of this document, focused on the "modern" day, integrated the insights of several experts, highlighting the weaknesses of today's energy market. The strategy behind the U.S. shale revolution – which is approaching a stage of maturity – was also discussed, along with the opportunities offered by renewable energy, that has a steadily growing share in the EU energy mix.

Today energy remains a decisive instrument of coercion; besides considerations related to military power, oil and natural gas still represent, as mentioned in the introduction, 70% of the energy

consumed globally. Both energy-importing and exporting countries owe much of their power and competitiveness to energy trade, even if to different extents.

Although opportunities such as those of strategic reserves – which have now spread in multiple areas of the world - and of renewable energy seem to provide a form of buffer, they are *de facto* insufficient at the moment. As a matter of fact, for instance, while energy security has been proven to be a driving factor in countries' strategies, the interviewed IEA employees recognised it would be an overstatement to claim that oil-market stabilising operations "had an impact on decision-making beyond oil markets strictly". Potentially, future programs and instruments of energy security could further constrain the efficacy of petroleum weaponisation. Moreover, as previously mentioned, the phenomenon of U.S. shale is forecasted to enter a phase of decline at the end of the present decade, eventually resulting in the loss of a substantial share of today's global oil and natural gas supply.

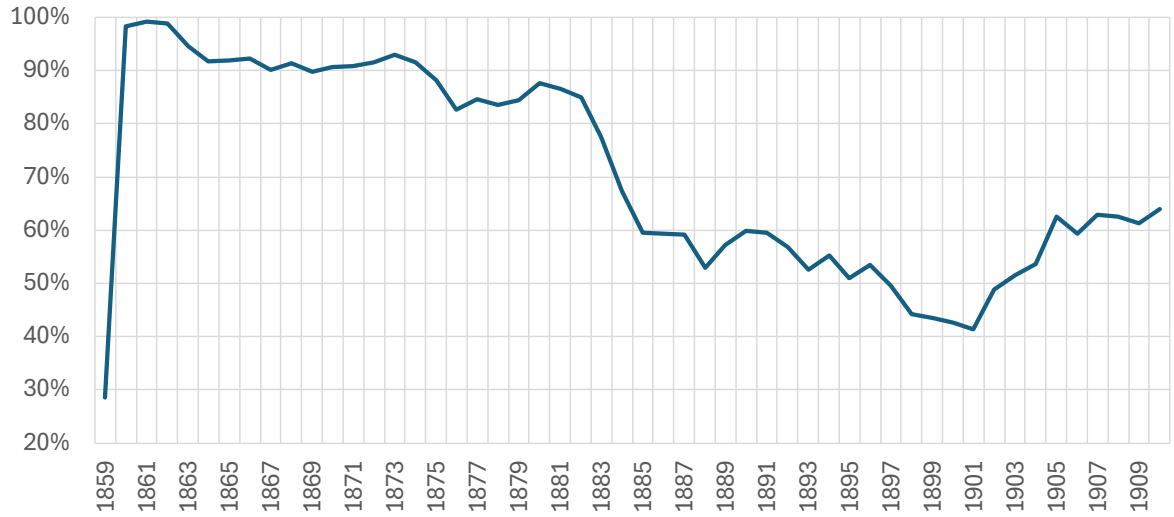
Some limitations to this research should be considered when evaluating its findings. First, the design of this research aimed at covering two centuries and two energy sources, thereby imposing a limitation in terms of the quantity of case studies. Moreover, causal complexity is a highly critical factor when conducting research. This work has attempted to strike a balance between affirmations related to causality and correlation, and it must be acknowledged that energy security is one among many factors that influence geopolitical and market dynamics.

Future inquiry should prioritise the scrutiny of other declassified diplomatic material, to broaden the scope of historical findings. A further line of research worth investigating would be an empirical study on the efficacy of emergency oil stocks and natural gas storage systems.

APPENDIX A: FIGURES AND TABLES

Chapter I

Figure 1.1: U.S. Oil Production as a Percentage of World Total (1859-1910)



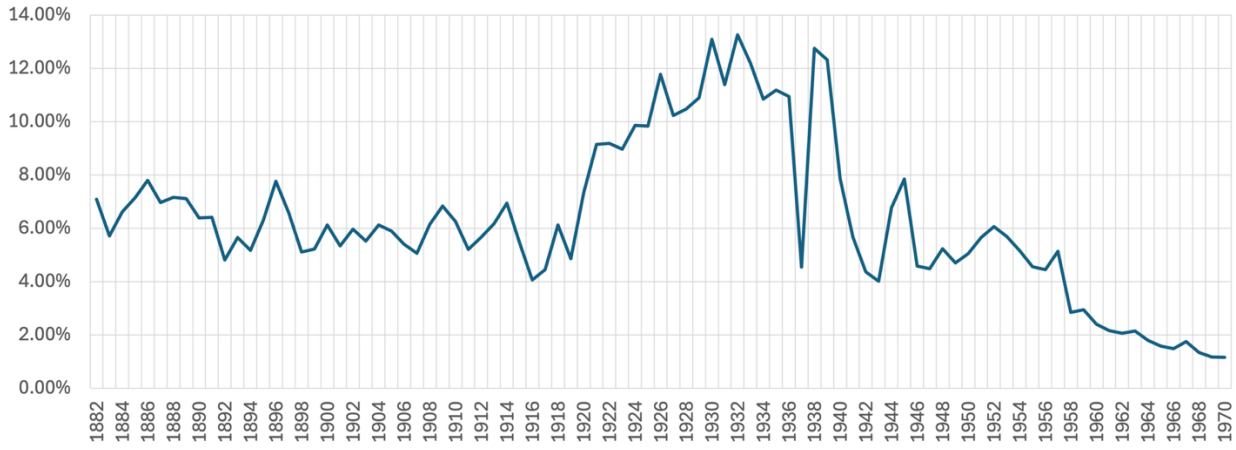
Data source: American Petroleum Institute (1949, p. 452).

Figure 1.2: Prices of oils and illuminating fluids between 1833 and 1859 in Massachusetts, US

Note: In 1833, 1834 and 1856 the average price was reported without grade distinction. In 1835, only the average "lamp" material price was provided. In 1837, the average price was reported for a quart of low-grade oils and illuminating fluids; this value has been multiplied by four to estimate the gallon price. In 1851, the average was reported for a quart of material, so it was also multiplied by four, but does not represent the average price of low-grade materials as no grade distinction was provided for in that year. No data was published for the year 1853. The analysis ends in 1859 as this was the last year for which detailed prices were reported.

Data source: Wright (1889, pp. 135-136).

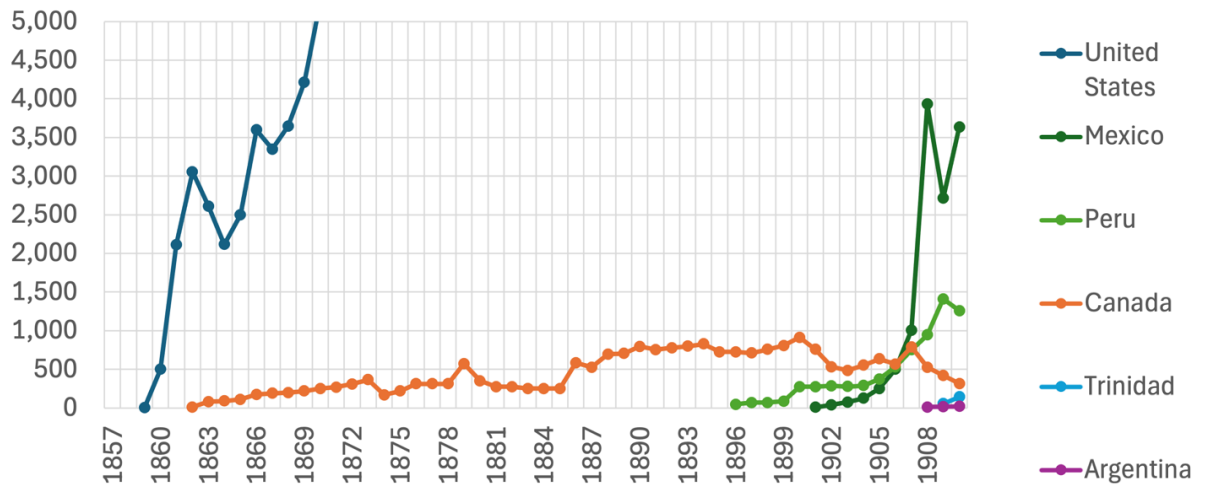
Figure 1.3: Share of Petroleum and Petroleum Product Exports in Total U.S. Merchandise Exports, 1882–1970



Note: Data between 1960 and 1962 had been recorded under two different classifications. From 1960 onwards, SITC data has been considered for this analysis.

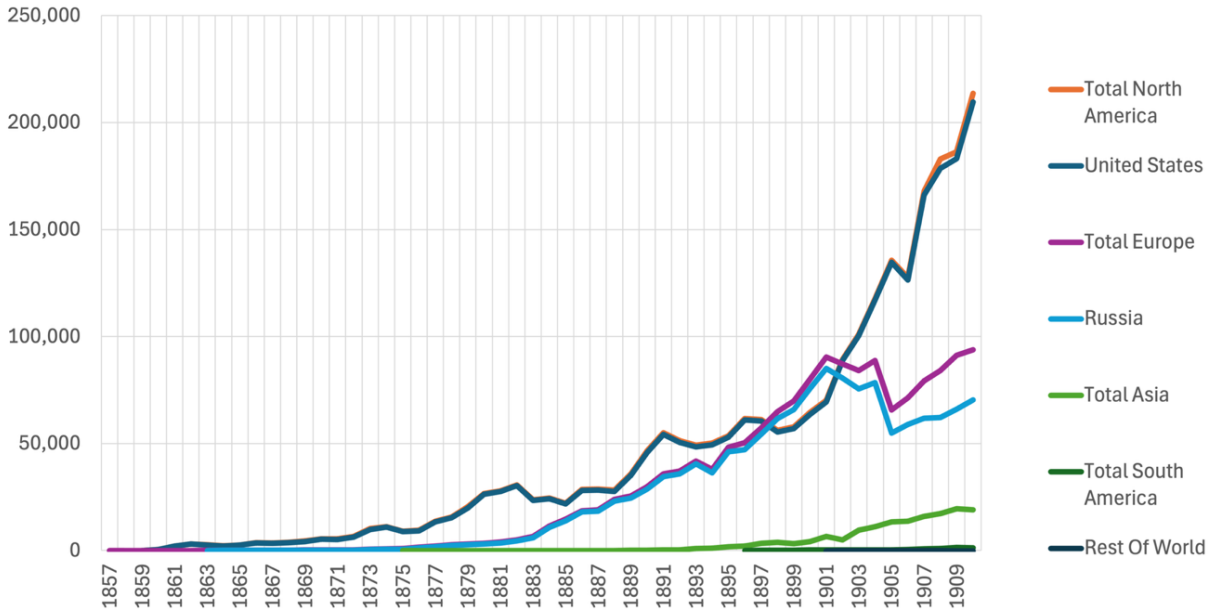
Data source: United States Census Bureau (1975, pp. 889-890, 897-898).

Figure 1.4: Oil production by American Country (Thousands of Barrels, 1857-1910)



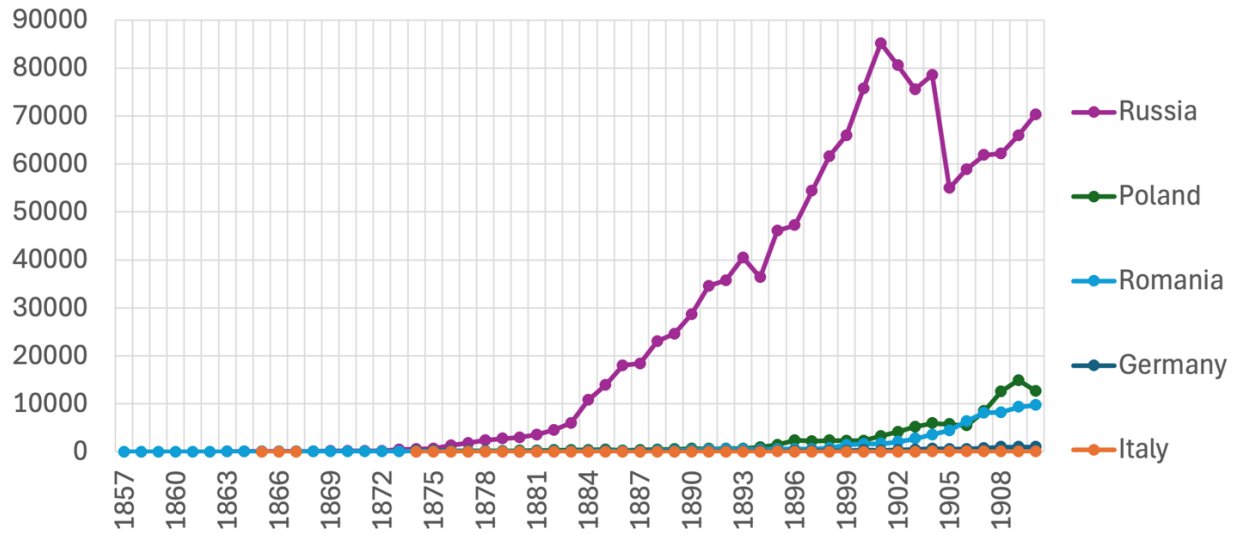
Data source: American Petroleum Institute (1949, pp. 450-452).

Figure 1.5: Oil production by Region and Selected Countries (Thousands of Barrels, 1857-1910)



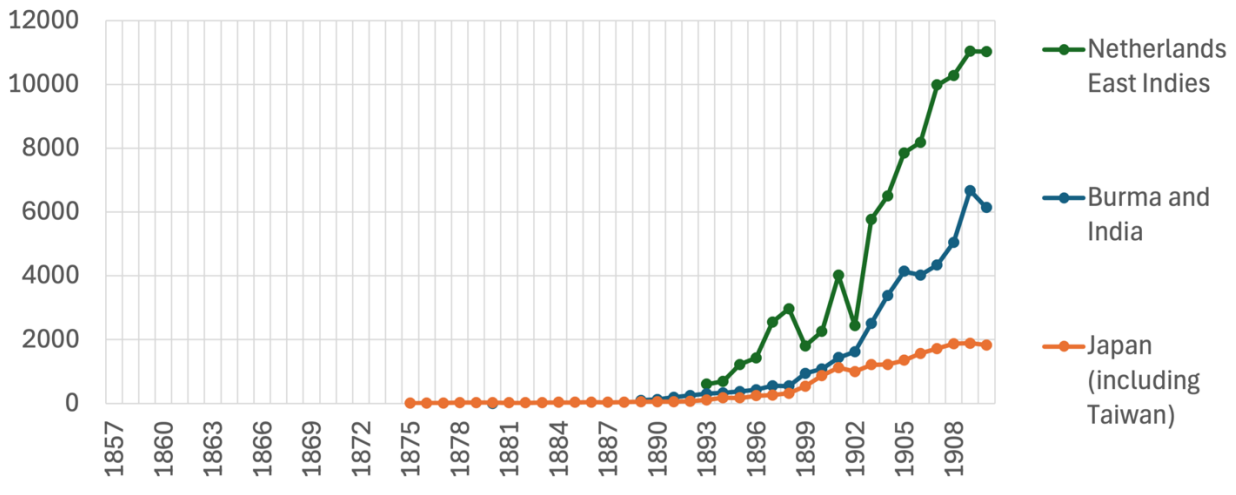
Data source: American Petroleum Institute (1949, pp. 450-452).

Figure 1.6: Oil production by European Country (Thousands of Barrels, 1857-1910)



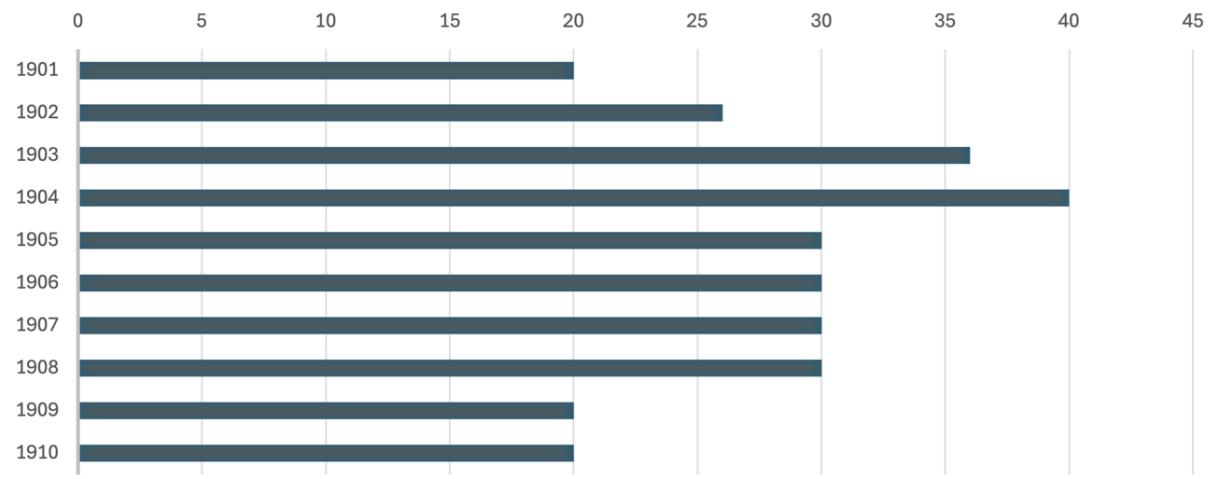
Data source: American Petroleum Institute (1949, pp. 450-452).

Figure 1.7: Oil production by Asian Country (Thousands of Barrels, 1857-1910)



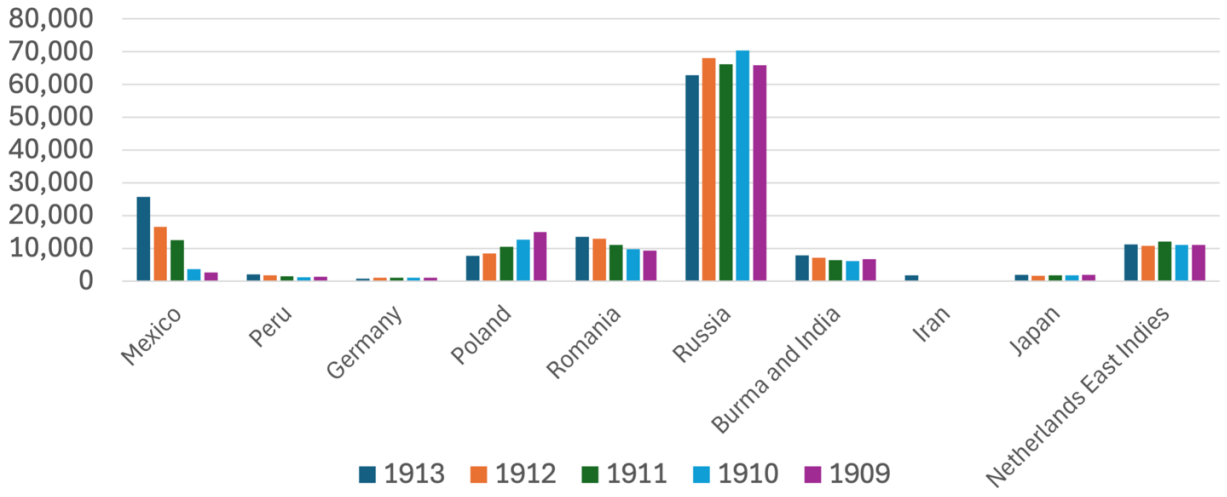
Data source: American Petroleum Institute (1949, pp. 450-452).

Figure 1.8: Oil production in the rest of the world (Thousands of Barrels, 1857-1910)



Data source: American Petroleum Institute (1949, pp. 450-452).

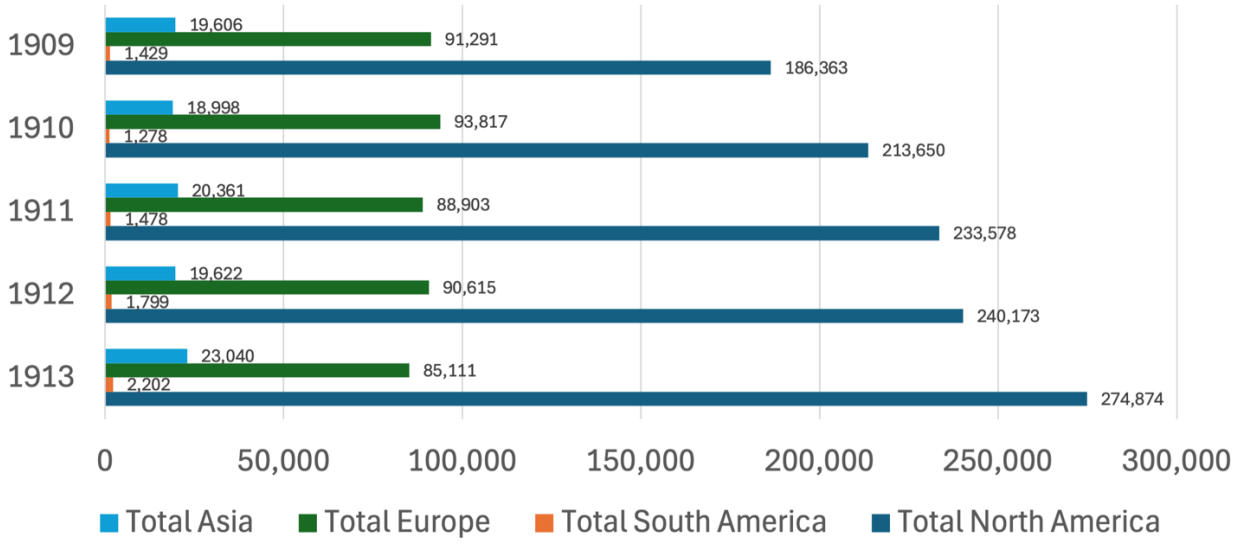
Figure 1.9: Oil production by Selected Countries (Thousands of Barrels, 1909-1913)



Note: Data regarding Japan included oil extraction in Taiwan in the years 1909 and 1910.

Data source: American Petroleum Institute (1949, pp. 444-452).

Figure 1.10: Oil production by Region (Thousands of Barrels, 1909-1913)



Data source: American Petroleum Institute (1949, pp. 444-452).

Table 1.1: Average annual growth rates of US oil consumption and production 1860-2020.

Years	Consumption	Production	Consumption > Production
1860-1870	30.2%	95.2%	-
1870-1880	75.5%	39.9%	+
1880-1890	6.1%	7.4%	-
1890-1900	4.3%	3.9%	+
1900-1910	33.7%	22.9%	+
1910-1920	16.2%	11.1%	+

1920-1930	11.4%	10.3%	+
1930-1940	3.2%	5.1%	-
1940-1950	7.0%	4.6%	+
1950-1960	4.9%	3.0%	+
1960-1970	4.0%	3.2%	+
1970-1980	1.6%	-1.1%	+
1980-1990	-0.1%	-1.5%	+
1990-2000	1.3%	-2.3%	+
2000-2010	-0.7%	-0.6%	+
2010-2020	-0.8%	7.7%	+

Note: Data related to the period between 1860 and 1960 has been reproduced from Van der Linde (1991, p. 57), derived from Schurr and Netschert (1977). Values for the period 1960-2020 were calculated using data from the U.S. Energy Information Administration (2024). In the EIA dataset, production data was relative to crude oil, while consumption to petroleum.

The following is the formula used for calculating the average annual growth rate (AAGR) for each decade (e.g., from 1960 to 1970, using annual growth rates from 1961 to 1970), for the period 1960-2020. This method is the most likely one employed by Van der Linde (1991).

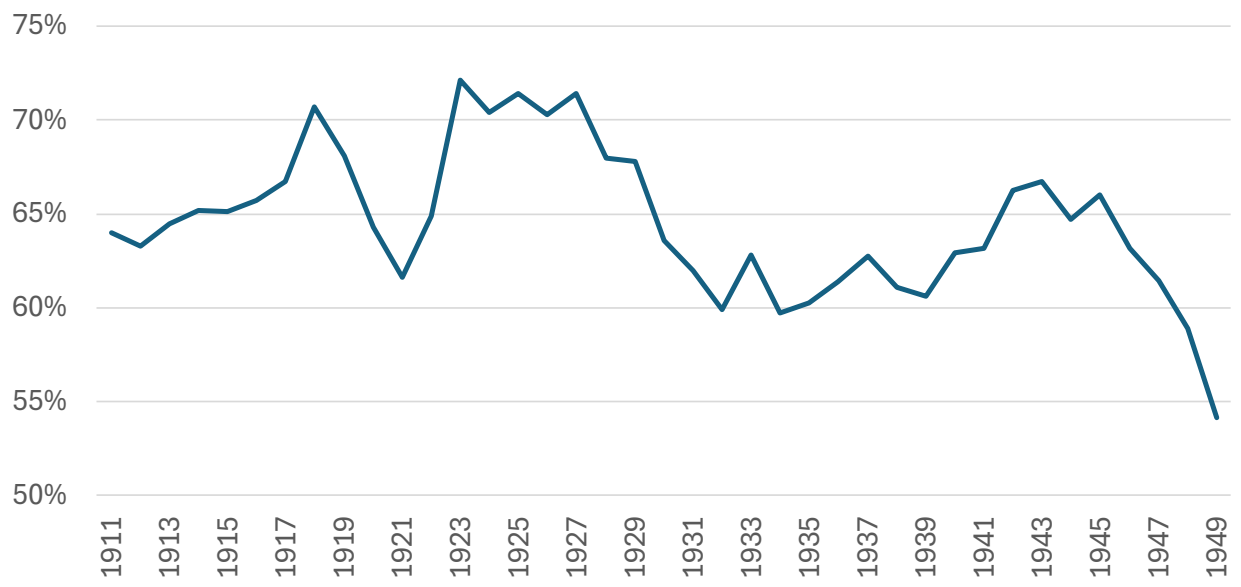
$$\boldsymbol{AAGR_{decade} = \frac{1}{10} \sum_{t=year_0+1}^{year_0+10} \left(\left(\frac{V_t}{V_{t-1}} - 1 \right) \times 100 \right)}$$

Where $\boldsymbol{year_0}$ is the first year of the decade analysed (e.g., 1960, 1970, …), and $\boldsymbol{V}$ represents the value of production or consumption.

Table 1.2: Cost of artificial light in the US (1860)			
Illuminating material	Cost per Unit	Consumption in 4 hours	Hourly Light Cost (in Cents)
Red Wax Candles	\$0.50 / lb	532 grains	1.068 ¢
Green Wax Candles	[NOT STATED]	458 grains	[NOT STATED]
Paraffin Candles (6)	\$0.60 / lb	567 grains	1.395 ¢
Tallow Candles (6)	\$0.15 / lb	563 grains	0.324 ¢
Sperm [Whale] Candles (4)	\$0.40 / lb	587 grains	0.984 ¢
Star Candles	\$0.25 / lb	636 grains	0.688 ¢
Lard Oil	\$1.20 / gallon	12.61 fl oz	2.096 ¢
Burning Fluid	\$0.75 / gallon	5.09 fl oz	0.746 ¢
Kerosene	\$1.20 / gallon	3.89 fl oz	0.912 ¢
Petroleum Oil	\$1.00 / gallon	3.24 fl oz	0.860 ¢
New York Coal Gas	\$2.50 / 1000 cu ft	4 ft burner	1.000 ¢
Note: Adapted from Gésner & Gésner (1865, p. 173), using data published in 1860.			

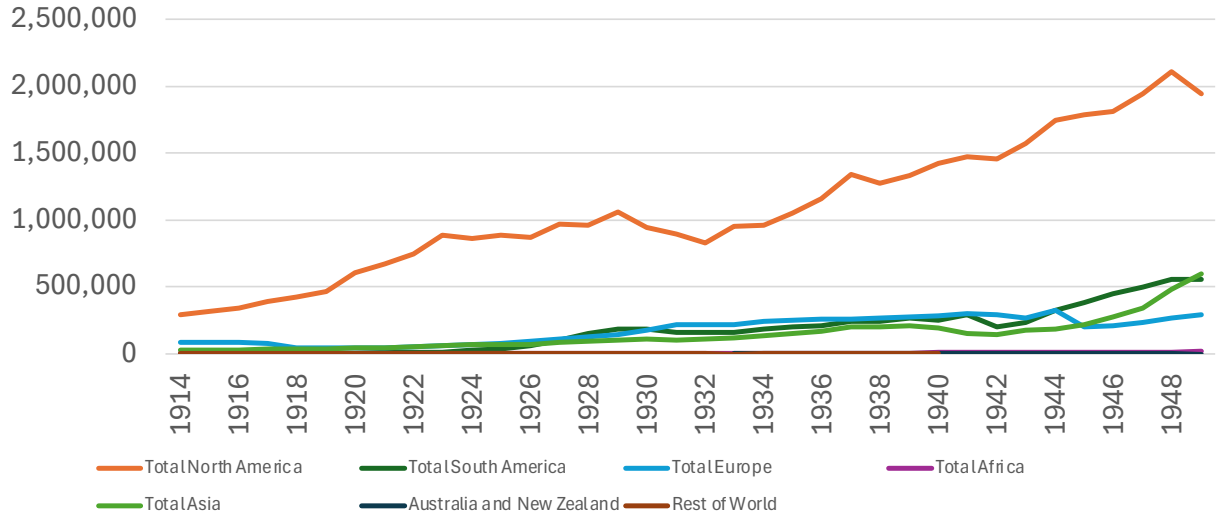
Chapter II

Figure 2.1: U.S. Oil Production as a Percentage of World Total (1911-1949)



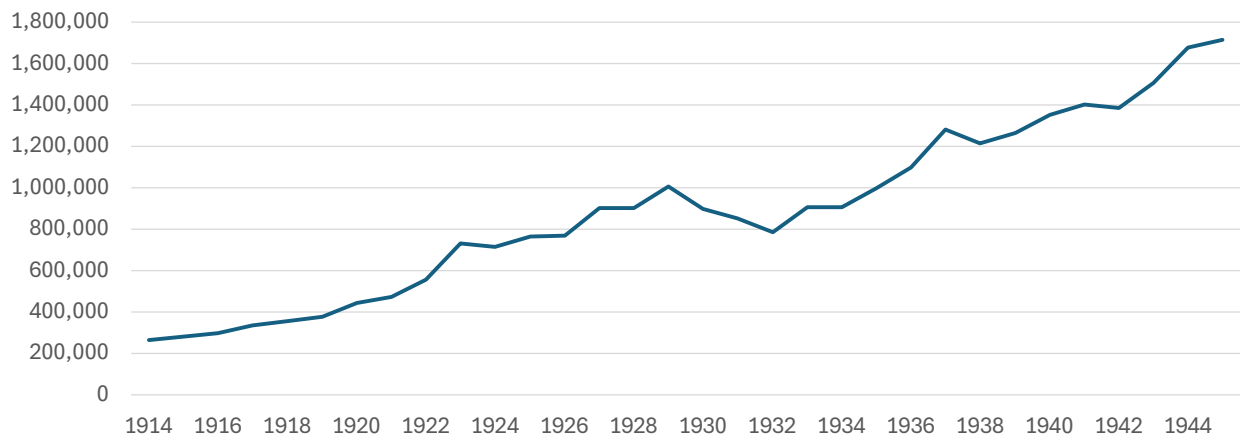
Data source: American Petroleum Institute (1949, pp. 444-449).

Figure 2.2: Oil production by Region (Thousands of Barrels, 1914-1949)



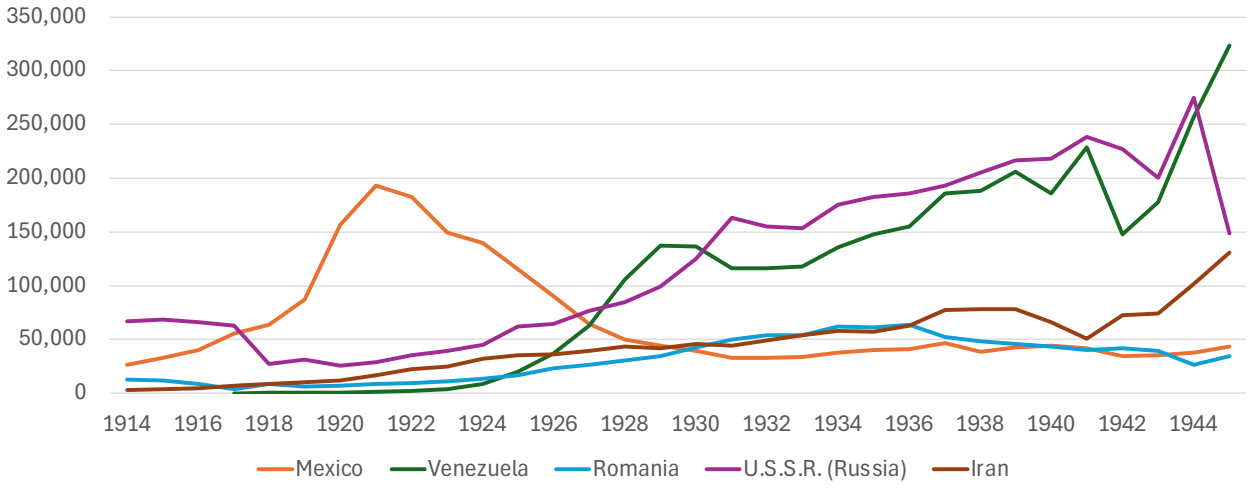
Data source: American Petroleum Institute (1949, pp. 444-449).

Figure 2.3: Oil production in the United States (Thousands of Barrels, 1914-1945)



Data source: American Petroleum Institute (1949, pp. 444-449).

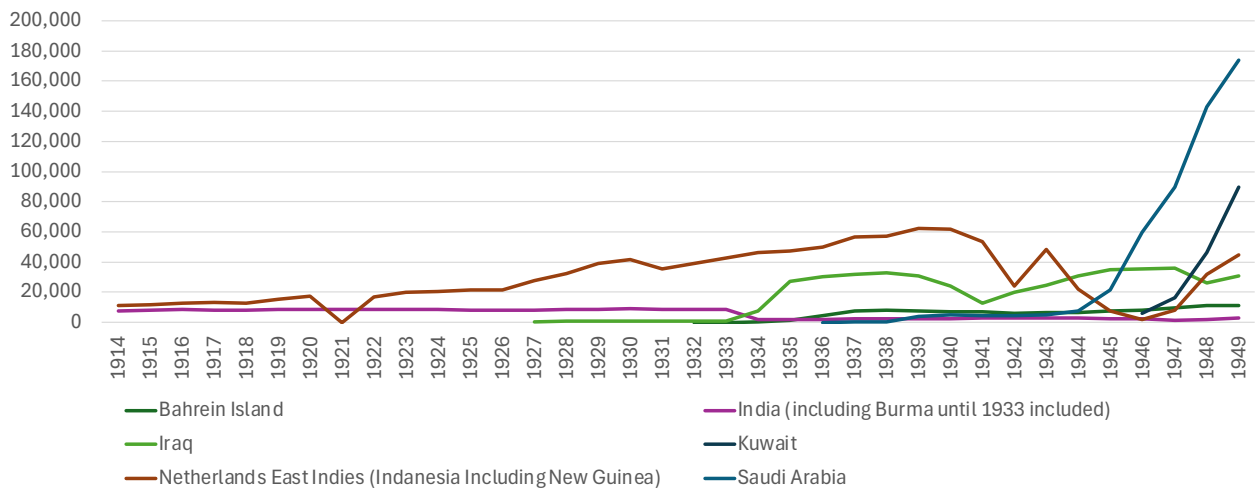
Figure 2.4: Oil production in Selected Countries (Thousands of Barrels, 1914-1945)



Data source: American Petroleum Institute (1949, pp. 444-449).

Figure 2.5: Oil production in Selected Asian Countries

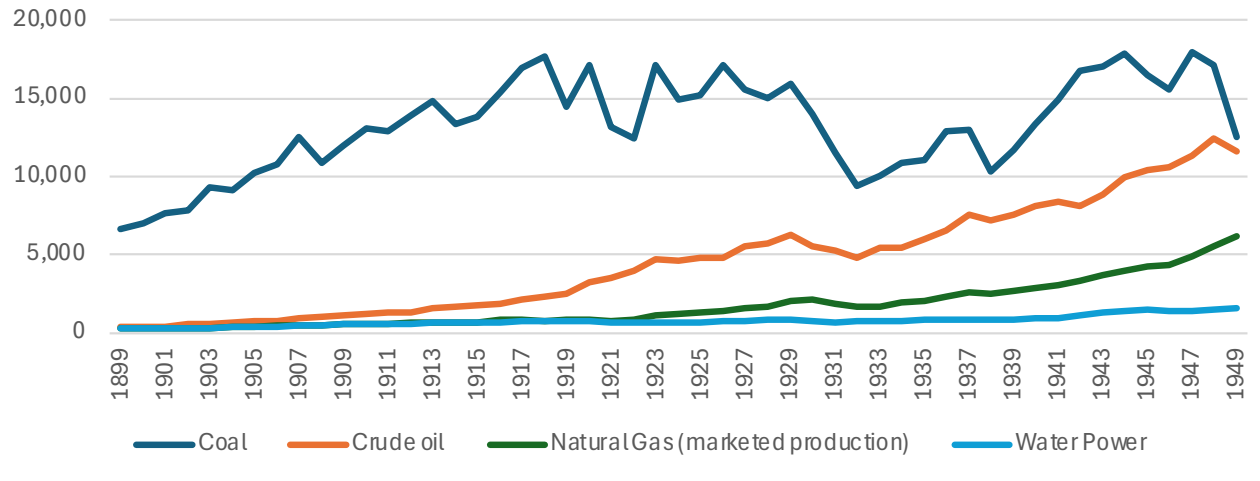
(Thousands of Barrels, 1914-1945)



Data source: American Petroleum Institute (1949, pp. 444-449).

Figure 2.6: U.S. Annual Energy Supply from Mineral Fuels and Water Power

(Trillions of British Thermal Units, 1899-1949)



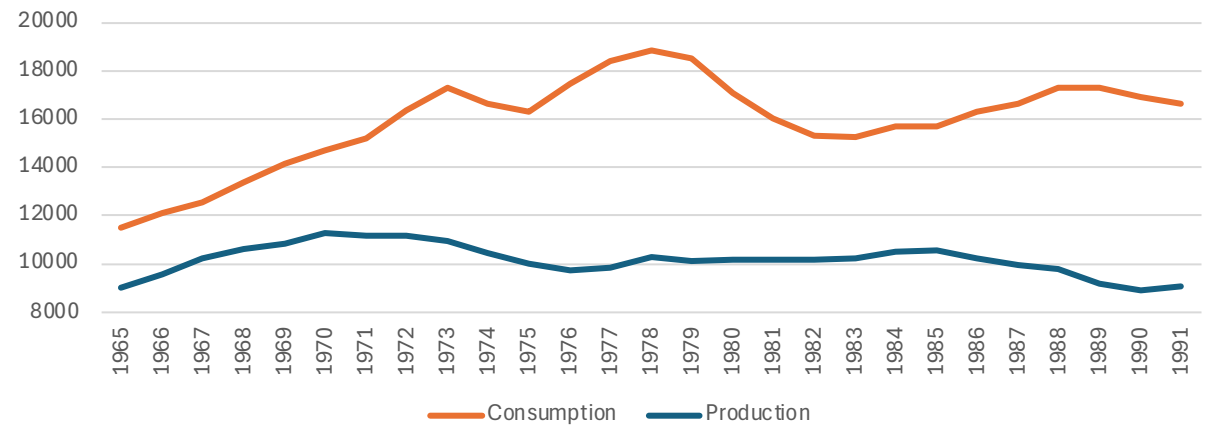
Data source: American Petroleum Institute (1949, p. 117).

Table 3.1: Crude oil production in selected countries (Thousands of barrels, 1945-1955)

Year	United States	Vene-zuela	Iran	Iraq	Saudi Arabia	Kuwait	USSR	Roma-nia	World Total
1945	1,713,655	323,156	130,526	35,112	21,311	0	154,953	34,772	2,594,695
1946	1,733,939	388,486	146,819	35,665	59,944	5931	163,673	31,434	2,745,429
1947	1,856,987	434,905	154,998	35,834	89,852	16,225	194,463	28,552	3,021,736
1948	2,020,185	490,015	190,384	26,115	142,853	46,500	225,000	34,000	3,432,834
1949	1,841,940	482,316	204,712	30,957	174,008	90,000	244,700	33,700	3,403,838
1950	1,973,574	546,783	242,475	49,726	199,547	125,772	273,200	32,000	3,802,597
1951	2,247,711	622,216	123,512	65,122	277,963	204,910	292,000	31,000	4,282,729
1952	2,289,836	660,254	7800	141,100	301,861	273,433	329,400	58,900	4,518,611
1953	2,357,082	644,243	9400	210,268	308,294	314,592	380,160	67,506	4,798,450
1954	2,314,988	691,810	21,500	228,432	350,843	350,317	426,960	72,600	5,017,940
1955	2,484,428	787,409	120,562	251,206	356,664	402,917	509,760	78,670	5,626,051

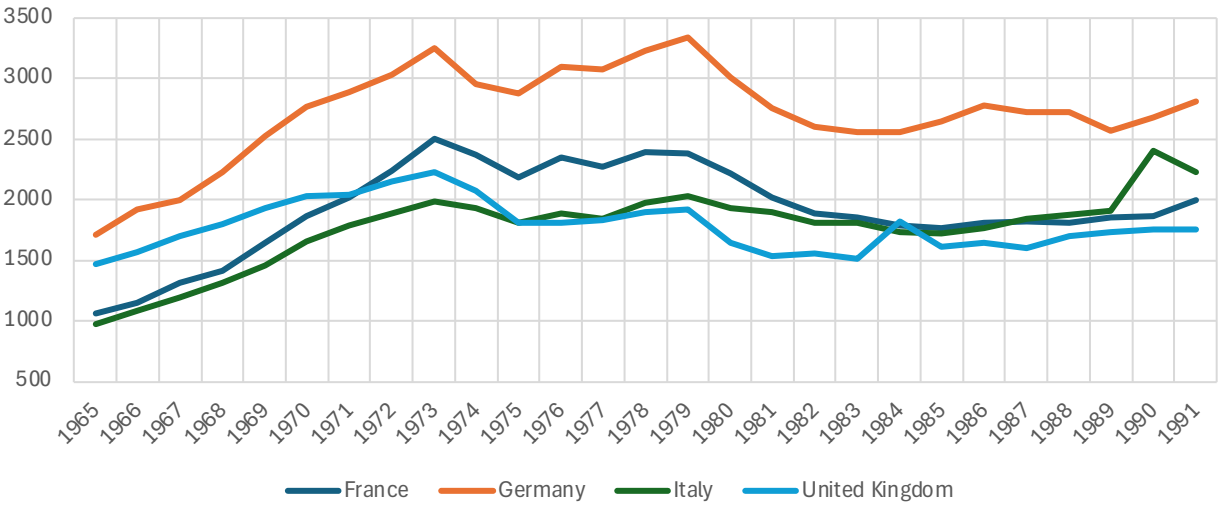
Note: Adapted from Painter (2009, p. 162).

Figure 3.1: Oil consumption in the United States (Thousand barrels daily, 1965-1991)



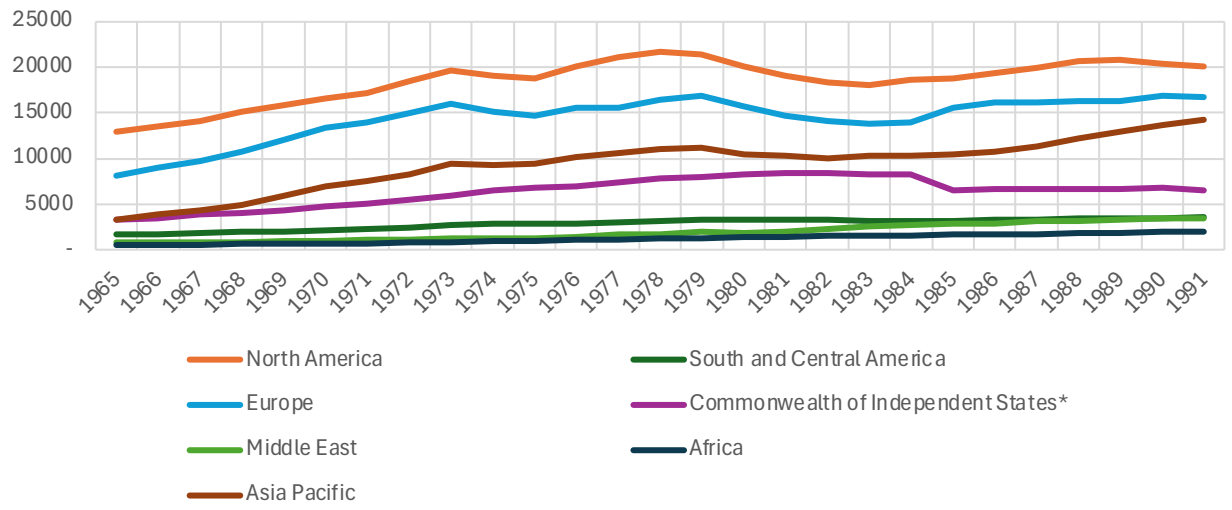
Data source: Energy Institute (2025).

Figure 3.2: Oil consumption in selected European countries (Thousand barrels daily, 1965-1991)



Data source: Energy Institute (2025).

Figure 3.3: Oil consumption by region (Thousand barrels daily, 1965-1991)

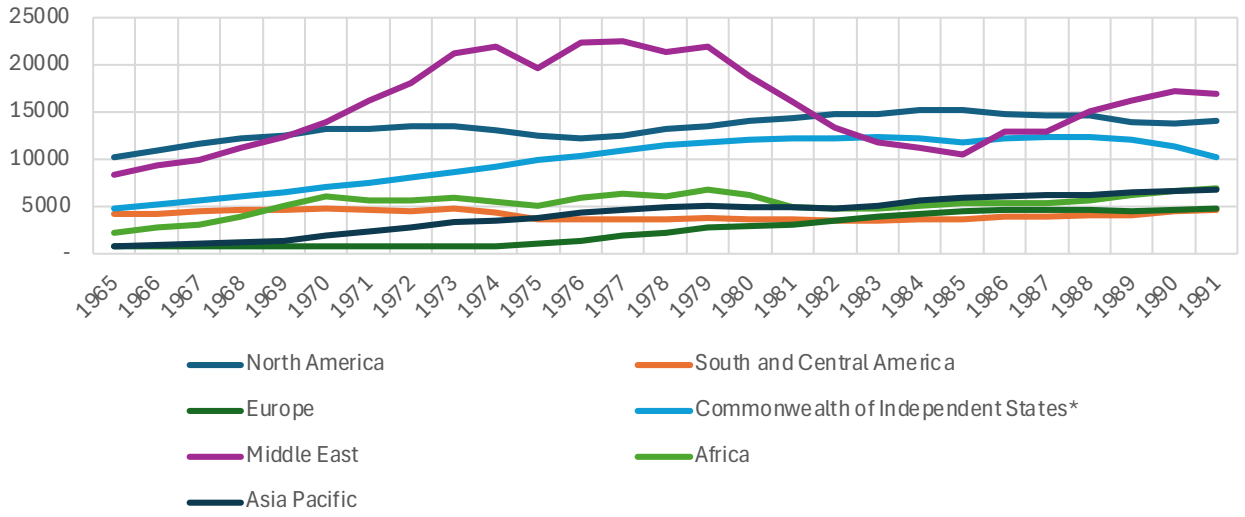


Note: Consumption has been defined as "Inland demand plus international aviation and marine bunkers and refinery fuel and loss". "Consumption of biogasoline (such as ethanol) and biodiesel are excluded while derivatives of coal and natural gas are included".

* The Commonwealth of Independent States, created at the end of 1991, includes the following countries: Armenia, Azerbaijan, Belarus, the Kyrgyz Republic, Kazakhstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Eurostat, n.d.).

Data source: Energy Institute (2025).

Figure 3.4: Oil production by region (Thousand barrels daily, 1965-1991)



Note: Consumption has been defined as "Inland demand plus international aviation and marine bunkers and refinery fuel and loss". "Consumption of biogasoline (such as ethanol) and biodiesel are excluded while derivatives of coal and natural gas are included".

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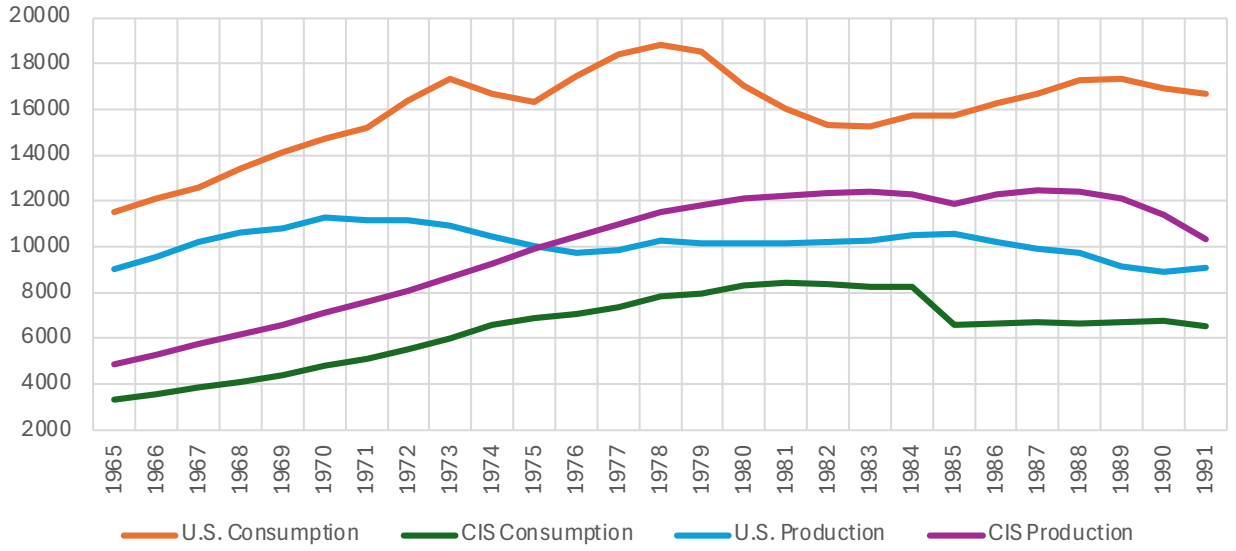
Data source: Energy Institute (2025).

Figure 3.5: Oil consumption and production in the United States and CIS* states (Thousand barrels daily, 1965-1991)

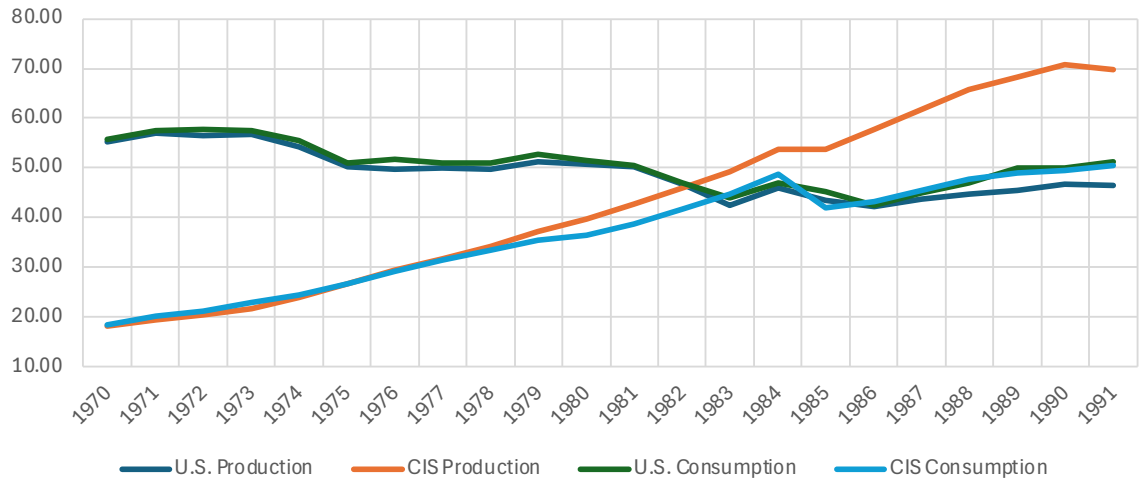


Note: Consumption has been defined as "Inland demand plus international aviation and marine bunkers and refinery fuel and loss". "Consumption of biogasoline (such as ethanol) and biodiesel are excluded while derivatives of coal and natural gas are included".

* The Commonwealth of Independent States, created at the end of 1991, includes the following countries: Armenia, Azerbaijan, Belarus, the Kyrgyz Republic, Kazakhstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Eurostat, n.d.).

Data source: Energy Institute (2025).

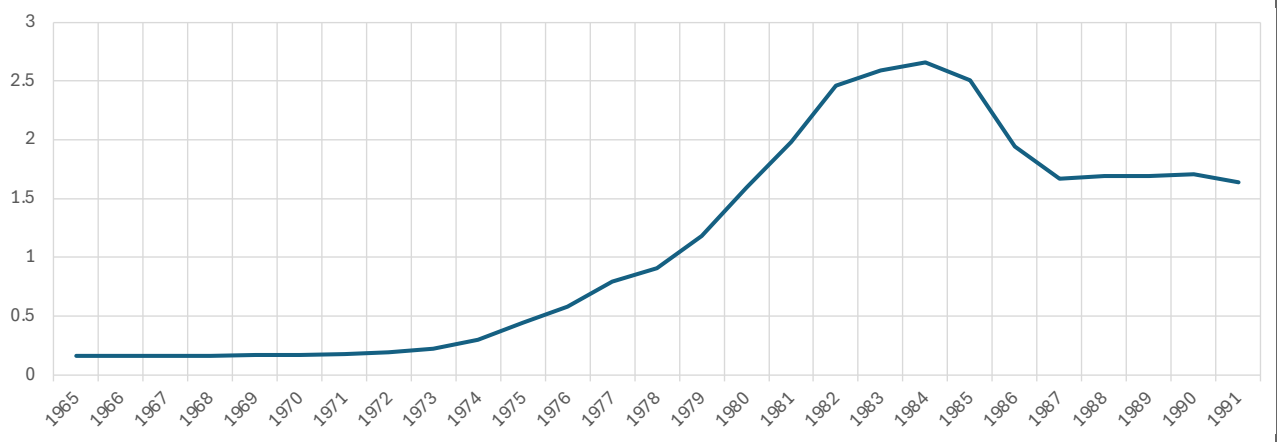
Figure 3.6: Natural gas consumption and production in the United States and CIS* states (Billion cubic feet per day, 1970-1991)



* The Commonwealth of Independent States, created at the end of 1991, includes the following countries: Armenia, Azerbaijan, Belarus, the Kyrgyz Republic, Kazakhstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (Eurostat, n.d.).

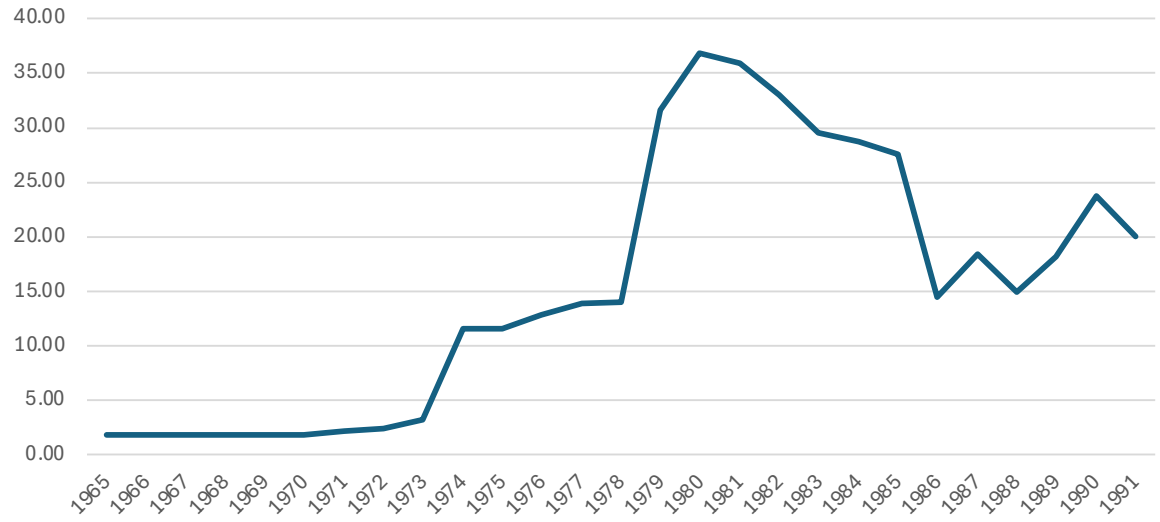
Data source: Energy Institute (2025).

Figure 3.7: U.S. Natural Gas Wellhead Price (Dollars per Thousand Cubic Feet, 1965-1991)



Data source: U.S. Energy Information Administration (2025a).

Figure 3.8: Nominal prices of crude oil (USD per barrel, 1965 - 1991)



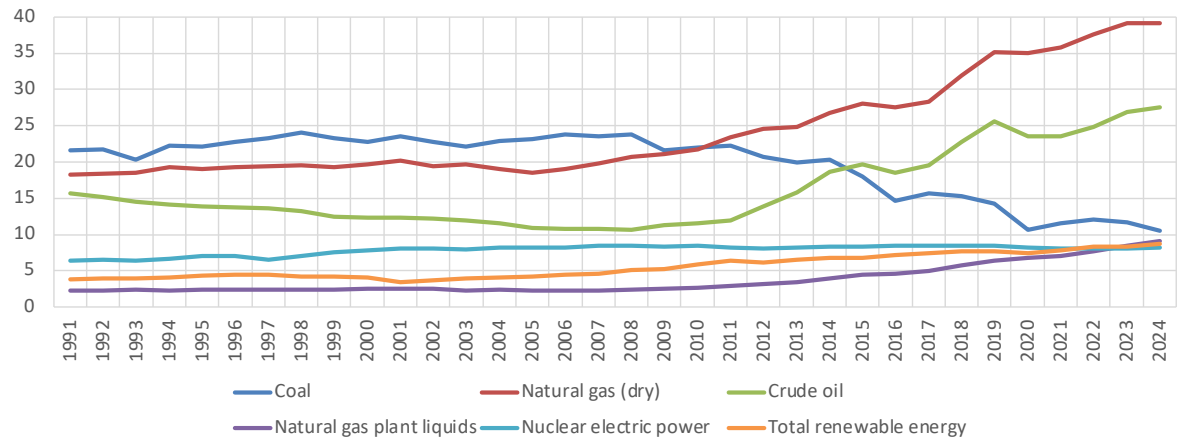
Note: Oil prices up to 1983 are drawn from Arabian Light, posted at Ras Tanura, while from 1984 onwards they reflect Brent dated.

Data source: Energy Institute (2025).

Chapter IV

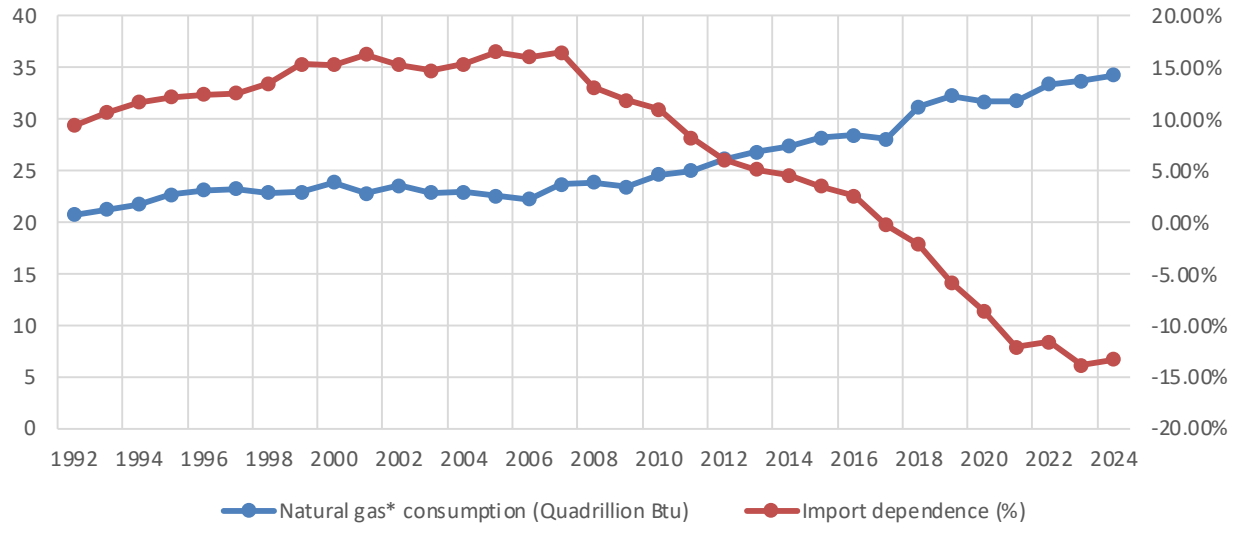
Figure 4.1: U.S. Primary Energy Production by Source

(Quadrillion British thermal unit, 1991-2024)



Data source: U.S. Energy Information Administration (2025b).

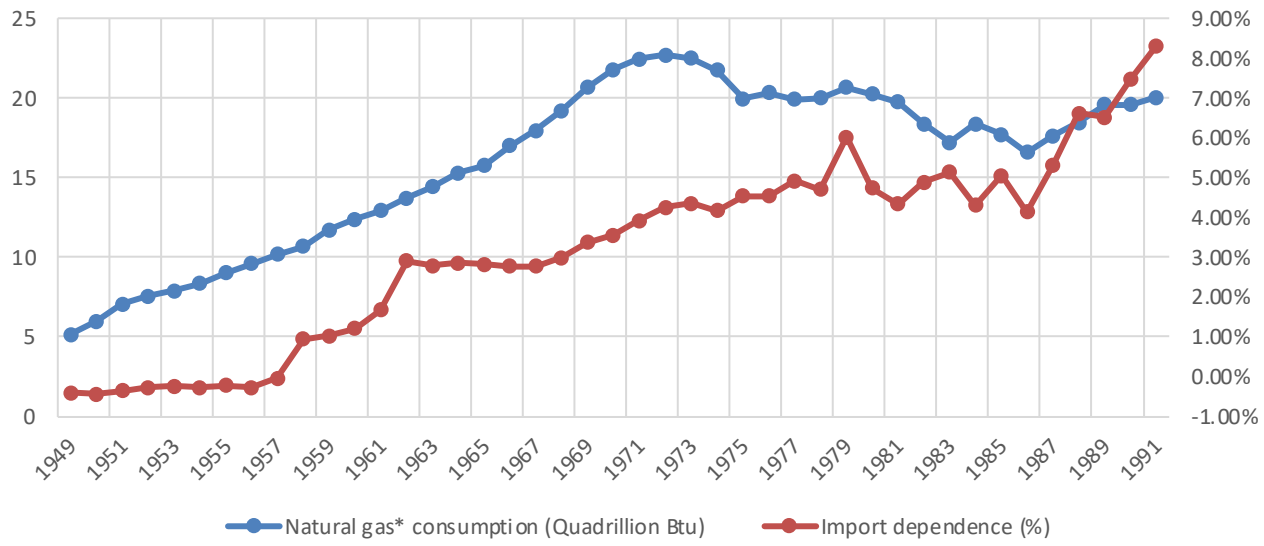
Figure 4.2: U.S. natural gas, consumption vs. import dependence (1992-2024)



* Excluding supplemental gaseous fuels.

Data source: U.S. Energy Information Administration (2025c, 2025d, 2025e).

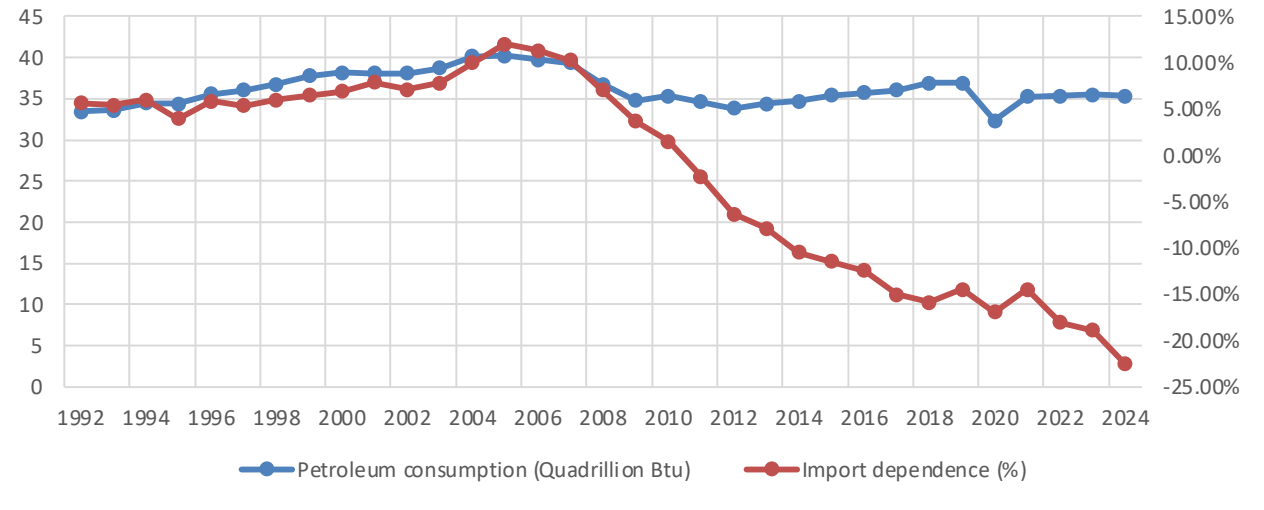
Figure 4.3: U.S. natural gas, consumption vs. import dependence (1949-1991)



* Excluding supplemental gaseous fuels.

Data source: U.S. Energy Information Administration (2025c, 2025d, 2025e).

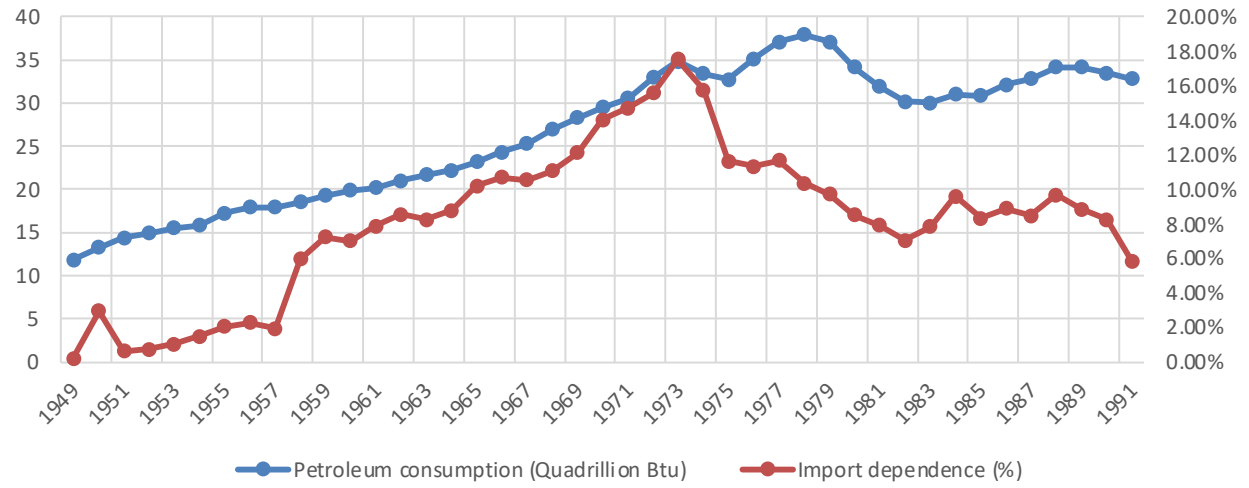
Figure 4.4: U.S. petroleum products*, consumption vs. import dependence (1992-2024)



* Excluding biofuels.

Data source: U.S. Energy Information Administration (2025c, 2025d, 2025e).

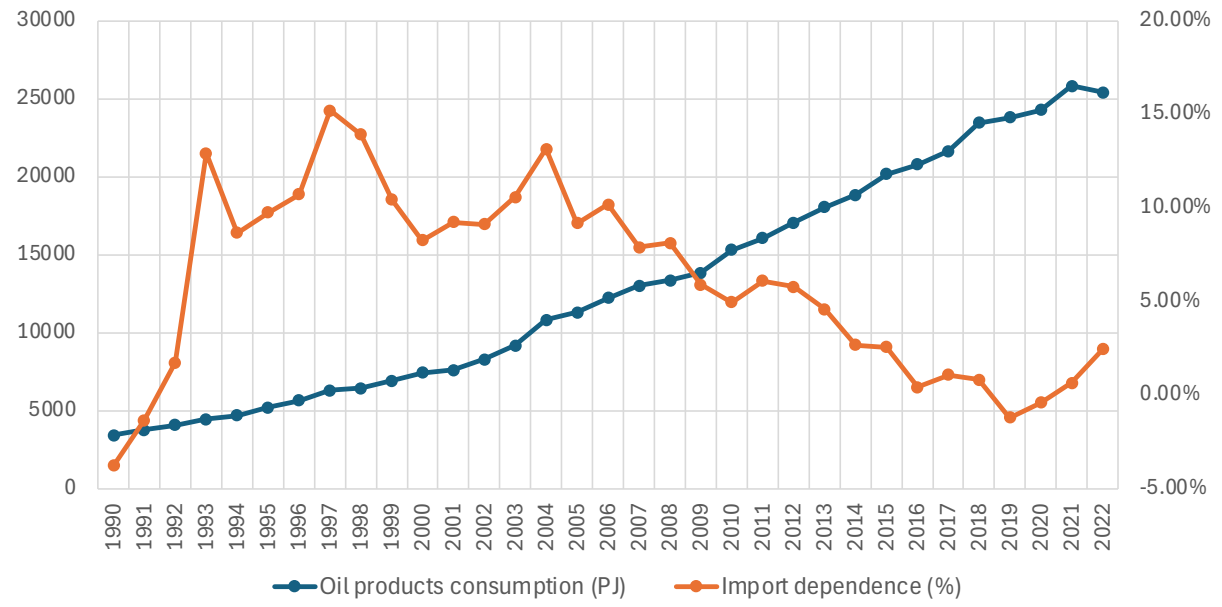
Figure 4.5: U.S. petroleum products*, consumption vs. import dependence (1949-1991)



* Excluding biofuels.

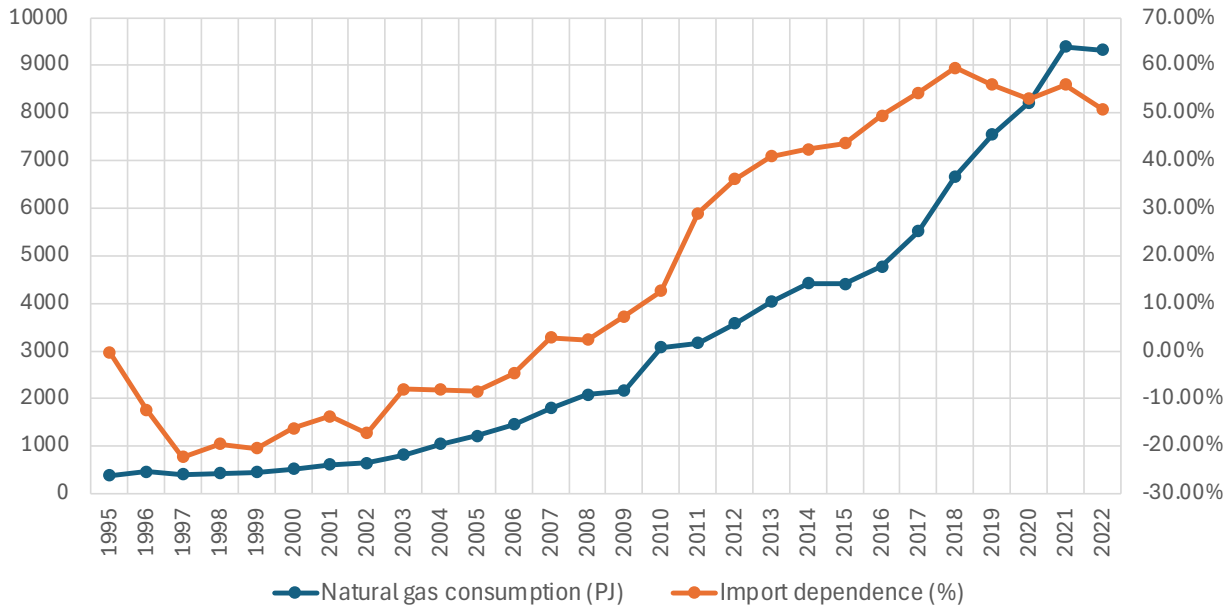
Data source: U.S. Energy Information Administration (2025c, 2025d, 2025e).

Figure 4.6: China's oil products, consumption vs. import dependence (1990-2022)



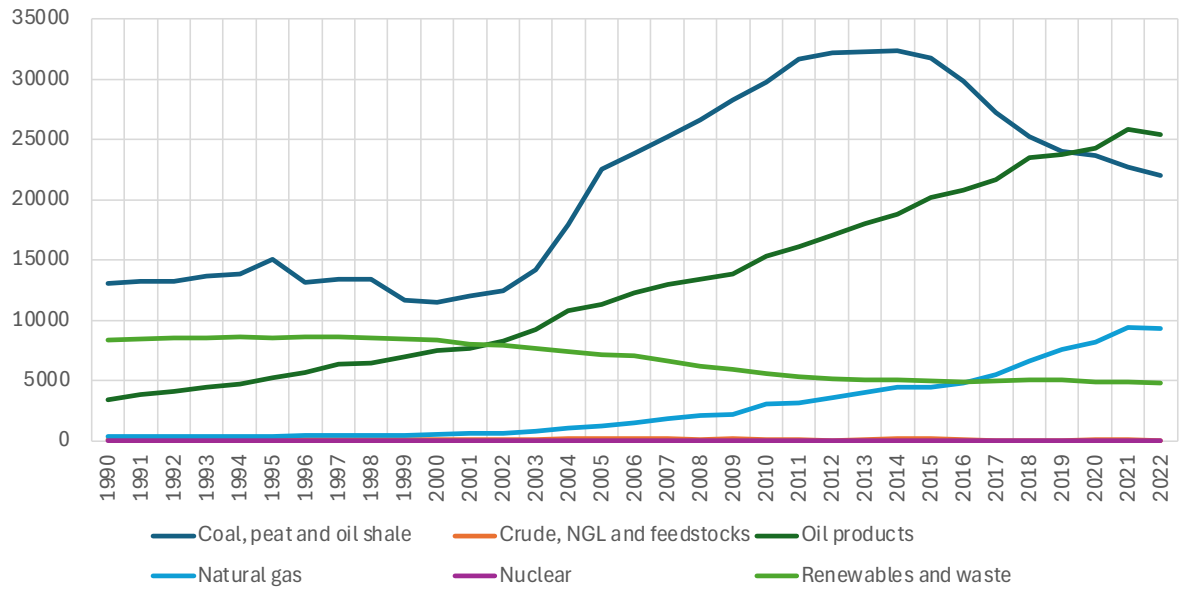
Data source: IEA (2025a).

Figure 4.7: China's natural gas: consumption vs. import dependence (1995-2022)



Data source: IEA (2025a).

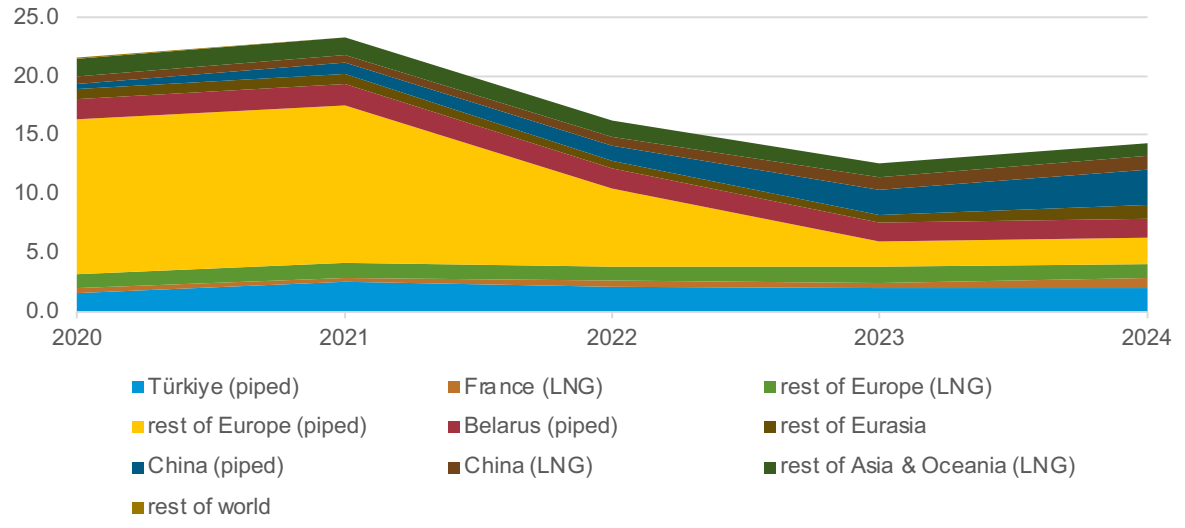
Figure 4.8: China - energy consumption by selected source (Petajoule, 1990-2022)



Data source: IEA (2025a).

Figure 4.9: Annual natural gas exports from Russia by destination

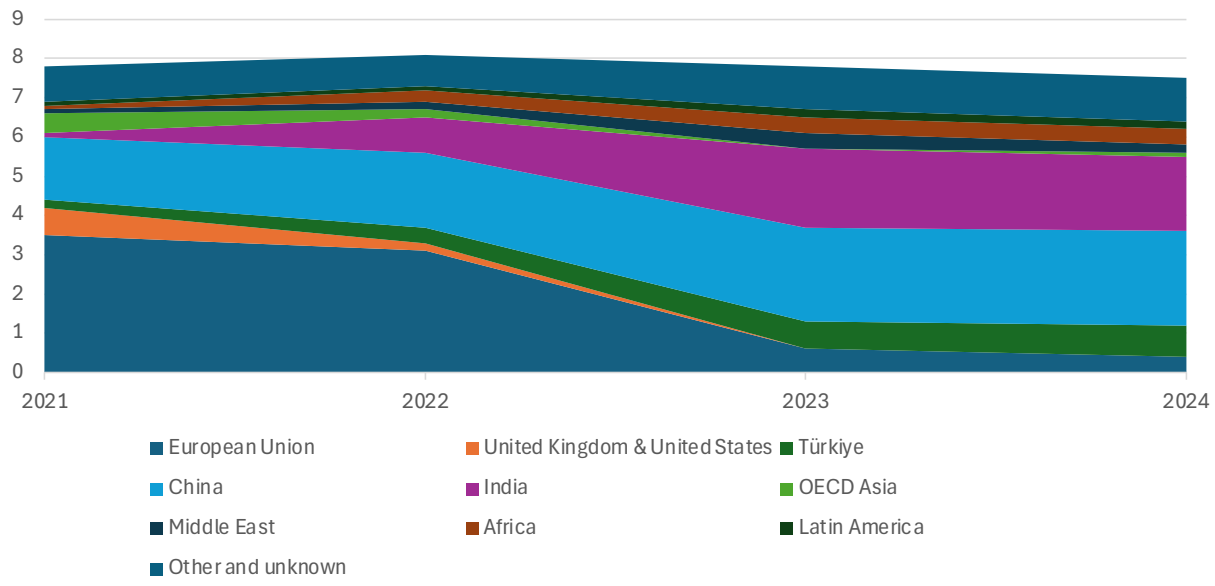
(Billion cubic feet per day, 2020–2024)



Data source: U.S. Energy Information Administration (2025g).

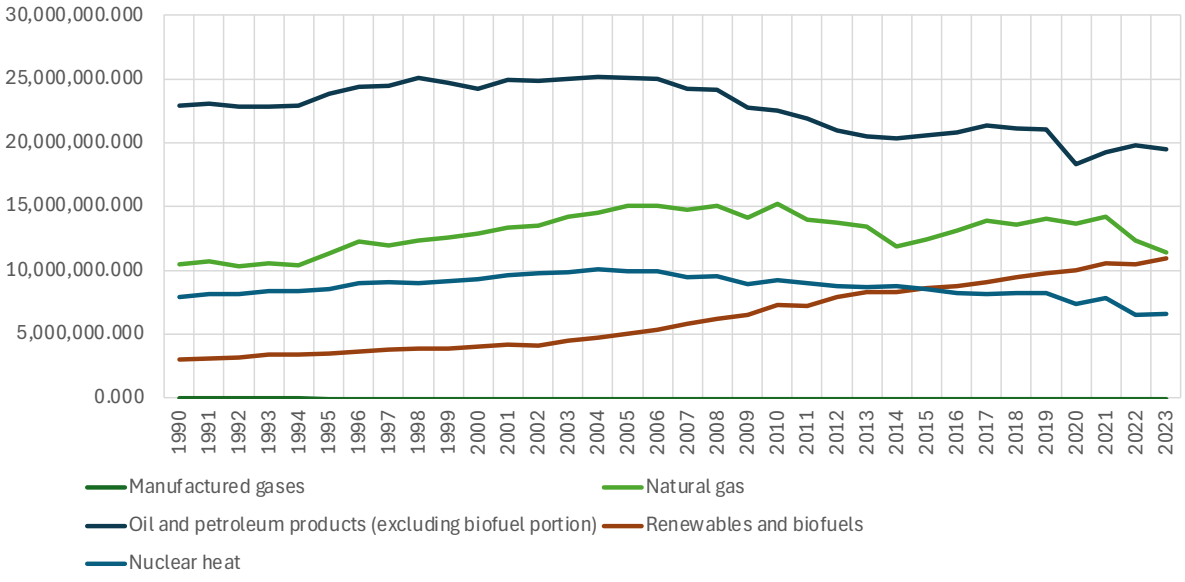
Figure 4.10: Average Russian oil exports by country and region

(Million barrels per day, 2021-2024)



Data source: IEA (2025b).

Figure 4.11: EU - Gross inland consumption of selected sources (Terajoule, 1990-2023)



Data source: Eurostat (2025a).

APPENDIX B: INTERVIEW TRANSCRIPTS

I. Fabrizio Maronta, Scientific Advisor and International Relations Manager at Limes

Oral interview conducted on June 19, 2025.

Question: To what extent, today, does energy security influence the foreign policy of countries and the strategy of energy firms? Could we compare these elements to previous significant historical moments, such as the 1973 energy crisis?

Answer: The answer could be trivial, but in reality, the importance of energy, as a vector and determinant of countries' foreign policy, has fundamentally not changed. Banally, in any society, but especially in an industrial society, which is therefore highly energy-intensive, everything necessarily needs constant, abundant and secure energy provision, both directly, such as in road transport, and indirectly, for instance regarding the production of industrial goods we consume. This was true even before the arrival of electronics, and therefore before the necessity of guaranteeing constant electricity supply for all the systems that manage complex networks. Very plainly, if you take away electric energy, you also interrupt water supply, because water pumps need electricity. In the same scenario, also hospitals would stop working, and so on. From this point of view, the importance [of energy security] has not changed, compared to the Arab-Israeli Wars of the 60s and 70s for instance. If instead we focused on what level of energy intake is necessary in a contemporary society compared to one of forty or fifty years ago, referring to the evolution of countries such as Italy, then the answer would be different. Energy diversification has always been the strategy of a good investor, but with today's energy requirement, it has turned from desirable to absolutely necessary. This had been incredibly forgotten by everyone before the 2022 War in Ukraine. We do not only need more energy

than before, but we also need to use it much differently. We are facing a growing need of electrification. And we also have a number of sectors, especially the industrial one, with special regard to heavy industry such as steel, glass and concrete production, that still run on fossil fuels and will continue doing so for a long time. So, we cannot rely on a single [energy] source; countries such as Italy have invested from the beginning on hydropower, but looking back we can argue that oil "won the race". We rely on oil, gas, electricity from multiple sources, and so on. So, the energy requirement has grown, and so has the need of energy diversification, not only because of energy security, but also because what we use energy for has become more articulated. So, the importance has generally stayed the same, but the requirement has grown quantitatively, and also qualitatively in terms of source diversification.

Question: Looking for instance at the War in Ukraine with gas, or at Iran with oil sanctions, could we argue that energy could also be used to influence the foreign policy of countries?

Answer: To the extent that there is an energy market in which there is a supplier whose economy heavily depends on energy exports, but there is also a consumer who has a high energy demand, the weaponisation of energy has not changed much. We remember the years around 1973 as those of energy crises, and that was not really predictable: the Strait of Hormuz stayed open, [the] Suez [Canal] stayed open, those were ground wars, therefore not naval ones, and oil plants were not attacked, differently from the [First] Gulf War in the 1990s, when Saddam Hussein intentionally bombed Kuwaiti plants. So, there was no direct reason related to war for it to turn into an energy crisis; it did because OPEC, dominated by Arab countries, retaliated by limiting [oil] production. They did exactly what Putin has been doing with gas. From this point of view, the use of energy as an instrument of coercion, of economic, diplomatic and military pressure, as modern wars are industrial and extremely energy-demanding, has not changed. The problem is, especially for us Europeans, that then as now, we live off the added value of what we do with what we don't have. If necessary, Germany would

restart employing coal. Europe is extremely industrialised, and for this reason averagely rich, but it doesn't have resources. Thus, our prosperity is based on the ability of taking raw materials from other areas, transforming them into something more valuable, and alimenting our wealth through the added value. This was as true in 1973 as now, and that has been proven by the War in Ukraine. This is a condition that we take for granted, but for example the United States are different from this point of view. The United States and Russia are the only two countries that have the two fundamental self-sufficiencies: the energy and the food ones. Europeans have neither one nor the other, as theoretically our agriculture produces enough to match our demand, but since it is an industrial agriculture, without energy we would lose food self-sufficiency. As a matter of fact, the two are interconnected. What in school we learn as distinct primary and secondary sectors, respectively the agricultural and industrial ones, are in fact a single sector today, as without the industrial component, our agriculture would be unable to meet current demand. Going back to the original question, the crucial point is that if you depend on external inputs, you can always be blackmailed. From this point of view, notwithstanding all the efforts made by Mohammed bin Salman to diversify Saudi Arabia's portfolio, fundamentally the world energy landscape remains divided between importing and exporting countries. Exporting countries need their oil and gas to be sold, and this true also for Russia: China and India have been able to take advantage of Russia's need to sell hydrocarbons after the beginning of the War [in Ukraine], aiding Russia by still buying them but at lower prices. Importing countries, as a matter of fact, do not have what they need. And this is true also for renewable energy: luckily, now the notion that renewable energy frees you from dependency has fallen out of favour. But incredibly, up until recently, no one would talk about this. In the words of a friend who worked at ENI for ages, who I think perfectly synthetized the issue, renewable energy represents, at least with current technologies, the shift from the field to the mine. In the past, dependence was on those who had fossil fuels; that is, on their natural deposits. Today you depend on who has developed the supply chain for extraction and, particularly, refining, of rare earths and metals. Which is fundamentally China. These materials enable all electrification storage devices, as well as permanent magnets for motors and wind rotors,

and electronic devices for wind and solar energy for instance, which also require manufacturing capabilities. They are also needed to manage next-generation grids: power grids are shifting from the radial model, [where energy moves] from the plant to the consumers, to a new multi-generation model where everyone is both a consumer and a producer at the same time. These [next-generation] grids require a lot of electronic devices, so you'll fall anyway into dependence on who has raw materials and manufacturing capabilities. Who has raw materials and manufacturing capabilities? Today, fundamentally, China, the United States, and a few more. Therefore we [the Europeans] remain part of who is dependent.

Question: According to you, in the wake of the development of renewable energy, are there any countries which have become less vulnerable to energy coercion?

Answer: If one conducts a snapshot analysis of the current situation, and hypothesises that tomorrow Iran sinks two cargo vessels in the Strait of Hormuz and blocks everything, the answer is yes, for a certain amount of time. This would be true for Germany, at least regarding private consumption, given the amount of solar and wind power installed, while as far as German industries are concerned, we have seen some German firms go out of business because the rise in gas prices made them no longer competitive. Switzerland and Italy could also be cited as examples of countries that might use renewable energy as a temporary buffer. What is the fundamental problem though? All of this stuff needs maintenance, components, and so on. Strictly speaking, if the Strait of Hormuz were to remain closed for two years and your solar panel broke, there would also be the risk that the producing country, should it join the conflict on your opposing side, might refuse to sell you a replacement, effectively weaponizing energy. Therefore, renewable energy made us less vulnerable to energy coercion in the short run. But not in the long term. As I said before, renewables do not entail independence from raw materials, manufacturing capabilities, and everything that enables the transformation of natural elements into electricity. If we Europeans were self-sufficient in the

extraction and refining of rare earths and rare metals, and if we had the capability of building solar panels like China or microchips like Taiwan, we would be able to meet at least electricity demand. But since we do not have this opportunity, it works the same as when Americans sell us an F35: it will continue to operate as long as the USA provides us with replacement parts. Also, as you know, these energies are in part substitutive for something else, and in part they are additional: since the energy requirement has grown, part of the output of these technologies also simply covers up additional demand during moments of economic growth. Particularly since the outbreak of Covid, in many cases there has been a reduction in energy requirement, especially in the industrial sector. In fact, in a number of European countries, industrial production has declined. Consequently, in many cases there is now the opposite problem: an excess of energy capacity. But in the European context, that's an excess in a context of dependency from external inputs: this means that there is an excess of installed capacity, but only as long as someone sells us gas and oil. We also need suppliers to provide solar panels and wind rotors to generate renewable energy. If these external inputs are no longer available, the excess installed capacity turns into a deficit: I would have the plants to produce energy, but I would lack the electric input to run the turbine, for instance. On the other hand, we have hydropower, which is susceptible to climate-related reactions and water availability. Today, renewables remain complementary, and as the recent blackout in Spain proved, they cannot be fully substitutive as they are too unstable. The only source of energy that can be turned on and off at will to guarantee constant voltage, which is necessary for power grids, is the fossil fuel power plant, which is powered either by gas or fuel oil.

Question: Could you name a significant case of energy weaponisation, or of an oil sanction regime, which is often underrated but that could shed light on more aspects of this theme?

Answer: There are two types of energy sanctions: the export ban, targeting a country which has a lot of energy supply and generally also not providing it with extraction technologies, and the import

ban, starving it of energy supply. In the first case, I would name Iran, which is the country which today has by far the largest proven oil and gas reserves in the world. In the period of the Arab-Israeli Wars, gas was considered to be a by-product of oil, and it had a rather low market value. Contracts, until not long ago, had their gas prices pegged to the oil quotations. It is comparable to paraffin, an oil refining by-product. On the other hand, in a context like this, where gas became a fossil with its own market, and sometimes a fuel preferred to oil for environmental reasons, the damage to Iran became more significant. The problem for a country like Iran is that there is no need to inhibit the ability to export and sell, similar to how the Russian price cap works. A country like Iran, which has not received foreign investments for four decades, has no extraction technologies, which are fundamentally still a monopoly owned by western superpowers. China is also advancing in these regards, so prospectively it could sell them to Iran, just as in the case of nuclear reactors, to help it in this sense. For the second case, I would illustrate the case of North Korea. This country is reduced to buying coal from China, but the case is also very different. It is an extremely smaller country, decimated by recurring famines. The case is different because if a country lacks energy, and you deny it the ability to purchase it, the only survival strategy it is left with is suppressing internal energy consumption as much as possible. A key example are the pictures of Pyongyang's dark streets at night, except from the Kim dynasty statues which are always illuminated for propaganda reasons. Another very similar example is Cuba's.

II. Alfio Rapisarda, Head of Global Security at ENI

Oral interview conducted on September 2, 2025; written remarks, integrated with the transcript, were received on September 11, 2025.

Question: To what extent does energy security influence the foreign policy of countries and the strategies of energy companies today?

Answer: I would draw a distinction. The foreign policies of countries - whether Western, African, or from the Far East - follow their own paths, not necessarily tied to issues of energy security, supply, or policy. This is because, clearly, where an energy policy exists - as in the case of Europe - it is not exactly a policy shared by each country at a common table like that of the 27 [European Union member states]. Italy, for instance, has its own energy policy, which is the product of a trajectory that began after the Second World War. Central to this trajectory was Enrico Mattei—whose work, I recommend, should be studied carefully, as it remains highly relevant in this field. Mattei embodied an idea, a personal vision, and an industrial approach, but also a distinctive conception of energy policy. This path rests on a written framework, which remains valid today; [this is the case] not because it was drafted recently, but because Italy remains a country with no significant domestic energy resources and thus must import them from abroad. This reliance on foreign energy does not stem from political decisions by Italian governments to forge alliances with one, two, or several states, from which oil companies would then proceed to conclude commercial agreements. On the contrary, the dynamic was reversed. Enrico Mattei, who was both a politician and President of ENI at a time when the company was a state-owned enterprise and effectively an appendix of the State. Although he was a politician, he did not leverage foreign policy as a means to secure access to oil resources that had not yet been claimed by other international companies. In this sense, foreign policy and industrial policy followed distinct logics. Industrial policy was driven by opportunities—

economic, commercial, and technical. An oil company would not enter a country simply because the political leadership suggested it. If oil was absent, there was no reason to go. In such cases, other forms of cooperation—such as development aid, sustainability projects, or cultural initiatives—might occur, but oil companies went only where oil existed. This was the primary driver of decisions, upon which foreign policy was later superimposed. Once a company decided to operate in a country offering the prospect of oil exploration and transport, a dual relationship emerged: the company invested capital, technology, and expertise, while the host country had to assume the associated liabilities. Agreements were therefore required to determine how benefits would be shared. ENI is illustrative here: though an Italian company, it is also a multinational. Roughly 45–46% of its shareholders are Italian, including 30% held by the State through Cassa Depositi e Prestiti and the Ministry of Economy and Finance, but the remainder are international investors, major funds as well as private shareholders. Thus, while ENI retains an Italian identity, its industrial choices - such as investing in Libya - were not politically dictated. Rather, they created opportunities that, in turn, allowed Italian foreign policy to leverage improved bilateral relations. The oil sector, and the energy sector in general, brings with it an entire industrial chain that, more than many others, generates industrial spillovers. This includes specialized skills and technologies accustomed to working with oil companies, as well as internal resource expertise. Consequently, ancillary companies - satellites of the core oil enterprise - clearly benefit from opportunities, as they follow the sector's activities. Thus, these are opportunities within the sector, and one could say that foreign policy, in a sense, adapts to industrial opportunities. At times, there are cases where the two already coexist. Libya is a case in point. ENI's presence there was the product of industrial logic. At the same time, historical and cultural ties - rooted in colonial history and geographic proximity - created overlapping layers of political and cultural engagement. Yet fundamentally, foreign policy has not been the primary driver of energy decisions; in many cases, it has been the opposite. That said, this pattern varies across countries and companies.

Question: When dealing with such large-scale issues, companies often face the challenge of balancing national energy security with market dynamics. Could you describe situations in which ENI has found itself making decisions not only on the basis of corporate interests, but also with implications for Italy's stability and security?

Answer: This second question is closely connected to the first. As I said, foreign policy generally does not interfere with industrial decisions - unless there are overriding circumstances. A clear example is the War in Ukraine. The sanctions imposed in response by Europe were not an opportunity, but a constraint, with significant economic costs, since existing investments and supply agreements with Russia were abruptly suspended. We had to offset these losses through other partnerships, such as with Algeria, as well as through other agreements already in place elsewhere. It is clear that all of this intersects with business opportunities and interests. From a business perspective, the company's duty is to generate returns for shareholders and investors—the CEO is not the "owner" of the company, and every euro or dollar invested must be properly remunerated. Yet in situations of *force majeure*, such as sanctions, commercial interests must be reconsidered or even subordinated to broader political and security imperatives. Another example relates to country risk. It is evident that if a company has the opportunity to develop, for example, major projects whose size and potential are well known but located in a high-risk country, then from a security standpoint such a venture is not pursued. The investment would be too dangerous, not only in terms of risks to personnel and assets but also because the overall level of risk would outweigh potential benefits. In such cases of *force majeure*, corporate decisions extend beyond purely business considerations. My role, for instance, as Head of Security, also entails evaluating country risk. Thus, if the company, or the business strategy, envisages opening a new opportunity in a country that is extremely high-risk from a security perspective - not only in terms of terrorism, but also ethical risks, corruption, and lack of transparency - these factors all form part of a broader risk management framework. When such

risks exceed the company's internally defined threshold of acceptability, the opportunity must be declined.

Question: Regarding projects that ENI initiated, to what extent do you consider oil sanctions to be effective instruments? Cases in which they succeed seem to vary. In your view, under what circumstances have sanctions been most effective, and what factors determine their impact?

Answer: I am not an expert on sanctions, but sanctions do work, and their effectiveness depends on the resilience of the target country. When sanctions are imposed on a country whose economy relies almost exclusively on the activities placed under restriction, it is evident that the country risks suffering severe, even irreversible, damage - if not in the short term, then in the medium or long term. Stronger countries, however, with significant size and resources - such as Russia and Iran - are among the world's largest oil producers and therefore retain substantial opportunities. For them, oil sanctions clearly pose a problem, as do restrictions on investment and financial flows. Yet, for sanctions to be truly effective, they must be universally and comprehensively applied. If they are only partially enforced, or if some countries apply them while others do not, their robustness and effectiveness are inevitably undermined. Russia, for example, has turned toward Asia, where sanctions are not enforced, while the West reduces its engagement. Sanctions function in as much as we enforce them, but Russia or Iran can continue operating, albeit at reduced levels and with greater difficulty. It is not as though closing one tap immediately deprives them of oxygen and forces them to seek help. These countries possess alternatives and greater resilience, partly because of their large domestic markets and their ability to establish alternative trade routes where sanctions prove ineffective. In the field of energy - oil and gas - this is especially clear. Russia, for instance, has forged alliances with China and India, and discussions around these partnerships are ongoing, including within forums such as the Shanghai Cooperation Organization. On paper, such alliances are important - West versus East, Atlanticism versus the Asian world - but a decisive factor remains infrastructure availability and

capabilities. Applicability differs, however, from country to country. In Venezuela, for example, sanctions have proven more effective than in Russia. This is partly because they have been in place for a number of years, and partly because Venezuela is geographically more isolated, bounded by the Pacific and Atlantic, with only a few neighbouring countries such as Colombia and Brazil - the latter being already economically strong on its own. Russia and China have then found in Venezuela a potential new commercial partner, avoiding the sanctions imposed by the United States and its allies, but the challenge of physical access remains. Few oil tankers a month cannot resolve the structural energy supply problems of Venezuela or its trading partners'. Thus, sanctions are a deterrent, and their effectiveness becomes evident in the medium or long term.

Question: Given this context, how do you think the energy market will shape global geopolitics in the coming years?

Answer: This question is perhaps the most important, because it brings real substance not only in terms of foreign policy, but of geopolitics - and the two are not the same. The energy world, especially in its fossil dimension, is characterized by a structural division between producer and consumer countries. Producers are not always consumers: Africa, for instance, produces energy resources but consumes little, due to the lack of infrastructure and the absence of development trajectories comparable to other regions. By contrast, the West - Europe and Italy in particular - produces very little but consumes a great deal of energy. This imbalance between energy-producing countries and energy-hungry consumer countries is destined to widen, since wealthy countries of the global North require ever more energy - to sustain their "digital comfort" or "digital welfare", as I call it -, while nearly a billion people worldwide still lack access to energy, relying on firewood or coal for cooking and heating. This widening inequality does not follow a simple producer–consumer equation, because in the meantime the renewable energy transition has emerged. Within this framework, reliance on fossil fuels remains tied to oil-producing countries. If I need oil, I must turn

to those who produce it and invest there; for ENI, this means seeking opportunities where they exist. In Italy, domestic reserves are limited. Even if drilling were permitted in the Adriatic—subject, of course, to environmental regulations—the contribution would cover only a small share of demand. It would represent an Italian opportunity within the Mediterranean, but one insufficient to meet the broader energy needs of Italy and Europe. This is why, alongside the continued reliance on traditional sources, the so-called renewables are developing in parallel and creating what we call a sustainable energy mix. But what does this actually entail? Developing technology. Renewable energy does not appear out of nothing: it is derived from solar, wind, and even nuclear technologies, which in turn demand sustained investment, academic research, industrial development, and the capacity to translate research into viable products. This led to the "geopolitics of competition", involving countries that are carrying out research and investing. Investments are, in turn, strategically made: those who claim to have bought ten wind fields, or ten square meters of solar panels, have not properly invested. They have plainly bought something produced by someone else. We should instead define it as research and development, which leads, in turn, to innovation, generating something useful in the medium and long term. We shouldn't forget that our requirements are related to supply and demand. Energy demand continues to grow, and at present renewable sources cannot fully meet it. No society wants to regress to pre-industrial living conditions; rather, we seek to become ever more digital and interconnected, which increases energy needs. This means that fossil fuels will remain indispensable for the foreseeable future, drawing a strong sustainable decarbonization path while investments in renewables proceed in parallel. In the geopolitical landscape of the third and fourth millennia, a crucial element will be access to critical raw materials—particularly rare earths—which are indispensable for solar panels, wind turbines, and next-generation nuclear technologies. This brings us to the question of raw materials. Dependence - which has long led to external conditioning - will no longer be limited to fossil resources, but it will increasingly also relate to rare earths. This is a key dimension of present and future geopolitics: we depend on those who supply us with energy. In the past, we depended on Russia; today we rely on Algeria. Although dependence on a single

supplier has been reduced in absolute terms, the reliance on rare earths and other strategic materials has created a new vulnerability.

Here, all countries - including the United States - are heavily dependent on China, which understood many years before us the need to invest in these resources. Technology, semiconductors, technological know-how, artificial intelligence - everything that underpins human development - advances under the influence of those who secure access first. Geopolitics, therefore, can no longer be reduced to what it has been considered until recently. It must evolve. And while I do not wish to invoke Chinese strategic thought - from Sun Tzu to the present -, [we still have to recognise that] it has always been characterised by "doing today what will be needed in twenty years", because it reflects reality. So today we are making the same mistake that we made with energy supply: the so-called outsourcing of globalization. At the time, the prevailing rationale was that factories in Italy were too costly and environmentally harmful, which also exposed the industry to legal liabilities and loss of competitiveness. As a result, production was progressively relocated to other industrially "cheaper" countries. And today we depend on China, on India, and so on. Thus, we no longer operate within a logic of autonomy - not necessarily of national sovereignty, but of national security, particularly energy security and beyond - since in every domain we depend on other countries that could, at any moment, decide to suspend supply. Today the vulnerability concerns gas supplies; tomorrow it may involve cyber technologies; and the day after, container shipping, guaranteeing the continuity of supply chains. Any provision that depends on maritime transport is inherently exposed, particularly since a substantial share of the shipping companies that we are involved with is Chinese. This geopolitical logic of foresight-based power is fundamental. In this respect, we lag behind - in Italy, and in Europe more broadly - as countries that thrive on the work and contributions of others. Unfortunately, this remains the central dilemma: in my view, it is no longer sufficient to enter a country and "just produce there", as was the case for many years in Africa regarding energy, and more broadly exporting our know-how, luxury goods, culture, and so on. This is precisely what geopolitics will be required to address in the coming years, with energy security assuming a role no

longer confined to fossil fuels. The equation that determines patterns of cooperation now encompasses not only oil or gas, but also rare earths and technological know-how. From solar to wind to nuclear, every future option for energy development comes into play, thereby broadening the reference framework. It is also evident that the major power-holding states remain largely the same, although Russia may become less central due to its heavy reliance on fossil fuels. Similarly, the Gulf countries risk losing significance if they do not adapt swiftly, as their wealth has traditionally derived from oil and gas reserves. Now that attention is shifting to renewables, their initial reluctance is giving way to the recognition that they must act. I personally consider global demand for fossil fuels unlikely to diminish [soon], as reliance on them will persist until nuclear energy becomes viable. Nuclear power is likely to emerge sooner, not only in terms of timing, but more importantly in its capacity to provide large-scale energy supply. To illustrate, if we were to install solar panels today, the scale required would be utopian. By contrast, if within few years clean and safe nuclear energy becomes available, a single plant could potentially supply energy to a large number of consumers. It is therefore evident that the world would go in that direction. Solar panels, by comparison, will remain ancillary - useful for individual households or apartment buildings to reduce electricity bills, but essentially confined to the individual rather than systemic level. This represents the geopolitics of the future: a far broader and more transversal vision compared to the traditional approach, yet fully integrated within a framework shaped by the decisions each country must make. I present this from a personal perspective, but it is evident that this logic takes national sovereignty into account, because, unfortunately, we remain dependent on others if we do not ensure our own national security. This security extends beyond the defence of borders to encompass the capacity to set aside a portion of domestic supply, particularly of energy material. Reducing the dependacy from energy imports by developing larger amount of domestic production or applying a strong diversification approach (more energy mix and different import routes) could potentially sustain ourselves for a larger period in the event of any disruption of foreign energy supply. This principle applies broadly across all sectors and represents a wider concern for Europe. Within the European Union, the bureaucratic structure and the

relative dilution of national identity create challenges, as individual states must navigate both collective and sovereign interests. Consequently, some countries may act independently: for instance, France with its nuclear plants, while Italy and Germany decided in the mid-1990s to abandon the nuclear program.

For this reason, geopolitics must adopt a forward-looking perspective, while simultaneously maintaining the capacity to ensure a minimum level of national resilience in emergencies. This principle applies across all sectors, from defence to the energy industry, and more generally to any industry reliant on the import of raw materials or semi-finished goods. Consider the case of the Ever Given, which ran aground in the Suez Canal. For months, this incident caused delays in the supply of automobiles, refrigerators, and other goods, as the ship was transporting chips, microchips, semiconductors, cables, spare parts, and similar critical components. The root of the problem lies in the industrial strategy: we opted to relocate production abroad, primarily due to lower costs in foreign manufacturing. Moreover, we no longer maintain substantial warehouse stock, as the industrial sector considered it inefficient to stock capital in that form. Today, this has tangible consequences: if a consumer orders a product, they may have to wait a year because no stock is held domestically. While maintaining minimal stock - say ten units instead of a thousand - may provide some emergency buffer, this scenario illustrates a broader limitation inherent to the politics of globalization in general.

III. Nicola Saldutti, Editor-in-chief of the Economics section at Corriere della Sera

Oral interview conducted on June 29, 2025.

Question: To what extent, today, does energy security influence the foreign policy of countries and the strategy of energy firms? Could we compare these elements to previous significant historical moments, such as the 1973 energy crisis?

Answer: The energy policy of countries has always been interconnected with security, because clearly energy sources are necessary not only for the operations of industries, but first and foremost for the daily life of citizens. Countries can be divided into two main categories: those that have their own energy sources, and those that do not, which make up the vast majority. If we take Europe for instance, we have Norway which disposes of oil and methane; we have The Netherlands which until a few years ago had large methane reserves; and we have Italy where we have methane, and some oil in Basilicata. But otherwise, there is a heavy dependency on imports. In recent times, the key date is that of the Russian invasion of Ukraine, for an apparently easy reason: the invasion has suddenly lead to the discovery that the excessive dependency on Russia, mainly for its gas, was tied to favourable conditions, as the price was very low, which allowed industrial systems, especially in Europe, to remain competitive. It made this possible for Italy, but above all for Germany, and we know this even if the contract prices have always been kept secret. So, we know the price was very low, and surely lower than that which, since February 2022, has reached up to 400 dollars per kilowatt-hour. Even if the gas prices started climbing even before the start of the war. So, energy security became a matter in which the public opinion is an important actor, even more than in 1973. In that year, daily life was affected by austerity measures, such as the so-called ‘domeniche a piedi’ when cars were not allowed to circulate on Sundays. At the time, awareness was mainly related to daily life, and it was not considered that the industrial system could be impacted by this variable. The ongoing war that started

in 2022, instead, marked the first time this awareness emerged. This happened in a context that was different from the 1973 one, as recent times have also been shaped by the renewable energy debate, centred for instance on wind, solar, and nuclear power. So, in 2022 we also caught the opportunity to rethink the energy mix. The first point was substituting Russian gas, which was not easy: geographically, Europe shifted its gas imports from the east to the north and south. So, we resumed relations with Algeria, Congo, Qatar, and other countries that are known for having large methane reserves, shifting our security reliance to these countries. We should note that right now we consider countries as Algeria stable, but some of them are emerging from rather complicated periods. So, the political and strategic response to these newly sought alternatives can be broadly categorized into three types. First, a geographical shift: efforts have been made to diversify the points of entry for energy resources. Second, diversification of energy sources: for example, in Italy today, renewables account for less than 30% of the energy mix. Third, investment in innovation: this includes research into new power sources and the broader study of energy technologies aimed at reducing overall systemic risk, as in the case of biofuel for motor vehicles. The other variable is mobility: in recent years, Europe has decided that, starting in 2035, the sale of internal combustion engine vehicles will be banned. Consequently, the need for electricity has grown substantially. Electricity as a source, or rather as a vector, can be generated either from traditional fossil fuels or, preferably, from alternative sources like the wind and the solar ones. So, this transformation is a major one. And it's no coincidence that it's one of the key components of the REPowerEU Plan, which is the strategy Europe has outlined to address these kinds of needs. In Italy’s case, we also have the National Recovery and Resilience Plan, which includes a very significant investment, around 70 billion euros, dedicated to the green transition. And of course, this includes the energy transition, meaning the gradual shift from fossil fuels to non-fossil, renewable sources. It's clear that in this context, price is a highly relevant factor. Even though this is a system where national governments play a significant role, it's important to remember that many key players in the energy market are state-owned. In Italy, for example, both ENI and ENEL have the state as their majority shareholder, and the same goes for EDF in France.

And in those frameworks, you have to coordinate the national energy policies with market policies, as we are assisting a huge paradox: the higher is the price of fossil fuel energy, the more competitive the alternative systems get. For instance, if oil costs 100 USD, there is an incentive for everyone to switch to alternative sources. The lower the prices of oil and gas get, the slower the transition gets, as there are forms of inertia that make cultural shifts around energy sources difficult to implement immediately. It's for this reason that the security variable has become decisive: the mistake made in response to low Russian gas prices was that many countries overlooked the need for diversification, particularly risk diversification. Such risk includes, for example, the depletion of reserves, but more significantly, as we have seen since 2022, conflict-related risks.

Question: Are there any cases, before the war in Ukraine, in which strategic operations have been carried out by ENI?

Answer: ENI's history is closely connected to Enrico Mattei, who played a pivotal role in positioning the company as an important international stakeholder. His decisive intuition was to share the royalties, that is, to exploit the reserves while sharing the benefits with the producing countries. This strategy made ENI an alternative to the famous "Seven Sisters" American oil companies, to such an extent that there remain mysteries surrounding his death in a plane crash. It is no coincidence that in recent years the Italian government has revived this concept with the so-called "Mattei Plan," which embodies precisely this idea, a strategy by a country heavily dependent on foreign energy sources. At one point, Italy's oil balance showed a deficit of 90 trillion lire. Italy is a highly industrialized country, being the second-largest manufacturing economy in Europe, and therefore requires vast amounts of energy to keep its factories running. There are sectors classified as "hard to abate" due to their high energy consumption, such as steel, certain chemical industries, cement, and ceramics. These sectors consume substantial amounts of energy. What is remarkable about Italy is that, despite lacking domestic energy resources, it has managed to develop a highly competitive

industrial system. However, this competitiveness was seriously challenged when energy prices became unsustainable, particularly around 2022. In this context, the role of companies like ENI is all the more critical, as is that of ENEL, which in recent years has undertaken a significant transition towards renewables through a mixed system. On one hand, this system keeps conventional power plants running to ensure continuity, because we must recognize that all alternative sources are so-called intermittent sources, as they do not always produce energy. The sun does not shine at night, and the wind does not always blow. To ensure continuity, thermal power plants remain operational, serving as suppliers of last resort. So, these two companies in the last years have strongly transformed, as ENI has been working a lot on new fuels and on CO_2 storage capacity. As I said before, innovation is an extremely important objective for everybody. Recently, when the U.S. President used the phrase 'drill, baby, drill', openly suggesting that Americans could safely resume oil exploration everywhere, thereby casting doubt on the energy transition, I began to wonder whether something similar could happen in Europe. This would be more difficult here, not only due to the EU's legal framework, but also because alternative sources have become established market options. Today, solar and wind energy are economically competitive, even if at the beginning they needed very strong incentives, which in Italy, reportedly, have amounted to 120 billion euros.

Question: According to you, can we predict how the energy market could shape global geopolitics in the near future? For instance, are there any weak spots that should be dealt with?

Answer: I would start from the fact that global energy reserves are unequally distributed, as they are concentrated in Saudi Arabia, Qatar, Iran, and so on. Secondly, the United States has become the world's leading oil exporter, shifting the dynamics of the global oil market, which were previously centred on the Middle East. So, you have a geological factor which you cannot influence. However, a significant shift has been driven by alternative energy sources such as wind, geothermal, and solar power. The point is that this kind of energy needs large attention from public policymakers, which

have to stimulate this kind of production. Take the cost of solar panels, which has declined at a pace far exceeding the rate predicted by Moore's Law for computing advancements. So, the competitiveness of these energy sources has significantly grown. In this case as well, a central question remains: where can these energy sources be effectively produced? When it comes to solar energy production, it's clear that it performs better in the Southern Hemisphere than in the Northern Hemisphere. This underpins, for example, a strategy pursued by ENI: producing energy in North Africa and transmitting it via cable to Northern Europe. The point is that, generally, industries are not located where there are energy sources: this also concerns Italy. All systems and solar power plants are developed in the South, but the output gets mainly distributed in the North, so efficient transmission, strong digital infrastructure, and other strategic investments are all crucial. And in this way, you can reduce a part of your dependency. Then, clearly there is the nuclear option, which brings a substantial effect; some countries have chosen and kept it, and others, like Italy with the 1987 referendum, opted out of it. A framework law has just been passed to reopen discussions and assessments on nuclear energy. However, the timeline remains uncertain—if a new plant is ever built, it could take decades from the enactment of the legislation to the plant becoming operational. Meanwhile, both industry and citizens urgently need access to energy for their daily lives. There's another important element to consider. Earlier, we spoke about Africa. While Africa's current energy demand is still very low compared to that of the United States or Europe, it is expected to grow significantly, much like China's. As the global community's requirements for well-being increase, so too will global energy demand, as confirmed by IEA forecasts. This means we will face a dual challenge: a gradual phasing out of fossil fuels and a simultaneous rise in demand, which will be increasingly global in scope. In this context, political security becomes a critical factor. I believe countries that are strategically stable and solid will gain even more importance in the energy landscape. One example of this is the growing use of regasification plants. If you look at the ships arriving in Italy to supply these terminals, nearly 50% of them come from the United States. From a strategic standpoint, especially as part of the NATO framework, this is clearly a positive development.

However, from an economic perspective, it's less advantageous: a shipment from the U.S. is much more expensive than one from Qatar. So, we must weigh both economic and strategic considerations. To your question about which parts of the world are likely to be more vulnerable, the answer is: those that need more energy but lack the capacity to scale up domestic production. Take, for example, the controversies in Italy around the regasification plants in Livorno and Piombino. On one hand, the public demands low-cost energy, and national governments have intervened multiple times to help cover energy bills. On the other hand, many citizens oppose the construction of such facilities, just as they do with waste-to-energy plants. At this point, we move beyond economics and into the realms of politics, society, and even psychology. It's as if we need a new form of energy education, an effort to raise awareness among the public. People generally understand that fueling their car requires oil, vaguely originating from the Middle East. But they're far less aware that running their household appliances, like an oven, also depends on energy sources that need to be diversified.

IV. Ciro Sbailò, Member of the Scientific Committee of Med-Or (Leonardo Spa Foundation) and founder of the Geodi Study Center (Research Center for Geopolitics and Comparative Law)

Oral interview conducted on July 23, 2025; written remarks, integrated with the transcript, were received on July 30, 2025.

Question: What is geopolitics today?

Answer: Geopolitics is an operative and generative knowledge that weaves together power, space, and order in a continuous dance of forces and meanings. It is not limited to mere representation or description of territory or power relations; it acts, shapes, and orients political reality, configuring trajectories and producing configurations of meaning and power. It is a strategic intelligence capable

of reading, interpreting, and constructing the complexity of the world, transforming a simple map into an active device of governance and control.

Since antiquity, reflection on power in space has been central to understanding political order. Plato, in his analysis of the polis, conceived the community as a harmonic and dynamic order, in which the logos regulated the tensions between laws, justice, and the material forces that guaranteed stability. This philosophical dimension of power as an ordered tension is the deep root of geopolitics, understood as an embodied political science, both a reflection and a constituent of lived reality.

Thucydides, through his narrative of the Peloponnesian War, offers the founding paradigm of geopolitics as performative knowledge. Not a neutral chronicle, but a narrative that unveils the deep nature of power, fear, interest, and honor—elements that shape order and disorder in the political world. In his work, narration is already intervention, since the very description of conflicts contributes to determining their course and perception. From this awareness arises a geopolitics that intertwines knowledge, decision, and action in a continuous play of forces and meanings.

Historically, with the Peace of Westphalia, international law sought to circumscribe political order within clear normative boundaries, imagining sovereign states separated by a fabric of rules. This distinction polarized the relationship between geopolitics and law: on one side, the mutable and often conflictual field of power and interests; on the other, the formal stability of international norms. However, today this separation has dissolved. International law, often unable to effectively govern the complexity of global relations, has lost operational centrality and political credibility.

In this context, comparative law assumes a central role as an original epistemic dimension of public law thinking, representing the locus of creative tension and continuous reflection among diverse models of order, legitimacy, and governance. It is the practice that precedes and nourishes public law—a form of knowledge that exposes norms to a living and productive confrontation, capable of generating new normative and institutional configurations. As shown in Platonic-Aristotelian traditions, the polis is the field of dialectic between law and force, inside and outside, order and disorder. Today, in a complex, networked, and fluid global space, geopolitics and

comparative law merge into a new grammar of power. In this space, the boundary between observer and observed dissolves, just as in quantum physics: the act of observing is an integral part of the observed phenomenon, and every geopolitical analysis is already a performative intervention in the strategic field. Maps and strategies are no longer mere reflections but agents of transformation.

Geopolitics thus configures itself as an intelligence of becoming, an art of inhabiting complexity without losing coherence, a practice of constructing sovereignty in a continuously changing world. Comparative law, for its part, provides the epistemic and normative device that allows understanding and governing this complexity, offering tools to mediate between plurality, differences, and crises.

In this way, geopolitics becomes the strategic physics of power, and comparative law its epistemological laboratory, together capable of guiding decisions in an increasingly interconnected, uncertain, and performative world.

Question: To what extent does energy security influence the foreign policy of countries and the strategies of energy companies today, compared to other historical moments characterised by particular tensions?

Answer: The theoretical premise to my answer is that the energy question today is a crucial challenge, that questions our paradigms of geopolitical and *geopolitical* analysis. The reason is the following: we are in a phase of change occurring at an exponential pace. Technical development outpaces that of law and politics, fuelling the gap between these two points of view. We need to find new analytical instruments and categories, as the ones we dispose of are obsolete. The issue is that geopolitical and *geolitical* analyses have developed in a context characterised by the Newtonian and Galilean revolution, with linear reasoning and deterministic laws. In the meanwhile, reality has mutated: not only have some things changed, but the very way in which change occurs has also transformed. This keeps us always one step behind events.

Ongoing changes on the planet, beginning in the 1980s and 1990s, have experienced a strong acceleration rate. Somehow, the world is becoming increasingly fluid and interconnected, and this makes global dynamics increasingly less describable using mechanistic, Newtonian analytical tools, while the planet's behaviour is increasingly reminiscent of what happens in the subatomic world. This is the International Year of Quantum Science and Technology, as proclaimed by the United Nations. There are dynamics increasingly reminiscent of the subatomic world, such as those between the observer and the observed. I'm telling you this because it is the epistemological framework within which my answers will move.

Regarding the first question, energy is no longer merely the fuel of foreign policy but has become the fundamental grammar that structures and governs it. The issue does not stand anymore only in flow stability, but in the fact itself that we are thinking about implementing national strategies to achieve energy autonomy. So, while in the past, up to the 1980's and 1990's we generally aimed at having, now we have to be energy producers. This concerns large companies, such as Eni, which are parastatal or hybrid in nature; they no longer simply follow geopolitics but actively influence it through the development of interconnections. We live in a context in which interconnection between actors A, B and C is more important than their identification. This appears as a logical-mathematical issue, but this is what we are working with. For instance, today we first analyse the directrix, i.e. the idea and strategy, and only later we shift our attention to the related interconnected actors. A perfect example is the Imec Corridor, which does not only involve the energy market but also the Cotton Road.

Question: In your opinion, what is a significant case of the instrumentalization of energy that is often underestimated?

Answer: Energy is clearly instrumentalised. Russia has used its contracts to fragment Europe during the first years of this century. Today, however, there are stronger examples, given the

aforementioned primacy of interconnection over the interconnected entities. Everything related to the refining and logistics infrastructure is involved. Those who control the transformation process of energy and its distribution set the rules.

Question: Are some countries more exposed to energy-related coercion? Has renewable energy had an impact in these regards?

Answer: Those most exposed are the ones least willing to question themselves and to promote interconnections. The most exposed are those who do not control the places where things are signed, where things are regulated, and where things are allocated. Thus, there is a twofold exposure: on the one hand, the most exposed are democracies, because the criterion of transparency rigidifies the control over real decision-making processes, and therefore all the—so to speak—hidden interconnections that are formed escape our capacity for representation. The importance of these interconnections on the geopolitical level is fundamental: one need only think of the internal dynamics within the Islamic Ummah and of the conflict of interconnections, for example, between the Tripoli–Ankara axis and, on the other hand, the United Arab Emirates and others. On the other hand, there is also a strong exposure of the less flexible, authoritarian regimes, because they are less willing to change, and therefore this exposes them to entropic drifts.

Question: Are oil sanctions effective instruments?

Answer: I would answer positively, but only if they are developed within a coherent strategy. For instance, a transnational ecosystem has been built against Iran, along with the imposed sanctions, involving banks, assurance companies, and access to the US Dollar. This strategy worked. In the case of Russia, its performance was notably weaker, as there was no coherent and systemic narration.

Question: How do you think the energy market will shape global geopolitics in the coming years?

Answer: Certainly, there will be a growing orientation toward Asia. Not only in terms of demand, but also in relation to its standards. Who will regulate the green transition within the BRICS+ countries? Whoever will, will also dominate over the fossil fuel market. Italy is involved, due to the existing energy corridors, like in the case of the aforementioned Imec Corridor. Moreover, interoperability between energy, data and security is also a core issue: the energy market is particularly exposed to the fluidification of these global processes. Many of the future transformations will pass through energy. Not only that, but we are also speaking of cyber-energy. For instance, who controls the digital interfaces of energy flows? Those who control them will probably have no need for cannons.

V. Roberto Sommella, Editor-in-Chief of Milano Finanza

Answers received in written form on July 07, 2025

Question: To what extent does energy security influence the foreign policy of countries and the strategies of energy companies today, compared to other historical moments characterised by particular tensions?

Answer: The Russian invasion of Ukraine has taught us, at great cost, how vital energy security is, and even more so, energy autonomy. In fact, energy independence is now a key component of foreign and defence policy. Consider, for example, the work done by Eni since 2022 to reduce Italy's reliance on Russian gas.

Question: In your opinion, what is a significant case of the instrumentalization of energy that is often underestimated?

Answer: The price set on the Amsterdam gas exchange is not entirely immune to speculation, just as the various strategies used to bypass sanctions against Russia undermine the principles of a truly free market. Alongside the euro and the single market, what is clearly needed is a unified energy market with a single buyer, similar to the approach taken with vaccine procurement. As for the Italian domestic market, it is time to reconsider the implementation of full liberalisation and to reduce the tax burden on energy bills.

Question: Are some countries more exposed to energy-related coercion? Has renewable energy had an impact in these regards?

Answer: Countries that do not have energy autonomy, such as Italy, are obviously more exposed. But even those that are strongest in renewables, such as Spain, are still at risk due to the variable output that this type of energy source can provide in times of need.

Question: Are oil sanctions effective instruments?

Answer: There are no specific sanctions that are effective, the ones imposed on Russia have not delivered the expected results so far.

Question: How do you think the energy market will shape global geopolitics in the coming years?

Answer: Whoever has the cheapest energy will be stronger than the other countries, much like what happened with the advent of nuclear energy.

VI. Matteo Villa, Senior Research Fellow at ISPI

Oral interview conducted on June 23, 2025.

Question: To what extent, today, does energy security influence the foreign policy of countries and the strategy of energy firms? Could we compare these elements to previous significant historical moments?

Answer: My premise is that I teach at the ISPI Executive Master program in Geopolitics of Energy, and I cover security from a geopolitical perspective. The primary variable to consider is the extent of your influence on the market. Secondly, influence over something isn't always voluntary: the market reacts to what happens. Maybe your primary or secondary goal could be to influence the market, but the latter can also react to geopolitical shocks, which is different. My third point is that the market does not always stay the same: depending on what is happening in the market before the geopolitical shock, or before the targeted action that aims at producing a shock, there can be conditions related to supply and demand. If supply greatly exceeds demand, the shock can only be limited. If, on the other hand, the market is demand-driven, as it was discovered to be the case in 1973, because the prices were regulated, the shock can be very strong. Moreover, the 1973 shock led to profound insights and realizations: the price was set by companies, so it was not a free-floating market price. Therefore, there was a sort of "inverted cartel", and that was not a "true price", but somehow a political one. So, in 1973 OPEC understood that they held "something important" in their hands. Today, we can add that the key factors include the market, the fact that you do not always want a shock, and the potential consequences your actions may have on yourself. It's obvious that

there have been many uses of it in this sense. For instance, during the 1980s Iran-Iraq War, both countries tried to influence the oil market and the outcome of the war: for instance, Iraq was hoping for the United States to join the war, which eventually did not happen. Another example is the 1991 Gulf War, when the US intervention caused a price shock, which did not last much though: first, the invasion of Kuwait caused a little price shock, and in contrast, the western counter-reaction at the Baghdad Port provoked a relatively light price increase. Compared to the 1973 oil shock, this highlights how market conditions can significantly influence both the duration and scale of economic consequences. I want to stress that these shocks are byproducts of acts of war, the United States did not want an oil shock. Today, it's clear that you can try to influence the market in a number of ways. Until recently, efforts to influence the market were primarily economic: for example, OPEC's actions over the past five years. During this period, Saudi Arabia struggled to manage supply in an attempt to keep prices sufficiently high. I would like to mention two more points. In 2022, it wasn't just the oil market that was affected: the entire energy market felt the impact. It marked the most recent deliberate geopolitical use of energy prices, both for gas and oil. As an energy superpower, something Russia remains despite its relatively modest economic size, a country can wield significant influence over the energy market. When it invaded a country, oil prices surged almost immediately. In this way, you get a byproduct of war that is perfect for financing the invasion. Almost everyone recognizes that oil is impossible to sanction effectively. Efforts have been made by Europe to reduce the profit margins Russia earns from oil exports, essentially through self-imposed sanctions. Russian oil continued flowing, particularly to India, where it was refined and then resold to Europe. In this way, Russia took a financial hit by offering oil to India at discounted prices, India profited from this process, and Europe managed to maintain its oil supply without significant disruption. Russia lost tens of billions of dollars through this strategy, but obviously this does not mean that they did not increase oil revenues in 2022, and in a short period of 2023, too. Secondly, we must consider gas, which is even more striking: it is a regionalised market, and Russia gave us half of its extracted gas before the war. This meant that if they had "turned off the taps" correctly, they would have made the

prices skyrocket. And they did that, as by reducing their supply to Europe by nearly two thirds, the price surged to six times its previous level. The result was that they doubled their revenues from Europe despite the lower gas outflow. This is what happened during the first year, though: the revenues have been plummeting for two and a half years. I would also remind you that you can deliberately leverage prices to your advantage if, as in this case, you are a superpower producing nearly 8-9% of the world's oil and controlling nearly half of Europe's gas market. Lastly, Iran finds itself in a completely different position: it is not an energy superpower, but rather a "relevant power". And any attempt to close the Strait of Hormuz would be tantamount to suicide. So, Iran's condition is totally different from Russia's. This is the present situation: influencing prices for geopolitical ends today does not appeal much. Even because in the last years we have remained in a supply-driven market, so prices are generally trending downward, and every price peak is not similar to that of 1973.

Question: Do you think that energy and oil sanctions are effective? For instance, regarding what happened in 2022 in relation to the invasion of Ukraine, or in relation to failed petrostates, like Venezuela.

Answer: Regarding energy sanctions, looking at Iran, we can conclude they are effective, as it has a so-called "crippled economy". However, like in the aforementioned case, they have to be targeted, seriously implemented, and coordinated. And they have to attack a small to mid-sized state. With regard to Russia, the G7 has introduced a price cap that limits the maximum price per barrel of Russian oil. I have done a lot of research on the topic, and I have always claimed that it is a deeply flawed idea: from an economic perspective, you cannot impose a fixed price cap. From a political and technical standpoint, you can do it, as it is a "signalling game". The only viable course of action may be to impose a targeted price reduction; however, it is important to note that sanctioning a superpower often results in greater harm to the sanctioning party than to the target itself. If I ever managed, for example through a naval embargo, to block Russian maritime exports, that would

amount to cutting off 4-5% of the global oil supply. The same percentage is what Arab countries took away from the market in 1973 to cause a global recession: the rigidity of oil demand is extremely strong. Today it is a bit different from how it was then, but it is still very rigid. If you take away 5% of the supply, prices skyrocket. So that was not a viable option, and we knew that from the beginning. We could only attack Russia in certain ways. Thus, the price cap was essentially self-imposed, since for months, in 2022, there had been no obligation to refrain from importing Russian oil. Roughly from the beginning of March to November, as in December the G7 imposed the price cap on oil prices. The "self-sanction" materialised as Western oil companies stopped importing Russian oil: the impact on prices was evident when comparing the global benchmark Brent crude to the Urals price, which is one of the two primary Russian oil grades. Before they were similar, and after the Urals price dramatically dropped by 30 USD, keeping this margin consistent despite volatility in oil prices. A fixed price cap is ineffective: keeping the same parallel as before, if the Brent crude price rises to $100 per barrel, it is unrealistic to require Indian refineries to continue importing at $60 per barrel. Instead, as an incentive, it would be more practical to say: "we will not impose sanctions if you purchase at a 20% discount to the market price". And this strategy works, as when the market price is 60 USD, a 20% reduction lowers the oil price to 48 USD, which is already a huge discount. And this "flexible price cap" would be reasonable across any point of market fluctuation. The price cap is dead *de facto*, as it works in terms of discounts, but it has never been proven to be effective as a political statement. If you look at the price cap on Russian oil throughout the months, progressively the discount lowered from 30 to 15 USD, and today it can be argued to have reverted to the pre-war conditions. So strategically, it would have been better to threaten sanctions against countries importing Russian oil, were they not to purchase it at a fixed discount rate. The strategy we implemented instead turned out to be a failure. With regard to natural gas, sanctions have never been implemented. Poland has stopped letting it flow through the gas pipeline that runs beneath its territory, called Yamal. For years, Russia also chose not to let its gas run through Ukraine, until the gas transit contract was officially not renovated last January. The North Stream pipeline had *de facto* been shut

down by Russia, with the excuse that in 2022 a turbine had not been properly maintained; after more than one month and a half, the pipeline was sabotaged.

Question: Could you name a significant case of energy weaponisation which is often underrated but that could shed light on more aspects of this theme?

Answer: Russia has always used the energy market to influence us: we have never underestimated this threat, but we always thought it was targeted and relatively minor, for instance during the 2006 and 2009 winters. And we also thought it was in relation to something specific. But at the end, in 2022 they used the "ultimate weapon", which consisted in influencing the energy market and convincing Europe that this vast basin, the only one close to us and which allows us to maintain low prices, is also highly risky. Before we did not think that would be possible. In general, I would not argue that there are events we underestimated. At most, sometimes, we overestimate them, because we do not consider the condition of the global market. Just think about the Strait of Hormuz today.

Question: Are some countries more vulnerable to energy coercion than others? Furthermore, what role does renewable energy play in this dynamic?

Answer: Focusing on pressure exerted through hydrocarbons, we can start off by claiming that the oil market is different from the gas one. Today, gas is used for heating and generating electricity, while oil is used for mobility, except from the Middle East. It's clear that a country is more or less vulnerable depending on how much relies on a single energy source, always considering that the European electricity market is interconnected and integrated almost everywhere. So, electricity prices can fluctuate, but not dramatically. In fact, in France, where 70% of the electricity is generated by nuclear implants, the prices are almost at the same level as Italy's. Thus, to a certain extent, our

vulnerability depends on the composition of the European electricity mix, and generally, even in the case of a common shock like the 2022 one, the prices across European countries do not vary a lot. We chose to have gas indexed to the TTF in Amsterdam, having a common impact when gas prices vary. The issue is that, as in the case of Italy where 40% of electricity is produced using gas, you will pay significantly more compared to those who use gas for only 5% of their electricity generation. First, all the electricity markets in Europe use the same method, which is that of the marginal unit, so if you need gas to clear the market, all the electricity prices will be higher. More specifically, regardless of your electricity mix, if the marginal unit setting the market clearing price at a given hour is gas, then the price of electricity will align with the price of gas. In that scenario you can try decoupling, but it is complicated given the market signals that would be generated. Going back to the original question, renewable energy is not the only relevant variable in vulnerability, as also other choices are involved. In 2022, we calculated a vulnerability index to assess which countries were most at risk from Russian gas disruptions. Although the situation today has not changed significantly, the index primarily reflected the dependence of each country's energy system on Russian gas. However, such indices can be misleading because they focus solely on the share of Russian gas imports without considering the overall role of gas within a country's broader energy mix. For example, by that measure, Poland would have ranked as the most vulnerable, as 90-95% of its gas came from Moscow. But since Poland's energy system was primarily based on coal, the implications differed significantly. But notice that it is not only renewable energy that can make you less vulnerable: in some cases, such as Poland's, it is carbon that makes you less vulnerable. The strategy implemented by Germany during the first year was increasing coal consumption.

Question: How does the reliance on foreign technologies for renewable energy generation affect dependency on their supply chains and maintenance services?

Answer: The timing and methods involved in installing renewable energy technologies, which generate power for over twenty years, differ significantly from the timing and approaches required for using fossil fuels. Gas can be stored for half a season, but additional supplies will be required thereafter, so a supply-disruption-related crisis could start after three to six months. In Europe, oil can also be stocked to secure supply for three months. If you have a renewable energy facility, the only parts you will have to substitute within one year are the ones you installed twenty years ago. So, if a total embargo is imposed on you, next year you will only produce 5% less energy. It will gradually decline to very low levels, but it still represents a long-term dependency, which industrially offers a foundation for much more. Dependence on Chinese solar panels allows for a longer timeline in the pursuit of energy independence. It is a totally different type of dependency. It's not necessarily less concerning, it just happens in a different way. In my view, the energy transition gives you more breathing room in terms of timing. At the same time, it exposes you to different types of risks: for example, the power grid becomes more vulnerable. An electricity market based on real-time energy generation is much more complex to balance compared to a system based on fossil fuels.

APPENDIX C: ENGLISH TRANSLATIONS OF ITALIAN DIPLOMATIC DISPATCHES

I. Consul Beauregard to the Minister of Foreign Affairs, Dispatch R. R. 121/20, Havana, March 5, 1901

THE CONSUL IN HAVANA, BEAUREGARD, TO THE MINISTER OF FOREIGN AFFAIRS, PRINETTI[1]

R. [r]. 121/20.

Havana, March 5, 1901.

I have the honour to present to Your Excellency my view of the current political situation on the island of Cuba.

The American newspapers appear to suggest that the population will not protest too much, except merely as a formality, against the protectorate that the United States is about to impose on the country.

This is not, and cannot be, the case: in Havana and in other cities there are indeed many families who, for particular interests and above all due to the so-called people of color, who might seize the opportunity to commit outrages, would willingly submit to Washington's demands. But these families, being a small minority, constitute the conservative party.

This party, which would provide the largest number of honorable and capable men, has always been kept away from political affairs by the United States, which deliberately placed at the head of

[1] Beauregard. (1901, March 5). *R. R. 121/20. Avana, 5 marzo 1901*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Terza serie: 1896–1907. Volume V (16 febbraio – 31 dicembre 1901)* (Doc. No. 91, pp. 44–45. Istituto Poligrafico e Zecca dello Stato, 1979.

the civil government the revolutionaries who, through their ineptitude, served the designs of the invader, thereby disgusting the country.

As a result, since trade with other nations has been hampered, and with the metropolis outright blocked by the current customs tariffs, Cuban landowners and merchants have sent two commissions to try to obtain at least equal treatment for sugar and tobacco, the island's only sources of wealth, with the other nations of the Americas. But they obtained only mockery and humiliation. President McKinley did not, in fact, lower the exorbitant duty imposed on Cuba's products, but by simply removing the meager export duties, he dealt a terrible blow to the finances of the country.

As if this were not enough, import taxes on essential goods are continually being increased, and yesterday a dispatch from Washington announced yet another significant increase in import taxes on cotton fabrics, the only clothing of the people, and on petroleum, already extremely expensive, entering the island, while electric light and gas, in the hands of American companies, are downright overpriced.

At first, the United States no doubt believed it could, by such means, force Cuba to request annexation. But since that effort failed, they now want, by pushing things to the extreme, to achieve by arms what they could not accomplish by underhanded methods, convinced that Europe, which they so despise yet also fear, will be deceived.

Because of the hostility dividing whites and blacks, the scarcity of the population, and the disorganization of its administration, Cuba is certainly not in a position to govern itself. Nevertheless, I have no doubt that when the protectorate, in whatever form or under whatever name, is decreed, the population, especially the people of color, will take up arms in the eastern part of the island. And although they may not be able to resist as long as the Filipinos, they will nonetheless give the invaders considerable trouble.

Most people believe that matters are about to be decided, but in my opinion, it is possible that the men in the White House in Washington may delay the matter until autumn for fear of the summer season.

In any case, the announcement of a revolution should not come as a surprise, and I have therefore considered it proper to inform Your Excellency of the political situation of the country.

II. Minister Cucchi Boasso to the Minister of Foreign Affairs, Dispatch T. Gab. 3859/269, Sofia, May 30, 1915

THE MINISTER IN SOFIA, CUCCHI BOASSO, TO THE MINISTER OF FOREIGN AFFAIRS, SONNINO[2]

T. GAB. 3859/269.

Sofia, May 30, 1915, 11:30 a.m. […].

Brenna telegraphs as follows: "According to what I have been assured, the situation in Constantinople is desperate. There is a shortage of coal, petroleum, and grain. The Committee of Union and Progress is said to have held a tumultuous session with a strong reinforcement of the Turkish demand for neutrality in the Austro-Italian conflict. Enver Pasha's fierce determination is said to be making a warlike tendency prevail. An anti-Italian popular demonstration was prevented by the police."

[2] Cucchi Boasso. (1915, May 30). *T. Gab. 3859/269. Sofia, 30 maggio 1915, ore 11,30 (per ore 18,15 dell'1 giugno)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)* (Doc. No. 55, p. 27). Istituto Poligrafico dello Stato, 1973.

III. Minister Fasciotti to the Minister of Foreign Affairs, Dispatch T. Gab. R. Sp. RR. 969/338, Bucharest, July 31, 1915

THE MINISTER IN BUCHAREST, FASCIOTTI, TO THE MINISTER OF FOREIGN AFFAIRS, SONNINO[3]

T. GAB. R. SP. RR. 969/338.

Bucharest, July 31, 1915, 8:30 p.m. […].

The Minister of Finance came to see me this morning and explicitly and clearly stated once again that it is absolutely impossible to talk about a fixed date for Romania's entry into action. Romania's role is neither to save Russia (a task for which, moreover, its forces would be unequal) nor can it be; rather, it is only to cooperate with Russia when it is able to undertake a serious advance. He added that Romania would have made a serious mistake if it had engaged in the war when the Russians were on the Carpathians, as it would have then been swept away in the Russian retreat due to lack of ammunition, and that even after Brătianu was wrong to indicate a fixed date which he knew he could not maintain. On the other hand, the Minister of Finance confirms he considers it fair to leave to Serbia the southern part of the Torontal district facing Belgrade.

Regarding grain exports, the Minister of Finance told me that the Romanian government cannot do without allowing them again. However, he confirmed that in no case will it tolerate the transit of war material either to Turkey or to Bulgaria. Oil export has also been prohibited to Bulgaria (3).

(3) Retransmitted to Paris, London, and Petrograd with *t. gab. r. sp. 781* of August 2, 9:30 p.m.

[3] Fasciotti. (1915, July 31). *T. Gab. R. Sp. RR. 969/338. Bucarest, 31 luglio 1915, ore 20,30 (per ore 18 dell'1 agosto)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)* (Doc. No. 509, p. 308). Istituto Poligrafico dello Stato, 1973.

IV. Minister Fasciotti to the Minister of Foreign Affairs, Dispatch T. Gab. RR. 1090/348, Bucharest, August 7, 1915

THE MINISTER IN BUCHAREST, FASCIOTTI, TO THE MINISTER OF FOREIGN AFFAIRS, SONNINO[4]

T. GAB. RR. 1090/348.

Bucharest, August 7, 1915, 9:40 a.m. […].

An agreement is being signed between Romania, Austria, and Germany, under which the three countries commit to allowing the passage of goods destined for one of them or in transit, with the exception of war materials and items that could be used for military or naval purposes. The lifting of the grain export ban is imminent. The ban on the export of oil to Bulgaria, mentioned in my telegram Gab. no. 344, is definitive.

V. Minister Cambiagio to the Minister of Foreign Affairs, Dispatch R. 318/43, Mexico, April 16, 1917

THE MINISTER TO MEXICO, CAMBIAGIO, TO THE MINISTER OF FOREIGN AFFAIRS, SONNINO[5]

R. 318/43.

[4] Fasciotti. (1915, August 7). *T. Gab. RR. 1090/348. Bucarest, 7 agosto 1915, ore 9,40 (per ore 10 dell'8 agosto)*. In Ministero degli Affari Esteri (Ed.), *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)*, Doc. No. 547, p. 336. Istituto Poligrafico dello Stato, 1973.

[5] Cambiagio. (1917, April 16). *R. 318/43. Messico, 16 aprile 1917*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Quinta serie: 1914–1918. Volume VII (1° gennaio – 15 maggio 1917)* (Doc. No. 748, pp. 556–557). Istituto Poligrafico e Zecca dello Stato, 1978.

Mexico, April 16, 1917.

Immediately after receiving official news of the state of war between the United States and Germany, the new North American Ambassador, Mr. Fletcher, notified the Mexican Government of the state of war through the note attached here in copy (1). The Mexican Government responded through another note, also attached here in copy (1), delivered by Mr. Garza Perez, the Undersecretary currently acting as head of the Ministry of Foreign Relations. In it, Mr. Carranza expressed his regret that the United States Government had not been able to settle its differences with Germany peacefully, and affirmed that the Mexican Government—remaining inspired by the principles expressed in its note to the neutral powers dated February 11 (see my report No. 35 of March 18) (2)—would leave no means or effort untried in contributing, in any way possible, to the achievement of peace.

This response, which runs counter to diplomatic customs, gave the impression that President Carranza's government, known for its Germanophile leanings, continued to uphold the idea already hinted at in its previous note to the neutral powers, namely, to block the shipment of any aid or war materials to the belligerent nations. The Mexican Government could do this by prohibiting the export of oil from the country; an export of great importance, having reached more than 40 million barrels in 1916 (6,447,524 cubic meters of crude oil). It also caused some concern in diplomatic circles that the Mexican Government, which at this point has become close to countries that have entered the global conflict, has not declared its neutrality. Therefore, Mr. Carranza was well advised when, in his address to the Congress last night, as I had the honour of reporting to Your Excellency in my telegram No. 11 of today (2), he solemnly declared that the Mexican Government would pursue a policy of the most rigorous and strictest neutrality in the European conflict.

Conflicting rumours spread throughout the capital after news broke of the United States' entry into the war. The Germanophiles, who still constitute the vast majority here, anticipated even stronger support from the Mexican Government for the Germans against the hated United States, including a ban on oil exports, permission to establish naval bases in the Gulf of Mexico, the cession of wireless

stations to Germany, and so on. On the other hand, those favouring the Allied powers hoped the United States would exert increasing pressure on the Mexican Government until it aligned itself with them against Germany.

However, the Mexican Government has the greatest interest in maintaining the strictest neutrality in the conflict, as if it were to actually hint at offering serious support to Germany, the United States could not allow it, and once they have at their disposal strong military forces, they could quickly invade this country, initiating the kind of intervention that has been predicted a lot of times and which many believe would be the country's only salvation, given that after seven years of revolution and civil war, the rule of liberty and justice has yet to be restored. Nor could the Mexican Government, owing again to its Germanophile stance and the antipathy toward the "gringos" (as the Americans are commonly called here), which is perhaps its main reason, be willing to enter the war siding with the United States, unless subjected to strong external pressure by the latter.

Only a slow, skilful, and continuous effort by the North American Government, accompanied by some gratification to the self-respect of the current Mexican Government, and especially through some economic and financial concessions, could one day bring Mexico to openly side, despite its natural repulsion, with the United States.

By way of curiosity, I enclose an interview from the Mexican newspaper Excelsior with the German Minister, Mr. von Eckardt, in which he declares that no nation will be completely defeated at the end of the war, and that Germany will continue to command the same respect it deserves today, from both nationals and foreigners.

(1) Not published

(2) Not published

VI. Ambassador Bonin to the Minister of Foreign Affairs, Dispatch T. Gab. Posta 1320/345, Paris, June 20, 1918 (Collective telegram originally in French)

THE AMBASSADOR IN PARIS, BONIN, TO THE MINISTER OF FOREIGN AFFAIRS, SONNINO[6]

T. GAB. POSTA 1320/345.

Paris, 20 June 1918 […].

Collective telegram from the ministers of France, England, Italy, and the United States in Jassy:

"To complete the information already provided by the telegrams of March 22, 26, 30 and April 24 and 25 (3), we report among the conditions of peace imposed on Romania those that best highlight the monstrous hypocrisy and insatiable greed of German imperialism.

1. - The Germans have required in one of the protocols the mention that the treaty entails neither annexation nor indemnity. As for annexations, the "condominium" of Dobruja and the "rectifications" of the border along the Carpathians take away from Romania approximately 26,000 square kilometres and more than 800,000 inhabitants, representing one tenth of its total population.

The strategic reasons put forward to justify the rectifications of the frontier are a ridiculous pretext. In fact, if the Central Powers are victorious, Romania, which has become a German colony, cannot be a danger to them. On the other hand, they cannot ignore that its integrity would be restored by the victory of the Entente. The truth is that these rectifications, which encompass the richest forests of the Carpathians, serve no other purpose than to supplement the hunts of the Hungarian feudal lords

[6] Bonin. (1918, June 20). *T. GAB. POSTA 1320/345. Parigi, 20 giugno 1918 (per. il 26)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Quinta serie: 1914–1918. Volume XI (1° giugno – 3 novembre 1918)* (Doc. No. 92, pp. 80-82). Roma: Istituto Poligrafico e Zecca dello Stato, 1986.

and to secure the fortune of forestry companies through the grabbing of timber, in which German and Austro-Hungarian leaders are interested. It would be interesting to expose this war aim to socialist circles in Germany and Austria-Hungary.

The Germans claim that these rectifications affect only deserted regions. However, they annex to Hungary 170 villages with a population exceeding 130,000 inhabitants. This population represents the purest element of the Romanian race, which, during successive invasions, had sought in the high mountains an inviolable refuge under Turkish domination.

Finally, the conditions granting Germany a monopoly over the exploitation and sale of petroleum, as well as cereal exports, represent yet another form of unlimited war indemnity. For cereals alone, and for the current year, between the real value of these foodstuffs and the prices imposed by Germany… (1).

It must not be forgotten that the Austro-Germans reserve the right to fix the export quantities, which are to be assessed not by the size of the harvest but by the needs of the Central Powers. This clause allows, after the achievement of peace, to impose on Romania a rationing that could go so far as [to result in] famine.

Moreover, the prices of cereals bought by the Central Empires must be brought forward by the Romanian Government, to which they will open a current account, that they will, or will not, settle at their discretion.

The treaty sets a deadline for the approval of the peace by the Romanian Parliament… (1) without requiring any ratification. Thus, the inertia of any one of the involved governments will suffice to prolong indefinitely, for the benefit of the Austro-Germans, the exorbitant advantages they derive from the theoretical state of war. As a precedent one may cite the Peace of Bucharest of 1913, which has still not been ratified by the Bulgarian Parliament.

Ratification by the Romanian Parliament will be devoid of any legal basis. In fact, this parliament will have been elected under German bayonets, without the participation of the two great historical parties, without the participation of soldiers who could not return to their homes, and under

an electoral law abrogated by the dissolved Parliament, which alone had the authority to establish a new regime on the basis of universal suffrage, whose principle was already voted. Finally, the choice of candidates has been submitted to German authorities, despite the guarantees they already obtained from the abstention of Entente parties and from the prior investiture of Mr. Marghiloman.

Far from even partially liberating Romania, the peace will ensure its subjugation and ruin. Six enemy divisions will continue to occupy its territory even after ratification, which Germany may postpone for as long as it wishes. Railways, river navigation, post offices, and telegraphs remain in the hands of the enemy. A German delegate is placed in each secondary Ministry at the request of the Romanian Government. Under the reduction imposed by Germany, Romania will retain only police forces. Military equipment and munitions are placed in deposits in occupied territory under the custody of the German command.

The Germans have created a German agricultural exploitation company with a capital of 80 million. This company, through disguised expropriation in the form of long-term compulsory leases, concluded under the occupation and recognized by the peace treaties, seeks to monopolize Romanian agricultural production. This is yet another speculation of Austro-German capitalists, worth denouncing to the Social-Democrats.

Ordinances promulgated by German military authorities on the eve of the signing of the Peace Treaty force the entire male population of the occupied territory, that is, two-thirds of Romania, from ages 14 to 60, to labour ordered by German authorities. Refusal to obey would entail deportation, imprisonment from one to five years, and in certain unspecified cases, the death penalty.

In summary the treaty imposed on Romania is the most cynical denial that Germany's actions have ever reflected its declarations. It entails the barely disguised annexation of the entire country, the plundering of public property, and after the [signing of the] Peace Treaty, the most barbarous and exhaustive exploitation. It makes of Romania a penal colony where the entire population is condemned to forced labour for the benefit of its enemies.

This example of German peace deserves even greater reflection because the German delegates, to the astonishment of the Romanian delegates, declared that these conditions are very moderate compared to the indemnities envisaged in the draft treaties to be imposed on France, England, and Italy after the victory of the Central Empires."

(3) – Cf. Series V, vol. X, nos. 468 and 469.

(1) Groups undeciphered.

VII. President of the Italian Union for Enterprises in West Africa, Solari, to the Delegate to the Peace Conference, Salvago Raggi, L., Paris, January 30, 1919

THE PRESIDENT OF THE ITALIAN UNION FOR ENTERPRISES IN WEST AFRICA, SOLARI, TO THE DELEGATE TO THE PEACE CONFERENCE, SALVAGO RAGGI[7]

L.

Paris, January 30, 1919.

I have the honor to forward herewith the report requested of me concerning Italian interests in West Africa.

The transformation of the Italian Union for Enterprises in West Africa into a Joint-Stock Company is currently underway, with capital adequate for the program outlined in the attached report.

This will give a legal form and a more solid position to the aforementioned interests. But should it be appropriate to hasten such transformation, it would be necessary that the Minister of Foreign

[7] Solari. (1919, January 30). *L. Parigi, 30 gennaio 1919*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Sesta serie, 1918–1922, Volume II (18 gennaio – 23 marzo 1919)* (Doc. No. 168, pp. 113–116). Istituto Poligrafico e Zecca dello Stato, 1980.

Affairs write me a letter demonstrating the importance, at this particular moment, of affirming Italian interests in West Africa.

Given the remoteness of these countries and the present political situation, a governmental push is needed to facilitate the development of our enterprise in the regions referred to in the annex.

I am leaving this evening for Rome, Via del Collegio Romano, 15, where I will make myself completely available for any clarification you may require. (1)

ANNEX

Solari to Sonnino

Paris, January 29, 1919.

The recent Colonial Congress in Rome unanimously approved, as published in the Italian press, an agenda signed by a large number of congressmen, and illustrated by me with factual data, affirming the desire that Italy, while respecting Portuguese sovereignty in Angola, should complement its colonizing work, and that, in consideration of the Italian interests already established and the greater ones still in the process of being created in West Africa, Italy should take part in the replacement of Germany in those very rich regions, and obtain at least an outlet for its commerce in West Africa.

Having promoted in West Africa, beyond the use of wireless telegraphy, also the creation of Italian agricultural and commercial interests, I wish, in the name of the Italian Union for Enterprises in West Africa, which I preside, to briefly recall some of the Italian interests which justify the vote of the Colonial Congress.

These interests are represented by:

Agricultural enterprises;

Mining enterprises;

Hydro-electric enterprises;

Import and export enterprises.

[…]

Mining Enterprises. – The Italian Union has been involved in mineral research in Angola and has gathered evidence establishing that the rich copper mines of Katanga extend into Angola, and that petroleum, coal, and various minerals exist in those regions.

The Italian engineer Rodriguez carried out important research and studies there. Our Union holds options for the purchase of mines.

Electrical Enterprises. – The first electric power plant was established in Catumbella (near Lobito) in Angola by the Italian Mr. Giovanni Zanchi, who obtained the hydraulic concession, later acquired by an English company, in which, however, a good portion of the share capital is Italian. This enterprise could still be made entirely Italian.

[…]

In conclusion, in West Africa there exist Italian interests which must be protected and developed, to secure for our commerce an outlet and to obtain there the raw materials indispensable to our economic independence.

And I, in the name of an Italian financial group, beg Your Excellency to secure that in the new colonial arrangement of West Africa we be granted:

0) To acquire at least a portion of Germany's participation in the capital of the Benguela Railway;

1) To establish on the coasts of West Africa a refuelling base for our ships and an outlet for our commerce.

(1) Marginal note by Salvago Raggi:

"Written to Solari on February 9. The Minister instructed me to tell you that he has read yours with great interest and believes it may be useful if you keep the Royal Ministry informed of what, in your opinion, the Royal Government might do to facilitate the development of the enterprise."

VIII. Minister, Delegate and Technical Adviser, Crespi, to the President of the Council, Orlando, Memorandum, Paris, April 2, 1919

MEMORANDUM FOR PRESIDENT WILSON[8]

Memorandum.

Paris, April 2, 1919.

Italy's monthly requirement for coal can be estimated at one million tons. As soon as the transformation and transition from war industries to peace industries is completed, there is no doubt that this [demand] can only increase. On the other hand, if [such a supply] were not possible [to be achieved], there would be a considerable contraction in production, with consequent unemployment and repercussions on public order.

For this need, Italy is entirely dependent on foreign sources, being forced to obtain coal mainly from England and partly from Germany. It must also be taken into account that there is a need for an equitable distribution among the Allies of the mining advantages resulting from the war.

To mention only a few, the right of exploitation of the Saar mines granted to France and the oil regions of Mesopotamia attributed to England must entail some form of compensation for Italy, even though the importance of Heraclea cannot be compared with the above-mentioned advantages acquired by the Allies.

[8] Crespi. (1919, April 2). *Promemoria per il Signor Presidente Wilson, Parigi, 2 aprile 1919*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Sesta serie, 1918–1922, Volume III (24 marzo – 22 giugno 1919)* (Doc. No. 100, pp. 105–106). Istituto Poligrafico e Zecca dello Stato, 2007.

It is today a concern of Italian statesmen to lessen the anxieties that Italy experienced during the war because of its total lack of coal. The relief Italy would derive from the possibility of possessing its own coal deposit could represent, from a certain point of view, a principle of partial indemnity for the serious economic and financial damages borne during the war.

Such a possibility could arise if, in the zone to be entrusted to Italy in Asia Minor, the coal basin of Heraclea were included. The Heraclea coal basin has not yet been fully studied or exploited, and its exact resources are not known. In 1911, production reached 750,000 tons per year (of not very high quality), and it is believed that by intensifying operations it would be possible to reach an annual output of one million tons, that is, 1/12 of Italy's needs.

Nevertheless, with the sacrifice of Italian capital and labour, one might hope in a few years of intense activity to exceed the maximum productivity achievable today. Even though this would still represent only a minimal share of the total need, it would nevertheless help to partially relieve Italy of one of its gravest dependencies, would serve to support the growth of industries, could constitute a reserve, and might also have some small beneficial repercussions on the exchange rate issue. Currently, the concessions for the exploitation of Heraclea are held by an Italo-French group (in which Italian capital represents a very small minority), a German group, and a Turkish group. There is also a small Greek group of negligible importance.

It is obvious that the German and Turkish concessions should pass *ipso iure* to Italy, as part of the indemnities that the enemies will have to pay.

As for the French share and the Greek group, a financial arrangement seems possible.

Italy would guarantee coal supplies to passing ships.

[Note:]

This is the draft of a memorandum for Wilson prepared by Crespi and delivered by him to Orlando on the morning of the 2nd, […]. However, it most likely originates from the Wilson-Orlando

meeting of April 1 […], during which the Italian interest in the Heraclea coal basin was discussed, and about which the American president had requested information.)

IX. Head of Government and Minister of Foreign Affairs, Mussolini, to the Ambassador in Washington, Rosso, T. RR. 2328/522 R., Rome, November 21, 1935, 24:00 hrs

HEAD OF GOVERNMENT AND MINISTER OF FOREIGN AFFAIRS, MUSSOLINI, TO THE AMBASSADOR IN WASHINGTON, ROSSO[9]

T. RR. 2328/522 R. (1).

Rome, November 21, 1935, 24:00 hrs.

Faced with the new embargo proposals, I consider it urgent to mobilize and push to the utmost limit all the forces on which we can count in the United States. Every scruple must give way before British pressure. It is necessary to oppose any extension of the embargo. In the worst case, we must secure stabilization at the 1934 quantities. The question of oil is absolutely essential. It is necessary to fight so that the United States do not abandon its current line of conduct (2).

(1) Autograph draft.

(2) For Rosso's reply see Doc. 710.

[9] Mussolini. (1935, November 21). *T. RR. 2328/522 R., Roma, 21 novembre 1935, ore 24*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume II (1° settembre – 31 dicembre 1935)* (Doc. No. 677, p. 649). Istituto Poligrafico e Zecca dello Stato, 1991.

X. Undersecretary for Foreign Affairs, Suvich, Conversation with the Ambassador of Japan in Rome, Sugimura, Note, Rome, November 30, 1935

CONVERSATION OF THE UNDERSECRETARY FOR FOREIGN AFFAIRS, SUVICH, WITH THE AMBASSADOR OF JAPAN IN ROME, SUGIMURA[10]

Note.

Rome, November 30, 1935.

The Ambassador of Japan refers to his letter of November 29 (attached) (1).

He has, as indicated by us (2), put the representatives of the two commercial companies Mitsubishi and Mitsui in contact with Mr. Dall'Olio and the Fascist Institute for Foreign Trade. However, there is a preliminary issue to be resolved: that of payment of arrears, which in any case amount to the modest figure of one million lire. For this reason, he requests that the aforementioned Japanese representatives be put in touch with the Superintendent of Currencies.

Once this matter has been settled, the possibility of continuing trade with Italy was examined, especially regarding oil. The Japanese Government, when consulted on the matter, raised no objections; it merely pointed out that this must be done with great prudence because the more extreme nationalist groups in Japan are opposed to Italy, raising the issue of the defence of the coloured races. On the other hand, all trade between Italy and Japan passes through London, which gives an additional reason for prudence. It may be possible to establish direct relations.

As far as oil is specifically concerned, Japan is an importing country and therefore must bring it in from America, Venezuela, and other sources in order to be able to export it to Italy.

[10] Suvich. (1935, November 30). *APPUNTO., Roma, 30 novembre 1935*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume II (1° settembre – 31 dicembre 1935)* (Doc. No. 766, p. 738). Istituto Poligrafico e Zecca dello Stato, 1991.

The Ambassador considers it preferable that negotiations be conducted in Tokyo between our representatives and the headquarters of the companies.

(1) Not published.

(2) See Doc. No. 692.

XI. Deputy Secretary-General of the Delegation to the League of Nations, Bova Scoppa, to the Head of Government and Minister of Foreign Affairs, Mussolini, T. By Courier 1019/94 R., Geneva, February 3, 1936

THE DEPUTY SECRETARY-GENERAL OF THE DELEGATION TO THE LEAGUE OF NATIONS, BOVA SCOPPA, TO THE HEAD OF GOVERNMENT AND MINISTER OF FOREIGN AFFAIRS, MUSSOLINI[11]

T. By Courier 1019/94 R.

Geneva, February 3, 1936 […].

As I have already reported to Your Excellency in my previous communications, I am told from many sources that the Committee of Experts, which met today, will not reach definitive conclusions.

It is said that while, on the one hand, the Committee would establish the technical feasibility of an embargo, it would, on the other hand, emphasize that in this particular case the uncertain attitude of the United States, the oil reserves already possessed by Italy (the statistics provided today by the Secretariat show that in the single month of August 1935 Italy imported 15.2 thousand tons, as against

[11] Bova Scoppa. (1936, February 3). *T. PER CORRIERE 1019/94 R., Ginevra, 3 febbraio 1936 (per. il 5)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume III (1° gennaio – 9 maggio 1936)* (Doc. No. 170, pp. 207–208). Istituto Poligrafico e Zecca dello Stato, 1992.

12.5 thousand imported during the whole [year] of 1934), the quantity it has imported and stored in recent times, though not precisely known, would render the sanction practically ineffective.

It is also said that England intends to demonstrate that it can make use of this supreme threat: to have it recognized as enforceable, but to keep it practically in abeyance so as to use it as a means of pressure on Italy in the event that new diplomatic negotiations should arise before the rainy season.

But so far all these rumours seem unfounded to me.

I have the impression that the Committee is setting to work with the same spirit and by the same methods with which the other sanction committees have worked until now.

[…]

XII. Ambassador in Moscow, Brosio, to the Minister of Foreign Affairs, Sforza, Telespr. 1959/355, Moscow, August 14, 1947

AMBASSADOR IN MOSCOW, BROSIO, TO THE MINISTER OF FOREIGN AFFAIRS, SFORZA [12]

Telespr. 1959/355.

Moscow, August 14, 1947 […].

In my previous reports I have noted that the Soviet attitude toward us is gradually moving from a reserved distrust to a state that can now be defined as hostility. The most recent Soviet manifestations have gone in the same direction, and at the moment there is no sign of any change; on the contrary, from certain indications, I would say that things are tending to worsen.

[12] Brosio. (1947, August 14). *Telespr. 1959/355., Mosca. 14 agosto 1947 (per. il 23)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Decima serie, 1943–1948, Volume VI (31 maggio – 14 dicembre 1947)* (Doc. No. 331, pp. 422–425). Istituto Poligrafico e Zecca dello Stato, 1997.

Where do the Russians want to arrive with this line of conduct? Do they truly aim to create a barrier between us, considered the eastern outpost of the Anglo-American world, and them? Or is it simply a matter of heightening tensions for a time, in order then to make some sudden gesture of rapprochement, intended to disturb the opposing front with the least possible sacrifice on their part?

The latter is a hypothesis to keep in mind in order to assess the situation more calmly; but it is an optimistic and complicated hypothesis, and therefore doubly improbable.

I prefer to stick to the facts and to consider them as they appear, and in so doing I must conclude that the situation with regard to the Soviets continues to deteriorate and offers little ground for hope.

Let us look at these facts:

[…]

2) Again today Izvestia returns to the topic that Pravda had already covered on the 10th of this month, namely the American oil explorations in Italy and the concessions that the Italian Government is said to have given in this respect to the Standard Oil Company. These would be exploration permits granted to Standard [Oil Company] in January 1947 in the provinces of Ferrara, Parma, and Piacenza, in areas where methane had previously been found. Explicit mention is made of a gush of oil obtained at Ca' Posta (Malalbergo?–Ferrara), the relevance of which was said to have been denied by our Ministry of Industry; but here Izvestia shows that it does not believe such a denial. The issue of oil, as is well known, is one of the most sensitive for Soviet political circles and public opinion: by saying that Italy is about to become, or could become, a center of oil exploitation with North American participation, the Soviets are merely highlighting a fact that in their eyes has above all a clear political significance, such as another link in the chain that binds us to the United States.

[…]

Economic relations, the granting of oil, the claimed treaty, the granting of bases, all give us the opportunity to make them offers and precise statements, in order to demonstrate that the Marshall Plan does not prevent us from working with them, that we are not making military agreements, that

we are not granting bases, nor will we so easily renounce our sovereign rights in matters of oil deposits. These would in fact be the first premises of that policy of neutrality, as well as of bilateral economic cooperation, without which there can be absolutely no hope of improving our relations with the Soviets.

[…]

BIBLIOGRAPHY

ACADEMIC ARTICLES

Basosi, D. (2019). Oil, Dollars, And Us Power in the 1970s: Re-Viewing the Connections. *Journal of Energy History, No 3*(2), 1g-15g. https://doi.org/10.3917/jehrhe.003.0001g

Beaton, K. (1955). Dr. Gesner's Kerosene: The Start of American Oil Refining. *The Business History Review*, *29*(1), 28–53. https://doi.org/10.2307/3111597

Bini, E. (2014). A transatlantic shock: Italy's energy policies between the Mediterranean and the EEC, 1967-1974. *Historical Social Research, 39*(4), 145–164. https://doi.org/10.12759/hsr.39.2014.4.145-164

Black, B. C. (2012). Oil for living: Petroleum and American conspicuous consumption. *Journal of American History, 99*(1), 40–50. https://doi.org/10.1093/jahist/jas022

Brown, M. E. (1979). The Nationalization of the Iraqi Petroleum Company. *International Journal of Middle East Studies*, *10*(1), 107–124. http://www.jstor.org/stable/162481

Colgan, J. D. (2021). Oil and Security: The Necessity of Political Economy. *Journal of Global Security Studies, 6*(1). https://doi.org/10.1093/jogss/ogaa008

Conlin, J. (2020). An Oily Entente: France, Britain, and the Mosul Question, 1916-1925. *Diplomacy and Statecraft*, *31*(2), 231–256. https://doi.org/10.1080/09592296.2020.1760033

Craig, J., Gerali, F., MacAulay, F., & Sorkhabi, R. (2018). The history of the European oil and gas industry (1600s–2000s). *Geological Society London Special Publications*, *465*(1), 1–24. https://doi.org/10.1144/sp465.23

Dahl, C., & Ko, J. (1998). The effect of deregulation on US fossil fuel substitution in the generation of electricity. *Energy Policy*, *26*(13), 981–988. https://doi.org/10.1016/s0301-4215(98)00043-3

Daum, A. R. (1959). PETROLEUM IN SEARCH OF AN INDUSTRY. *Pennsylvania History: A Journal of Mid-Atlantic Studies*, *26*(1), 21–34. https://journals.psu.edu/phj/article/view/22644

Dickey, P. A. (1959). The first oil well. *Journal of Petroleum Technology*, *11*(01), 14–26. https://doi.org/10.2118/1195-g

Ediger, V. Ş., & Bowlus, J. V. (2018). A farewell to King Coal: Geopolitics, Energy Security, and the Transition to Oil, 1898–1917. *The Historical Journal*, *62*(2), 427–449. https://doi.org/10.1017/S0018246X18000109

Ediger, V. Ş., & Bowlus, J. V. (2019). Greasing the wheels: the Berlin-Baghdad railway and Ottoman oil, 1888–1907. *Middle Eastern Studies*, *56*(2), 193–206. https://doi.org/10.1080/00263206.2019.1667775

Elling, R. C., & Abdul Razak, R. (2021). Oil, Labour and Empire: Abadan in WWII Occupied Iran. *British Journal of Middle Eastern Studies*, *50*(1), 142–159. https://doi.org/10.1080/13530194.2021.1938971

Emiliozzi, S., Ferriani, F., & Gazzani, A. (2024). The European Energy Crisis and the Consequences for the Global Natural Gas Market. *The Energy Journal*, *46*(1), 119-145. https://doi.org/10.1177/01956574241290640

Engdahl, F. W. (2007). Oil and the Origins of the Great War. *History Compass*, *5*(6), 2041–2060. https://doi.org/10.1111/j.1478-0542.2007.00481.x

Fawcett, L. (2014). Revisiting the Iranian crisis of 1946: How much more do we know? *Iranian Studies*, *47*(3), 379–399. https://doi.org/10.1080/00210862.2014.880630

Frank, A. (2009). The Petroleum War of 1910: Standard Oil, Austria, and the limits of the multinational corporation. *The American Historical Review*, *114*(1), 16–41. https://doi.org/10.1086/ahr.114.1.16

Golden, J. M., & Wiseman, H. J. (2015). The fracking revolution: shale gas as case study in innovation policy. *Emory Law Journal, 64(4),* 955-1040. https://heinonline.org/HOL/P?h=hein.journals/emlj64&i=982

Griffin, J. M. (2015). Petro-Nationalism: The Futile Search for Oil Security. *The Energy Journal*, *36*(1_suppl), 25-42. https://doi.org/10.5547/01956574.36.SI1.jgri

Hamilton, J. D. (1983). Oil and the Macroeconomy since World War II. *Journal of Political Economy*, *91*(2), 228–248. https://doi.org/10.1086/261140

Hamm, G. (2013). British Intelligence in the Middle East, 1898–1906. *Intelligence and National Security*, *29*(6), 880–900. https://doi.org/10.1080/02684527.2013.846728

Harvie, B. A. (2010). Historical Review Paper The Shale-Oil Industry In Scotland 1858–1962. I: Geology And History. *Oil Shale*, *27*(4), 354. https://doi.org/10.3176/oil.2010.4.08

Heymann, H. (1948). Oil in Soviet-Western Relations in the Interwar Years. *The American Slavic and East European Review*, 7(4), 303–316. https://doi.org/10.2307/2491887

Hughes, L., & Long, A. (2014). Is There an Oil Weapon? Security Implications of Changes in the Structure of the International Oil Market. *International Security, 39*(3), 152–189. http://www.jstor.org/stable/24480764

Issawi, C. (1978). The 1973 Oil Crisis and After. *Journal of Post Keynesian Economics*, *1*(2), 3–26. https://doi.org/10.1080/01603477.1978.11489099

Jang, M. (2024). Kerosene Is King: Kerosene Consumers and the Antitrust Movement against Standard Oil, 1859–1911. *The Journal of the Gilded Age and Progressive Era*, *23*(2), 231–251. https://doi.org/10.1017/s1537781423000518

Johnson, V. C., Sherry-Brennan, F., & Pearson, P. J. (2016). Alternative liquid fuels in the UK in the inter-war period (1918–1938): Insights from a failed energy transition. *Environmental Innovation and Societal Transitions*, *20*, 33–47. https://doi.org/10.1016/j.eist.2015.12.001

Johnstone, P., & McLeish, C. (2020). World wars and the age of oil: Exploring directionality in deep energy transitions. *Energy Research & Social Science*, *69*, 101732. https://doi.org/10.1016/j.erss.2020.101732

Kim, I. (2020). Swinging Shale: Shale Oil, the global oil market, and the geopolitics of oil. *International Studies Quarterly*, *64*(3), 544–557. https://doi.org/10.1093/isq/sqaa042

Lea, C. (2018). Derbyshire's oil and refining history: the James 'Paraffin' Young connection. *Geological Society London Special Publications*, *465*(1), 71–76. https://doi.org/10.1144/sp465.4

Lütkenhorst, W., & Minte, H. (1979). The petrodollars and the world economy. *Intereconomics*, *14*(2), 84–89. https://doi.org/10.1007/BF02930203

Marsh, S. (2007). Anglo-American Crude Diplomacy: Multinational Oil and the Iranian Oil Crisis, 1951–53. *Contemporary British History*, *21*(1), 25–53. https://doi.org/10.1080/13619460600785259

Miller, R. R. (1973). Arms across the Border: United States Aid to Juárez during the French Intervention in Mexico. *Transactions of the American Philosophical Society*, *63*(6), 1–68. https://doi.org/10.2307/1006291

Movsumzade, E. M. (2000). The first attempts to use oil as navy fuel. *Icon*, *6*, 142–148. http://www.jstor.org/stable/23790462

Müller, D., Groves, D. I., Santosh, M., & Yang, C. (2024). Critical metals: Their applications with emphasis on the clean energy transition. *Geosystems and Geoenvironment*, 100310. https://doi.org/10.1016/j.geogeo.2024.100310

Painter, D. S. (2009). The Marshall Plan and oil. *Cold War History*, *9*(2), 159–175. https://doi.org/10.1080/14682740902871851

Painter, D. S. (2014). Oil and Geopolitics: The Oil Crises of the 1970s and the Cold War. *Historical Social Research / Historische Sozialforschung*, *39*(4 (150)), 186–208. http://www.jstor.org/stable/24145533

Petroleum in the Maracaibo region, Venezuela. (1926). *Nature, 117*(2953), 807. https://doi.org/10.1038/117807a0

Priest, T. (2012). The dilemmas of Oil Empire. *Journal of American History*, *99*(1), 236–251. https://doi.org/10.1093/jahist/jas065

Richter, T. (2020), New Petro-aggression in the Middle East: Saudi Arabia in the Spotlight. *Global Policy, 11*: 93-102. https://doi.org/10.1111/1758-5899.12780

Sbacchi, A. (1976). The Italians and the Italo-Ethiopian War, 1935-1936. *Transafrican Journal of History, 5*(2), 123–138. http://www.jstor.org/stable/24520239

Schattenberg, S. (2022). Pipeline Construction as "Soft Power" in Foreign Policy. Why the Soviet Union Started to Sell Gas to West Germany, 1966–1970. *Journal of Modern European History*, *20*(4), 554-573. https://doi.org/10.1177/16118944221130222

Schindler, S., DiCarlo, J., & Paudel, D. (2021). The new cold war and the rise of the 21st-century infrastructure state. *Transactions of the Institute of British Geographers*, *47*(2), 331–346. https://doi.org/10.1111/tran.12480

Shafiee, K. (2018). TECHNOPOLITICS OF A CONCESSIONARY CONTRACT: HOW INTERNATIONAL LAW WAS TRANSFORMED BY ITS ENCOUNTER WITH ANGLO-IRANIAN OIL. *International Journal Middle East Studies*, *50*(4), 627–648. https://doi.org/10.1017/s0020743818000909

Siddi, M. (2018). The Role of Power in EU–Russia Energy Relations: The Interplay between Markets and Geopolitics. *Europe-Asia Studies, 70*(10), 1552–1571. https://doi.org/10.1080/09668136.2018.1536925

Stivers, W. (1983). A Note on the Red Line Agreement. *Diplomatic History*, *7*(1), 23–34. https://doi.org/10.1111/j.1467-7709.1983.tb00380.x

Temin, P. (1997). The Golden Age of European growth: A review essay. *European Review of Economic History*, *1*(1), 127–149. https://doi.org/10.1017/S1361491697000063

Topliceanu, S., & Postolachi, A. (2025). A BRIEF ANALYSIS OF THE EU ENERGY DEPENDENCY IN TERMS OF CONVENTIONAL RESOURCES. *Journal of Public Administration Finance and Law, 33*, 336–344. https://doi.org/10.2908/nrg_bal_s

Toprani, A. (2014). Germany's Answer to Standard Oil: The Continental Oil Company and Nazi Grand Strategy, 1940–1942. *Journal of Strategic Studies*, *37*(6–7), 949–973. https://doi.org/10.1080/01402390.2014.933317

Ts'ai, S. H. (1976). Reaction to Exclusion: The Boycott of 1905 and Chinese National Awakening. *The Historian*, *39*(1), 95–110. http://www.jstor.org/stable/24444378

Van De Graaf, T. (2012). Obsolete or resurgent? The International Energy Agency in a changing global landscape. *Energy Policy*, *48*, 233–241. https://doi.org/10.1016/j.enpol.2012.05.012

Vonyó, T. (2008). Post-war reconstruction and the Golden Age of economic growth. *European Review of Economic History*, *12*(2), 221–241. https://doi.org/10.1017/S1361491608002244

Wohlforth, W. C. (1999). The stability of a unipolar world. *International Security*, *24*(1), 5–41. https://doi.org/10.1162/016228899560031

Wołkowicz, S., Graniczny, M., Wołkowicz, K., & Urban, H. (2016). History of the oil industry in Poland until 1939. *Geological Society London Special Publications*, *442*(1), 401–411. https://doi.org/10.1144/sp442.32

Wu, L. (2012). The Oil Politics & Geopolitical Risks with China "Going out" Strategy toward the Greater Middle East. *Journal of Middle Eastern and Islamic Studies (in Asia)*, *6*(3), 58–84. https://doi.org/10.1080/19370679.2012.12023208

Yurchenko, V. (2024). Confrontation between the USA and the USSR in the Middle East: Geopolitical aspect. *Foreign Affairs, 34*(1), 43–50. https://doi.org/10.46493/2663-2675.34(1).2024.43

BOOKS

Brew, G. (2022). *Petroleum and progress in Iran*. Cambridge University Press.

Gerretson, F. C. (1957). *History of the Royal Dutch* (Vol. 3). Royal Dutch Petroleum Company.

Gésner, A., & Gésner, G. W. (1865). *A practical treatise on coal, petroleum, and other distilled oils* (2nd ed., revised and enlarged). Baillière Brothers.

Giddens, P. H. (Ed.). (1947). *Pennsylvania petroleum, 1750–1872: A documentary history*. Drake Well Memorial Park, Pennsylvania Historical and Museum Commission.

Goralski, R., & Freeburg, R. W. (2021). *Oil & war: How the deadly struggle for fuel in World War II meant victory or defeat*. Marine Corps University Press.

Jones, G. (1981). *The state and the emergence of the British oil industry*. Palgrave Macmillan London.

Kelanic, R. (2020). *Black Gold and Blackmail: Oil and Great Power Politics*. Ithaca, NY: Cornell University Press.

Kelanic, R. A. (2020). OIL AND MILITARY EFFECTIVENESS. In *Black Gold and Blackmail: Oil and Great Power Politics* (pp. 48–66). Cornell University Press.

Marcel, B., & Taïeb, J. (2019). Les grandes crises (11ème Ed.). *Dunod*.

Maugeri, L. (2008). *The age of Oil: What they don't want you to know about the World's most controversial resource.* The Lyons Press.

McBeth, B. S. (1983). *Juan Vicente Gomez and the oil Companies in Venezuela, 1908–1935*. Cambridge University Press.

Perović, J. (2017). The Soviet Union's rise as an international energy power: A short history. In *Cold War energy: A transnational history of Soviet oil and gas* (pp. 1–43). Springer.

Toprani, A. (2019). *Oil and the great powers: Britain and Germany, 1914 to 1945*. Oxford University Press.

van der Linde, C. (1991). Market Developments in the United States 1860–1940. In: *Dynamic International Oil Markets*. Studies in Industrial Organization, vol 15. Springer, Dordrecht.

EDITED BOOK CHAPTERS

Barnes, J., Hayes, M. H., Jaffe, A. M., & Victor, D. G. (2006). Introduction to the study. In D. G. Victor, A. M. Jaffe, & M. H. Hayes (Eds.), *Natural gas and geopolitics: From 1970 to 2040* (pp. 3–26). Cambridge University Press.

Bauer, R. (2016). A Historical Overview. In: van Basshuysen, R. (Ed.) *Natural Gas and Renewable Methane for Powertrains*. Springer.

Claes, D. H. (2022). Oil and international institutions. In R. Dannreuther & W. Ostrowski (Eds.), *Handbook on Oil and International Relations*. Edward Elgar Publishing.

Degolyer, E. (1951). Some Aspects of Oil in the Middle East. In R. Frye (Ed.), *The Near East and the Great Powers* (pp. 119-136). Cambridge, MA and London, England: Harvard University Press.

Edgerton, D. (2015). Controlling resources: Coal, iron ore and oil in the Second World War. In M. Geyer & A. Tooze (Eds.), *The Cambridge History of the Second World War* (pp. 122–148). Cambridge: Cambridge University Press.

Frøland, H. O., & Ingulstad, M. (2020). Be prepared! Emergency stockpiles of oil among Western consumer countries prior to the International Energy Agency system. In D. H. Claes & G. Garavini (Eds.), Handbook of OPEC and the Global Energy Order. Routledge.

Kobrin, S.J. (1984). The Nationalisation of Oil Production, 1918–80. In: Pearce, D.W., Siebert, H., Walter, I. (eds) Risk and the Political Economy of Resource Development. Palgrave Macmillan, London.

Meza, F. (2021). The history of Mexico. In T. J. Kehoe & J. P. Nicolini (Eds.), *A monetary and fiscal history of Latin America, 1960–2017* (pp. 323–354). University of Minnesota Press.

Rees, A., & Jacobs, D. P. (1961). The cost-of-living index. In A. Rees & D. P. Jacobs (Eds.), *Real wages in manufacturing, 1890–1914* (pp. 74–119). Princeton University Press.

Restuccia, D. (2021). The history of Venezuela. In T. J. Kehoe & J. P. Nicolini (Eds.), *A monetary and fiscal history of Latin America, 1960–2017* (pp. 495-524). University of Minnesota Press.

Sette, A. (2020). CHAPTER SIX Diplomacy and Petroleum: Italy's Fight for Albanian Oilfields, 1920–1925. In B. Aleksov & A. Piahanau (Ed.), *Wars and Betweenness: Big Powers and Middle Europe, 1918-1945* (pp. 121-138). Budapest, Hungary: Central European University Press.

Vasudevan, H., Zolghadri, S., & Makarem, M. A. (2023). Introduction to oil, gas, and petrochemical industries: Importance to the current world. In M. R. Rahimpour, B. Omidvar, N. A. Shirazi, & M. A. Makarem (Eds.), *Crises in oil, gas and petrochemical industries* (pp. 25–46). Elsevier.

Williamson, H. F., Andreano, R. L., & Menezes, C. (1966). The American petroleum industry. In D. S. Brady (Ed.), *Output, employment, and productivity in the United States after 1800* (pp. 349–404). National Bureau of Economic Research.

DISPATCHES AND OTHER DIPLOMATIC MATERIAL

Bayard, T. F. (1885, September 1). *Mr. Bayard to Mr. McLane (No. 37)*. In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the President, December 8, 1885* (Doc. No. 272). Washington: United States Government Printing Office, 1886. https://history.state.gov/historicaldocuments/frus1885/d272

Beauregard. (1901, March 5). *R. R. 121/20. Avana, 5 marzo 1901*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Terza serie: 1896–1907. Volume V (16 febbraio – 31 dicembre 1901)* (Doc. No. 91, pp. 44–45). Istituto Poligrafico e Zecca dello Stato, 1979. https://www.farnesina.ipzs.it/series/TERZA%20SERIE/volumi/VOLUME%20%20V/full#91

Bell, I., Jr. (1885, December 22). Mr. Bell to Mr. Bayard (No. 88). In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the*

President, December 6, 1886 (Doc. No. 355). Washington: United States Government Printing Office, 1887. https://history.state.gov/historicaldocuments/frus1886/d355

Bigelow, J. (1866, September 7). *Mr. Bigelow to Mr. Seward (No. 366)*. In *Papers relating to foreign affairs, accompanying the annual message of the President to the second session of the Thirty-ninth Congress, Part I* (Doc. No. 310). Washington: United States Government Printing Office, 1867. https://history.state.gov/historicaldocuments/frus1866p1/d310

Bonin. (1918, June 20). *T. GAB. POSTA 1320/345. Parigi, 20 giugno 1918 (per. il 26)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Quinta serie: 1914–1918. Volume XI (1° giugno – 3 novembre 1918)* (Doc. No. 92, pp. 80-82). Roma: Istituto Poligrafico e Zecca dello Stato, 1986. https://www.farnesina.ipzs.it/series/QUINTA%20SERIE/volumi/VOLUME%20%20XI/full#92

Bova Scoppa. (1936, February 3). *T. PER CORRIERE 1019/94 R., Ginevra, 3 febbraio 1936 (per. il 5)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume III (1° gennaio – 9 maggio 1936)* (Doc. No. 170, pp. 207–208). Istituto Poligrafico e Zecca dello Stato, 1992. https://www.farnesina.ipzs.it/series/OTTAVA%20SERIE/volumi/VOLUME%20%20III/full#170

Brosio. (1947, August 14). *Telespr. 1959/355., Mosca. 14 agosto 1947 (per. il 23)*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Decima serie, 1943–1948, Volume VI (31 maggio – 14 dicembre 1947)* (Doc. No. 331, pp. 422–425). Istituto Poligrafico e Zecca dello Stato, 1997. https://www.farnesina.ipzs.it/series/DECIMA%20SERIE/volumi/VOLUME%20%20VI/full#331

Cox, S. S. (1886, April 5). Mr. Cox to Mr. Bayard (No. 147). In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the*

President, December 6, 1886 (Doc. No. 452). Washington: United States Government Printing Office, 1887. https://history.state.gov/historicaldocuments/frus1886/d452

Crespi. (1919, April 2). *Promemoria per il Signor Presidente Wilson, Parigi, 2 aprile 1919*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Sesta serie, 1918–1922, Volume III (24 marzo – 22 giugno 1919)* (Doc. No. 100, pp. 105–106). Istituto Poligrafico e Zecca dello Stato, 2007. https://www.farnesina.ipzs.it/series/SESTA%20SERIE/volumi/VOLUME%20%20III/full#100

Cucchi Boasso. (1915, May 30). *T. Gab. 3859/269. Sofia, 30 maggio 1915, ore 11,30 (per ore 18,15 dell'1 giugno)*. In Ministero degli Affari Esteri (Ed.), *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)* (Doc. No. 55, p. 27). Istituto Poligrafico dello Stato, 1973. https://www.farnesina.ipzs.it/series/QUINTA%20SERIE/volumi/VOLUME%20%20IV/full#55

De Bunsen, M. (1916, March 2). *Foreign Office to Admiralty.* (FO 800/96/32, Folio 84). The National Archives, Kew. https://discovery.nationalarchives.gov.uk/details/r/C16457699

Denby, C. (1888, March 10). *Mr. Denby to Mr. Bayard (No. 586; Extract)*. In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the President, December 3, 1888, Part I* (Doc. No. 181). Washington: United States Government Printing Office, 1889. https://history.state.gov/historicaldocuments/frus1888p1/d181

Fasciotti. (1915a, July 31). *T. Gab. R. Sp. RR. 969/338, Bucarest, 31 luglio 1915, ore 20,30 (per ore 18 dell'1 agosto)*. In Ministero degli Affari Esteri (Ed.), *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)* (Doc. No. 509, p. 308). Istituto Poligrafico dello Stato, 1973. https://www.farnesina.ipzs.it/series/QUINTA%20SERIE/volumi/VOLUME%20%20IV/full#509

Fasciotti. (1915b, August 7). *T. Gab. RR. 1090/348, Bucarest, 7 agosto 1915, ore 9,40 (per ore 10 dell'8 agosto)*. In Ministero degli Affari Esteri (Ed.), *I documenti diplomatici italiani: Quinta serie, 1914–1918, Volume IV (25 maggio – 23 ottobre 1915)* (Doc. No. 547, p. 336). Istituto Poligrafico dello Stato, 1973. https://www.farnesina.ipzs.it/series/QUINTA%20SERIE/volumi/VOLUME%20%20IV/full#547

Flagg, J. H. (1885, August 28). *Mr. Flagg to Mr. Bayard (Inclosure in No. 87)*. In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the President, December 8, 1885* (Doc. No. 272). Washington: United States Government Printing Office, 1886. https://history.state.gov/historicaldocuments/frus1885/d272

Flagg, J. H. (1888, March 20). Mr. Flagg to Mr. Bayard. In *Papers Relating to the Foreign Relations of the United States, Transmitted to Congress, With the Annual Message of the President, December 3, 1888, Part I* (Doc. No. 189). Washington: United States Government Printing Office, 1889. https://history.state.gov/historicaldocuments/frus1888p1/d189

India Office. (1914, June 13). *Memorandum by the India Office: "Persian oilfields: Admiralty Contract with Anglo Persian Oil Company"* (FO 800/98/110, Folios 340–345). The National Archives, Kew. https://discovery.nationalarchives.gov.uk/details/r/C16456532

King, H. (1905, November 28). Minister King to the Secretary of State (No. 248). In *Papers relating to the foreign relations of the United States, with the annual message of the President transmitted to Congress December 5, 1905* (Doc. No. 933). Washington: United States Government Printing Office, 1906. https://history.state.gov/historicaldocuments/frus1905/d933

Lansing. (1917, July 4). The Secretary of State to the Ambassador in Great Britain (Page). In *Papers Relating to the Foreign Relations of the United States, 1917, Supplement 2, The World War, Volume I* (Doc. No. 166; File No. 763.72/13321a). Washington: United States Government Printing Office, 1932. https://history.state.gov/historicaldocuments/frus1917Supp02v01/d166

Libby, W. K. (1886, March 27). *Mr. Libby to Mr. Cox* (Inclosure 1 in No. 147). In *Papers relating to the foreign relations of the United States, transmitted to Congress, with the annual message of the President, December 6, 1886* (Doc. No. 452). Washington: United States Government Printing Office, 1887. https://history.state.gov/historicaldocuments/frus1886/d452

McGoodwin, P. (1920, April 5). *The Minister in Venezuela (McGoodwin) to the Secretary of State (No. 1955)*. In *Papers Relating to the Foreign Relations of the United States, 1921, Volume II* (Doc. No. 890; 831.6363/25). Washington: United States Government Printing Office, 1936. https://history.state.gov/historicaldocuments/frus1921v02/d890

Mussolini. (1935, November 21). *T. RR. 2328/522 R., Roma, 21 novembre 1935, ore 24*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume II (1° settembre – 31 dicembre 1935)* (Doc. No. 677, p. 649). Istituto Poligrafico e Zecca dello Stato, 1991. https://www.farnesina.ipzs.it/series/OTTAVA%20SERIE/volumi/VOLUME%20%20II/full#677

Nathan, E. I. (1914, August 15). *The Consul at Mersina (Nathan) to the Secretary of State*. In *Papers relating to the foreign relations of the United States, 1914, Supplement, The World War* (Doc. No. 1211; File No. 867.00/652). Washington: United States Government Printing Office, 1928. https://history.state.gov/historicaldocuments/frus1914Supp/d1211

Odeen, P. A. (1973, March 13). *Memorandum from Philip A. Odeen of the National Security Council Staff to the President's Assistant for National Security Affairs*. In *Foreign Relations of the United States, 1969–1976, Volume XXXVI, Energy Crisis, 1969–1974* (Doc. 172). Washington, DC: U.S. Government Printing Office. https://history.state.gov/historicaldocuments/frus1969-76v36/d172

Solari. (1919, January 30). *L. Parigi, 30 gennaio 1919*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Sesta serie, 1918–1922, Volume II (18 gennaio – 23 marzo 1919)* (Doc.

No. 168, pp. 113–116). Istituto Poligrafico e Zecca dello Stato, 1980. https://www.farnesina.ipzs.it/series/SESTA%20SERIE/volumi/VOLUME%20%20II/full#168

Suvich. (1935, November 30). *APPUNTO., Roma, 30 novembre 1935*. In Ministero degli Affari Esteri, *I documenti diplomatici italiani: Ottava serie, 1935–1939, Volume II (1° settembre – 31 dicembre 1935)* (Doc. No. 766, p. 738). Istituto Poligrafico e Zecca dello Stato, 1991. https://www.farnesina.ipzs.it/series/OTTAVA%20SERIE/volumi/VOLUME%20%20II/full#766

Wharton, W. F. (1890, September 22). *Mr. Wharton to Mr. Reid* (No. 176). In *Papers Relating to the Foreign Relations of the United States, Transmitted to Congress, With the Annual Message of the President, December 1, 1890* (Doc. No. 206). Washington: United States Government Printing Office, 1891. https://history.state.gov/historicaldocuments/frus1890/d206

LEGAL TEXTS AND PATENTS

Council Directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009L0119

Council Directive 68/414/EEC of 20 December 1968 imposing an obligation on Member States of the EEC to maintain minimum stocks of crude oil and/or petroleum products. https://eur-lex.europa.eu/eli/dir/1968/414/oj/eng

Gesner, A. (1854a). *Improvement in kerosene burning-fluids* (U.S. Patent No. 11,203). United States Patent and Trademark Office. https://patents.google.com/patent/US11203A/en

Gesner, A. (1854b). *Improved mode of preparing hydrocarbon oils* (U.S. Patent No. 11,204). United States Patent and Trademark Office. https://patents.google.com/patent/US11204A/en

Gesner, A. (1854c). *Improved process of manufacturing illuminating oils* (U.S. Patent No. 11,205). United States Patent and Trademark Office. https://patents.google.com/patent/US11205A/en

IEA (2018). Agreement on an International Energy Program (as amended 17 February 2018).

Natural Gas Act of 1938, Pub. L. No. 75-688, 52 Stat. 821 (1938). https://iea.blob.core.windows.net/assets/c6be6d60-1ca8-4b99-b8c7-7ac508ec157c/IEP.pdf

REPORTS, DATABASES AND THINK TANK ARTICLES

American Petroleum Institute. (1949). *Petroleum facts and figures* (9th ed.). American Petroleum Institute.

Douet, J. (2020). *The Heritage of the Oil Industry (TICCIH Thematic Study)*. The International Committee for the Conservation of the Industrial Heritage. https://ticcih.org/wp-content/uploads/2020/05/Oil-industry-thematic-report.pdf

Energy Institute. (2025). *Statistical review of world energy 2025: Workbook*. https://www.energyinst.org/statistical-review

ERIA Study team (2022). Rising Oil Import Dependency and Oil Stockpiling in ASEAN, in ERIA (Eds.), *The Strategic and Economic Value of Joint Oil Stockpiling Arrangements for Middle East Exporters and ASEAN Importers*. ERIA Research Project Report FY2022 No. 09, Jakarta: ERIA, pp. 1-14. https://www.eria.org/uploads/media/Research-Project-Report/RPR-2022-09/08_Chapter-1-Rising-Oil-Import-Dependency-and-Oil-Stockpiling-in-ASEAN.pdf

European Commission: Directorate-General for Energy & Trinomics. (2019). *Impact assessment "Measures resulting from the mid-term evaluation of the Oil Stocks Directive 2009/119"*. Publications Office. https://data.europa.eu/doi/10.2833/804022

Eurostat. (2025a). *Simplified energy balances* (Data code: nrg_bal_s). https://doi.org/10.2908/nrg_bal_s

Eurostat. (2025b, May). "Energy statistics - an overview.". https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Energy_statistics_-_an_overview

IEA. (2014). *Energy Supply Security: Emergency Response of IEA Countries*. https://www.oecd.org/content/dam/oecd/en/publications/reports/2014/08/energy-supply-security-2014_g1g4668f/9789264218420-en.pdf

IEA. (2025a, August). *World Energy Balances 2024 Highlights (free extract)*. https://www.iea.org/data-and-statistics/data-product/world-energy-statistics-and-balances

IEA. (2025b, January 31). *Average Russian oil exports by country and region, 2021–2024*. https://www.iea.org/data-and-statistics/charts/average-russian-oil-exports-by-country-and-region-2021-2024

IEA. (2025c, August 13). *Oil stocks of IEA countries*. https://www.iea.org/data-and-statistics/data-tools/oil-stocks-of-iea-countries

ISPI Data Lab. (2022, February 2). *Russia-Ucraina: Gas, chi rischia di più?* ISPI - Istituto per gli Studi di Politica Internazionale. https://www.ispionline.it/it/pubblicazione/russia-ucraina-gas-chi-rischia-di-piu-33064

Maloney, A. P. (1984, January). *The Berlin-Baghdad railway as a cause of World War I* (CNA-PP-401). Center for Naval Analyses. https://apps.dtic.mil/sti/html/tr/ADA138432/

Roy, D., & Cheatham, A. (2024, July 31). Venezuela: the rise and fall of a petrostate. *Council on Foreign Relations*. https://www.cfr.org/backgrounder/venezuela-crisis

U.S. Energy Information Administration. (2024, July 15). *U.S. energy facts explained*. U.S. Department of Energy. https://www.eia.gov/energyexplained/us-energy-facts/

U.S. Energy Information Administration. (2025a, August 29). *U.S. natural gas wellhead price (dollars per thousand cubic feet)*. U.S. Department of Energy. https://www.eia.gov/dnav/ng/hist/n9190us3a.htm

U.S. Energy Information Administration. (2025b, August 26). *Monthly Energy Review: Table 1.2 Primary energy production by source*. U.S. Energy Information Administration. https://www.eia.gov/totalenergy/data/monthly/

U.S. Energy Information Administration. (2025c, August 26). *Monthly Energy Review: Table 1.3 Primary energy consumption by source*. U.S. Energy Information Administration. https://www.eia.gov/totalenergy/data/monthly/

U.S. Energy Information Administration. (2025d, August 26). *Monthly Energy Review: Table 1.4a Primary energy imports by source*. U.S. Energy Information Administration. https://www.eia.gov/totalenergy/data/monthly/

U.S. Energy Information Administration. (2025e, August 26). *Monthly Energy Review: Table 1.4b Primary energy exports by source*. U.S. Energy Information Administration. https://www.eia.gov/totalenergy/data/monthly/

U.S. Energy Information Administration. (2025f, September 24). *Henry Hub natural gas spot price (dollars per million Btu)*. https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm

U.S. Energy Information Administration. (2025g, September 3). *Russia's natural gas and coal exports have been decreasing and shifting toward Asia. Today in Energy*. https://www.eia.gov/todayinenergy/detail.php?id=66044

United States Census Bureau. (1975). International Transactions and Foreign Commerce: International Transactions and Foreign Aid (Series U 1-186). In *Bicentennial Edition: Historical Statistics of the United States, Colonial Times to 1970* (pp. 858–907). https://www2.census.gov/library/publications/1975/compendia/hist_stats_colonial-1970/hist_stats_colonial-1970p2-chU.pdf

Wright, C. D. (1889). *Comparative wages, prices, and cost of living*. Wright & Potter Printing Co., State Printers.

NEWSPAPER AND MAGAZINE ARTICLES

Glatsky, G. (2024, April 17). *U.S. Restores Oil Sanctions on Venezuela as Hopes Dim for Free Election*. The New York Times. https://www.nytimes.com/2024/04/17/world/americas/us-oil-sanctions-venezuela-maduro.html

Greene, M. (2021, December 15). *The limits of US sanctions in dealing with Russia are becoming clear*. Financial Times. https://www.ft.com/content/69421aa4-f86d-4c64-bd83-0f8402a65db5

Khan, S. (2025, April 15). *US oil production to peak by 2027 as shale boom fades, EIA forecasts*. Reuters. https://www.reuters.com/business/energy/us-crude-oil-output-peak-by-2027-eia-projects-2025-04-15/

Long, T. & Schulz, C. (July 15, 2025). *How 1860s Mexico offered an alternative vision for a liberal international order*. The Conversation. https://theconversation.com/how-1860s-mexico-offered-an-alternative-vision-for-a-liberal-international-order-260228

Mchugh, D., & Kozlowska, J. (2025, September 10). *A gas pipeline deal between Russia and China is still murky on many details*. AP News. https://apnews.com/article/russia-china-gas-pipeline-siberia-b48dffa3b9527cbccfa7585a03ca3c17

Mukherjee, H., & Verma, N. (2025, September 5). *India will continue to buy Russian oil despite US tariffs, finance minister says*. Reuters. https://www.reuters.com/business/energy/india-will-continue-buy-russian-oil-despite-us-tariffs-finance-minister-says-2025-09-05/

The New York Times. (1911, January 7). *Austria Drops Oil Fight: Ready to Remove Restrictions of American Concern's Trade*. https://www.nytimes.com/1911/01/07/archives/austria-drops-oil-fight-ready-to-remove-restrictions-of-american.html

The New York Times. (1934, July 22). *When first oil flowed*. *The New York Times*. https://www.nytimes.com/1934/07/22/archives/when-first-oil-flowed.html

ENCYCLOPEDIAS AND DICTIONARIES

Danielsen, A.L. (2025, September 14). *OPEC. Encyclopedia Britannica*. https://www.britannica.com/topic/OPEC

Hopwood, D., Baker, R.W., Holt, P.M., Smith, C.G., Goldschmidt, A.E., Little, D.P. (2025, August 3). Egypt. Encyclopedia Britannica. https://www.britannica.com/place/Egypt

Knight, F.W., Levinson, S.H. (2025, August 31). Cuba. Encyclopedia Britannica. https://www.britannica.com/place/Cuba

Law, J. (2009). *A Dictionary of Business and management*. Oxford University Press.

Li, X., & Molina, M. (Eds.). (2014). *Oil: A cultural and geographic encyclopedia of Black Gold* (Vol. 1). ABC-CLIO.

Riva, J.P., Solomon, L.H., Waddams, A., Atwater, G.I., & Carruthers, J.E. (2025, September 6). Natural gas. *Encyclopedia Britannica*. https://www.britannica.com/science/natural-gas

The Editors of Encyclopaedia Britannica. (2025a, July 2). *Monroe Doctrine*. Encyclopedia Britannica. https://www.britannica.com/event/Monroe-Doctrine

The Editors of Encyclopaedia Britannica. (2025b, May 30). *Dutch East Indies*. Encyclopedia Britannica. https://www.britannica.com/place/Dutch-East-Indies

The Editors of Encyclopaedia Britannica (2025c, August 25). *Marshall Plan*. Encyclopedia Britannica. https://www.britannica.com/event/Marshall-Plan

OTHER

Ansted, D. T. (1862). *Artificial light*. *The Popular Science Review*, *1*, 80–90.

Council of the EU and the European Council. (2025, August 27). *Where does the EU's gas come from?* https://www.consilium.europa.eu/en/infographics/where-does-the-eu-s-gas-come-from/#0

Ermolaev, S. (2017, March 29). *The formation and evolution of the Soviet Union's oil and gas dependence*. Carnegie Endowment for International Peace. https://carnegieendowment.org/posts/2017/03/the-formation-and-evolution-of-the-soviet-unions-oil-and-gas-dependence?lang=en

European Commission. (2025, June 17). *REPowerEU*. https://commission.europa.eu/topics/energy/repowereu_en

Eurostat. (2025c, September). *EU imports of energy products - latest developments.* https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_imports_of_energy_products_-_latest_developments

Eurostat. (n.d.). *Glossary: Commonwealth of Independent States (CIS)*. In Statistics Explained. European Commission. Retrieved September 29, 2025, from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Commonwealth_of_Independent_States_(CIS)

Graefe, L. (2013). *Oil shock of 1978-79*. Federal Reserve History. https://www.federalreservehistory.org/essays/oil-shock-of-1978-79

IEA. (2023, June 22). *IEA Governing Board concludes 2022 collective actions*. https://www.iea.org/news/iea-governing-board-concludes-2022-collective-actions

IEA. (2024, December 10). *Association countries*. https://www.iea.org/about/membership/association-countries

Lewis, T. T. (2023). *Natural Gas Act*. EBSCO. https://www.ebsco.com/research-starters/law/natural-gas-act

Mazzeno, L. W. (2021). *American automobile industry in the 1920s*. EBSCO. https://www.ebsco.com/research-starters/history/american-automobile-industry-1920s

Office of the Historian. (n.d.a). *French intervention in Mexico and the American Civil War, 1862–1867*. U.S. Department of State. Retrieved September 29, 2025, from https://history.state.gov/milestones/1861-1865/french-intervention

Office of the Historian. (n.d.b). *Biographies of the Secretaries of State: Thomas Francis Bayard (1828–1898)*. U.S. Department of State. Retrieved September 29, 2025, from https://history.state.gov/departmenthistory/people/bayard-thomas-francis

Office of the Historian. (n.d.c). *The 1928 Red Line Agreement*. U.S. Department of State. Retrieved September 29, 2025, from https://history.state.gov/milestones/1921-1936/red-line

Reinbold, B., & Wen, Y. (2019). Historical U.S. trade deficits. *St. Louis Fed*. https://www.stlouisfed.org/on-the-economy/2019/may/historical-u-s-trade-deficits

Rudolph, J. R., Jr. (2023). *Oil Is Discovered in Venezuela*. EBSCO. https://www.ebsco.com/research-starters/history/oil-discovered-venezuela

U.S. Energy Information Administration. (September 19, 2024). *How much shale gas is produced in the United States?* Frequently Asked Questions (FAQs). https://www.eia.gov/tools/faqs/faq.php?id=907&t=8

US National Archives. (March 15, 2022). *Sherman Anti-Trust Act (1890)*. National Archives. https://www.archives.gov/milestone-documents/sherman-anti-trust-act

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