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The development of Azerbaijani Oil & Gas industry from the  
origins to recent FDIs.

The Case of British Petroleum.

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## **Abstract**

Azerbaijan is one of the few regions in the world where petroleum resources have been obtained and put into use for a thousand years. There have been various stages in the growth of the region's oil & gas industry, each with its unique set of achievements. While the history of natural resources extraction in Azerbaijan starts back in ancient times, the main development stages cover the period from the middle of the nineteenth century when for the first time in the world oil field was drilled with an industrial method, in Baku, until current times when the oil & gas industry is the main aspect of the republic's economy. At the same time when we talk about the history of petroleum in Azerbaijan, it is impossible not to mention the Foreign Direct Investment (FDI). Azerbaijan with its rich natural resources from the nineteenth century was at the center of attraction of foreign investors such as Nobel Brothers, Rothschilds, and British Petroleum which, by investing in hydrocarbons of the nation, were able to succeed as well as write their names in the history of the industry. Although during the beginning of the 1990s the sector was in a situation of crisis due to a lack of investments, infrastructure, and attention, the right decisions and FDI were the main aspects leading to significant development. There are many leading oil & gas companies from different parts of the world involved in the FDI of the country's industry, however, British Petroleum (BP) is the one that stands between the others with its notable investments. This study will analyze the development stages through which the oil & gas industry of the nation passed to reach its current stage where the sector is the lifeblood of the economy. In this research paper, we will understand the value of petroleum for Azerbaijan, the factors and challenges that the industry faced in its development path, and the role of FDI in this process. In addition to this, the study will be supported by the analyses of the British Petroleum (BP) case in Azerbaijan which contributed considerably to the modernization and evolution of the industry.

## **Acknowledgments**

As an Azerbaijani living in a country where oil & gas means more than just an industry, I have been always curious on the topic of how one industry can be so essential for a nation not only for economic aspects but also for social, political, and historical. This curiosity persuaded me toward having an enthusiasm and even a dream to conduct my own research.

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*For my dear Mother and Father who have been  
always there to support me...*

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## List of Abbreviations

ADR	: Azerbaijan Democratic Republic
ACG	: Azeri-Chirag-Gunashli oil field
AIOC	: Azerbaijan International Operating Company
AMCHAM	: American Chamber of Commerce
AZN	: Azerbaijani Manat
BCM	: Billion Cubic Meters of natural gas
BP	: British Petroleum
BTC	: Baku-Tbilisi-Ceyhan Pipeline
CO2	: Carbon Dioxide
CSR	: Corporate Social Responsibility
EDP	: Enterprise Development Program
ESIA	: Environmental and Social Assessment
EU	: European Union
GDP	: Gross Domestic Product
GHG	: Greenhouse Gas emissions
GUUAM	: Georgia, Ukraine, Uzbekistan, Azerbaijan, and Moldova
MEP	: Major Export Pipeline Route
NKVD	: People's Commissariat of Internal Affairs
NREP	: Northern Route Export Pipeline
PSA	: Production Sharing Agreement
SCP	: South Caucasian Pipeline
SGC	: Southern Gas Corridor
SOCAR	: Azerbaijan State Oil Company
SOFAZ	: State Oil Fund of Azerbaijan
SSR	: Soviet Socialist Republic

TANAP : Trans Anatolian Gas Pipeline

TAP: : Trans Adriatic Pipeline

TPAO : Turkish Petroleum Corporation

TRACECA : Transport Corridor Europe-Caucasus-Asia

UN : United Nations

USA : United States of America

USAID : United States Agency for International Development

USD : United States Dollar

USSR : Union of Soviet Socialist Republics

WWI : World War I

WWII : World War II



# Introduction

## Overview

The Republic of Azerbaijan is positioned in the Caucasus region at the boundary between West Asia and East Europe. To the east it is bounded by Caspian Sea, to the south by Iran, to the west by Turkey and Armenia, to the northwest by Georgia, and to the north by Russia. All through history, oil & gas factor has been a driving force in the economic and political life of Azerbaijan.

The petroleum production history of country starts back in ancient times and ancient and medieval sources have preserved a significant amount of information about its extraction and production. However, it is worth noting that mechanized hydrocarbons' production began around the end of 19<sup>th</sup> century and already during the beginning of 20<sup>th</sup> century, Baku, which is currently the capital city of republic, was the world's leader in oil production. Historically, Azerbaijan is the place where the world's first paraffin factory was launched in 1823 and where for the first time in the world, drilling of oil field was happened with an industrial method in 1846.

The main history of development of the nation's oil & gas industry is divided into several stages. It's mainly because of geopolitical reasons and as the region of modern Azerbaijan did not have stable political power during the last 2 centuries, the petroleum sector also faced many ups and downs. Many factors including revolution, civil war, and lack of interest of some powers such as USSR to develop the region created obstacles for the region's petroleum development.

Historical data indicates that throughout the first oil boom in Baku (1885-1920), Azerbaijan by being incredibly advanced in its drilling and lifting techniques, produced around half of the world's oil. As a result, it is apparent that the nation has been a major producer of oil for a particular period of time in the beginning of 20<sup>th</sup> century. During the period of Soviet governance between 1920 and 1991, energy sector became less innovative, as it was monopolized and taken out of private hands. Most of its oil profits went to the USSR's central government. However, since the collapse of Soviet regime, oil profits have been increased gradually and its utilization is now managed by the state. (Gurbanov, et al., 2017)

The end of 1980s and beginning of 1990s were challenging for all former USSR states involving Azerbaijan. The year of 1991 brought independence to all Central Asian and South Caucasus states, formerly part of the USSR, and subsequently after many years of Soviet occupation, the Azerbaijani nation was able to regain its independence. Finally, with regained independence, the nation was left alone with its own rich natural sources which by being the benefit for the region also at the same time was always a source of challenge.

However, it was not an easy task to rebuild a petroleum industry to revive an economy, as the country had to face many challenges including war, economic crisis, and political instability during 1990s. Despite the great challenges, the republic was able to rebuild itself and oil & gas sector played a locomotive role in this rebuilding process and stills plays a vital role in the economy of country.

It should be mentioned that Foreign Direct Investment (FDI) was one of the key aspects which enabled Azerbaijan to develop its oil & gas industry. With the collapse of USSR, the former Soviet States have been attempting to integrate into the global economy as new independent countries. Between them, Azerbaijan has performed the best regarding persuading foreign investment thanks to its natural resource reserves. Openness of republic for foreign investments fuelled political and commercial competition between different world powers such as USA, Russia, and European Union. (Lussac, 2010) According to UN World Investment Report 2002, on the topic of Foreign Direct Investment (FDI) performance index, Azerbaijan ranked 3<sup>rd</sup> between 140 countries from 1994 to 1996, and 8<sup>th</sup> from 1998 to 2000. (Bayulgen, 2003)

## **Objectives**

This study paper aims at analyzing the oil & gas industry development of Azerbaijan over the history, from the period of time when the first natural resources were extracted until nowadays when the petroleum is the main aspect of national GDP of Azerbaijan. More precisely, the paper discovers key aspects leading to industry development and degradation, benefits and challenges that industry brought to Azerbaijani nation throughout the history and specifically the collaboration of republic since 1991 with foreign oil companies to persuade industrial development.

The whole paper is split into 3 sections:

Chapter 1: Covers the early oil extraction period and 4 development stages which starts in 1846 and finishes in 1991.

Chapter 2: Focuses on 5<sup>th</sup> stage of industry development which started in 1991 when the nation was able to regain its independence from USSR and continues until today.

Chapter 3: The final section is aiming at analysing British Petroleum (BP) case in Azerbaijan which played one of the vital roles in the state's oil & gas industry evolution over the last 30 years.

To bring deeper understanding of topic, I provided analysis on factors such as economic and geopolitical which directly concern the Azerbaijani oil & gas industry. The paper also includes discussions on attitude of several world powers on Azerbaijan and its natural wealth over the history, the role of petroleum on the fate of nation, revolutionary Production Sharing Agreements (PSA) that the Azerbaijani government signed will world's petroleum leaders to rebuild an energy sector and the impacts of sector in republic's modern economy. In addition to this, the paper will be supported by the Foreign Direct Investment (FDI) case of BP in Azerbaijan, which was not only able to write its name in country's oil & gas development history but also to become the main foreign party in republic.

Throughout the paper, in order to have a rational and different angle view on the topic, I used different sources from different countries of the world in several languages, mainly in English, Azerbaijani, Russian, and Turkish. Sources that I used to conduct my research include books and articles published by Azerbaijani and International scholars, data from corporate and other websites, electronic sources such as published by Azerbaijani and International press, governmental publications, statistics, and records, reports, and research papers conducted on topics related to my paper.

# Chapter 1: Four Development Stages of the Azerbaijani Oil & Gas Industry

## 1.1 Value of Petroleum Industry for Azerbaijan

If we ask how important the oil & gas industry is for Azerbaijan, then we can answer this question with a short answer: it is very important. The country and its economy are highly reliant on oil and gas. (Lauinger, et al., 2015)

Energy reserves in large amounts have been the main contributor to the economy for a long time, influencing the number of exports and becoming a key determinant of the economic structure of the republic. (Aras, et al., 2013)

However, besides positive factors for the region, petroleum of Azerbaijan has been always a reason for geopolitical instability in the region. Many powers including Tsarist Russia and later USSR, Great Britain, and even Nazi Germany during World War II (WWII) were fighting for having power over it because of huge benefits.

Oil & gas are the primary energy sources of Azerbaijan as well as the main natural wealth of the Caspian region. The region is rich in its natural sources and this fact was the main reason for international attraction. Because of temporary governances and instability, the industrial development of oil & gas includes different phases.

*Table 1: Main energy sources of Azerbaijan*

<b>Reserves</b>	<b>Proven</b>	<b>Metrics</b>
<b>Oil</b>	7 billion <sup>1</sup>	Barrel
<b>Natural Gas</b>	1,1 trillion <sup>2</sup>	Cubic Metres
<b>Hydro Generation Capacity</b>	40 billion	KW/hour
<b>Wind</b>	15,000	MW/year
<b>Biomass</b>	900	MW/year
<b>Geothermal</b>	800	MW/year
<b>Solar</b>	8000	MW/year

*Source: Transition to renewable energy and sustainable energy development in Azerbaijan, Nurtaj Vidadili, Elchin Suleymanov, Cihan Bulut, Ceyhun Mahmudlu, Renewable and Sustainable Energy Reviews 80 (2017) 1153-1161*

<sup>1</sup> 7 billion oil barrels is equal to more than 954 mln of tonnes (approximate figure).

<sup>2</sup> 1,1 trillion Gas Cubic meters is equal to 750 mln of tonnes (approximate figure).

The country's reliance on petroleum has progressively increased during its new oil boom from the beginning of 2000s until the sudden drop in oil prices at the end of 2014. However, oil and gas reserves of Azerbaijan will not endure forever, and according to the World Bank (2011), oil production (but not gas production) would begin to fall by 2024. When the natural resources will run out, the major sources of government revenue and export will need to turn to non-oil industries, particularly manufacturing. To accomplish this, it will be required to develop a sufficient infrastructure as well as to increase manufacturing proportion of GDP above the 5.5%, which is averagely maintained between 2004 and 2015, as indicated in the table below. (Gurbanov, et al., 2017)

*Table 1: Sectoral Shares in GDP of Azerbaijan with the percentage*

Years	Agriculture	Mining	Manufacturing	Utilities	Construction	Trade, Transportation, Accomodation., Food	Finance, Technical Services	Public Administration, Defence	Other Services
2005	9.9	45.7	7.1	0.9	9.8	12.9	5.8	6.8	1.0
2006	7.5	53.3	6.0	0.8	8.2	11.2	5.8	6.6	0.6
2007	7.0	57.1	5.1	1.1	6.9	11.7	5.6	5.1	0.5
2008	6.0	56.0	5.0	1.3	7.4	12.0	5.8	5.9	0.7
2009	6.6	46.4	6.0	1.4	7.9	15.6	6.1	8.3	1.6
2010	5.9	49.2	5.0	1.1	8.7	14.0	6.6	7.5	1.8
2011	5.4	50.9	4.2	1.9	8.4	13.7	6.6	7.1	1.6
2012	5.5	45.9	4.5	2.2	10.7	14.1	7.7	7.5	1.8
2013	5.7	42.8	4.5	2.2	12.4	14.3	8.5	8.1	2.0
2014	5.7	37.0	5.1	2.1	13.6	15.7	9.7	8.6	2.3
2015	6.8	28.8	5.8	2.4	13.2	19.8	10.9	9.7	2.5

*Source: Article Economies, Management of Oil Revenues: Has That of Azerbaijan Been Prudent? Sarvar Gurbanov, Jeffrey B.Nugent, and Jeyhun Mikayilov, published on 12 June 2017*

Currently, republic's exports are dominated by oil and gas, which make up more than 90% of the country's total. (International Energy Agency (IEA), 2021) With the completion of the Baku-Tbilisi-Ceyhan Oil Pipeline in 2005 and the Baku-Tbilisi-Erzurum Gas Pipeline in 2007, the economy became more major oil and gas based. With the development of these projects year after year, the essentiality of the republic's oil & gas source income on export volume and the consequences on the national economy have grown. Although there were many efforts to diversify the economy away from oil, the country's exports remain heavily reliant on earnings from energy sources. (Aras, et al., 2013)

Over the Century, oil made the region interesting for many powers such as Russian Empire, later the USSR, and more recently the European Countries and the USA, which in different ways and times tried to exercise their control on the area.

Azerbaijan's oil production had a peak during the WWII in 1941 with 172 million barrels<sup>3</sup>, accounting for about 75% of the Soviet Union's total production, but it had a sharp decrease during the final years of Soviet governance. (Wakeman-Linn, et al., 2004)

In the second part of the 20<sup>th</sup> century somehow the conditions changed and Azerbaijan by 1980 contributed to the Soviet economy only with 2.4% of total oil production. It was because, Moscow was not very much interested to promote economic growth in the region. After all, it aimed and still aims at having the South Caucasus be fundamentally dependent on Russia.

After Azerbaijan regained its independence from the USSR, at the beginning of the 1990s, the real GDP growth of the country was negative and between 1992 and 1995 it fell almost more than 70% compared to the last years of Soviet governance.

The beginning of the 1990s was probably the hardest period for Azerbaijan. The newly created republic had to deal with many problems including the war in the region of Nagorno Karabakh<sup>4</sup> between Azerbaijan and Armenia, the unwillingness of Post-Soviet Russia to lose control over the region, internal political problems, etc. All these problems created geopolitical instability during the first half of the 1990s and therefore the oil industry which had to define the economy of the republic was facing hard times due to lack of attention. We will have a more detailed look at the situation of the republic and its petroleum industry during the beginning of the 1990s in the second chapter of this research paper.

The significant oil output decline was one of the main three reasons for the collapse of the GDP. Due to military mobilization, government earnings decreased significantly while spending remained high. As a result, significant budgetary deficits developed between 1992 and 1994. (Guliyev, 2013).

According to Farid Guliyev (2013), promotion of foreign investments in the petroleum industry of republic was the most important step at that time. Because this step eventually led to economic growth. In figure 1 below its visible that, when the Azerbaijani oil industry was so important for the Soviet State, its extraction was high with its peak in

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<sup>3</sup> Barrel (bbl) – the unit of volume that is used in oil & gas sector to report the volume of petroleum products – 7.3 bbl = 1 ton, 172 million = 23 million tons (approximate figure)

<sup>4</sup> First Nagorno-Karabakh War (1988-1994)

1941, but after the USSR changed its attitude toward the region, extraction dropped sharply. Eventually, only after Foreign Direct Investment (FDI) came to the industry with foreign partnerships, the oil extraction experienced a great increase.

Since 1991 when the independence was regained, the economy of the country faced a considerable transformation, as a result of its significant hydrocarbon reserves which pushed the country toward the strong growth of the 1990s and 2000s. (International Energy Agency (IEA), 2021) On the other hand, the country is vulnerable to the effects of oil price volatility due to its substantial reliance on extractive sectors.

Figure 1: Oil extraction in Azerbaijan with millions of tons (1801-2010)



Source: Book of Natig Aliyev - Oil and Oil Factor in the Economy of Azerbaijan in the XXI Century

It is essential for the future of a country's economy to handle revenues in a way that it will allow to diversify the economy, to make sure the living standards of the nation will rise. This is essential for the state, not only because the oil boom has a transitory character but also because the oil & gas sector does not provide much employment, employing only 1.1% of the republic's working force in 2001. (Wakeman-Linn, et al., 2004)

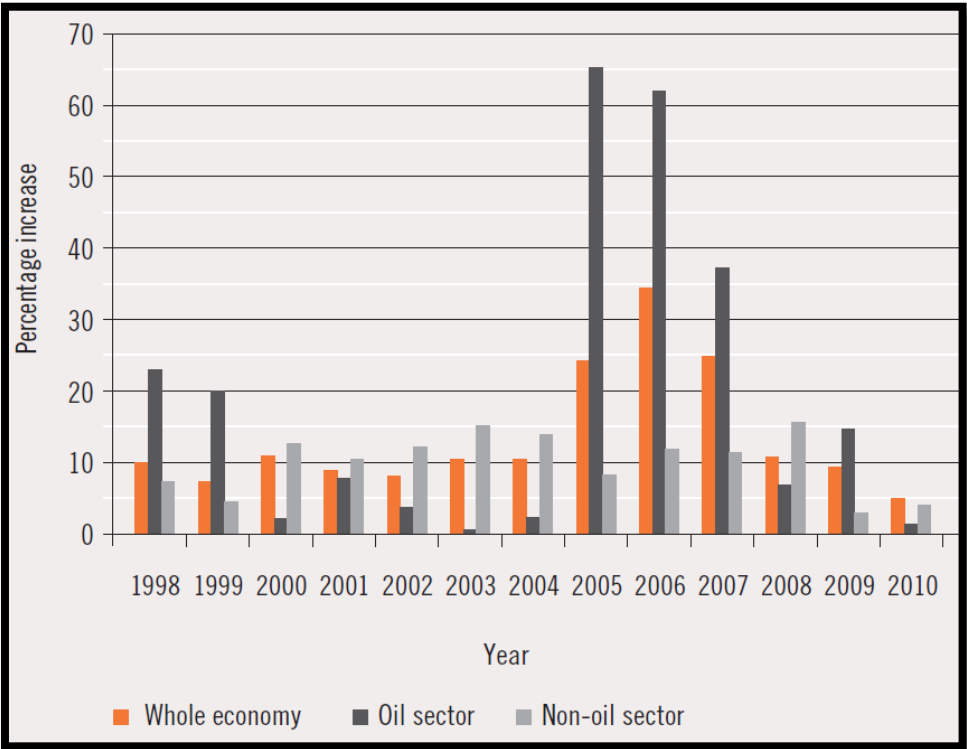
As we know oil and gas are the key drivers of the economy, accounting for 87% of total exports, 70% of revenues, and 45% of GDP. Therefore, any changes in oil output and

pricing, like in other petroleum-dependent nations, significantly dictate the direction of economic growth. (Giorgi, 2016)

However, regardless the fact that in the last 2 decades the country was fully dependent on petroleum, in past years the republic has made efforts to lower this dependence on petroleum. (Giorgi, 2016) Azerbaijan took an objective to establish new economic sectors to become less reliant on volatile oil prices.

Figure 2: GDP growth in Azerbaijan across sectors, 1996 - 2010

(Derived from Guliyev 2013: 139)



Source: Swiss Study Foundation, Report on States and Societies in Transition –History, Threats and Opportunities. The Case of Georgia and Azerbaijan, p 28

Although until 1991 the nation was not able to use its natural resources for its own sake, now the republic can use its rich resources independently. Unlike earlier decades, current experience shows that the oil factor has provided favourable conditions for the resolution of numerous challenges. This industry gave an ability to reinforce independence. In addition, the importance of the oil industry can be explained as an opportunity for governance of Azerbaijan with the revenues coming from it to invest and develop non-petroleum sectors keeping the stability of the economy.



## 1.2 Early extraction period

The first information about oil extraction in Azerbaijan was many times mentioned by medieval scholars and travellers and it was described as a big source of revenue. According to some scholars there are proofs that it's extraction even started in the 1st century BC. For instance, back in 1877 Charles Marvin wrote that the oil exportation from Absheron peninsula, where the city of Baku is located, to Iraq, India, Iran, and other countries 2500 years ago can be proven. (Bagirov, 1996)

Some literary sources and monuments that have come down to us, describe that the existence of oil in this land was already known during the campaigns of Alexander the Great, who used oil for military purposes as well as a means of heating and lighting. (Aliyev, 2010)

Very valuable data about it was reported by famous travellers and historians such as Abu-Istakhri in 8<sup>th</sup> century, Ahmed Balazuri in 9<sup>th</sup> century, Masudi in 10<sup>th</sup> century, Marco Polo in 13/14<sup>th</sup> centuries, and O'Learius in 17<sup>th</sup> century. According to Arabic scientists Abu-Istakhri and Masudi, who visited Baku in 8<sup>th</sup> and 10<sup>th</sup> centuries respectively, oil and gas were used for medicine, military, cooking and boiling purposes. A very famous traveller and Venetian merchant Marco Polo (1254-1324), during his trip to Persia through Baku in 1264 was a witness of oil obtaining process in Caspian Sea in the territory of modern Azerbaijan. In his "Description of the World" Marco Polo writes about huge oil ponds which are possible to place in a great number of ships. (Biletskiy, et al., 2019).

Arabic scientist of Middle Ages Masudi mentions in his book of "Book of the Middle" that in Baku there were two oil extraction sources: while white and yellow oil was extracted from one source, blue and black oil was obtained from another extraction source. (Biletskiy, et al., 2019)

In villages people were digging simple wells, by using the way that they used to dig normal water wells. Some historical records tell that in 1594 a person called Nur Oglu, a resident of the Absheron peninsula, dug a well to a depth of 35 meters with the usage of a simple hand method. The inscriptions found in a stone in one of the wells called Balakhany, Baku, recently, proves the fact of well being dugged by Nur Oglu. It's important to mention that natural gas had also a great usefulness for locals however because of

impossibility of transportation to long distances until 20<sup>th</sup> century, the use of natural gas was entirely local.

In 1806 Baku Khanate was occupied by Russian Empire and its oil production was taken under a monopolistic control. (Smil, 2017). After the start of Russian domination in Transcaucasia in the beginning of 19<sup>th</sup> century, extraction of oil continued, however for several decades its level remained low. The state of Russia for that time was not tend to consider natural resources of major importance and there was only low-level interest in oil products. Later only some individuals were given with a right to produce oil and because of this monopoly annual oil production did not change. By the system created by Russian Empire oil production was monopolized by a set of some individuals who did not have much incentive to develop drilling methods and increase production.

### **1.3 The First Development Stage (1846-1920)**

Until the middle of the mid-nineteenth century, the extraction of oil was not in large scales as oil obtaining was mainly a matter of simply digging wells by hand. (Martellaro, 1985).

The first stage of industrial development started in 1846, when firstly in the world oil well was drilled with an industrial method in Baku and oil started to be extracted from the well located at 21 meters deep in oil field which is called Bibiheybat, near to Baku. This occurred 11 years before the first oil well drilling in Pennsylvania. However, according to some sources Pennsylvania is the place where the first oil well was drilled with an industrial method. It was because, the oil deposit found in the well of Baku was limited and had no industrial significance as in Pennsylvania, but in fact, Absheron peninsula where Baku is located is the first place where the first oil well was drilled with an industrial method.

Unfortunately, because of limits in oil deposits of oil wells in Baku the oil extraction was slowed down for a while, at time. The oil was extracted and stored in stone-lined holes before being delivered to state-owned storage facilities after setting and refining. In Baku this simple way of oil extraction was used until 1872 when the new technology of well drilling came to the use. (Bagirov, 1996).

*Figure 3: The world's first oil well drilled with an industrial method in Bibiheybat, Baku, 1846*



*Source: www.azertag.az, April 20*

Although the oil production in Baku was increasing gradually every year, it was not so much profitable and essential. However, when Russian government realized how fast was growing the demand for kerosine, it was motivated to change its way to deal with oil industry in Baku. Baku's oil production and its profitability was low compared to the American, which was growing fast as a result of its legal and economic structure. The structure of American business allowed and attracted higher and rapid investments as well as the improvement of technology and infrastructure. By observing, huge profits and benefits made by Americans, Russian investors started to consider the change to a more beneficial and productive arrangement.

During the 1860s Russian officials<sup>5</sup> began the long process of rethinking about the switch from the Lease System in favor of a more productive and effective arrangement.

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<sup>5</sup> In the beginning of nineteenth century in 1806 Baku was occupied by Tsarist Russia and during nineteenth century was under this occupation. Therefore, the officials who started rethinking process to change is mentioned as Russian officials.

Lease system was the system in which under particular conditions, it was possible to rent oil-bearing lands. The decision to switch to a new system started to attract investors and entrepreneurs from west Europe. Finally, in the year of 1972 the officials announced new regulations with the goals of encouraging private enterprises. With the new system and regulations nearly 3300 acres of oil-bearing lands in Absheron peninsula were available for the long-term leasing and auction (Hastings, 2020)

Until 1872 in the Lease system, an authorized representative of the owner and the lessee signed the rental agreement, which was normally for a five-year term. The mechanism for selecting lessees is comparable to today's tender system, with the highest offer winning. The government declared the basic minimum rent, and people who wished to join were required to pledge half of the annual rent. However, with the introduction of new system in 1872, Lease system was replaced by a new system with two very essential legislative acts which were:

- The Law on Oilfields and Liability for Excise Tax on Oil Products
- The Law on the Auction Sale of Oilfields Belonging to Leaseholders to Private Persons. (Bagirov, 1996)

After the introduction of the new system in 1872 in the auctions, many oil fields were sold to different private individuals. One of the goals of the new system was to increase Russian state's revenue and the result was quite successful as these auctions directly provided considerable revenue. With the increase of interested parties and expand of oil exploration, the officials became more comfortable with the newly introduced system and put more acres of land available for auctions in the following years.

The year of 1872 was also the year when Haji Zeynalabdin Taghiyev who is the greatest philanthropist between the all-oil barons in Azerbaijan, established his Oil Trade Company. (Mir-Babayev, 2008) Oil magnate Haji Zeynalabdin Taghiyev (1838-1924), is considered in Azerbaijan as the one of the greatest contributors to the wealth of the population at the end of 19<sup>th</sup> and beginning of 20<sup>th</sup> centuries.

Taghiyev was born in Baku, accumulated initial wealth, and invested it in the most successful industry of the 19<sup>th</sup> century - the oil business. He was the first Azerbaijani entrepreneur to begin developing the non-oil sector with funds from oil, which is now one of the major focuses of the country. These are some reasons of why he is famous with his

investments and charitable acts to increase the welfare of nationality. Taghiyev used the proceeds from the sale of his company to British to establish a textile factory in Baku. Taghiyev's investments covered practically every sector of the economy for that time, including shipping, shipbuilding, energy, cotton, fish, flour-grinding, and winemaking. (Djabbarov & Velikhanli, 2014)

After the sale of many oil fields in auctions, oil well drilling process took a very massive scale. Subsequently, this process during the late 19<sup>th</sup> century along with the process of development of well drilling technologies has resulted in discoveries of many oil wells in Baku.

In 1877 an event took place that became a bright page in the history of Azerbaijani oil industry - a powerful fountain gushed from a well drilled in the area on the Sabunchi field, Baku, flooding all the surroundings with oil. For a short period of time, already in the first half of 1878, there were no less than 25 gushing wells, for which this area, due to its oil wealth, received the name "Golden Bazar". (Aliyev, 2010)

These developments and discoveries led to the great increase in oil production, high development of oil infrastructure and creation of oil production, refining and sales companies in high numbers. In this way, Baku at the end of 19<sup>th</sup> century has turned into one of the world's industrial centers, where the leading oil companies of the world came together, and leaseholders had the right to export the oil produced by them. Henry Roman, who was one of the visitors to Baku during the late 19<sup>th</sup> century mentioned that "The mysterious natural processes that produce petroleum in the earth's bowels, whether animal or vegetable, have occurred in an unusually high degree beneath on the eastern shore of the Caucasian peninsula, where Baku has risen".

Azerbaijan by obtaining more than one hundred million tons yearly, which was over 50% of the world's total oil production, was ranked first in the world' oil production between 1899 and 1901. While for that time in Azerbaijan oil production accounted for more than one hundred million tons, in USA this number was only nine million tons. (Powers, n.d.)

During the late 19<sup>th</sup> century 49 out of 167 operating entrepreneurs in oil industry were Azerbaijanis and these oil millionaires made a great contribution to the industrial improvement. Along with Azerbaijanis, there were also foreign entrepreneurs investing

such as Swedish Nobel brothers<sup>6</sup> who had many oil fields, oil refineries, oil tankers in the Caspian Sea, hotels, and railroads. Rothschilds family is another foreign investor famous with its outstanding investments in Baku's oil. In 1886 the family established its Caspian Black Sea oil company in Baku. To understand the significance of foreign investments for that time, we can take a look at fact that 42% of Baku's oil export in 1890 was controlled only by Rothschild family. (The Ministry of Energy of the Republic of Azerbaijan, 2020)

There was a considerable amount of foreign investment non only in oil industry of Baku but in the whole Russian Empire. At the end of 19<sup>th</sup> century there were nearly 67 main industrial companies in Russian Empire whose total assets were exceeding 10 million rubles. The Nobel brothers' company was leading this list with the total assets of 63 million rubles<sup>7</sup> in 1898 with their oil companies Branobel and Baku Oil Company. (Dmitrieva & Borodkin, 2014)

From the table 2 below, we can understand the significance of the foreign investments in the oil industry of Russian Empire at the end of 19<sup>th</sup> and beginning of 20<sup>th</sup> centuries. It's important to note that the figures in the table 2 only mention amount of shares of Nobel Brothers oil companies' but not the whole of foreign investments in Russian Empire.

Before the start of World War I (WWI) the greatest amount of Russian oil exceeding the half was concentrated in the hand of three companies mentioned below and it was nearly three-quarters of all the trade in oil and its products in the whole Russia. (Dmitrieva & Borodkin, 2014)

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<sup>6</sup> Nobel Brothers – four brothers originally from Sweden, Emil, Ludwig, Robert, and Alfred Nobel. As oil magnates, they are among the greatest investors in the Azerbaijani oil industry playing a role in its development at the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> centuries. Nobel Brothers established the first foreign firm in Baku.

<sup>7</sup> In 1895 100 rubbles = 51 US dollars (approximate figure).

*Table 2: The asset balance sheets of the leading companies in oil and gas industry, 1897-1914*

No.	Companies	Asset Balance Sheet (mln rubles)		
		1898	1905	1910
1	Branobel	63.5	117.6	142.3
2	A.I Mantashev & Co., Oil Company	-	42.8	27.3
3	Baku Oil Company	4.5	7.7	15.2

*Source: Leonid Borodkin and Anna Dmitrieva, Shares of the Branobel Petroleum Company on the Russian Stock Market at the Beginning of the 29<sup>th</sup> Century, the Influence of Economic and Political Factors. Chapter in the book: Swedish Business History in Russia, 1850-1917, P. 26-49.*

Nobel Brothers as one of the key players in 1878 founded the Branobel oil company in Baku. Brothers significantly grew their wealth from their oil fields in Baku, after solving problems of transportation, by building the first oil tanker in world which they called “Zoroaster” in 1878 and installing oil pipelines. (Chapple, 2021)

*Figure 4: Oil Wells of Nobel Brothers, located in Balakhani, Baku, 1890s*

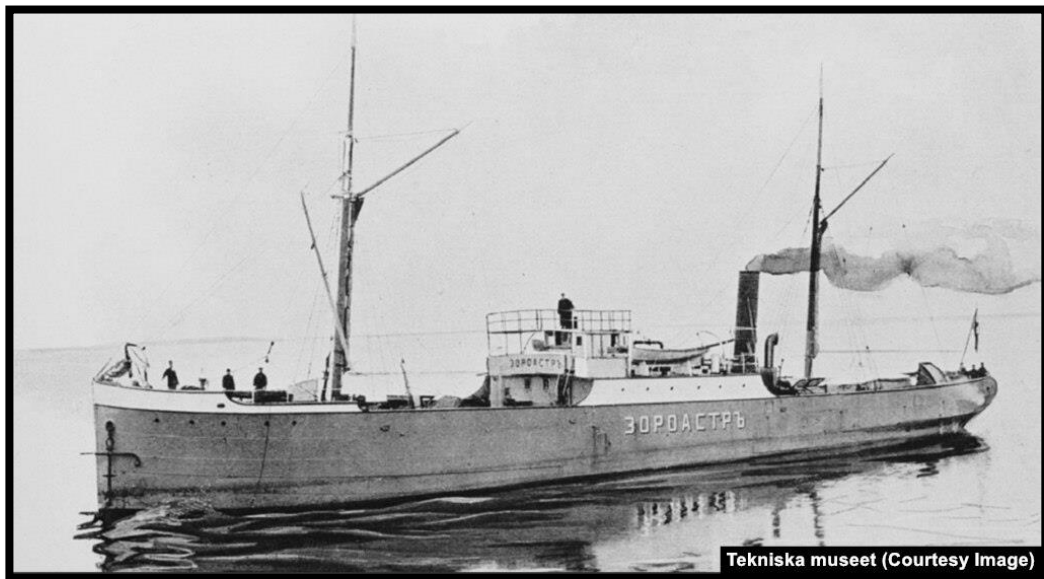


*Source: Research Paper, Water management paradigm shifts in the Caspian Sea region: Review and Outlook, Zarema Akhmediyeva, Iskandar Abdullayev, January 2019*

At the end of 19<sup>th</sup> century Branobel company with the rich fields of oil, around Baku, became the main player in the oil market of the world. (Dmitrieva & Borodkin, 2014) Brothers’ business in Azerbaijan deserve a great attention because without Baku

Nobel's oil business and without Nobel's investments Baku's oil industry would not be the same as it was for that time. Their ability to realize the potential of Baku, enabled them to start investing and become oil magnates. It was Robert Nobel who firstly draw attention of the whole family to Baku and who became the first foreigner taking part in oil industry of Baku.

*Figure 5: The first oil tanker in the world operating from Baku, built by Nobel Brothers called "Zoroaster"*



*Source: Radio Free Europe, Radio Liberty, electronic source by Amos Chapple, June 15, 2021, www.rferl.org*

When we talk about Nobels, its crucial to speak about the labour of Alfred Nobel who was not engaged in company's work but who played a significant role in the oil business. Alfred Nobel was the one who invented gas deposits of firm and advised his brother Ludwig not to use steam boilers in oil ships. Ludwig with the advice of his brother Alfred, who believed in the bright future of mazut<sup>8</sup>, made a decision to use mazut for the steamers' furnace and started to buy and collect mazut. As a result, Ludwig Nobel became "The King of Mazut" and subsequently with the mazut selling, Nobel Brothers' company became oil leader at the end of 19<sup>th</sup> century. (Mirzayeva, 2014)

The Nobel Brothers were the first foreigners in Azerbaijan who established a foreign company. With a total of 25-28% of the total oil production volume of Baku, they turned to be oil magnates with their leading oil companies in Russian Empire. Generally,

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<sup>8</sup> Mazut is low quality and heavy fuel oil which is cheaper than crude oil. It's almost produced exclusively in Azerbaijan, Kazakhstan, Turkmenistan, and Russia.



the business activities of Nobel Brothers in Azerbaijan encompassed the years between 1879 and 1917 or 1920 before the nationalization of the industry by Bolsheviks<sup>9</sup>. In 1917 when Bolsheviks took power in Russia with the revolution, one of their objectives was taking power over Baku to get a control over the rich oil sources. (Mirzayeva, 2014)

Among the most important interventions there was the construction of oil pipelines. During the time, the transportation of hydrocarbon resources was happening in only barrels and cisterns. However, the year of 1863 was a turning point because the well-known scientist D. I. Mendeleev proposed the idea of oil transportation through the pipelines. Later in 1877 he gave an idea of constructing long distance oil pipelines. (Mir-Babayev, 2018)

In 1878 Balakhani oil pipeline, by being the first oil pipeline in Russian Tsarist territory, was constructed in the field of Balakhani, near to Baku. The pipeline was connecting the field of Balakhani with the Baku oil refinery. Later in 1907 with the great support of oil leaders and industrialists, Baku-Batumi oil pipeline was launched. By being the longest pipeline in the world (885-km length), it was constructed in 10 years. (Mir-Babayev, 2018) In addition, to enable further the oil transportation of Branobel company from Baku to Europe the railway line, Baku-Batumi, was constructed in 1883. (Asbrink, 2011)

On the eve of nationalization of industry there were nearly 270 enterprises engaged in oil production, 49 firms engaged in digging process of oil wells, 25 oil refining firms and others. Despite of high development in the beginning of 20<sup>th</sup> century, Azerbaijani oil industry faced a considerable decline as a result of WWI, the Bolshevik revolution, the consequent collapse of the economy during the civil war period, and the government's and field owners' frequent restructuring. During 1917 along with significant decline in oil production also many other problems such as social instability including strikes and mass demonstrations were arising. By October 1917 as Baku's political situation deteriorated, production had dropped to less than 4 million tons per year. (Sicotte, 2017)

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<sup>9</sup> Bolsheviks (Majority) – is a revolutionary Marxist faction created by Vladimir Lenin, which was able to become the leading power in Russia subsequently leading to the establishment of the USSR.

After the collapse of Russian Empire in 1917 the future of oil & gas sector was taken under control by different political factions such as Bolsheviks, Mensheviks, and other parties in Baku. While eventually Bolsheviks in 1918 were able to take under control Baku, their existence was not long as the Bolsheviks and their supporters had lost control of Baku's surrounds by August of 1918, and the Trans-Caspian Directorate, a transitional administration governed by the British, had temporarily taken command. However, British existence in Baku and its oil fields was also not long and after the liberation of Baku by Caucasian Islamic Army<sup>10</sup>, the control under Baku and its fields was taken by Azerbaijan Democratic Republic (ADR)<sup>11</sup>.

The founders of newly created republic were understanding that the country's economy was completely dependent on oil exports for that time, so there was a necessity to revive the sector at any cost. However, the situation was not good at all and due to the civil war in Russia, the main consumer of oil, the market was closed, exports fell considerably and the price of "black gold" fell sharply. The ADR's government issued a special decree, on October 5, 1918, returning all oil fields, the Caspian merchant fleet, factories, and workshops to oil entrepreneurs, giving them two-thirds of the oil produced and keeping the remainder. The country's oil reserves tripled in 1919 because of severe steps implemented, reaching 300 million pounds in the early 1920s. The government was able to conduct unrestricted oil commerce with neighboring countries thanks to the favorable situation. (Azerbaijan State News Agency, 2018)

Recognition of the young republic by the international community, maintaining its independence, assuring social and economic progress, and strengthening its defense capabilities were all critical strategic tasks at the time. To reach these objectives, the government created commercial and trading relations with Italy, Turkey, Georgia, and the United States, as well as importing cash-strapped food, military equipment, and sophisticated industrial and agricultural equipment. Italy was among very few countries which played very essential role for Azerbaijan because of newly created commercial and

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<sup>10</sup> Caucasian Islamic Army – the army created by Azerbaijan Democratic Republic and Ottoman Empire following the “Treaty of Mutual Assistance and Friendship”

<sup>11</sup> Azerbaijan Democratic Republic (ADR) – by being the first republic in the Islamic world was founded on 28 May 1918 after the collapse of Russian Empire in 1917 and existed until 28 April, 1920 when the region of Azerbaijan was occupied again by Red Army.

trading links. However, the development process of oil industry in newly created republic did not last long, as in April of 1920 the region was invaded again by Bolsheviks.

After the Red Army recaptured the briefly independent Azerbaijan Democratic Republic in 1920, oil production and especially exports fell. This drop was linked to the nationalization process of industry by Soviets, as well as the expropriation of those local and European investors who were previously responsible for oil industry's high-level development. (Lauinger, et al., 2015)

#### **1.4 Sovietization of Industry as the Second stage (1920-1949)**

The second stage of the development started with the nationalization of industry and covers the period until the construction of unique petroleum city on stilts in Caspian Sea in 1949.

For Soviet State, Baku was not only a source of petroleum but also at the same time it was a source of diplomatic recognition. Governmental officials including Lenin were convinced that without the oil fields of Baku it was impossible for the newly created state, to survive and win the Civil War. In May 24, 1920, a decree was issued on the nationalization of the oil industry and private property and foreign capital were categorically prohibited. (Djabbarov & Velikhanli, 2014) All oil-producing, oil-refining, oil-trading and ancillary enterprises were declared the property of the state, 272 private oil-industrial firms were liquidated. At the same time with the nationalization, the Azerbaijan Oil Committee (Azneftek) was created, headed by the professional revolutionary A. Serebrovsky, a protege of the head of the Russian government V. Lenin. The transfer of Baku oil to the subordination of Russia was completely re-lified. This time, for decades, Soviet Russia managed to have a control of the national wealth of Azerbaijan. (Muradaliyeva, 2005)

Although there were many protests of previous oil fields' owners, the Bolsheviks were able to take a full control of all oil fields, oil production facilities and transportation sources. Following the WWI and the Civil War (1918-1921), Soviet State required political stability to recover economically, which was dependent on the acquisition of oil and other fuel supplies. Because of its geographical location, riches, and the pre-revolutionary oil industry, the Caucasus played a significant part in the USSR's founding. (Brinegar, 2014)

One of the main goals of Soviet State was to export oil as much as possible from Baku to Russia. In fact, the main reason for the capture of Azerbaijan was hidden precisely in this. Azerbaijani oil had to play a key role in rebuilding Russia's shattered economy, political, and economic infrastructure. (Djabbarov & Velikhanli, 2014) In order to overcome the social crisis in the country in 1921 the Bolshevik government was forced to implement economic reforms, known in history as the new economic policy (NEP).

After the transition to a new policy, the industry faced a fundamental change toward the improvement. (Azerbaijani House in Paris, n.d.) The newly created enterprise Azneft was directed by the 36 years old Aleksandr Serebrovski, and he was fully responsible for the whole petroleum production. Although, oil production of Baku in 1920 was in very low amounts, in first five years extraction process in Baku faced an increase.

The processes of restoration and extraction from old oil fields were also followed by huge new improvements in oil well drilling, oil extraction technologies and exploration work. In order to increase the oil extraction, finding new oil deposits in Baku was one of the main important steps and even with this purpose in 1920 there was created Geologoraz-Investigation Bureau which had to deal with discovering of new oil fields. (Djabbarov & Velikhanli, 2014) Through the use of more advanced equipment and technology, stabilization was achieved first, and then an increase in oil production. Because of great expansion of exploration work, several new oil fields were discovered and put into use.

The oil industry of Baku re-achieved its pre-war (1913) peak only in 1927. However, regardless of many activities to recover the industry, recovery process was continuously slowed down both due to both political and practical reasons. The reasons for this gradual and slow improvement were mainly related to difficulties in infrastructure repairing process, adaptation to a new style of industrial administration and creating efficient and developed labour force.

Soviet officials at the end of 1920s had a success in reshaping the oil industry of Baku to fulfil their own practical and ideological goals. Although Baku's first decade under Soviet administration was challenging in many ways, Baku and its oil industry eventually emerged as one of the promising projects for the future.

Even though the gas industry did not have the same improvement levels as oil industry in Azerbaijan for that time, it was also facing gradual improvements during this stage. While the production of natural gas in Azerbaijan was not in high amounts during the 1920s, it had nearly doubled by the end of the 1930s. Natural gas output has expanded by more than 14 times from 1928 to 1940. As a result, Azerbaijan was the USSR's top gas producer before the World War II (WWII), with 2.5 billion cubic meters (more than 1.8 mln tons) of gas produced out of a total of 3.2 billion cubic meters in 1940. The exploration process of new onshore gas fields after the war such as "Garadagh", "Zire", "Siyazen", and the offshore field of "Bahar" was critical to the quick growth of gas sector. (Rzayeva, 2015)

During the late 1930s and beginning of 1940s oil extraction reached the point, in which every kind of petroleum product was exported to almost every USSR State. In 1941 Azerbaijan's output peaked at 23.5 million tons, just in time for the Nazi invasion. (Piriyev, 2020) Neither before nor after did the oil industry of Azerbaijan reach such an indicator. (Agakishiyev, 2012)

Without oil, it is nearly impossible to imagine contemporary combat or allied victory of USSR in WWII. That is why Azerbaijan with its oil played a decisive role in the victory of the USSR in war, because if we look at this war from all sides, we will see that it was a war of engines: engines on the ground and engines in the air. Gasoline, which was used to fuel cars as well as diesel fuel and jet fuel, was the main required petroleum product made from Crude Oil.

During the war all petroleum products was provided to all sectors of economy of USSR. If we compare the four-year period during the war (1941-1945), then we can see that the total volume of oil production in USSR amounted to 110 million tons, of which 75.2 million were produced only in Azerbaijan. (Bakhramov, 2020) If we divide this figure by years, then on average, about 18.5 million tons of oil were produced in Azerbaijan every year during a war time.

Between 1941 and 1945 in Baku were built and put into use 63 new enterprises and chemical industry. Although in 1941 oil production reached its peak, at the same time there were some challenges. Firstly, oil production decreased by 14,6% until the end of war and one of the main reasons for this was that almost all well-drilling bureaus were transferred to the east part of USSR. About half of the oil equipment, engineering technical

personnel was sent to the different USSR oil area called "Second Baku". Secondly, during the war years the number of qualified oil workers has dropped significantly as a result of conscription because of war. After the 1941 nearly 30,595 oil industry workers were sent to the war and 10,695 were transferred to the oil fields in east parts of Russia. (Ibrahimova, 2019).

However, according to Ismail Agakishiyev Associate Professor of Historical Faculty in Lomonosov Moscow State University, the main reason was related to violation of technological rules during extraction. The difficult conditions of war persuaded this tendency to go further, and this led to wasteful methods of oil extraction. The depletion of the upper layers of oil, the narrowing of exploration and drilling operations, became the major reasons for the decrease in oil extraction. All this affected the development of the oil industry in Azerbaijan in the post-war years.

During two years from 1941 until 1943 maintenance of wells was getting worse because of the lack of repairing processes. The material and technical support of the oil industry deteriorated sharply during the war years due to the deterioration of oil equipment. Despite all the difficulties, Azerbaijani oil workers were able in 1944 to produce 11.8 million tons of oil, or 64.5% of the 18.3 million tons of all Union production. To understand the significance of Azerbaijani oil industry for Soviet State during the war, we can look at statistical data acquired during 1939-1945 according to which 118,9 million tons of oil out of 172 was supplied by Baku and that was 69% of total oil produced in USSR during this period of time. (Ibrahimova, 2019)

After the WWII, in the second half of 1940s Baku kept continuing to contribute to the Soviet energy landscape, but in a less visible manner than before. One of the main reasons was that the production of oil from the fields faced a decline because of under investment and catastrophic over production during the war time.

At the same time, creation by Soviet Leadership of "Second Baku" oil region in east region of State, had a great impact by concentrating the attention on a new oil region. However, Baku kept contributing and did not lose its importance for the Soviets, therefore in post-war era, the government took active measures to introduce the exploitation of new oil fields explored in Caspian Sea by highlighting the restoration of destroyed oil infrastructure.

Although the power of Azerbaijani oil sometimes is underestimated in Soviet sources, it's a fact that oil obtained during the war from the oil fields of Baku played one of the key roles in victory over Nazi Germany as more than half of Soviet tanks and aircrafts were fuelled by Azerbaijani oil. Not only USSR and Germany were interested in oil fields of Baku, but also Britain and France were showing nervousness about the rich fields controlled by Soviets.

Before the start of war between USSR and Germany in 1941, the signing of the Non-Aggression Pact between two states in 1939 was of great concern to the ruling circles of Britain and France. Prejudicial reports in the world media about the USSR's supply of Germany with Baku oil caused official discussions in the military circles of London and Paris, and secret measures were taken at the highest levels to control and prevent this situation. B. Liddell Garth, one of the leading military historians of the 20<sup>th</sup> century, wrote in his 938-page book, *World War II* that Germans after capturing France in June 1940 by using French archival documents, reported that the French military command had "devised a plan to strike the oil-rich regions of the Caucasus to deprive Germany of access to Soviet oil resources." (Ismailov, 2007)

Essentiality of oil for the war was also the reason of why the Third Reich in 1941 decided to seize Baku and its oil fields. Firstly, Baku could provide Wehrmacht with essential oil that they needed significantly to fuel their tanks and aircrafts and secondly capturing Baku could leave USSR without essential oil sources which was a key role of victory. (Yevdayev, 2017)

The Germans plan of capturing Baku and its fields was more than definite and already in the spring of 1941 the Germans created a special department - "Westfalen Headquarters" to organize the exploitation of Baku's oil products after capturing the city. (Kafkash, 2020)

Figure 6: Crude oil trains moving from Baku to the front during the World War II, 1940s



Source: Azerbaijan's contribution to the Victory in the World War II, Permanent Mission of the Republic of Azerbaijan to the United Nations, 2016, <https://un.mfa.gov.az/>

However, Hitler's plans were unsuccessful. During an eight-month period in 1942-43 on their route to Baku across the North Caucasus, the German war machine came to a standstill at Stalingrad, resulting in a terrible loss for the Nazis and ending their march to the oil fields of Baku. Despite the victory, Soviet Union was the one who suffered the most between participants of the war, with approximately 26 million fatalities. Azerbaijani share in the suffering was 400,000 sacrificed soldiers with 700,000 soldiers sent to the front. In 1941-1945 Baku oilmen accounted for more than 70% of all oil production and more than 80% of total gasoline production in the Soviet Union. (Yevdayev, 2017)

Although oil fields of Baku were damaged considerably during the war times, by considering the importance of Caucasian oil for Soviets, the governance proposed the first five-year plan to rebuild the industry. During the first five-year plan of the post-war rebuilding phase, Azerbaijan's oil production climbed by 28.8%. Baku oilmen have consistently boosted production of oil and oil products to strengthen the country's international position and economic strength, as well as providing unparalleled services in training employees for the country's new oil regions. (Ismailov, 2007)

In 1945 Azerbaijani oil engineers Y. Safarov and S.A Orujev suggested a new method for offshore bases which was tubular collapsible constructions. In 1947 the trestle



method of connecting development rigs and processing facilities was invented by a group of oilmen. Therefore, starting from 1947, for the first time in the world, the construction of metal trestles on the sea has been started. (Farhad Djabbarov, 2014). Soon exploration processes gave great results and after some years of hard geological studies in Caspian Sea in 1949 a very important oil deposit was discovered opening the path for offshore extraction. (Senses Atlas, 2020)

### **1.5 Exploitation of “Neft Daşları” (Oil Rocks) in Caspian Sea as the Third Stage (1949-1969)**

The third phase of the development of Azerbaijani oil & gas industry started in 1949 with the commissioning of “Neft Daşları (Oil Rocks)” which led to the development of offshore oil industry and this phase lasted until 1969.

The USSR today does not cause positive emotions among the majority of the population of Azerbaijan. However, it must be admitted that during the time of Bolsheviks many unique technical projects were conducted. Exploitation of oil city in the sea which subsequently was called “Oil Rocks” was among these unique technical projects. If we ask when and where did the world’s first offshore drilling platform appear? The answer is in 1949 in Azerbaijan, 40 km from the Absheron Peninsula where Baku Is located, the field was called “Oil Rocks”. (Bulanova, 2017)

The exploitation of “Oil Rocks” the city in the sea has a historical importance not only for regional oil industry but also for global oil industry, as “city in the sea” was the world’s first offshore oil well constructed ever for that time. Its highly believed that the construction of this great field is the source that started oil extraction from the sea.

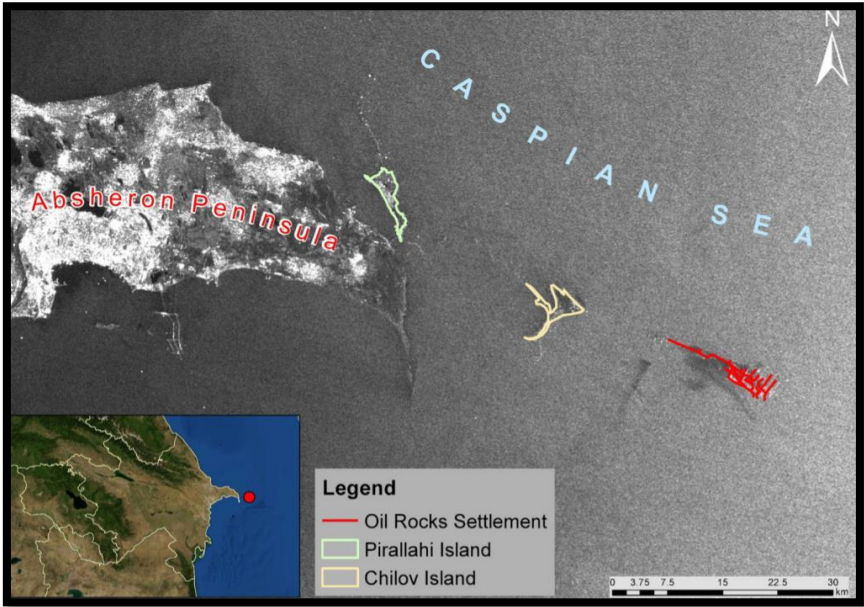
However, how Soviet Officials came to the idea to build the oil city on the sea? It all started in 1930s when almost newly created young state was on its way to the bright future. There was an industrial development in many industries also including oil. In America there was a Great Depression, and the Soviet Union was buying the latest technologies and sometimes even entire factories with low price. In factories there were a production of tanks, planes, cars, and tractors.

There were already existing many oil fields from which oil in large amounts was extracted however these deposits were not enough for the needs of the Soviet country,

and it was decided to look for new ones and develop the old ones. However, in the vicinity of Baku, everything was already so dug up that the oil pumps are almost on top of each other. Therefore, it was decided to go beyond the Absheron peninsula - into the sea. One of the potential areas in Caspian Sea for digging oil wells was the area 110 km from the coast.

The name of the city in the sea is not random, as many years before of exploitation in the Caspian Sea in 1930s black rocks covered with oil slick were noticed. (Mir-Babayev, 2009) Only after the construction of the oil city in the Caspian Sea, the area was renamed from “Black Rocks” to “Oil Rocks”.

*Figure 7: Oil Rocks Settlement in Map of Caspian Sea, 110 km from the Absheron Peninsula where Baku is located*



*Source: Article, Detection of oil spill frequency and leak sources around the Oil Rocks Settlement, Chilov and Pirallahi Islands in the Caspian Sea using multi-temporal Envisat radar satellite images 2009-2010, Emil Bayramov, 2014*

In 1946, the Az USSR Academy of Sciences organized a large expedition to the Black Stones (for that time the area was called Black Stones). This expedition discovered that oil spills in this area are not accidental - there is a large oil-bearing layer under the sea bottom. The preparatory work was completed two years later on November 14, 1948, on the Black Stones. By the holiday of November 7 (in USSR everything was done for the holidays), the well gave the first oil from a kilometre depth, and in what quantity - the

daily flow rate of this well was 100 tons. In honour of such an important event, the Black Stones were renamed into Oil Stones. (Bulanova, 2017)

The trestles connecting the wells were actively built in tandem with the expansion in the number of wells. It was an incredible sight: dozens, hundreds of capital buildings, oil rigs, and oil wells linked by kilometers of bridges over which automobiles and trucks drove. Only the Caspian Sea surrounds the city, and the nearest land is a hundred kilometers away via boat or helicopter. (Onliner, 2013)

One of the interesting aspects of the construction of oil rocks was that initially, everything was started to be built on wooden piles driven into the seabed, but this method significantly slowed the deposit's development - people simply had nowhere to turn around, and they needed to live somewhere. The semi-fantastic decision was made to create an artificial "island of lost ships," or, more precisely, an island of specifically flooded ships. The decommissioned ship "ЧВАНОВ" was brought from Baku Bay and partially flooded. Sleeping and working areas were also provided in the interior. Since the experience with "ЧВАНОВ" was successful, several more decommissioned ships were brought to the area before drilling the second well, which they turned into an artificial island, named the "Island of Seven Ships." Unfortunately, among the ships flooded during the construction process was the Zoroaster tanker, the world's first oil tanker, built on the Nobels' initiative. It could have become a second "Aurora,"<sup>12</sup> into a museum, but it has not. On the other hand, it was very symbolic: the world's first tanker served as the foundation for the world's first oil city on the water. (Bulanova, 2017)

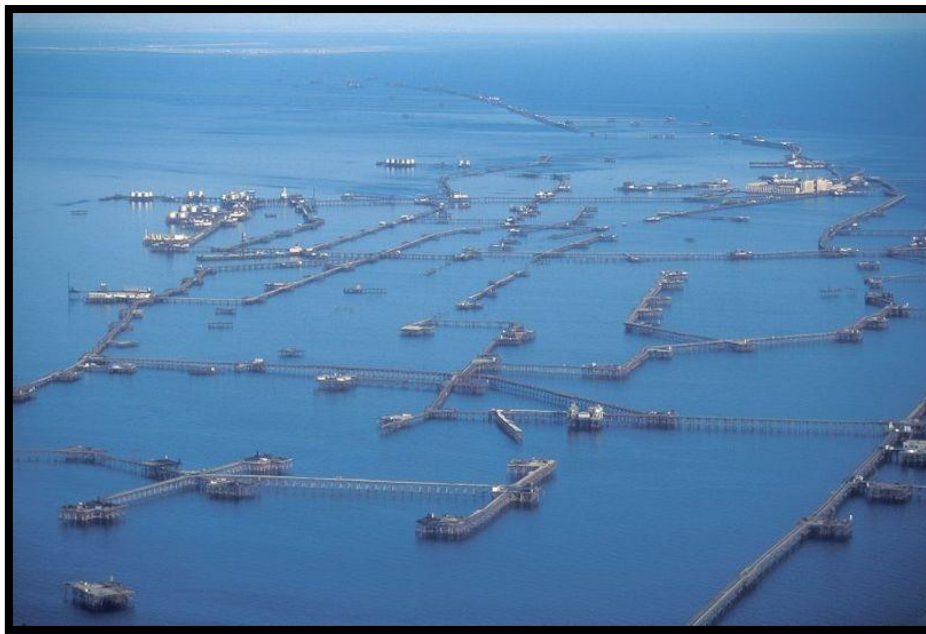
Meanwhile in December 1946 in Chicago the American Geological Society drew up and authorized a long-term (15-year) program of work to study the geology of the seabed, with plans to conduct research in the next 5 years, followed by the construction of offshore fields in the Gulf of Mexico. However, due to a variety of objective and subjective financial reasons, development of offshore fields in the Gulf, and exploration were not carried out from 1949 to 1953. Only in 1954 in the United States was a drilling rig built for drilling six oil wells with a rearranged rotor and crown block. (Mir-Babayev, 2009)

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<sup>12</sup> Aurora – is a famous Russian protected cruiser, built in Saint Peterburg for services in the Pacific. Currently, the ship is preserved in a museum as a museum ship in Saint Petersburg.

In this tandem, “Neft Daşları” or in other words “Oil Rocks” was constructed in a distance of 110 km from Baku coast in Caspian Sea, among the rocks of seabed. The construction of the oil city on the sea is considered as a golden page in the history of Azerbaijani oil & gas industry. In the first 20 years in the area of 163 kilometres, trestles were built on the poles in Caspian Sea. From November 1, 1949 the production of tons of oil started from the first well in oil rocks. (Ismailov, 2007)

*Figure 8: Neft Dashlari (Oil Rocks), - June, 1997*



Source: *guerrilla semiotics, spatial poetics: Stalin's Atlantis* <http://guerrillasemiotics.com/>

This is no little project, with 300 kilometres of road and 256 distinct oil wells. It was the world's first attempt to tap into hidden offshore riches. Stalin commissioned the project before moving on to build Russia's oil operations in Siberia. Drilling platforms were created one after the other and joined with piers. (Maguder, 2011)

One of the important questions aroused was what to do with the produced oil. Although it was transported by oil tankers because of no other choice, it was inconvenient to export oil by tankers, and it was not always possible, after all, no one cancelled the stone ridge, and no one wanted to have a hole in the bottom of the tanker. The solution turned out to be simple - they built a 78-kilometer pipeline to the Absheron Peninsula, however, this happened only in 1981. By the end of the 50s “Oil Rocks” was already a fairly large working settlement - with two power plants, a boiler house, a bathhouse, a first-aid

post, not to mention the infrastructure for oil production and transportation. (Bulanova, 2017)

The construction process was continued in 1950s and 1960s in parallel with the exploitation of new oil fields in the area and expansion of the area of the city in the sea. Throughout this period, oil production in Baku steadily increased, by experiencing a peak in 1969. At the same time, gas became the major fuel for all domestic heating. The economy of Azerbaijan has become the most intensive gas consumer in Europe. The whole USSR was witnessing an economic expansion, and even Nikita Khrushchev, who followed Stalin as General Secretary, was expecting and promising that the planned economic path will bring an age of plenty and in this way, Communism will defeat Capitalism in its own consumerist culture. (Marriott & Minio-Paluello, 2012)

Until these days by playing one of the key roles in offshore oil extraction “Oil Rocks” contributes to the economy of modern Azerbaijan. Currently there are more than two thousands of oilmen working in the site. The republic is now a transit point for Caspian Sea region energy exports and “Oil Rocks” is considered as a fascinating link in the eastern supply and western demand chain. Currently, SOCAR which is Azerbaijan's state oil company, operates the field. (Maguder, 2011)

## **1.6 New Industrial Development as the Fourth Stage (1969-1991)**

The fourth development stage covers the period from 1969 until 1991 when Soviet empire collapsed. This stage is mainly characterized with the discovery of new offshore fields and extraction of “black gold” from deeper parts of the sea. While until 1970 it was impossible to dig deeper and extract oil from more than 40 meters deep, after 1970, the oil and gas industry of Azerbaijan entered a new stage, with the possibility to dig deeper to the sea and extract oil and gas in higher amounts mainly from offshore fields thanks to the new technologies and investments during 1970s and 1980s.

However, during the beginning of 1970s oil industry was facing a decline in the production volume. Due to continuous oil extraction in extremely high volumes by Soviets, technology obsolescence, and unchangeable organizational structure, the golden period of Azerbaijani oil industry was coming to an end.

The industry was in tatters at the end of 1960s and in the beginning 1970s, a lack of investment and attention by Soviets were resulting in diminishing returns. In order to stop the process of degradation and increase the effectiveness of the industry, new investments, new technologies, exploitations of new fields and renovation of old fields were required.

The “Oil Rocks” was the site of the world's first successful offshore oil drilling settlement in 1949 and by the 1960s, 21 million tonnes of oil were extracted from field in each year. Even so, this type of innovation was on the decline. Moscow shipped Azerbaijani crude across the Soviet Union but gave very little in return. (Wilson, 2013)

1969 was the year when Heydar Aliyev started to lead Azerbaijani SSR<sup>13</sup> as he was elected for the position of the First Secretary of the Central Committee of the Azerbaijani Communist Party. The situation faced in his first years in governance, in the early 1970s, was dire. Azerbaijan's industrial output was suffering because of chronic underinvestment. There was a lack of power capacity, which was largely caused by a deplorable lack of infrastructure. All these aspects resulted in a year-on-year decrease in production. (Wilson, 2013)

In 1970 in the first period of Heydar Aliyev's governance in Azerbaijan, the “Hazardenizneft” Oil Production Union was established and the Ministry of Petroleum Industry of the USSR, by taking into consideration the experience of Azerbaijani oil workers in Sea, entrusted to them new exploration, development, drilling, exploitation, and other works in different oil & gas sectors (from 1970 Caspian Sea was divided by oil sectors) of the Caspian Sea. (The Ministry of Energy of the Republic of Azerbaijan, 2020)

More than 400 crane-vessels, turbo-carriers, seismic, passenger, and other vessels of 75 different types were brought to region between 1970 and 1980. In the Caspian Sea, the crane-ship with a carrying capacity of 2500 tons began operations. Furthermore, semi-submersible drilling rigs were purchased at first to perform geological exploration in sea areas up to 70 meters deep, and later - Shelf-type rigs, which allow working in sea areas up to 200 meters deep, allowing rich oil and gas deposits to be discovered in the deeper parts of the sea. As a result of these events, eight new oil and natural gas deposits

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<sup>13</sup> SSR - Soviet Socialistic Republic

were discovered during the 1970s and 1980s, doubling oil reserves and tripling natural gas reserves (Presidential Library, n.d.)

Until then, the Caspian Sea's technological capabilities limited work to areas of the sea up to 40 meters deep. Almost all oil and gas fields up to 40 meters deep in the promising areas of the Azerbaijani sector of the Caspian Sea had been discovered by 1970. Prospects for raising the levels of oil and gas production at Caspian Sea were linked to deeper sea oil and gas deposits as oil and gas fields with more promising and rich reserves were located in the great depths of the sea.

However, even though the amount of oil produced from the offshore fields reached a considerable amount in 1970s, total oil production (19.9 million tons) was lower than total in 1965. (21.5 million tons). This can be explained by the steady decline in the amount of oil produced on land as the focus was on offshore oil production since the 1960s. Furthermore, it has been observed that total oil production has decreased steadily since the 1970s until the country's independence in 1991 after the collapse of USSR. This is primarily due to insufficient investments in oil fields and the use of outdated technologies in this field. (Seferov, 2005)

Until the 1990s, natural gas consumption was exceedingly inefficient, with large losses in the transportation and distribution systems. To meet its gas consumption needs, which had exceeded domestic production, the republic which was full of gas resources even began to import gas from Iran. Imports began in the late 1960s and early 1970s to secure not only Azerbaijan's energy security, but also that of Georgia and Armenia, which imported natural gas from Caspian region via the Nagorno-Karabakh territory.

The end of 1970s is characterized with some very essential events in the history of oil and gas industry of the nation. The now-famous "Azeri-Chirag-Gunashli" deposits, about which we will discuss in 2<sup>nd</sup> chapter, were discovered at a depth of 85-350 meters in the sea during the 2<sup>nd</sup> part of 1970s and 1<sup>st</sup> part of 1980s. These fields played a considerable role in the production process of the following years as the Gunashli offshore oil fields produced up to 7.2 million tons of oil per year during the 1980s, accounting for 90% of Azerbaijan's total oil production. In parallel with the great discoveries the oil produced from the field of "Oil Rocks" accounted approximately for 720,000 tons per year.

Subsequently, after 1980s new essential oil deposits were discovered in fields of Chirag, Azeri, Kepez, and Karabakh. (Gasimov, 2007)

After exploitation of Oil Rocks and other offshore oil fields in Caspian Sea the attention of officials was focused on offshore oil fields rather than onshore oil fields. This attitude was beneficial from the point of view that it led to more exploration and exploitation works in Caspian Sea resulting in discovering new important offshore oil fields which keep their essentiality until current times. However, it was a disadvantage for onshore old oil fields as new situation created lack of attention and investments for old oil fields which were located on Absheron peninsula.

Azerbaijan has produced approximately more than one and a half billion tons up until today. Unfortunately, until the Soviet Union's collapse in 1991 nothing was done to ensure nation's future from its oil and revenues. In other words, the State injected an average of 30 million tons of oil into the Soviet system each year during the Soviet era, but received very little in response.

Broadly speaking, the country reached a certain level of development during the Soviet Union period. However, it lost more than gained, during the Soviet period between 1920 and 1991. Because in this period, the planning of the economy in the centre resulted in not considering the economic conditions of the country. Many products, either as raw materials or intermediate products, were sold at low prices to the union's member republics before being sold at high prices to Azerbaijan as final products. On the other hand, although Azerbaijan has always been an exporter of products such as oil and other petroleum products, wine, cotton, and tobacco that bring income to the country, since the revenues from the sale of these products were collected in a single centre within the Union, the republic did not have the right to own the property in its own sources. (ARAS, 2003)

Overall, if we try to evaluate oil and gas production during the 4<sup>th</sup> development period, despite of the great new offshore oil field discoveries, there was a gradual decrease in oil production during the period from 1969 to 1991.

The factors responsible for the gradual oil production decline were the followings. First of all, the resources of the continuously exploited onshore oilfields were depleted, and none of the newly discovered fields could demonstrate profitability. Secondly, huge



new fields have been discovered in western Siberia of Russia, western Kazakhstan, and other locations of Soviet Union. Azerbaijan's share of USSR's oil output fell from 39.1% in 1950 to 12.0% in 1960, to 5.7% in 1970, and to 2.4% in 1980s. Subsequently, it was unsurprising that Moscow became less enthusiastic in Baku's oil production at the time. (Bagirov, 1996)

A year of 1990 marked the beginning of a new stage, with a drop in output caused by the economic collapse of Soviet economy's in the 1980s, the weakening of economically destructive connections between the republics of the USSR, and the readjustment of the economy toward a free market. (Bagirov, 1996)

## Chapter 2: Oil & Gas Industry in Azerbaijan's Modern History as the Fifth Stage (1991-current)

### 2.1 The Collapse of USSR and Azerbaijan is free in using its own sources

In 1991 USSR collapsed and all former republics were left free from Soviet Regime. Despite of decades of Soviet domination, Azerbaijani nation did not forget its history as the east's first democratic republic between 1918 and 1920, granting equal rights to all residents regardless of ethnicity, religion, sect, or gender. The Soviet Army's massacre in Baku and other provinces of Azerbaijan on January 20, 1990, completely destroyed nation's trust in the USSR, speeding up the country's independence process. (Rehimov, 2019)

On January 20, 1990, following the demonstrations against the Soviet governance, under the direct instructions of the General Secretary of the Central Committee of the Soviet Union Communist Party Mikhail Gorbachev, Soviet Army entered Baku and nearby regions, massacring the civil population by using the heavy equipment.

*Figure 9: Black January, Azerbaijanis do not have any hope on USSR, Baku, January 1990*



*Source: Black January, Sofia Cupal 30 October 2020, <https://storymaps.arcgis.com/>*

As a result of this terrible event, more than two hundred civilians were brutally murdered after Soviet army forces opened fire on protestors. It was part of Moscow's

endeavour to prevent the collapse of the Soviet Union. However, the repression against civilians only fuelled the local independence movement, and Azerbaijan became a sovereign state the next year. (Oliylyk, 2020) It was the first time in Soviet history, when soldiers opened fire against their own citizens.

Following these events, on October 18, 1991, a year and a half after the massacre in Baku by Soviets, Azerbaijan became free, becoming one of the first Soviet Republics to declare independence, resulting in the rebirth of the republic. (Aghayev, 2020) Finally, after nearly 70 years of Soviet occupation, the nation was free in using its own natural sources for the welfare of its own population.

However, it was not an easy task as it can seem, as the country entered the stage of full of political and economic challenges. Firstly, newly created republic had to deal with Armenian occupation supported by Russia in Nagorno-Karabakh region of Azerbaijan. Secondly, to develop economically the republic had to develop its oil and gas industry which was the main aspect toward the economic development. But oil and gas industry for that time was in a miserable situation and in order improve the situation high investments were required.

## **2.2 Issues around Caspian Sea**

### **The Changing Caspian Environment**

The establishment of independent nation-states along Russia's southern border in the region of Caspian Sea during the first part of 1990s was the most considerable geopolitical development in the region for that time. (McMullin, 2003)

While before 1991 the Caspian shoreline was surrounded only by two states which were USSR and Iran, with the appearance of new states such as Azerbaijan, Turkmenistan, and Kazakhstan the number of countries surrounding Caspian Sea turned to be five.

Over the last decades following the empire collapse, the political scene in the Caspian region has been almost fundamentally transformed. Main international actors have become intensely interested in establishing profitable relationships with new sovereign states in the region, in addition to keeping relations with their traditional partners in the region which are Russia and Iran. (Chufrin, 2001)

There were mainly two reasons of the growing international attention in new states surrounding the Caspian Sea. The first is geo-strategic considerations, as the Caspian Region's states are located in heart of Eurasian continent and on trade routes between Asia and Europe. The concrete national strategies that Caspian states will pursue have caught the interest of major extra regional powers (including the United States, China, and EU member states), prompting them to begin developing their own policies in the Caspian Region that may not only be reactive but also actively influence the economic, political, and security developments in the region to their advantage. (Chufrin, 2001)

*Figure 10: Caspian Sea and its Neighbours*



*Source: Article in Tourism and the Environment: Issues of Concern and Sustainability of Southern Part of the Caspian Sea Coastal Areas, Farzaneh Mola (Corresponding author), Fatemeh Shafaei, and Badaruddin Mohamed, 2012 available in: [www.researchgate.net](http://www.researchgate.net)*

The second and very important reason was related to great natural source reserves in Caspian waters. The fact that, since 1991, the newly created countries have enhanced activities in the exploitation of offshore oil and gas resources in the Caspian Sea, drawn the attention of many leading countries to the region. (Shonbayev, 2003)

## **The Legal Status of Caspian Sea**

The Caspian Sea, the world's largest landlocked salty water body, is encircled by five "Caspian Republics": Azerbaijan to the west, Russia to the north, and Turkmenistan and Kazakhstan to the east. The important location of Caspian Sea at the intersections of Europe, Middle East, and Asia has maintained its strategic importance over the years until current times. (Karbuz, 2016)

The Caspian is referred to as a sea. It is large, salty, and can be stormy. It is, however, surrounded by land and has no connection to other water bodies. It is hard to define its legal definition, but there are significant opinions, though not universally held, that for a particular body of water to be classified legally as a sea that body of water must connect with ocean or another sea and not, like in the case of Caspian which connects with other big water bodies via non-salty water bodies such as rivers. (Doeh, 2021)

Because the Caspian Sea is unique in many ways – economic, geopolitical, and environmental, the debate over its legal system raised various issues that touch on fundamental areas of international law (law of the sea, law of treaties, state succession, environmental law, etc.). It has abundant fishery resources, including 90% of the world's sturgeon stock, as well as enormous oil and gas potential in the subsoil. It is crossed by vital transit lines that connect Europe and Central Asia. It was the only domain of Iran and the USSR for long of the twentieth century, with the latter enjoying naval superiority. (Janusz, 2005)

For almost 20 years, 5 countries surrounding the sea have argued over whether it is a sea or lake. If the Caspian is declared a lake, its resources must be shared equally among the states which surround it, regardless of their coastlines. However, if it is defined as a Sea, then the resource allocation would be based on national sectors of each state, as defined by the so-called median line approach, which determines the water's surface by drawing equidistant lines from each national boundary and continuing into the sea. (McMullin, 2003)

Before the breakup of the Soviet Union (USSR), the decision – which has enormous legal, political, and economic ramifications – was largely ignored. USSR and Iranian State regarded the Caspian Sea as a lake with a maritime international border between them.

Resources, which were assumed to be primarily made up of fish at the time, were shared. That approach worked fine until the establishment new republics following the collapse of Soviet Union. (Ballard, 2019)

There were two treaties related to the Caspian status signed in 1921 and 1940 between Iran and USSR. These treaties established the legal basis for the Caspian division until the USSR's collapse in 1991, but these treaties did not address offshore production of oil and gas. (McMullin, 2003) Also, in terms of the legal status of water body, Treaties did not provide a definitive response. They just acknowledged it as a Soviet-Iranian Sea. Furthermore, no previous Treaties established for marine boundaries or delimitation boundaries in the Caspian Sea between Soviet and Iranian sections. (Karbus, 2016)

However, we can ask, why the two treaties signed in 1921 and 1940 between USSR and Iran regarding legal status of Caspian Sea did not address the oil and gas exploitation in the sea, if it so important?

The treaties signed by USSR and Iran did not address oil and gas exploitation rights for the very simple reason, that significant activity mainly occurred onshore at the time when the treaties were signed, and there was little interest both locally and internationally in oil and gas production from offshore areas in Caspian Sea. This situation started to change after WWII, and this eventually extended to the Caspian Sea. (Doeh, 2021) Although, the treaty of 1921 between Iran and USSR was noting the equal rights over the sea of both countries, because of its military and naval dominance, the USSR had a higher share of the sea.

Also, in 1935 NKVD (People's Commissariat of Internal Affairs during USSR) chief Genrikh Yagoda issued a secret order dividing the Caspian along the Astara-Gasan-Kuli line (the border line of Azerbaijan-Iran). This became the USSR's state boundary on all USSR maps, however it was never approved by international law. Without any confrontation with Iran, the USSR began offshore drilling at "Oil Rocks" in 1949. During the 1950s Iran performed the same thing along its own coast without informing the USSR. Furthermore, both states' official publications indicated that the natural reserves in the Caspian seabed where it contacts their coastlines belong to the state in issue. (Janusz, 2005)

The turning point in legal status discussions started from 1994 when Azerbaijan came to an agreement with 13 international major oil companies (paragraph 2.5) in exploitation of its hydrocarbon resources. Following this, the problem of legal status of Caspian Sea arose to be more important, as the parties interested in issue increased.

There were several critical questions here. What should be the legal status of the water body according to international law? How far does the sovereignty of the riparian countries extend? Which states surrounding Caspian Sea have the right to use the Sea and subsequently its natural resources, and to what extent? Finding the appropriate solutions would be extremely difficult, if not impossible. (Janusz, 2005)

The evolution of the Sea's political geography divided the coastline states' governments into two groups: Iran and Russia on one side and other three Caspian states including Azerbaijan on the other side, with each side holding opposing views on the Sea's delimitation. The Russian-Iran alliance claimed that, prior to the disintegration of the Soviet Union, the Caspian Sea was under the authority of Russia and Iran through treaties signed in 1921 and 1940. The side of Russia and Iran claimed that according to the Declaration of December 21, 1991, on the dissolution of the USSR, all Post-Soviet republics of the Union and Caspian Sea coastal states should accept the legitimacy of the Soviet Union's foreign agreements, involving the treaties of 1921 and 1940. (Abilov, et al., 2020)

It is important to mention that the Article 11 of the treaty signed between USSR and Iran gave granted the parties flying their flags an equal, free-floating right and the entry of any additional countries into the Sea was forbidden by Article 7 of the treaty. By supporting this principle, Russia was attempting to maintain its old dominance over the Caspian Sea's former Soviet republics and prevent any foreign power from entering its sphere of influence. Another objective of Russia's Caspian policy was to benefit from these countries' enormous oil resources. (Abilov, et al., 2020) Azerbaijan, Kazakhstan, and Turkmenistan on the other hand, maintained that the previous deals were between Iran and USSR and did not apply to them. As a result, they rejected both treaties.

It was not a secret that the conflicts and disagreements were not related to the sea's legal principles but about the profits, influence, and power. (Becker, 1998) Moreover, while the richest sectors of sea were located near to seabed's of Azerbaijan,

Turkmenistan and Kazakhstan, Russia was not willing to lose control over the whole region and the negotiations about the legal status of Caspian was getting more complicated. Although, there were many trials to reach a final decision regarding the legal status of sea, the results of these negotiations were not successful.

After many years of negotiations in August 12, 2018, Azerbaijan, Russia, Iran, Kazakhstan, and Turkmenistan signed the Caspian Sea Convention, a significant agreement that took nearly 22 years to reach. Finally, the Caspian Sea Convention accorded it's special legal status,' determining that it is neither a sea nor a lake. Each of the five states has been given 15 miles of sovereign waters as well as an additional 10 miles of fishing space. Aside from that, any of the signatories can use the common seas, but each state has a veto over the development of energy deposits in these common areas. (Ballard, 2019)

The Convention signed in 2018 established Caspian water's legal status. It governs the usage of natural resources as well as the airspace over the sea, but some issues are left to be determined by further agreements. The agreement reserved all rights of all five states over the sea and its natural resources, but it excludes enter and use of Caspian by any third parties. The agreement confirmed each coastal states' rights to explore and use the seabed and subsoil beyond its territorial waters within its appropriate sector of the seabed. As a result, the Caspian Sea's whole seabed and subsurface, as well as its corresponding resources, are divided among the five coastline states. (Muller & Betaneli, 2018)

Also, the Convention eliminated one of the most significant uncertainties for investors in Caspian Sea exploration and exploitation activities. Rather than exercising their rights in the Caspian Sea collaboratively, each coastline State has absolute sovereign rights over its portion of the seabed and subsoil. Any coastline State may issue licenses for the discovery and exploitation of natural resources, particularly oil and gas, as some Caspian States like Azerbaijan have done before 2018 in the past. (Muller & Betaneli, 2018)



Figure 11: The status of Caspian water according to the convention signed by coastal Caspian states on August 12, 2018.



Source: Radio Free Europe, Radio Liberty, <https://www.rferl.org/>

## 2.3 Political Instability and Strategic Choices: Oil industry of Azerbaijan Facing a Transition

### Security Threats and Instability in Azerbaijan (beginning of 1990s)

Given Azerbaijan's reliance on oil, it's no wonder that the country's oil sector and political structures are closely linked. Following the fall of the former Soviet Union's central economic system, Azerbaijan's economy was in a state of severe disaster. At the same time the state was facing a major threat, from the side of Armenia supported by Russia to its geographical integrity from the first years of its independence. This threat, which was started from 1988, was also one of the reasons of demonstrations in Baku against the Soviet governance subsequently resulting in massacre of population in Baku by Soviet army in January 20, 1990. One of the key reasons of demonstrations in Baku resulting in "Black January" was related to carelessness and unwillingness of USSR to solve the problem.

Armenia initiated the Nagorno-Karabakh War<sup>14</sup> by promoting separatism in Azerbaijan's Karabakh region. The conflict was too sudden and unpredicted for the new republic, and as a result Armenia took control of not only the Karabakh territory, but also the seven Azerbaijani districts surrounding it. The war produced nearly one million Azerbaijani refugees and occupation of 20 % Azerbaijani territories. This was the reason that the international community has been in supportive position toward Azerbaijan's desire to reaffirm its territorial integrity, as seen by UN Security Council Resolutions 822, 853, 874, and 884 on the Nagorno-Karabakh conflict, as well as the Resolution of UN General Assembly 62/243. (Ibrahimov, 2016) Although, the above-mentioned Resolutions demanded unconditional withdrawal of occupying forces from internationally recognized Azerbaijani territories, none of them were performed until 2020 when the forces had to leave the majority of occupied territories during the Second Nagorno Karabakh War.<sup>15</sup>

The country's economy was suffering in the first part of the 1990s as a result of the Karabakh War, the breakdown of the Soviet system, and a variety of other issues. However, despite the challenges that a young republic had to face, it was able to recover quickly in the late 1990s, positioning its GDP as being one of the worlds 's fastest growing during the 2000s. (Ibrahimov, 2016) Without any doubts, petroleum aspect played the key role in the renovation process of the economy.

Since the country's independence in 1991 successive presidents have experienced security issues of maintaining stability of their authorities through the lens of the Nagorno - Karabakh conflict. First, the Karabakh conflict posed a threat to internal stability because opposition organizations heavily politicized the issue of Karabakh, resulting in successive changes in governmental leadership. For instance, during 1991-1993, Azerbaijan changed three Presidents, all of whom were forced to step down because of difficult situation. Likewise, Ayaz Mutaibov, the very first President of independent Azerbaijan, was forced to resign in March 1992 following public demonstrations in February, whilst

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<sup>14</sup> The First Nagorno-Karabakh War (1988-1994) was a territorial and ethnic conflict between Armenia and Azerbaijan. The war ended with ceasefire in 1994 resulting in occupation of 20 % of Azerbaijani territories and nearly 1 million Azerbaijani refugees from occupied regions.

<sup>15</sup> The Second Nagorno-Karabakh War (September 27, 2020 – November 10, 2020) – The second an armed conflict between Armenia and Azerbaijan in the Azerbaijani region of Nagorno-Karabakh and the surrounding territories, resulting in liberation of the occupied territories.

Abulfaz Elchibey was chosen in June 1992 after Yakub Mamedov's temporary administration. President Elchibey, on the other hand, was forced to leave Baku on June 21, 1993, following the anti-government insurgency that began on June 4. Political instability was only solved when Heydar Aliyev came to the governance and became the president in 1993. (Pinar, 2009)

### **Strategic Choice of Azerbaijan in the Caspian Region**

After 1991, the "newly independent states" were eager to develop in absolutely any path that would allow them to get rid of the former union centre's influence. There was a run (cultural, political, economic, and even civilizational in broad terms) from Moscow, and so from the Russian Federation as the formal successor to the USSR. New centres of attraction for former Soviet republics getting rid of Russia, were European Union, Turkey (for Azerbaijan and most of Central Asian countries, as part of the Turkic states' rapprochement and unity strategy), United States and some East Asian countries to a lesser extent such as Pakistan, Saudi Arabia, Iran, and other Islamic states. The states of the European Union and the United States became the new republics' primary economic and political partners. (Dobronravin, 2008)

The beginning of 1990s, by being the period of search, disappointment, and doubt, at the same time was also the period of hope and particular success for Azerbaijan. The country has had to establish its key priorities and objectives in both the domestic and external sectors.

Security threats faced in the early years of its independence were critical aspects in determining the foreign policy of the republic, which has been considerably driven by economic and political desires for prioritizing relations with multinational oil and gas enterprises and persuading an oil-led development process. The regional conflicts faced, emphasized the essentiality of economic recovery for the national security of the republic. In the brief period between 1991 and 1993, the Karabakh conflict remained important for determining the foreign policy priorities of Azerbaijan and setting a pathway with other regional powers. To enhance its earnings, Azerbaijan needed to start exporting oil to increase revenues. Moreover, a financially stronger the state may create a modern military, giving it much more leverage. On the other hand, as Caspian Oil does not have any access to other sea and oceans, exporting oil through Russia would boost Russia's

influence on Azerbaijan. (Pinar, 2009) Subsequently, all the above-mentioned aspects were among determining reasons of foreign policy and economic development through the oil and gas industry development.

The government's strategic goal has been to strengthen the country's independence and national security, and the country has seen tangible progress along this path. There were several essential elements in strategic choice of Azerbaijan in the region. Firstly, it was strengthening economic and political relations with western countries, specifically with USA. Secondly, the maintenance of stable relations with important neighbours Turkey, Iran, and Russia. Thirdly, it was the development of partnerships with all members of GUUAM<sup>16</sup>. Fourthly, cooperation in the development process of the Transport Corridor Europe-Caucasus-Asia (TRACECA)<sup>17</sup> Fifthly, it was the determination of borders on the Caspian Sea. Finally, and very importantly, construction of a diverse network of oil and gas pipelines. (Bagirov, 2001)

## 2.4 Azerbaijan State Oil Institutions

From 1992, oil and gas production as well as oil refining started to be performed by a huge industrial organization named SOCAR or in other words the State Oil Company of Azerbaijani Republic. The oil sector received a new name and with a different quality following the decree signed by President Abulfaz Elchibey on September 13, 1992. This decision marked the beginning of the industrial transformation process, which had previously just been an adjust of the former USSR'S oil and gas industry. (Bagirov, 1996)

SOCAR has now incorporated refineries and allied businesses into its structure. For the first time in the former USSR, the concept of establishing a Western-style integrated oil firm began to take shape. The SOCAR's structure was quickly restructured to improve operational effectiveness and convert the company into a share-based company. With the introduction of contracts between the corporation and the employees, the system of labour relations began to change as well. (Bagirov, 1996)

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<sup>16</sup> **GUUAM** – firstly named “GUAM” is the regional organization, established in 1997 for economic development and democracy of four former USSR States which are Georgia, Ukraine, Azerbaijan, and Moldova. Later in 1999 it was renamed to “GUUAM” due to the membership of Uzbekistan.

<sup>17</sup> **TRACECA** (Transport Corridor Europe-Caucasus-Asia) – is the international transport program, created in 1993 including twelve members of the Central Asia, Caucasus, and Eastern Europe. Azerbaijan is among the member states of TRACECA.

Company's structure has undergone a number of revisions since its establishment. Inside the organization of SOCAR, the Onshore and Offshore Oil and Gas Production Association was founded. The Onshore and Offshore Oil and Gas Production Associations merged to become the "Azneft" Production Association in 2003. (Aliyev, 2018) Today the following major labour unions are linked with the company: offshore oil and gas production; onshore oil and gas production; oil pipeline transportation; geophysics and engineering geology; machine building; construction of deep-water offshore platforms. Additionally, SOCAR has shares in companies operating in various industries (insurance, construction, processing, shipbuilding, marketing, etc.) and currently there are more than 35 joint ventures operating with its participation

At the same time, it increases its significant presence in neighbour country Turkey. In 2007 a decree was signed by the president of SOCAR and chairman of the Turkish Oil Company to establish a joint company. (Ibrahimov, 2020) The company also conducts retail activities in Switzerland, Ukraine, Romania, and Georgia. (Aliyev, 2018)

One of the biggest projects SOCAR has implemented as a leader together with Turkish partners was the construction of the Trans Anatolian gas pipeline (TANAP) which is now the basis of bringing Azerbaijani gas to Europe and about which will be discussed further on paragraph 2.7.3.

Another oil institution is the State Oil Fund (SOFAZ) which is state's primary entity for managing its oil wealth. It was founded as an extrabudgetary fund in 1999 to enhance transparency in the administration of oil earnings and to limit asset utilization. Its primary goal is to save money for future, but assets are sometimes employed in investment ventures. Although the institution was created in 1999, SOFAZ's total assets already at the end of March 2003 were \$727 million. (Wakeman-Linn, et al., 2004)

The Fund is a legal organization with its own administrative structure that reports directly to President. To ensure its savings and stability responsibilities, the Fund includes operating aspects comparable to other funds around the world; nevertheless, it was organized with a greater emphasis on savings than stabilization. According to Kuralbayeva et al. (2011), Azerbaijan began to consume its profits too quickly between 2001 and 2007 but adopted efforts that resulted in a significant rise in savings in 2008

and 2009. The government has allocated the outflows to the funding of public investment. (Ciarreta & Nasirov, 2012)

The establishment of an oil fund has improved fiscal discipline as well as contributed to improved openness and accountability in oil income administration. (Wakeman-Linn, et al., 2004) In other words, SOFAZ is the fund which is aimed to help to diversify economy for future generations and fund national socio-economic projects in order to be less dependent in hydrocarbon resources. Worldwide there are several oil-rich countries which by collecting proceeds from oil in special funds, also known as “sovereign wealth funds”, invest in other less developed industries to diversify the economy and be less fragile toward the ups and downs in petroleum industry. The State Oil Fund is one of these kinds of funds. (Yucesoy, 2013)

## **2.5 “Contract of Century” and Beginning of Azerbaijani New Oil Era**

### **Signing a Determining “Contract of Century”**

Azerbaijan is probably the most effective example of a Caspian country impacted by oil boom. After the collapse of USSR, the government was able to adopt strategies (see paragraph 3.3) which guaranteed profitability and very importantly legal protection of foreign investments.

Although, the discussions with petroleum leading companies started some years before 1994, many ups and downs in political situation of Azerbaijan were interrupting these discussions. For instance, Heydar Aliyev the third president of Azerbaijan after coming to the power in 1993 decided to suspend negotiations with foreign oil companies. The main reason for the decision was the incompleteness of information in the draft agreement and the existence of conditions that do not meet the interests of the nation. It took time to investigate the issue and study the project in depth. The suspension of negotiations on the drafting of agreements was met with concerns by foreign oil companies and western countries. Western companies by putting their interests first were trying to speed up the process of signing contracts. Despite all the difficulties, the government was trying to conclude the oil contract on more favourable terms and to consider the interests of the country as much as possible. (Mehdiyev, 2014)

There were many countries interested in cooperation with Azerbaijan in the field of oil production and wanting a share in this agreement. Continuing the line of mutually beneficial cooperation with foreign oil companies, the republic under the governance of the Heydar Aliyev finally witnessed a historic event on September 20, 1994, which played an important role in the socio-economic life of the country. (Mehdiyev, 2014)

After 3 years of hard discussions, the government's national policy (paragraph 3.3) resulted in the signing of a revolutionary Production Sharing Agreement (PSA) in September 20, 1994. The agreement was signed between a consortium of eleven foreign leading oil companies representing eight different nations and the State Oil Company of the Republic of Azerbaijan (SOCAR) for the improvement of an area that involved major offshore oil fields of the Azerbaijani sector in Caspian Sea, which are called Azeri, Chirag and Gunashli (ACG). Later, in November 15 of the same year, the agreement was approved by the decision of the Parliament of Azerbaijan. (Yusifzade, 2019)

This Production Sharing Agreement was the first large foreign direct investment (FDI) contract in any country of the former USSR republics by Western multinational companies. The PSA became famous with the name of “Contract of Century”.

*Figure 12: The moment of signing the “Contract of Century”, 20 September 1994*



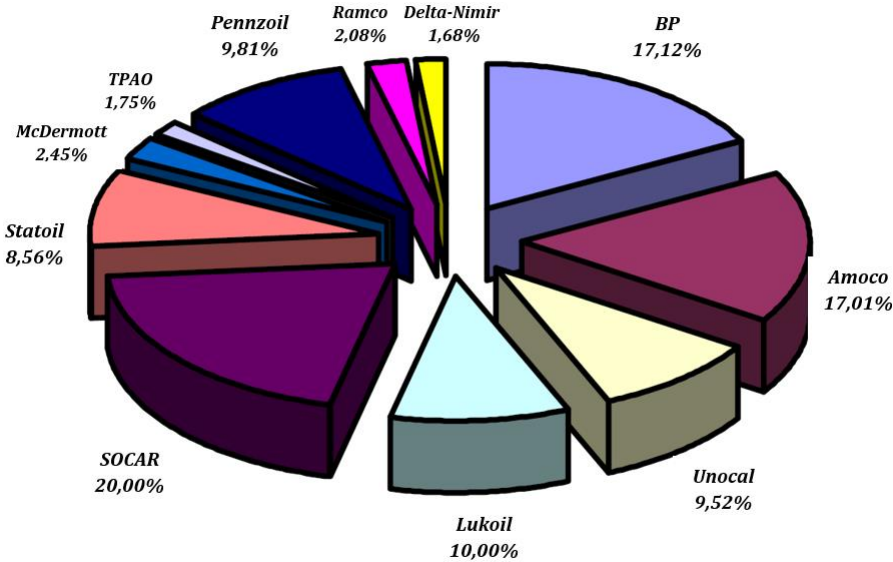
Source: <https://ru.wikipedia.org/>

As a result of the agreement, the Azerbaijan International Operating Company (AIOC) including all 11 foreign companies was formed, which started operations under

the first Production Sharing Agreement (PSA) under the leadership of British Petroleum to develop Azeri, Chirag and Gunashli (ACG) oil fields. (Lynch, 2004)

The parties participated in agreement were as follows: Azerbaijan (SOCAR), Great Britain (BP, Ramco), United States (Amoco, Unocal, McDermott, Exxon, Pennzoil), Russia (Lukoil), Norway (Statoil), Turkey (Turkish Petroleum), Saudi Arabia (Delta-Nimir) and Japan (Itochu). The agreement involved exploration, development and sharing of production at Azeri, Chirag and Gunashli (ACG) oil fields which is defined as the largest in Caspian sector of country. This event is considered as the first international success of independent Azerbaijani Republic. (Alizade, 2018)

Figure 13: Participation share of the parties on the date of signing “Contract of Century”



Source: Azərbaycan Respublikası Prezidentinin İşlər İdarəsi, PREZİDENT KİTABXANASI, <https://www.preslib.az/>, Əsrin Müqaviləsi: II Fəsil “Əsrin Müqaviləsi” artıq reallıqdır

Although, SOCAR (Azerbaijan) owned 20% of share in the signed document in 1994, because of not having enough resources to invest its participation in the project, in the spring of 1995, SOCAR ceded its 10% of share to other companies. As a result, 5% was transferred to Exxon (USA) which did not participate previously in negotiations and another 5% of SOCAR’s share to TPAO (Turkey) which’s initial share was only 1.75%. Also, both companies were obliged to pay a bonus of \$173.2 million and guaranteed SOCAR to finance its remaining 10% of share in project. Also, later in 1996 a petroleum company



from Japan joined the consortium by buying some shares from McDermott and Pennzoil. (Bagirov, 1996)

ACG by being the largest field in Azerbaijan is also classified as the third largest oil field in the world. The agreement due to contract was valid for thirty years. The ACG field was developed in three phases. The first phase begun with production from the Chirag offshore platform in 1997. The second phase involved two steps: the first was development of Central Azeri platform which started in 2005 and the second was development of East Azeri platform in 2005 and West Azeri platform in 2006. In 2008 the Deep Water Gunashli platform started the third stage. (Ciarreta & Nasirov, 2012)

*Figure 14: The offshore oil field ACG which is the basis of "Contract of Century" on the map of Caspian Sea*



Source: <https://commons.wikimedia.org/>

The benefit from ACG field development was huge in subsequent years. For instance, in 2009 Chirag platform gave total production of 105.300 barrels per day (14.000 tons) from its 19 wells, West Azeri platform gave total production of 275.200 barrels per day (37.698 tons) from 18 wells, while Central Azeri and East Azeri platforms gave respectively 185.800 barrels per day (25.452 tons) from 18 operating wells and 139.400 barrels per day (19.095 tons) from 13 operating wells, and finally the number for Gunashli platform in 2009 was 116.400 barrels per day (15.945 tons) from operating 17 wells. (Ciarreta & Nasirov, 2012)

The agreement began the successful implementation of the "New Oil Strategy" and the doctrine and very importantly is considered as a turning point of Azerbaijani economic development in modern history.

## **Positive and Negative Sides of PSA Signed in 1994**

So, in September 20, 1994, a historical event had occurred and Azerbaijan together with world's petroleum leaders signed an agreement that had to make the country rich and modern. The sides in the agreement had to develop jointly hydrocarbon reserves in Caspian Sector of Azerbaijan. With the significance of the volume of oil reserves and profits to be generated, we can say that ACG is the most important development in the petroleum history of republic since independence. However, did Azerbaijan reached its goal by benefiting from signing this contract? Did the agreement meet the republic's high expectations? To answer to this question, we need to consider both positive and negative sides of this PSA for Azerbaijan.

One of the positive sides of "Contract of Century" was that it persuaded political stability and economic independence. Between domestic problems and war in Nagorno-Karabakh, the signing of the agreement enabled to restore the country's economy and stability. As, the agreement was based in long-term investment, the foreign oil leaders and their host governments were interested in a reliable property rights and safe investment environment and theses needs of foreign petroleum companies persuaded republic's foreign policy to balance geopolitical interests of world powers.

However, from geopolitical point of view the negative side of this means that balancing this also led to freezing of the Nagorno-Karabakh status with the conditions that were not favourable for national interests and delaying its resolution as there was no foreign power which was interested in changing the status quo. (Guliyev, 2014) This was a negative side because for that time 20% of national territories was under occupation, so signing any important international agreement with world powers meant freezing the status as it is.

Another positive side is that the signing of PSA persuaded subsequently the great FDI inflow. Already in the beginning of 2000s there were nearly 33 foreign petroleum companies active in republic with which 21 more oil agreements (PSAs and joint ventures) were signed. However, as joint ventures had some limitations on direct oil export, it discouraged development of some oil fields. Because of this, in 2000 the government decided to eliminate joint ventures and replace them with PSAs. (Lynch, 2004)

It is important to understand that these foreign investments into the most essential industry of the republic and profits earned were more than essential. Because the investments persuaded creation of modern oil and gas infrastructure which the country lacked during the Soviet regime. The fact that the agreement led to high earnings, created opportunities to develop poorly invested industries. This possibly can be considered as the most positive fact of the contract signed in 1994.

Secondly, the “Contract of Century” put the republic’s name back on the world’s energy map. It made Azerbaijan again to be recognized as a major centre of petroleum production and inspired a national pride. It was also a beneficial agreement in monetary terms, as it provided an access to global oil markets and generated significant revenues for the budget. Due to the contract’s terms, the Azerbaijan gets a much higher shares of profits from the project in ACG fields compared to foreign petroleum companies involved in contract. While the Azerbaijan side receives nearly 70-75% of total profits generated, the other parties receive approximately 25-30% of profits after recovering their costs. (Guliyev, 2014)

However, although the profits earned enabled the country to develop its other industries, it also increased dependency of country in petroleum. This is a negative fact because it makes an economy to be fragile to any fluctuations in worldwide oil and gas industry.

One of the important factors was to consider petroleum transportation options. Because after the oil was extracted, the key was to transport it in a secure and beneficial way. Therefore, the agreement also led to the construction of very important oil pipelines from Caspian Sea to Europe and other destinations such as Baku-Tbilisi-Ceyhan pipeline about which we will talk in the paragraph number 2.7.2. These pipelines were essential for all parties involved, for Azerbaijan to deliver its oil and gas to international market and for countries importing oil and gas to import it in a more secure and sustainable way.

Overall if we consider both the negative and positive sides of PSA signed in 1994, we can say its positivity exceeds its negativity in many ways. Because it was the basis for economic development start of the country and to be recognized globally. Regardless of negatives effects such as increased dependency in oil and gas, it also opened the doors of other industries for foreign investments.

## **2.6 Further Resurgence of the Azerbaijani Petroleum**

### **2.6.1 Oil Sector**

The agreement of 1994 led to a significant development of industry. Due to the table 4, oil production from 9 million tons in 1997 which was its lowest level in the history of Azerbaijan reached 50 million tons in 2010. However, as we mentioned previously the agreement's key benefit was attracting further investments and agreements to the petroleum infrastructure, exploration, cooperation, and sustainable development. At the same time, the chose of Production Sharing Agreements (PSAs) by Azerbaijani government as an investment regime in oil industry boosted further considerably the foreign attraction.

The FDI flow into the sector, resulted in establishment of essential oil and gas pipelines in the region, to fulfil the provisions of the contract on schedule and supply growing volumes of oil produced to international markets. In general, for the supply of Azerbaijani oil from the Caspian Sea to world markets, oil pipelines were built up to 1/10 of the Earth's equator: Baku-Novorossiysk (1330 kilometres) in 1997, Baku-Supsa (833 kilometres) in 1999 and the main export oil pipeline Baku-Tbilisi-Ceyhan (1768 kilometres) in 2006. Further in this chapter of study, we will discover in details above mentioned oil pipelines in paragraph number 2.7.2.

In addition, more than 30 other PSAs for the exploration and exploitation of the country's onshore and offshore hydrocarbon deposits have been signed and ratified since 1994. According to the data from Central Bank of Azerbaijan, only between 1994 and 2006 more than 7.5 billion dollars have been invested in petroleum sector of the state. The recently launched pipeline project from Baku to Ceyhan in 2002 has significantly improved the opportunities. The success of some PSAs, on the other hand, has been limited as given the lack of commercially viable oil reserves, several PSAs have been cancelled. (Wakeman-Linn, et al., 2004) However, it did not limit the implementation of new agreements on the development of oil sector.

In the beginning of 1990s the oil fields were not well maintained because of poor maintenance with old machines from the Soviets, but oil production between 1991 and 1994 was relatively high. The reason for this was the war in Nagorno-Karabakh. In these years, tons of fuel were sent to the war zone. With the signing of a ceasefire in 1994, the

domestic demand for oil decreased and its production also faced a decline which continued until 1998 when Azeri-Chirag-Gunashli (ACG) fields gave a high volume of oil. With the started extraction in ACG, the industry faced a considerable increased production year-by-year until 2010 as it is visible from the figures in table 1.

The first oil production between the AIOC and the Production Sharing Agreement (PSA) started in November 1997. Crude oil production, as a result of the introduction of new oil fields and technological developments persuaded by FDI, increased by 26.6% from 9 million tons to 11.4 million tons in 1998 and reached 14.0 million tons in 2000 as we can notice from the table below.

*Table 4: Oil production in Azerbaijan (including gas condensate) between 1991-2020 in thousand tons*

<b>Year</b>	<b>Oil production (incl. gas condensate)</b>	<b>Onshore</b>	<b>Offshore</b>
1991	11 742	2 238	9 504
1992	11 084	2 000	9 084
1993	10 295	1 974	8 321
1994	9 563	1 785	7 778
1995	9 161	1 624	7 537
1996	9 100	1 575	7 525
1997	9 071	1 563	7 509
1998	11 424	1 578	9 846
1999	13 807	1 526	12 282
2000	14 017	1 511	12 506
2001	14 909	1 596	13 313
2002	15 334	1 561	13 773
2003	15 381	1 630	13 751
2004	15 549	1 707	13 842
2005	22 214	1 755	20 459
2006	32 268	1 782	30 486
2007	42 598	1 767	40 831
2008	44 514	1 799	42 715
2009	50 416	1 781	48 635
2010	50 838	1 716	49 122
2011	45 626	1 768	43 858
2012	43 375	1 724	41 651

<b>2013</b>	43 457	1 712	41 745
<b>2014</b>	42 076	1 708	40 368
<b>2015</b>	41 628	1 598	40 030
<b>2016</b>	41 050	1 526	39 524
<b>2017</b>	38 688	1 534	37 154
<b>2018</b>	38 814	1 529	37 285
<b>2019</b>	37 501	1 521	35 980
<b>2020</b>	34 532	1 259	33 273

*Source: The State Statistical Committee of the Republic of Azerbaijan, <https://www.stat.gov.az/>*

The completion and put into operation of Baku-Tbilisi-Ceyhan (TBC) oil pipeline in 2006, which bring oil from Baku to world markets through Georgia and Turkey, was one of the major reasons of significant increase in oil production after 2005. It is important to mention that the country by reaching a record number of oil production (50 thousand tons) in 2010 since its independence, gets more than half of its entire oil output from offshore Caspian fields.

In 2017 after 23 years of signing the “Contract of Century”, it was agreed to extend the PSA for another 25 years. Normally, when the contract was signed in 1994 the period agreed was until 2024 however according to a new contract, between SOCAR and international consortium headed by BP, the Contract of Century was extended until 2050. Although many circumstances have changed, the value of Caspian oil and gas remained with the same level of essentiality until our days. (Cekuta, 2020)

After independence, the republic’s oil consumption has always been lower than its output, just as it was during the Soviet period. This demonstrates that Azerbaijan's own oil requirements are more than covered. The fundamental reason for the country's low consumption is because other industries other than the oil industry have yet to grow. Oil usage is primarily for domestic consumption.

### **2.6.2 Gas Sector**

In the global gas market, differently from oil sector, Azerbaijan started to become a new player and a transit country since the beginning of 2000s. In the middle of 1990s

republic was an importer of gas from Russia and in 2004 its own extraction accounted only for 4.6 billion cubic meters (bcm)<sup>18</sup>. (Mammadov, 2013)

However, the year 1999 specifically was important for gas sector of the State. It's because, in 1999 prospective recoverable natural gas resources exceeding 14 trillion cubic feet<sup>19</sup> were verified in the Shah Deniz field by BP. (Wakeman-Linn, et al., 2004)

The discovery of Shah Deniz in the South Caspian Deepwater Basin is country's major commercial gas resource. As a result of finding of the giant gas field, the republic as well as being an outstanding oil producer subsequently became gas producer and exporter. The exploration of Shah Deniz in 1999 is the result of exploration works due to PSA signed between SOCAR and international petroleum companies in 1996.

The PSA for Shah Deniz field exploration was signed by SOCAR, BP, Lukoil, Turkish Petroleum, Statoil, Elf Petroleum and Oil Industries Engineering and Construction in 1996. The total area according to the agreement for drilling activities accounted for 859.8 square km and the "Shah Deniz" Exploration and Production operating company was formed to conduct exploration and development activities. (Rzayeva, 2015)

The Shah Deniz gas field has 2 development stages which are named as Shah Deniz 1 and Shah Deniz 2. According to the Ministry of Energy of Azerbaijan, Shah Deniz 1 Stage started its operations in 2006 and it has the capacity of producing 10 billion cubic meters (more than 7.5 mln tonnes) of gas per year and 50.000 barrels of gas condensate<sup>20</sup> per day. On the other hand, Shah Deniz 2 project, by being a continuation of the first stage, is a giant project which produced its first gas in 2018 and it is planned that it will produce another 16 billion cubic meters (12 mln tonnes) of gas per annum in addition to the gas produced in Shah Deniz 1 field. The launch of Shah Deniz fields' development is the main source of FDI in gas sector after regaining independence. As we can see from the table below, launch of Shah Deniz field 1 in 2006 led to an outstanding increase in gas

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<sup>18</sup> billion cubic meters is a measurement type used in the oil & gas industry to measure gas extracted. 4.6 billion cubic meters (bcm) of natural gas = 3.4 million tons (approximate figures)

<sup>19</sup> Trillion cubic feet is another measurement type used in the oil & gas industry used to measure gas production. 1 trillion cubic feet is equal to 20 million tonnes (approximate figures).

<sup>20</sup> Natural gas condensate, also known as natural gas liquids, is a low-density mixture of hydrocarbon liquids found as gaseous components in raw natural gas generated by many gas fields.

production levels since 2006 and by being put into use in 2018 the Shah Deniz field 2 is also significantly contributing year by year to this gradual increase.

*Table 5: Total Gas production in Azerbaijan between 1991-2020 in billions of cubic meters*

<b>Years</b>	<b>Total Natural Gas</b>	<b>Years</b>	<b>Total Natural Gas</b>
<b>1991</b>	8 621	<b>2006</b>	9 076
<b>1992</b>	7 872	<b>2007</b>	16 850
<b>1993</b>	6 805	<b>2008</b>	23 399
<b>1994</b>	6 379	<b>2009</b>	23 598
<b>1995</b>	6 644	<b>2010</b>	26 312
<b>1996</b>	6 305	<b>2011</b>	25 728
<b>1997</b>	5 964	<b>2012</b>	26 796
<b>1998</b>	5 589	<b>2013</b>	29 245
<b>1999</b>	5 997	<b>2014</b>	29 555
<b>2000</b>	5 642	<b>2015</b>	29 175
<b>2001</b>	5 535	<b>2016</b>	29 331
<b>2002</b>	5 143.7	<b>2017</b>	28 596
<b>2003</b>	5 128	<b>2018</b>	30 490
<b>2004</b>	4 995	<b>2019</b>	35 610
<b>2005</b>	5 732	<b>2020</b>	37 140

*Source: The State Statistical Committee of the Republic of Azerbaijan, <https://www.stat.gov.az/>*

Turkey by being a client at the same time is the most valuable partner of Azerbaijan in energy sector. The cooperation with Turkey helped to implement valuable energy pipeline projects such as Baku-Tbilisi-Ceyhan oil pipeline and South Caucasus gas pipeline (paragraph 2.7.3) to deliver its oil and gas to world markets bypassing Russia. In addition, Turkey played one of the keys roles in defining the route of Azerbaijani gas to European continent with the gas pipeline projects TANAP and TAP (paragraph 2.7.3).

TANAP and TAP gas pipeline projects are the most significant indicators of the successful collaboration between 2 countries in the sphere of energy. When we talk about



partners in gas sector, we need to mention EU which with its objective of diversifying an energy security became the second valuable partner of Azerbaijan in gas sector after Turkey.

As a result of the agreement signed between Azerbaijan and Turkey in June 26, 2012, it was agreed to construct a new gas pipeline to transfer gas from Shah Deniz gas field in Caspian Sea to Turkey. The project of new gas pipeline which was called Trans Anatolian Gas Pipeline (TANAP) was expected to be finished in 2018 and it was also the first step in bringing 10 bcm of Azerbaijani gas to Europe. At the same time, due to the agreement, on June 28 of 2013, it was decided to also start another gas pipeline project to transport Azerbaijani gas to Europe from EU-Turkish border (TAP). Later, SOCAR (20%), British Petroleum (20%), Italian natural gas infrastructure company Snam 20%, Fluxys (16%), and Swiss energy company Axpo (5%) became the shareholders of the TAP project. (NS Energy, 2021) To summarize, two gas pipelines, TANAP in 2018 and TAP in 2020 were built for gas transportation from Baku to Europe. The TANAP took an objective to connect Azerbaijan with EU-Turkish border across Georgia and Turkey, while the TAP took an objective to transport the Azerbaijani gas from EU-Turkish border to its final destination in Italy. (Erdogdu, 2014)

The European Commission uses the phrase "Southern Gas Corridor" to characterize planned infrastructure projects carrying gas from energy fields of Middle East and Caspian Sea to Europe with the goal of boosting supply security. These proposed gas pipelines bring a new and alternate gas supply corridor to Europe to those already in place from Russia, Africa, and the North Sea. (Trans Adriatic Pipeline (TAP), n.d.) The two gas pipelines TANAP and TAP with South Caucasus Pipeline (paragraph 2.7.3) made conditions for Southern Gas Corridor (SGC) from Azerbaijan to Europe to be real. (Erdogdu, 2014)

Together TANAP and TAP projects make Azerbaijan more reliable partner to EU and reshaped the global energy landscape, as a result of the country's enthusiasm to have good relations with EU. At the same time both projects strengthened its cooperation with neighbours Turkey and Georgia. Also, the pipelines gave to Azerbaijan even a possibility to transport more than its own gas, by considering that its planned to expand the project gradually.

In addition, while Trans Adriatic Gas Pipeline (TAP) holds a vital role in delivering gas to Europe from Turkish-Greek border to Italy, it also creates opportunities to gas sellers to easily ship gas to neighbouring countries in Europe. In the case with TAP, Italy is the best positioned to transit Caspian gas to European neighbours through already existing infrastructures. This is also consistent with the Italian National Investment Strategy's goal of transforming Italy into a transit country. (Rzayeva, 2015)

In conclusion to this paragraph, even though Azerbaijan just became a net gas exporter in 2007 in that short time, SOCAR, with the participation of the government, has gained experience functioning in new markets and developing a balanced list of consumers. In other words, the republic's gas strategy is a diversified export policy with a large list of partners, similar to what they have already accomplished in the oil market, where Baku has more than twenty clients for its oil in various regions of the world. (Pritchins, 2010)

## **2.7 Azerbaijan's petroleum pipelines**

### **2.7.1 Geopolitical struggle for pipelines**

Since 1994 the main task ahead was to ensure the secured transportation of oil and later gas to markets of the world. To transport the hydrocarbon wealth to world markets, the pipelines had to be built connecting the Caspian Sea with other water bodies. Many countries such as Russia, USA, Iran, and others by understanding the essentiality and future potential benefits of energy transportation from Azerbaijan to world markets started to show their significant interests in being a part of this process.

Naturally, USA which had a large share in the Azerbaijani oil sector, was very interested in this process. However, Washington's further penetration to the region irritated Iran and Russia. Unlike Russia, Iran which was not in the "Contract of Century", intended at least to have a key position in the transportation. (Zeynalabdinov, 2021)

There was a high interest by parties in controlling the petroleum routes because it was clear for everyone that the one who will have the pipeline passing in its territories will not only have huge financial benefits but also geopolitical impact in Central Asia and Transcaucasia in 21<sup>st</sup> century.

The Azerbaijan International Operating Company (AIOC), created as a result of an international consortium, was principally in charge of determining the direction of the major export pipeline route (MEP). (Miles, 1999)

Because the Caspian Sea is landlocked, foreign corporations realized they would have to do what the Nobels did in Azerbaijan nearly a century ago: construct pipelines to access European markets. Three oil pipelines became a reality after lengthy and contentious talks. In 1997 the Baku-Novorossiysk pipeline, commonly known as the Northern Route Export Pipeline (NREP), was launched. The Baku-Supsa pipeline, often called as the Western Route Export Pipeline (WREP), was thereafter put into service. Finally, the Baku-Tbilisi-Ceyhan (BTC) pipeline, which connects the Caspian and Mediterranean Seas, went into service in May 2005. In 2008 these pipelines and the Baku-Batumi rail line delivered around 49.3 million tons of oil. The majority of its oil came from Azerbaijan (42 million tons), with the remainder coming from Kazakhstan. (Lussac, 2010)

There was also the option of construction oil pipeline through Iran in which the side of U.S was considerably concerned. Between the routes the one which was appreciated mostly was the route from Baku to Turkish port Ceyhan through Georgia subsequently called Baku-Tbilisi-Ceyhan (BTC) pipeline. Although the oil line through Iran fell off the agenda, the Baku-Supsa and BTC pipelines became reality over time. The possibility of route via Iran was dismissed by AIOC mainly because of the USA's containment policy toward Tehran. (Miles, 1999)

While Russia insisted on delivering oil to the west via mostly Russia, Azerbaijan was able to realize other very important new pipeline projects passing through the territories of Georgia and Turkey and connecting the country with world oil leaders without impact of Russia.

In October 9 AIOC decided on options of two pipelines for the early oil extracted from the fields, one to the Russian port in Novorossiysk and one to the Supsa terminal in Georgia, based on the government's decision. (Bagirov, 1996) The international consortium made a decision that "early oil" from Azerbaijan (in the early period) would be transported via both the Baku-Novorossiysk and Baku-Supsa lines. Thus, Russia's one hand was broken in the transportation of Azerbaijani oil.

The decision of two pipeline route for the early oil transportation should be considered as the right decision with positive aspects. By considering that the interest was not only of Azerbaijan but also neighbouring countries, the decision with two different routes ensured the steady oil extraction and its transportation from both economic and political point of view. The negative side of two route choice was increased expenses as two routes had to be built or renovated instead of one.

## **2.7.2 Oil pipelines**

### **Baku-Novorossiysk Oil Pipeline**

Baku-Novorossiysk was already an existing pipeline constructed during Soviet Time through Russia from Baku to Novorossiysk port in the Black Sea but as it could deliver Azerbaijani oil to Europe through Russia, this project did not serve the purposes of its members. While there was a pressure in Azerbaijan from the Russian side, western oil companies were very concerned about the political risks in the route through Russia. However, neither Azerbaijan nor the AIOC companies did not want to have problems in the early stages of project. (Pinar, 2008)

Although Russia was not able to prevent the construction of new oil pipelines connecting Azerbaijan and west, Baku-Novorossiysk pipeline since 1997 is also used to transport crude oil from Azerbaijan to Russian Novorossiysk port in Black Sea from where the oil is open to world markets.

With the transmission capacity of 100.000 barrels (13.698 tons) per day, the pipeline's length is 1.330 km, 231 km of which passes the territory of Azerbaijan. (Ministry of Energy of Azerbaijan, 2019) Azerbaijani oil transportation occurred with two stages, the first of which was the transportation of early oil. The amount of early oil was considerable because it had to provide the consortium of foreign investors with capital to continue the offshore Caspian projects. In December 1997 the first oil started to flow from Baku to Novorossiysk port. (Miles, 1999)

Chechen conflict<sup>21</sup> was one of the possible reasons in the delay of the decision of Azerbaijani government related to the early oil transportation because this pipeline route

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<sup>21</sup> The Chechen-Russian conflict – Also known as the Chechen War which started with Russian intervention in Chechnya in 1991 when Chechnya declared its independence as the Chechen Republic of Ichkeria.

between passes the Chechen Republic in South Caucasus. Although the negotiations related to the decision of early oil transportation started after the sign of contract of century, the difficult situation in Chechnya created an obstacle to make a definite decision on the northern route until 1995 when a ceasefire was established between Chechen's representatives and Russian government. (Bagirov, 1996)

Figure 15: Baku – Novorossiysk Oil Pipeline on the map



Source: <https://socar.az/>

The oil pipeline through Russia holds the advantage of very easy terrain and only passes the territories of two host nations. Among disadvantages it is the longest route, and it also involves the transportation of oil by tankers via Bosphorus and Dardanelles straits. (Englefield, 1994)

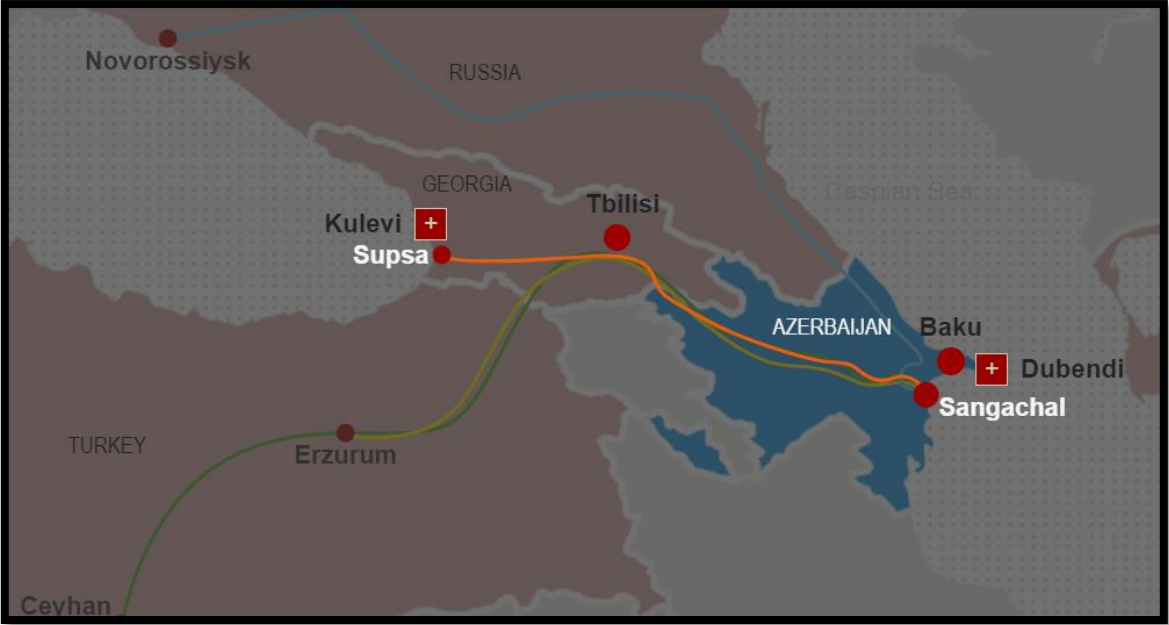
Baku-Novorossiysk oil pipeline was constructed in 1983 during the Soviet regime in Azerbaijan. During the Soviet period, it was used to bring oil to Baku for refining in the direction of Grozny (Chechen Republic)-Baku but, since 1997 the pipeline is used to transport oil in the opposite direction - from Azerbaijan to the Russian Black Sea port of Novorossiysk. It was rehabilitated and used to transport ACG oil and SOCAR's own oil until 2008. In addition, oil from onshore fields operated by SOCAR together with foreign partners since 2001 has been transported via this pipeline.

### Baku-Supsa Oil Pipeline

The Baku-Supsa Pipeline which is also called Western Route Export Pipeline (WREP) carries crude oil from offshore oil reserves in Azerbaijan's Caspian Sea coastal areas to global markets via Georgia. The pipeline starts its route at the Sangachal terminal near to Baku and passes in its way the territory of Azerbaijan and Georgia, before arriving in Supsa terminal of Georgia in Black Sea. The crude oil is transported by tankers, which are loaded at the Supsa port before sailing via the Bosphorus to European markets.

The Baku-Supsa Pipeline renovation process began in 1994 and was completed in 1998. The pipeline's official commissioning event held in April 1999. The WREP was also originally built during the Soviet era. Parts of the pipeline, and supporting technical equipment, were fully rebuilt during restoration. The first oil extracted from the Azeri, Chirag, and Gunashli (ACG) fields was to be delivered to Georgia's Supsa port on the Black Sea coast with this pipeline. The pipeline is operated by British Petroleum (BP). The pipeline covers 833 kilometres, 456 of which are on Azerbaijani territory. The pipeline's transmission power is 150.000 barrels (20.000 tons) per day. (Ministry of Energy of Azerbaijan, 2019)

Figure 16: Baku – Supsa Oil Pipeline on the map



Source: <https://socar.az/>

This pipeline with limited capacity was constructed mainly to deliver the “early oil” extracted together with Baku-Novorossiysk pipeline from Caspian Sea to Black Sea. With this line, "early oil" started to be exported as of April 17, 1999. The biggest advantage of this line is that it does not interfere with Russia's oil.

Azerbaijan has transported more than 700 million barrels (nearly 96 million tons) of oil to world markets through the route of Baku-Supsa since 1999 when it was launched. According to Aytan Hajiyeva, who is BP Georgia’s head of country, Baku-Supsa part is a crucial part of BP and its ACG partners' early oil project, as well as the first confirmation of the secured and reliable operations in Georgia and the region. (bp Azerbaijan, 2021)

### **Baku-Tbilisi-Ceyhan (BTC) Main Export Oil Pipeline**

The Baku-Tbilisi-Ceyhan (BTC) Oil Pipeline exports oil from the Caspian Sea to Turkey's Ceyhan Port through Tbilisi (Georgia), and from there by oil tankers to European markets through the Mediterranean Sea.

BTC is widely considered as a tool for reducing the country's dependence on Russia in terms of oil and gas export routes, and also for establishing new commercial, political, and security ties with Turkey and with Western Europe. (Ismailzade & Cornell, 2005) The importance of the project can be measured with the presence of the presidents of all three nations involved in the project at the opening ceremony conducted on May 25, 2005 at Sangachal Terminal, which is 55 kilometres away from Baku. (Iqbal & Shah, 2022)

The construction of this pipeline by being started in 2003 was finished in 2005. The pipeline with a total length of 1.768 km, passes via the territory of three countries which are Azerbaijan, Georgia, and Turkey, in which the total length of pipeline is 443 km, 249 km and 1.076 km respectively. The pipeline was designed majorly to deliver oil extracted from ACG fields to the port of Ceyhan on Turkey's Mediterranean coast, but also other opportunities to transport oil from other nations occurred. For instance, the BTC Pipeline also transports crude oil from of Turkmenistan and Kazakhstan. This pipeline's transmission power is 1.2 million barrels which is 160.000 tons per day, and it may be increased further. (Ministry of Energy of Azerbaijan, 2019)

Figure 17: Baku-Tbilisi Ceyhan (TBC) Oil Pipeline on the map



Source: <https://socar.az/>

The BTC oil pipeline is considered as the main oil export route for Azerbaijan through which oil is delivered to major European Countries. Since 2006 when the pipeline was launched until 2021 together with operating 4.659 oil tankers the country transported in total 3.57 billion of oil barrels (489 mln tonnes) to world markets while for only 2020 the volume of oil transportation through this route was 210 million of oil barrels (28.7 mln tonnes). (Daily Sabah, 2021)

The BTC oil pipeline is also, in some ways the cornerstone of the formation of trilateral cooperation between Azerbaijan, Georgia, and Turkey. This project has assisted Azerbaijan in overcoming the prospect of isolation in the area by exposing its natural sources to global markets. The project has aided Georgia's energy procurement as well as its geopolitical worth, while Turkey has got the benefit of being a regional energy hub. (Celikpala & Veliyev, 2015)

It has given a way for oil to be transported out of the region to Eastern Europe, Turkey, and other destinations. This pipeline is a three-billion-dollar transportation facility that has allowed to approach worldwide markets in a sustainable manner. (Iqbal & Shah, 2022)



### **2.7.3 Gas pipelines**

#### **South Caucasus Gas Pipeline (SCP)**

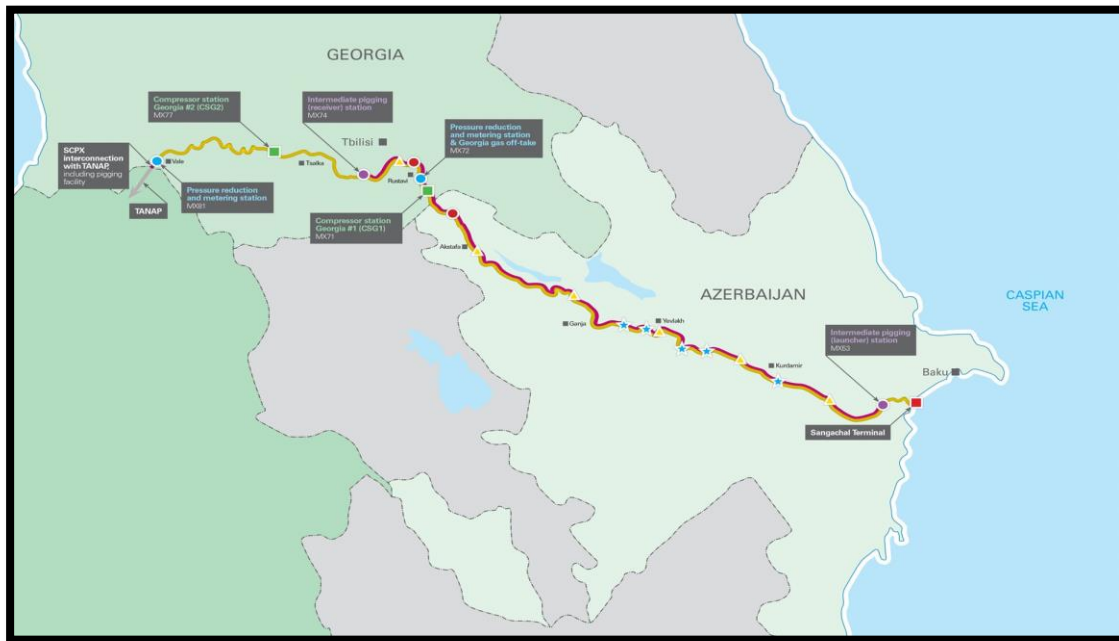
South Caucasus Gas pipeline (SCP), also known as the Baku-Tbilisi-Erzurum, is a gas pipeline transporting natural gas from Shah Deniz gas field in the Caspian Sector to Turkey through Georgia, from where it is opening to European market. The pipeline passes through the territories of Azerbaijan and Georgia before connecting TANAP pipeline (interconnector) in Georgian-Turkish border.

Construction of the SCP pipeline was persuaded by the finding of the Shah Deniz gas field in 1999 in Caspian Sea and it was launched in parallel with BTC oil pipeline. The pipeline, having an annual capacity of 30 billion cubic meters (20.3 mln tonnes), began construction in 2004 and was finished in 2007, while the first gas supply through this pipeline was done on 13 March of 2007. (Celikpala & Veliyev, 2015)

The success of the SCP also like BTC project, have created new financial benefits for all of three parties included in the project. As a result of high cooperation in SCP and BTC projects between Azerbaijan and Turkey three new agreements were signed on 2011 at the meeting of High-Level Strategic Cooperation Council that were held in Izmir, Turkey between three countries.

Between those three agreements signed, the most valuable one is the agreement of the transit of natural gas extracted from Shah Deniz field 2 from Baku to the European Market. Moreover, the agreement in purchasing and selling natural gas was signed between SOCAR and BOTAS which is Turkish Petroleum Pipeline Corporation. (Celikpala & Veliyev, 2015)

Figure 18: South Caucasian Gas Pipeline (SCP) on the map



Source: <https://www.sgc.az/>

It is essential to mention that SCP gas pipeline, after which Azerbaijani gas started to be delivered to the Turkish-Georgian markets, made the nation a gas exporter for the first time in its history. As a result of the discovery of new gas field and construction of gas pipeline, a new energy balance was determined in the region. At the same time, the point that Shah Deniz gas field proved an existence of considerable gas reserves in Azerbaijan, was one of the main points of attraction from the European side not only in oil production but also in gas sector. (Bayramov, 2020)

This pipeline project holds a key point as it persuaded the second phase development of Shah Deniz gas field and it resulted subsequently in essential projects such as TANAP and TAP. (Bayramov, 2020)

### **Trans-Anatolian (TANAP) and Trans-Adriatic (TAP) Gas Pipelines**

On June 12, 2018, the TANAP gas pipeline, as the first step toward bringing Azerbaijani gas to Europe, was officially launched at the compressor-measuring station in Turkish City Eskisehir. The opening ceremony was attended also by the presidents of Azerbaijan and Turkey, as well as by CEO of BP and Chairman of SOCAR. (Isayev & Aslanli, 2019) The initial export capability of this pipeline was nearly 16 billion cubic meters

(10.8 mln tonnes) of which 6 billion is exported to Turkey and other 10 billion to European Market through TAP pipeline. TANAP is notable for being a trilateral project completed without the involvement or aid of third parties. This initiative is at the heart of the trilateral strategic partnership between Azerbaijan, Turkey, and Georgia as a coincidence of mutual confidence. This pipeline project, which is predicted to fundamentally alter the region's energy balance, has prompted 3 countries to collaborate for participation in the European gas market. The project also contributed to Turkey's ambition of being a regional energy hub. (Celikpala & Veliyev, 2015)

On the other hand, TAP as a second step of bringing Azerbaijani gas to Europe, is another essential part of so-called Southern Gas Corridor (SGS). The 878-kilometer-long pipeline connects with TANAP pipeline at the Turkish-Greek border near Kipoi, then travels across Greece, Albania, and the Adriatic Sea before arriving in Southern Italy. The TAP's final point is San Foca which is between the most famous marines in the municipality Melendugno in south of Italy. (Di Ronco, et al., 2019)

The Trans-Adriatic Gas Pipeline (TAP) is a greenfield development that consists of the design, development, and implementation of a natural gas pipeline that begins at the Greek-Turkish border and connects to the Trans-Anatolian Pipeline (TANAP). TAP is critical in achieving one of the strategic goals of EU to diversify energy sources and have an energy security. TAP project was selected as the most direct and shortest route path for Azerbaijani gas to reach Europe. Related to this project, also the intergovernmental agreement was signed between Italy, Greece, and Albania in February 2013 to demonstrate their full support for project. (Isayev & Aslanli, 2019)

*Figure 19: TANAP and TAP Gas Pipelines' route taking Azerbaijani Gas to European Destination, Italy*



Source: <https://factsofturkey.org/>

Finally, after 4 years of construction in 2020 Trans-Adriatic-Pipeline (TAP) started its commercial operations and due to the data from Italy's transmission system operator Snam, the first gas from Azerbaijan to Italy arrived on December 30, 2020. Shareholders of TAP pipeline are several biggest energy companies of Europe which are SOCAR, BP, Fluxys, Enagas and Axpo. (Favasuli, 2020)

According to the announcements published by the Trans Adriatic Pipeline AG in March 2022, a total of 10 billion cubic meters (6.7 million tons) of natural gas from Azerbaijan has already reached Europe through the Kipoi connecting point on the Greek-Turkish border, where the TAP links to the Trans Anatolian Pipeline (TANAP). Approximately 8.5 bcm (5.7 million tons) of these 10 bcm have been transported to only Italy.

TANAP and TAP contributes significantly to Europe's energy security, supply diversity, and decarbonization goals. TAP also will allow gas deliveries to countries in South-eastern Europe via potential interconnectors. Following the completion of the Gas pipeline Greece-Bulgaria in September 2022, Bulgaria will be capable of covering up its 33% total gas consumption through TAP.

Azerbaijan by becoming a leading partner of TANAP and TAP projects, solidified its energy transportation diversification. With gas pipeline projects the republic currently is able to secure its access to European Market with its rich gas resources and also by avoiding an irritation with Russia. (Abdullayev, 2019)

Both projects holds a key essentiality especially to host European countries, via which TAP pipeline passes, which are Greece, Albania and Italy. All three countries now have more enhanced status on energy map of Europe as regional energy gateways. Also, by providing a new long-term gas infrastructure and sustainable asset the pipelines provide these countries with secure level of energy supply. TAP contains multiple other economic benefits to host countries, such as direct contribution to GDP with taxes, indirect and direct employment chances, environmental and social investments, etc.

In conclusion to TAP and TANAP, due to the data of Trans-Adriatic-Pipeline AG, Trans-Adriatic-Pipeline project which is the continuation of Trans-Anatolian-Pipeline considered as a huge contributor to European energy transition plan to be climate-neutral by 2050. As the continent moves toward a low-carbon future, it requires dependable, secure, and inexpensive energy from a range of sources to power its economy, stay competitive, and warm its houses. During this transformation, natural gas will continue to play an important role. Furthermore, natural gas infrastructure can be upgraded to transport hydrogen and other low-carbon mixtures. TAP is actively monitoring advancements in the field of hydrogen, which is expected to be a crucial component in attaining a carbon-neutral future.

## **2.8 Impacts in Modern Economy of Azerbaijan**

### **2.8.1 Revived Economy and Negative Effects**

The transition from a state-run to a capitalist economy as well as the Nagorno-Karabakh conflict, resulted in a trade collapse and a drop in economic production of more than 60% between 1989 and 1995. Trade between former Soviet republics collapsed, resulting in a drop in GDP and excessive inflation. According to International Monetary Fund, from 1989 to 1994, the country's GDP declined by over 60%, agricultural by around 43%, and industrial output by about 60%. (Ciarreta & Nasirov, 2012) However, political stability was achieved in the mid-1990s, and the promise of future oil revenue as a result of massive FDI investments led the International Monetary Fund (IMF) to grant Azerbaijan 240 million USD for macroeconomic stabilization and social assistance

following market reforms. In a summary, the government achieved macroeconomic stability in the mid-1990s. (Ahmadov, 2022)

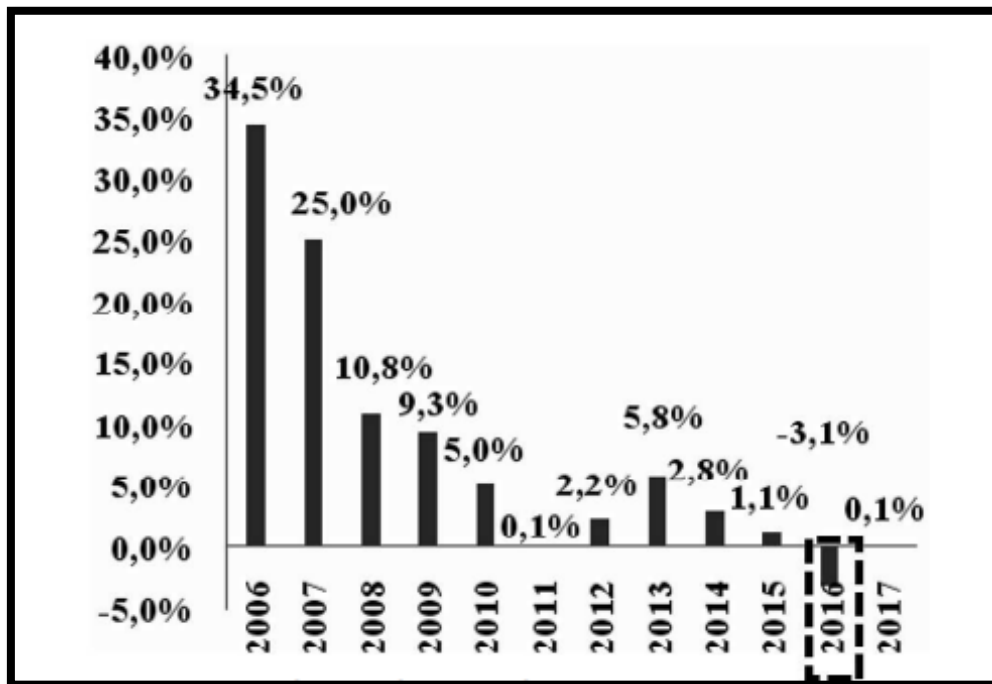
As we understood from paragraph 2.6, the “Contract of Century” signed in 1994 and subsequently other petroleum agreements, meant the foundation of new era in the Azerbaijani history, political and economic guarantee for the future, significant FDIs in the country, dramatic increase in GDP starting from 2005, opening of new workplaces and improvement of social welfare of Azerbaijanis. From 2001 as a result of huge investments, the republic started to seriously develop its oil and gas sector. Beginning from 2005 the country benefited from an oil boom that resulted in over 125 billion USD oil earnings being transferred to state coffers. (Mukhtarov, et al., 2020) The country faced the peak of oil and gas importance in 2017 when the GDP share of petroleum in economy accounted for 62.7% of total GDP. (Zulfigarov & Neuenkirch, 2019)

The country’s ability to make the most of its oil and gas resources was in part also lucky timing: between the late 1990s and 2010, when the country was increasing its production, global hydrocarbon prices also happened to be on the rise. Especially between 2005 and 2008 thanks to increased oil prices and high volume of oil production, revenues even exceeded 80% of total. (Ibrahimov, 2020)

Azerbaijani oil production volume saw one of its peaks at more than 1 million barrels (137.000 tons) per day in 2010 and has since been declining. Despite dropping output, oil prices remained extremely high until the end of 2014 with the country continuing to benefit from the oil boom. (Aliyev & Gasimov, 2018)

However, as the economy is highly dependent in oil and gas, logically any fluctuation in oil prices has an immediate negative economic impact. For instance, the dramatic drop in oil prices since 2014 along with decreasing oil production, has had a great influence on the republic's primary macroeconomic factors. As we can see from the figure 20, the GDP growth rate in 2016 was -3.1 percent, the first negative growth rate in country since 1995. Inflation rose, the current account surplus vanished, and the budget went into deficit. (Guliyev, 2018)

Figure 20: Real GDP growth in Azerbaijan between 2006 and 2017



Source: *Fiscal Policy Challenges*, Hafiz Eldeniz oglu Guliyev, Ministry of Taxes of the Republic of Azerbaijan, Chief state tax inspector, *ЕКОНОМІЧНА НАУКА*, 2018.

The sharp decrease of oil price in 2014 is considered as the end of the Azerbaijani oil boom (2005-2014), so since the beginning of 2015 the state entered a new era or in other words post-oil boom era. In the post-oil boom era the year of 2020 was another significant evidence of how fluctuations in oil price can have significant negative results in economy. It was because the global drop in demand for oil caused by the COVID-19 epidemic imposed economic pressure on oil-producing countries.

After the several negative situations that economy faced during the oil price fluctuations, we can summarize its effects in Azerbaijan as follows. First of all, whenever there is a decrease in oil price then the GDP growth rates also decreases in oil & gas and in the rest of economy. Secondly, it negatively affects non-oil industries, as fluctuations in oil profits impact the government's ability to support the rest of economy. Thirdly, the drops in oil prices have considerable connections with the country's inflation volume. (Zulfigarov & Neuenkirch, 2020) For instance, due to drop in oil revenue, Azerbaijan devalued national currency (Azerbaijani Manat) by 34 % in 2015. (Mukhtarov, et al., 2019) Finally, GDP effects are observed mostly following increases in oil prices, whereas interest rates and the exchange rate primarily react to drops. However, both shock types results in inflation, as a consequence of an accommodative monetary policy stance in the

case of lower oil prices or the shock itself in the event of higher prices. (Zulfigarov & Neuenkirch, 2020)

### **2.8.2 Dutch Disease Syndrome and Azerbaijan**

The term "Dutch Disease" was created during 1960s in the Netherlands, when the great income generated by the country's natural gas discovery resulted in a significant drop in the productivity of its other, non-booming trade sectors. Despite the revenue windfall brought by the new finding, the Netherlands witnessed a sharp decrease in economic development. This economic paradox has since been defined as a situation in which a thriving sector has a negative effect on the productivity of other sectors of an economy.

In short, the "Netherlands Syndrome" refers to the negative consequences of an ineffective policy for managing the rapid expansion in natural resources. An imbalanced increase will emerge as a result of not prioritising export-oriented sectors other than the oil & gas industry.

The impact of oil revenue on the overall performance of the national economy has received a great deal of attention. Their key shared outcome is that the input of large amounts of oil revenue hurts other tradable industries through Dutch disease syndrome and it can be said that the same symptoms was faced in Azerbaijan. The case is that non-oil sectors which need a large amount of investment, cannot benefit from the investments sufficiently.

If the production-technological products brought into the Azerbaijan under the framework of oil agreements are excluded, agricultural products account for roughly half of all imports. Indeed, Azerbaijan's natural-climatic and soil characteristics allow for increased agricultural product output in the country, as well as production for export in addition to meeting internal demand. To do so, it is required to establish appropriate conditions for attracting FDI also to non-oil sectors. (ARAS, 2003)

Following the collapse of the Soviet Union, most of the former member states endured severe economic hardship as they adjusted to the new difficulties of independence. The aspects such as political insecurity, short-lived regimes, and military wars hampered recovery from the early 1990s economic downturns. All of these



necessitated new structural alterations, as well as the implementation of efficient economic reforms. As we understood from previous paragraphs, Azerbaijan was no exception; nevertheless, the country's abundant oil and gas resources added fresh challenges to the transition process, forcing the government to rely on readily available mineral resources, pushing out industries and even the agriculture sector

While natural resources played a vital role in attracting revenues to the economy during and after transition period, it also negatively influenced the non-oil sectors. Therefore, unlikely from the oil sector the non-oil sector of the republic stays fragile.

For instance, the share of manufacturing in industrial production in 2010 was 74% lower than in 1990, while agricultural GDP fell from 32.5 percent in 1991 to 12.4% and 5.6 % in 2003 and 2017 respectively. Furthermore, manufacturing contributed only 5% in 2007, while mining provided 53.7 percent. Between 2005 and 2016, the mining sector attracted 73.8 percent of both domestic and foreign investment, while manufacturing received only 8.7 percent. (Niftiyev, 2020) Moreover, according to data from the State Statistics Committee of the Republic of Azerbaijan from 2005 to 2018, the petroleum products' share in total export structure of Azerbaijan was almost 90%. In 2018 the share of oil and gas exports accounted for 84% of total country's exports. (Hamidova, et al., 2021)

In economic policy transparency, foresight, and balanced distribution of resources should be taken into consideration at the first degree in decision-making, so that maximum benefit can be made from the intensive development of the oil sector to the free market mechanism. Strengthening the flow of foreign investments into the economy of Azerbaijan and fulfilling all conditions for their protection should be the main objective of the country's economic policy. As an important point, this should always be in the centre of attention of the state.

In conclusion to this paragraph, it should be accepted that the same FDI flows which became the economy driven power also created harmful effects to non-oil sectors, resulting in the establishment of a more resource-driven economy. By evaluating the governmental programs of Azerbaijan, particular policy tools such as creation of State Oil Fund to diversify the economy or goals we can realize that the government tried and tries to apply policies to reduce petroleum dependence and to create more sustainable

economy. The efforts are aimed at encouraging non-oil agents and maintaining disappearing industries. In this path, government implemented several reforms, but the challenge is that a significant number of the initiatives and projects, as we can understand from projects such as TAP and TANAP, are still heavily based in petroleum sector and due to the measures of foreign and local experts, starting from 2025, the country will face a great decrease in revenues coming from petroleum.

In terms of more concrete policy actions and techniques, national currency devaluation and the fiscal framework – "New Budget Policy" – are the first efforts to shift the economy from a pro-cyclical to a countercyclical policy. Hence, there are many tasks ahead for those government programs, objectives, and policy measures to overcome, and because the recognition of Dutch disease or de-industrialization is still inadequate, probably there is a long way to go before achieving a diverse and sustainable economy. (Niftiyev, 2020)

### **2.8.3 Azerbaijan diversifying its economy**

For the case of Azerbaijan, given the permanence of Azerbaijan's fragile socioeconomic situation, economic structure, and the fact of a fall in the country's oil reserves in the mid-20s, the management of oil money demanded and demands a cautious approach from the side of government.

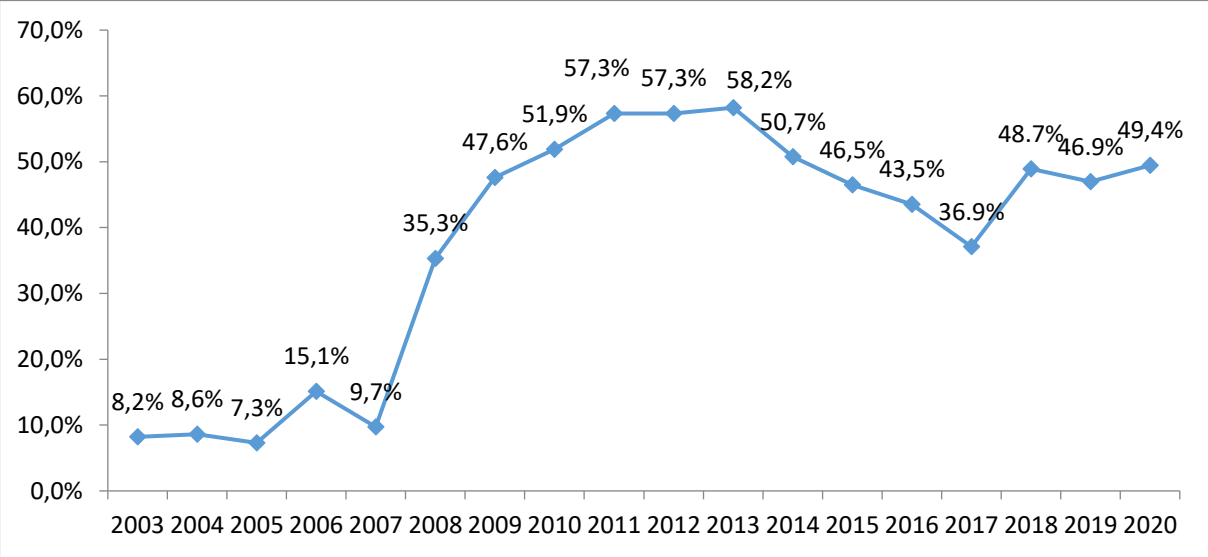
The first method of combating with the "resource curse" has been started to be applied since the middle of 1990s through the state oil strategy. (Hamidova, 2018) The government in order to support its macroeconomic stability by persuading non-oil sectors, its socio-economic progress by funding national scale projects. and to accumulate and preserve revenues from oil for future generations back in 1999 created a sovereign wealth fund, State Oil Fund called SOFAZ (paragraph 2.4). SOFAZ started to play a role of accumulating the fund from the sale of petroleum products to use them for overcoming vital economic challenges of the country in the future.

SOFAZ's income are anticipated under the 'Long-term plan on the management of revenues coming from natural resources, that covers the period 2005-2025 and specifies the rules for the usage of oil and gas revenues as well as the expenditure policy for this time period. As a result, SOFAZ plays a critical role in the state economy's fiscal viability,

as the amount of SOFAZ transfers to the state budget has increased dramatically since 2008. (Aslanli, 2015)

According to the data taken from official portal of State Oil Fund of the Republic of Azerbaijan, between 2003 and 2020 the total transfer from the Fund to the state budget has been reached AZN 112.14<sup>22</sup> billion.

Figure 21: A portion of the SOFAZ transfers in the state budget



Source: SOFAZ, Annual Report 2020, <https://www.oilfund.az/>

Economic diversification became more than a goal for Azerbaijan mainly since 2014 when the fragility of economy was realized as a consequence of oil price drop. Especially in 2016 the year after double devaluation of the AZN, the government established 11 areas of comprehensive economic growth framework with the implementation of strategic roadmaps for potential economic sectors with optimal utilization of the country's available resources. As a result of the decree issued, in December 6, 2016, a long-term objective project called "Strategic Road maps for the national economy and the main sectors of the economy" was issued. (Aliyev, 2020)

The main areas of development after oil & gas became industries such as Agriculture, Tourism, Logistics, Science and Technology, Banking, Telecommunications and Manufacturing.

<sup>22</sup> Azerbaijani Manat (AZN) – the national currency of Azerbaijan. Exchange rate of AZN as of 23/04/2022: 1 AZN = 0,58 USD. Exchange rate of AZN before 2015: 0,78 AZN = 1 USD. As a result of inflation, the currency was devalued starting from 2015.

When looking at Azerbaijan's export data agricultural products come in second behind oil products. As noted by the President of Azerbaijan, agricultural growth and expanded export potential are two of the country's most vital industries after petroleum. Today more than 35% of population is involved in agriculture related employments and 50% of Azerbaijani territory is defined as suitable for agriculture. This is the reason why the government in recent years, by taking the objectives to raise productivity and increase export incomes to straighten the competitiveness of agricultural products, has made considerable investments in agriculture and reforms. (Babayev, 2019)

Human resource development was defined as one of the key targets of the Strategic Road Map as it is the foundation of long-term economic development. Within the framework of Road Map the following goals have been set in the educational and training process of the Azerbaijan: Employers' integration with the vocational education and training system; Implementation of focused professional development programs; Developing sector-specific programs; Implementation of methods to promote the achievement of vocational education and training objectives. (Huseynova & Gurbanova, 2018) Due to data from World Bank, education sector of Azerbaijan faced considerable budget allocations (up by 13%).

In the path toward the sustainable economy, another step taken was the establishment of the National Strategy on Socio-Economic Development of the Azerbaijani regions and rural areas, between 2019-2023. This development was also designed to ensure the appropriate implementation of Strategic Road Map. The primary objective of the State Program 2019-2023 is to positively improve Azerbaijan's environment so that republic's different regions can have benefits from both the resilience and sustainability that development provides. (Huseynov, 2019)

The simultaneous realization of an industrial diversification policy on one hand and lowering reliance on natural resources on the other is a challenging task. In terms of technology and skills, in Azerbaijan the oil sector is relatively weakly linked to other export sectors. Furthermore, the implementation of economic diversification is a lengthy process that necessitates significant financial inputs. However, global experience shows that, despite difficulties, resource-dependent countries like Azerbaijan can diversify their economies by investing mainly in human capital and infrastructural facilities, enabling financial institutions, and managing properly the right allocation of resources.

## **Chapter 3: The Case of British Petroleum (BP) in Azerbaijan**

### **3.1 Foreign Direct Investment (FDI)**

Foreign direct investment (FDI) occurs when a person or company holds 10% or more of a foreign company. International Monetary Fund defines that if the ownership is less than 10%, then it's a part of their stock portfolio. (Amadeo, 2021). In other terms, Foreign direct investment (FDI) is considered as a long-term capital investment in the creation of new manufacturing facilities or the improvement of existing ones. FDI holds a crucial importance for emerging and developing market countries as it is one of the essential factors to develop an economy of a particular country.

According to United Nations, inflow of FDI is a substantial source of foreign capital and represents an essential way of achieving sustainable development objectives and encouraging private sector growth. In many circumstances, FDI also leads to technological transformations or innovations and the strengthening of labour and management capabilities. Consistent growth in FDI inflows is often indicative of a better investment climate.

It is important to mention that all FDIs have a common feature that differentiates them from portfolio investment, which is defined as "control". In the case of portfolio investment, portfolio investors are not looking for control or long-term interest, but they are looking for quick profits. On the opposite, FDI investors seek ownership over the firm they are investing, long-term interest, and consistent profit. (Guliyev, 2014)

Although the majority of FDI flows are happening from high-income nations to other high-income nations, FDI flows to developing nations are expanding and are critical in supporting long-term development. The completion of the Cold War with the collapse of the USSR, economic liberalization of Eastern Europe during the 1980s and 1990s, the establishment of the World Trade Organization in 1995, advancements in communication and logistic technologies, and China's economic emergence were the important aspects persuading great rise inward of FDI during the end of 20th century. (Blanchard, 2016)

After declining by roughly 4% in the early 1980s, global FDI to developing nations grew significantly by approximately 17% on a yearly basis during the second half of the 1980s, reaching \$70 billion in 1993 and about \$180 billion in 1999. Estimates from the Global Development Finance report showed that, despite falling from \$179 billion in

1999 to \$143 billion in 2002, FDI climbed to \$166 billion in 2004. (Chowdurry & Mavrotas, 2006)

However, the flash of global financial crisis was the factor that broke significantly the global FDI growth in 2008. In terms of the post-crisis (since 2008) FDI environment, whereas global stocks have continued to rise, yearly global FDI flows have yet to recover to pre-crisis levels. Nevertheless, FDI is here to stay, and in a major manner, with the recent FDI trend being ten times larger than it was in 1990. (Blanchard, 2016)

### **3.2 The Overview of British Petroleum (BP)**

British Petroleum also known as BP, was established in 1909. By being headquartered in London, England, it is one of the world's largest oil and gas corporations. BP's business operations spread across six continents, and its goods and services are available in more than 80 countries. (Li, et al., 2014) By being created under the name of Anglo-Persian Oil Company, the organization changed its name many times subsequently arriving in its present corporate name BP.

As a significant supplier of fuel, lubricants, and energy, BP has established an enviable reputation around the world. Its business is conducted through several channels, including midstream, upstream, and downstream. BP's midstream operations include natural gas liquids and storage of liquified natural gas, refining, marketing, and trading. The company is involved in the development, exploration, and production of oil and natural gas in the upstream channel. Lastly, it is involved in downstream activities such as refining, distribution, trade, and marketing of completed hydrocarbons. (Ceil, 2019)

The name BP includes various brands like BP, Amoco, Castrol, Wild bean café, and Aral. During the last decades the company has been making efforts to differentiate itself from its competitors, for instance, through the innovation and production of alternative energy sources. The company's differentiation strategy comprises discovering opportunities on competencies with added benefits and new features (product innovation). (Alam, 2013)

The company launched many oil fields and constructed refineries in many countries, involving main interests in Alaska's Prudhoe Bay in the US and the UK petroleum sectors in the North Sea, where in 1965 the company made the first

commercial finding of natural gas and the first finding of a largest oil field in 1970. (Britannica, T. Editors of Encyclopaedia, 2019)

For the last few decades, as most of the oil & gas companies, BP also has been linked to several environmental, health, and safety issues. The most recent and well-known event was the Deepwater Horizon oil spill in the Gulf of Mexico in April 2010, which is the greatest maritime oil spill in history. Until the end of 2013 the oil spill had cost the organization around \$28 billion in various payments. Therefore, to decrease its massive carbon footprint, the corporation has been diversifying its operations by expanding its investments in low-carbon energy initiatives such as offshore wind. (Sönnichsen, 2021)

According to data from BP, the company is aiming to be completely a different kind of organization by 2030. The main areas of aimed transformation include significantly decreasing oil & gas output and emissions, while maintaining cash flow by upgrading its portfolio and expanding bioenergy and making investments in low-carbon energy to accelerate the growth of solar and offshore wind.

### **3.3 The Need and Conditions for FDI in Azerbaijan**

After the industrial nationalization by Soviet regime in 1920 the gates for foreign investments in Azerbaijan were closed and they were only reopened when the nation was able to reach its freedom in 1991. However, because of instability in republic about which we talked in paragraph 2.3 and lack of investments, oil & gas industry and economy in the beginning of 1990s was in a situation of crisis. While during the WWII Azerbaijan's oil fields were producing nearly 22.5 million tons of oil yearly, in 1991 that figure was reduced by 90%. To improve the situation and reach the potential of petroleum reserves of Caspian Sea, the only way was attracting FDI to pay for technological modernization.

The same situation was also for gas sector. As a result of crisis, the gas extraction was decreased by nearly 35,7% during the period of 1990-1994. (Mehdiyev, 2014) Therefore, for boosting the petroleum industry the foreign investments were not only needed but they were essential as it was the question of economic future of republic.

Given a difficult political and economic situation, it was not unexpected that the Baku's administration considered oil and gas as the only accessible asset capable of

building deeper ties with international powers. In the situation of Azerbaijan, an acceptable vehicle was discovered in the form of foreign energy corporations, particularly western oil and gas companies, whose long-term, capital-intensive presence in Baku was considered to influence their home states toward more favourable relationships with Azerbaijan. (Hoffman, 1999)

It's important to mention that political instability is a harmful factor that would prevent the flow of FDI and development of economy. Although Azerbaijan was able to stabilize the situation on its region and persuade foreign investors to invest in country, in the beginning 1990s there was an obstacle of war and political instability for FDI.

The conflict blocked the possibility of western export routes of Azerbaijani hydrocarbons supplies and both potential foreign and local investors were not able to use export-oriented oil reserves. However, after ceasefire in 1994 the stable geopolitical situation benefited the economy by allowing it to follow its oil strategy and enhance the share of the oil sector. (Lianlei & Baghirov, 2016)

The aspect that differentiated Azerbaijan from other resource-rich post-soviet countries like Russia and Kazakhstan is that republic's authorities have not restricted the presence of multinational oil corporations in the country and has actively encouraged FDI in its energy industry, emphasizing the necessity of international participation. Together with decrees and laws adapted in republic such as the Law on Investment Activity (1995), the Law on International Arbitration (2000), the Law on Privatization of State Property (2000) and the Law on Foreign Investment Protection (1992), the government has managed to establish a separate legal framework for the petroleum industry to reach minimum of risks and speed up oil projects with a viability. (Frayne, 2012)

Oil development plan has centred on the exploitation of the country's offshore fields. This policy, which was developed and is still being implemented at the highest levels of the political establishment, is executed by SOCAR. Contracts addressing offshore fields and since 1998 also onshore fields were structured as Production Sharing Agreements (PSAs), a formula with a significant advantage over the other investment-recovery schemes: when signed by both parties the agreements are approved by Azerbaijani Parliament and therefore have the force of law. (Hoffman, 1999)



Although the availability of natural wealth is a significant determinant of FDI, the general literature on FDI indicates that the presence of natural resources is not enough for investments to occur. This tells us that FDI in Azerbaijan is majorly the outcome of factors other than resource wealth, emphasizing the role of the government in providing an appealing and flexible investment climate. (Frayne, 2012)

Azerbaijan's hydrocarbon sectors have enjoyed exceptional success since the mid-to late-1990s, which made the country the richest between the three Transcaucasian states. The successful performance of oil sector has been based on large amounts of foreign investment, a return to the type of extranational involvement that was typical during the Imperial Russian era. (Hastings, 2020)

### **3.4 BP's long – term presence**

#### **3.4.1 BP's involvement in oil and gas projects**

Foreign hydrocarbon investors usually prefer countries with an attractive business environment predictable legislative framework and political stability, and they fear the states with laws and regulations which are not predictable and high political risks. The fact that Azerbaijan in the middle of 1990s managed to create a cautious mechanism, which provided a very stable legal framework for contractors of oil fields, increased attraction of foreign investors and BP was not an exception. With this stable legal framework each contract became a law of republic, involving rights of contractors and interests. (Ciarreta & Nasirov, 2012)

The first years of BP in republic goes back to some years before. In 1992 BP established its first office in Baku. Then two years later signed the so-called essential “Contract of Century” (paragraph 2.5) with the Azerbaijani government and other oil corporations. By being the main actor in the contract for the Azeri-Chirag-Gunashli (ACG) oil fields (the basis of contract) which is the largest offshore oil field in country's oil sector, BP launched its considerable presence in the country. From that time until present, BP has been the dominant foreign party in all major oil and gas projects of the republic.

In 1994 foreign companies involved in contract unified under the Azerbaijan International Operating Company (AIOC) which started to be operated by BP jointly with

Amoco. Since 1999 when Amoco merged with BP, the international consortium until our days is fully operated by British Petroleum. (Lussac, 2010)

BP's current data from corporate website under the title "BP in Azerbaijan" provide that the overall volume of company's investments in the republic's major oil and gas projects between 1995 and 2021 accounted for \$81.5 billion.

In oil sector the company is majorly involved in ACG oilfield (the largest oil field of Azerbaijan). ACG was developed through 3 phases under the leadership of BP. Although initial share of company in ACG was 17.1% after BP merged with Amoco, the combined company under the name of BP increased its shares to 34.1%. (Marriott & Minio-Paluello, 2012)

During the ACG fields development process BP together with partners in AIOC developed one of the world's largest oil and gas terminals around Baku, Sangachal Terminal which turned to be the main terminal of country for handling and storing oil and gas from receipt to export. (bp, 2017) By having in total \$36 billion foreign direct investment throughout ACG development phase until the end of 2<sup>nd</sup> quarter of 2019, partners led by BP were able to construct 6 world-class outstanding offshore platforms. During the time the fields gave approximately 488 million tonnes of oil, 452 of which were delivered to world markets through BTC pipeline and more than 29 million tonnes of associated gas to republic. (bp Azerbaijan, 2019)

In recent years the main question arising related to oil sector of country was "What will happen when the "Contract of Century expire in 2024?". There were few options for government, to continue with AIOC operated by BP, to work with other foreign companies, and work alone on largest oil field of country, ACG. As we know from paragraph 2.6.1 the decision was to continue with BP until 2050. It was firstly because BP since 1994 is familiar with ACG field and its details. Secondly, the company showed a great enthusiasm in further long-term cooperation with country. Therefore, BP's involvement in Azerbaijani oil & gas industry is ensured until 2050 due to PSA signed in 2017. (Yusifzade, 2019)

Under the new agreement on extending the "Contract of Century" until 2050 SOCAR boosted its interest to 25% from 11.65%, while BP's holding decreased to 30.37%.

BP will continue to be the main operator. The new contract ensured long-term investment in state's oil & gas sector and a one-time bonus of \$3.6 billion for the government, providing a much-needed contribution. The fields produced 585.000 barrels (80.000 tons) per day in 2017, accounting for three-quarters of country's oil output, but it is expected to increase as the partners invest up to \$40 billion until 2050. (Bagirova & Bousso, 2017)

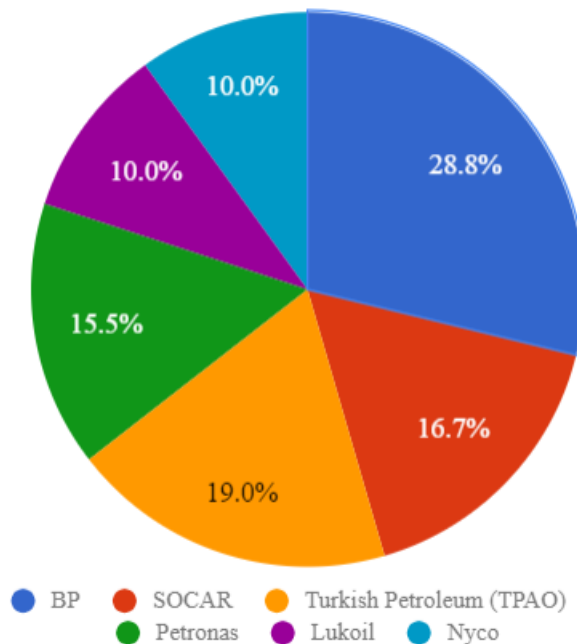
In the case of gas sector, when we talk about BP's involvement on gas sector of republic we need to move to the topic of the greatest gas field discovery (Shah Deniz field) in the history of Azerbaijan by BP in 1999 which was described in paragraph 2.6.2

It was also the greatest natural gas discovery in history of BP since 1978. (Wakeman-Linn, et al., 2004) By discovering the largest gas field in history of Azerbaijan, BP became the main operator in gas sector of country. When the PSA for Shah Deniz filed was signed in 1996 the period agreed for participation in project was 30 years. However, in December 2013 the agreement was extended until 2048. BP's shareholding interest for Shah Deniz is 28.8%. (bp Azerbaijan, 2022)

The nation's economy was previously highly reliant on gas. Large grid expansion projects by Soviets during 1960s and 1970s resulted in massive usage of gas for home heating with nearly 80% of country's total households connected by 1990. After USSR came apart, the grid reached the point where less than 50% of total households particularly those outside of Baku could access gas. Today BP and government of republic were able to rebuild the gas infrastructure of country, but most of the gas has an export objective. By being delivered from Shah Deniz field to Sangachal terminal, the major part of gas is piped into the gas pipelines such as SCP to be delivered to western countries. (Marriott & Minio-Paluello, 2012)

By the end of the first quarter of 2021, capital investment on the project of Shah Deniz had reached \$27 billion which is the highest FDI inflow in country. The field is between the most beneficial and productive fields in the history of BP. In total since the start of production until the first quarter of 2021, the field gave 140 billion cubic meters of gas, by having in total 32 wells constructed in Caspian Sea. (bp Azerbaijan, 2021)

Figure 22: Shareholders of Shah Deniz gas field



Source: <https://bankwatch.org/>

The Shah Deniz field's development by BP is the most essential aspect in the development of modern Azerbaijani gas sector. The field is another outstanding result of considerable FDI flow from involved international partners led by BP. The nation which was able to meet only its own oil demands, since 2006 became also self-sufficient in gas and stopped gas imports from Russia. While it can be considered as the main benefit of the discovery, we can say that the main advantage of Shah Deniz gas field is making the country a valuable partner to Europe in energy security. Because subsequently the gas fields made the state a central player in Southern Gas Corridor ensuring energy sustainability of Europe.

It is worth to mention that turning the Azerbaijan into a strategically essential gas exporter for the neighbours as well as for Europe in the long term and into an essential transit for the transportation of Central Asian oil and gas in the long term both are the keys parts of oil strategy initiated and adopted since 1990s by the governance. The role that the country plays in global energy long term sustainability is providing energy security to neighbours such as Turkey and Georgia and also to EU by being an essential part of Southern Gas Corridor from Caspian Sea to Europe.

During the last decades regardless of its already existing great shares in oil & gas sector of republic, BP was looking for new opportunities to expand. A new PSA was signed

between BP and SOCAR on exploration and development of swallow water area in Caspian near to Baku. It was planned to conduct 3 exploration well drillings of which the first was finished in 2021, the second is ongoing currently and, the third is planned to be started this year. (bp Azerbaijan, 2022) Then in 2018 the company signed another PSA with SOCAR to launch exploration works on potential new oil reserves of area called Block D230, in the North Absheron basin of Azerbaijani sector. Due to PSA, BP will be the operator with shares of 50% in exploration of block until 2043. (NS Energy Staff Writer, 2018)

### **3.4.2 The role of BP in oil transportation network**

The creation of reliable oil transportation network was the topic at least the same importance as developing the oil and gas fields of republic for BP to ensure the safe transportation of extracted oil and gas. During the process of defining and constructing the oil transportation network BP became the main actor in most of the essential pipeline projects of country. For instance, the decision to construct the Baku-Tbilisi-Ceyhan (BTC) pipeline (paragraph 2.7.2), which turned to be the main oil pipeline of country, was largely BP's. BP as a leader of AIOC was responsible for construction process of BTC.

The company executed the BTC project infrastructure in Azerbaijan, Georgia, and Turkey, by becoming the operator of the main oil pipeline when it was launched in 2006. This essential role in project provided to a company with a chance to have a key position within oil transportation framework of republic. Because with the completion of BTC pipeline the company became the main oil producer as well as the main operator in its transportation system after the government. Following these essential events now the London based company has links with all foreign corporations in Azerbaijan and significant decision-makers involved in energy industry of country. As a result no decision touching AIOC, ACG oil field, and BTC pipeline may be made without the involvement of British Petroleum, giving it the operating role in oil transportation network. (Lussac, 2010)

The major gas exports of republic since 2007 are happened with South Caucasus Pipeline (SCP) to Georgia and Turkey. (U.S Energy Information Administration , 2019) The construction of pipeline was finished by BP in 2007. (Hastings, 2020) BP by owning 28.8%

of shares in SCP project (SGC (Southern Gas Corridor), n.d.) became an essential partner also in gas transportation.

However, the topic of Azerbaijani gas transportation is a broader than just one constructed pipeline as SCP project was just an initial step toward creating Southern Gas Corridor to deliver a vital gas to Europe from Azerbaijan. Back in 2013 when BP together with SOCAR and other international partners approved a new route for gas supply to Europe the magnitude of the obstacles to establish a new energy corridor were unknown. It was clear that to make such a great project to be real there was a need to engage many stakeholders including different governments and local or international communities. However, all the obstacles and challenges were overcome thanks to the great work done in diplomacy, innovative way of thinking, and teamwork and already in 2020, the Southern Gas Corridor (SGC) was completed and gas started to flow to Europe from Azerbaijan. (British Petroleum (Bp), 2021)

While SCP pipeline was the first step toward Southern Gas Corridor, TANAP and TAP (paragraph 2.7.3) are two other essential pipelines of SGC which also received a great contribution from BP. Firstly, under the agreement signed between BP and TANAP the company became a shareholder of TANAP by taking 12% of share after SOCAR (58%) and Turkish State Company Botas (30%). (AGC Communciation, 2015) Secondly, BP became one of the key shareholders of TAP gas pipeline (20% of shares) which holds a key role in EU's energy diversification strategy. There was also an expansion project of SCP pipeline in which BP played a major role. The expansion project included the building of a new 48-inch pipeline circling SCP across Azerbaijan and Georgia and establishing 2 new compressor stations in the territory of Georgian Republic. (SGC: Southern Gas Corridor, 2022)

We should state that the SGC's significance should not be underestimated. As BP notes in its virtual trip along the SGC project "Southern Gas Corridor – project of the century", the project created a physical link between Azerbaijan and EU as well as created opportunities for EU to expand and diversify in the following decades. It could even play a critical role in providing low-carbon energy sources like hydrogen one day. It is a clear example of BP's new strategy to supply energy sources as they aim in transition from a worldwide oil business concentrated on resource production to an integrated energy corporation focused on customer solutions.

BP, by participating in above mentioned gas transportation pipeline projects during the last decade, played a connector role between EU and Azerbaijan as well as became more vital partner for EU in energy diversification strategy. Because the established gas corridor to Europe from Caspian Sea could not be possible without involvement of international consortium headed by BP who is a key player in Shah Deniz field development from where the gas starts its route to be finally delivered to Italy.

### **3.5 Socio-economic effects of company presence in country**

During its existence in Azerbaijan BP has always been at the centre of Corporate Social Responsibility (CSR)<sup>23</sup> policies and has been continuously stating its intention to participate actively in development of communities in Azerbaijan. (Azimli, 2016) FDI done by BP as well as long-term company presence with CSR policies created several socio-economic effects. These effects majorly include employment, environment, community, and society.

#### **3.5.1 Employment**

An article titled “Scale of the Century” written for ACG celebration noted that in republic beside from high earnings ACG project operated by BP has generated and sustained employment in total for nearly 15.000 Azerbaijanis, educating them to global standards. (Marriott & Minio-Paluello, 2012)

The operations of company are governed under Production Share Agreements (PSAs) with the government of the republic. Through these PSAs the company is dedicated to hire Azerbaijani citizens, however it is not obliged to do businesses with local companies. (Solli, 2007) In 2009 Rashid Javanshir, Azerbaijani, was selected as a regional president of BP. It was for the first time in history that BP’s regional president became Azerbaijani which demonstrates big attention by the company for diversity and recruiting also local people. It is one of company’s primary FDI strategies. (Guliyev, 2014) According to BP Azerbaijan, along with PSAs, BP also operates in republic with host government agreements (HGAs) which are signed with the government on management of its businesses and activities.

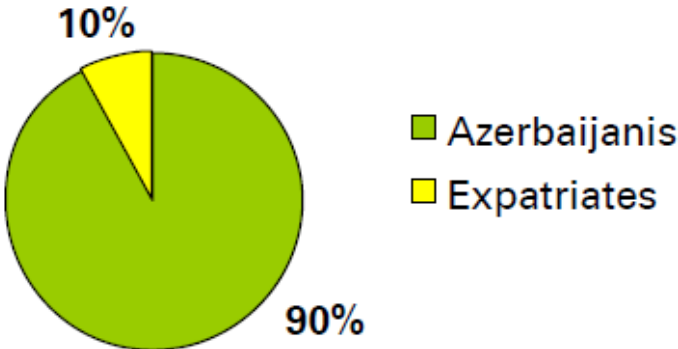
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<sup>23</sup> Corporate Social Responsibility (CSR) – a company business model that assists an organization in becoming socially responsible to itself, its stakeholders, and the general public.

It should be mentioned that one of the most critical human capital development duties in front of BP is workforce nationalization. Domestic content obligations started to be established by PSA signed in 1994 with government and included the hiring and training of native labour force. For instance, the Shah Deniz PSA states that more than \$200.000 should be invested yearly by BP to train Azerbaijanis. (Azimli, 2016)

Company’s recent publishment “2022 first quarter results” shared on May 5, 2022, release that the current number of Azerbaijanis directly employed by BP involving fixed-term employment equals to 2.247. According to data, 90% of professional workforce of BP’s businesses in republic are national employees, while non-professional workforce is fully nationalized.

Figure 24: Professional employees working in permanent terms in Azerbaijan



Source: Business update: 1<sup>st</sup> quarter 2022 results, bp Azerbaijan. Available here: <https://www.bp.com/>

Development of its workforce is one of the priority areas of company. Due to Sustainability Report 2019 of BP Azerbaijan in 2019 the company provided a variety of managerial, safety, technical, and behavioural training programs around the region. The local team organized over 1.000 programs with around 7.500 attendees. Azerbaijan hosted 87% of them. In republic company’s employee strategy also involves graduate as well as intern programs to acquire local talents. Graduate recruitment program allows to develop careers in different fields such as petroleum engineering, project engineering and accounting and finance. BP’s yearly intern program is quite famous amount youth. For instance, in 2019 by receiving approximately 600 applications, BP provided 28 nationals with a chance to participate in its intern program.



The report also notes that in the same year the number of senior level managers between Azerbaijanis accounted for 365 people which is 65% of total number of senior managers, while the figure for mid-level Azerbaijani managers was over 97%. Moreover, during the year 35 nationals even received mid-level overseas assignments.

### **3.5.2 Environment**

Azerbaijan is the country with very rich biodiversity but there are many environmental issues that the country is facing which are majorly connected to petroleum production from Caspian Sea.

In republic the energy and industrial sectors are considered as the primary sources of CO<sub>2</sub> emissions, while forests and agriculture are the primary sources of carbon absorbers and land-use change. Fuel burn in energy production, extraction of hydrocarbons, and their transportation are the aspects leading to CO<sub>2</sub> emissions which penetrate the ozone layer of atmosphere. (Vidadili, et al., 2017)

Although state's overall greenhouse gas (GHG) emissions are low in comparison to the rest of the globe, the petroleum aspect accounts for 63% of total GHG. (Crude Accountability, 2022) Moreover, between 1999 and 2019 CO<sub>2</sub> emissions in state increased by more than 28% as a main consequence of a doubled gas consumption. (Gurbanov, 2021).

Therefore, it is critical for country with its petroleum partners to lower its emissions to be able to maintain environment as well as diversify its economy. To achieve such a dimension the country has been involved in several steps. For instance, on April 23, 2016, Azerbaijan signed the Paris Climate Agreement according to which republic agrees to be committed to cutting its greenhouse gas (GHG) emissions majorly created by the petroleum industry by 35% until 2030. (Gurbanov, 2021). Since that the country is more committed to modernization of its sector with the new technologies especially to oil & gas processing technologies.

In this process one of the essentialities is involvement of international partners such as BP who is the main foreign partner. In country BP to reduce negative impacts on environment and increase sustainability tries to be involved in many activities. BP's Sustainability Report 2019 states that this includes workshops to increase awareness of

issues, projects on minimization of waste created during operations of company, and socio-environmental projects such as conducted in 2019 on planting more than 11.000 trees along SCP pipeline. Since 1995 many environmental monitoring programs such as surveys have been conducted near to company facilities and contract areas to expose ambient environmental health in the areas where the operational activities have an impact. Moreover, the company pays attention to technical safety of its facilities such as pipelines, terminal and specifically offshore oil and gas fields to prevent any oil spills or any similar environmental damages.

However, some projects of company have certain environmental impacts. In these cases the company makes efforts to reduce the consequences of negative environmental effects and to recover possible damages caused. Also, it should be mentioned that company name several times was mentioned in a poor environmental performance. For instance, Crude Accountability, a human rights and environmental non-profit organization, underlines that although BP has claimed no significant detrimental impacts on air quality, there has not been enough official environmental monitoring in villages located near to the Sangachal Terminal. Villagers residing near to it describe major flaring and smoke and respiratory issues, and sickness in their children and animals. They also describe detrimental effects on subsistence agriculture, which is the source of their food. (Crude Accountability , 2022)

On the other hand, BP is making efforts to comply to global environmental standards such as investing in most recent technology using an oil spill mechanism to immediately react in case of any possible harm and highly investing in environment which also enables its relationship with government. (Guliyev, 2014) To add, BP Azerbaijan publishes Environmental and Social Assessment (ESIA) documents which provides information about environmental and physical conditions within the proposed project areas in country.

### **3.5.3 Community and Society**

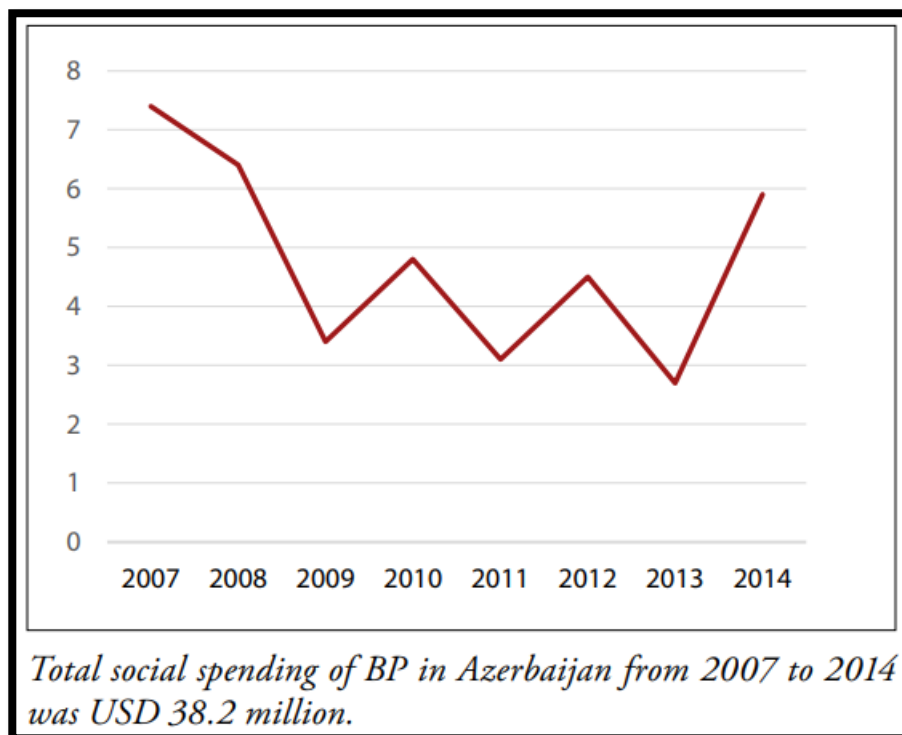
The projects' success in the Caspian is partly dependent on the capacity of operators involving BP to provide real advantages for the region's population. Towards that, London based company and its partners continuously implementing community and social investments projects like educational programs, capabilities, and skills building in

local areas, developing facilities, supporting local businesses with trainings, sport and cultural projects, and technical support in public institutions. (Azerbaijan State News Agency, 2021)

In republic some illustrations of such initiatives include the followings. The Enterprise Development Program (EDP) launched by BP which is a million of dollars initiative to encourage development of local companies with many training programs such as financial training for businessmen representing 25 firm from different parts of country. Project named “Build your Future” to support students from disadvantaged families in their endeavours for higher education at universities and social integration. Environmental project aimed at launching irrigation and water delivery facilities and massive tree plantation in different areas of republic. An educational initiative for three years to boost data analytics training and research capabilities. A program to develop rural micro-entrepreneurial competencies and to increase self-employment perspectives. Moreover, just in the 1<sup>st</sup> quarter of 2021 the company spending in country accounted for \$0.3 million on different sponsorship and social projects such as textbook translation from English into Azerbaijani, sport development support with sport Committees, sponsorship of conference, and exhibitions and English language improvement between students. (bp Azerbaijaj, 2021) The above-mentioned facts are just some of many projects that the company initiated and launched during its almost 30 years presence in Azerbaijan.

The company places a high value on collaboration with all parties involved in Azerbaijan, where the primary stakeholders are the government, workforce, and civil society. The company has a very effective collaboration with the Azerbaijani government and BP’s senior executives many times met with the President of republic. In addition, company maintains good relationships with SOCAR which is the main petroleum party in country and with different legal entities inside. (Guliyev, 2014)

Figure 23: Social investments of BP in Azerbaijan, throughout the oil boom of 2007-2014, mln. USD



Source: *The contribution of Foreign Oil Companies to Human Capital Development in Azerbaijan: The Case of BP's CSR Program, 2016. Caucasus Analytical Digest*

Other social investment programs include educational joint projects with AMCHAM<sup>24</sup> and USAID<sup>25</sup> such as “Youth Leadership Project” involving 120 local students to improve business management competencies via intern programs and a preschool educational program project in different regions of country. One of the significant non-industrial projects initiated by BP was the School of Project Management with a budget of \$2 million, allowing students to receive an Associate’s or Master’s certificates from George Washington University. (Azimli, 2016)

<sup>24</sup> AMCHAM – American Chamber of Commerce

<sup>25</sup> USAID – US Agency for International Development

## Conclusion

Starting from the first development stage of oil & gas industry of Azerbaijan until recent times all external powers which had a control over rich oil and gas fields of Azerbaijan were able to benefit from its rich natural resources as well as to impact industry's development. However, as we can realize from the paper while the powers such as USSR have not given enough in return to Azerbaijani oil & gas industry to ensure its effective future, the conditions started to change since 1991, when the Azerbaijani nation was left free from any external power to develop autonomously. The young state despite all the difficulties was able to make the right decisions to ensure long-term development of its oil & gas industry which became the main source of country's development.

FDI which led to the renovation and great improvement in oil & gas sector of Azerbaijan during its modern history was the result of efforts done by the government rather than just the existence of rich natural resources. The country stood out as a state that has been exceptionally effective in attracting FDI and has been characterized by many as the "frontier of global capitalism", "showcase" for the ability of doing business between the former USSR republic, and a "united nation of oil". (Frayne, 2012)

Starting from 1994 (paragraph 2.5) which was the start-up year of FDI inflow in oil & gas industry the country signed more than 30 Agreements with foreign oil and gas leaders. The country's achievement in establishing partnerships with foreign investors resulted in total foreign investment in Azerbaijan reaching 54.2 billion USD between 1993 and 2010, 37.6 billion of which was FDI. This extraordinary inflow of FDI accounted for the world's greatest GDP growth rates between 2005 and 2009 allowing the country's economy to quickly recover and develop following the collapse of the USSR. (Frayne, 2012)

Therefore, the study reveals the great effectiveness of FDI in emerging economies such as in case of Azerbaijan which despite the crisis during the beginning of the 1990s was able to rebuild its economy by creating appropriate conditions with stable legal framework for foreign corporations to invest in the country. From the paper we can realize that nearly 30 years of the history of British Petroleum in Azerbaijan is an effective example of FDI inflow's positive impacts on the host country. For the Azerbaijani Republic

the existence of BP means long-term stable foreign investment in oil & gas industry as well as other sectors which led not only to great innovation and modern petroleum infrastructure but also to a thousand of job opportunities and revived economy.

Moreover, the case of BP in Azerbaijan should be considered as a great example of a company success persuaded by a good relationship with the host government. Through productive relations with the government and community BP became the most important foreign petroleum company in republic. Its investment in the country is one of the largest overseas activities of the company. Analysts mark Azerbaijan as the third most beneficial state in the global portfolio of British Petroleum following Russia and the Gulf of Mexico, highlighting the country's worth to the corporation in terms of prospects of major development in the coming years. (Foy & Raval, 2019)

The oil & gas sector without any doubt is the engine of the Azerbaijani economy. However, the study indicates regardless of the great successes in oil & gas development since 1994 the country has many issues related to the further development of the sector as non-petroleum industries are considerably fragile with several obstacles such as fiscal system, corruption, and access to finance restricting both foreign and domestic investments. Also, the business environment is considered as poor. Although the programs aiming at social transfer have decreased poverty, they may not always result in long-term poverty decline. As much as earnings from oil & gas industry account for the majority of national budget expenditures, such actions are only beneficial in the short term. (Ciarreta & Nasirov, 2012)

During the last decade, Azerbaijan's economic strategy prioritizes economic diversification. The President of Azerbaijan's declaration of 2014 as the industry year demonstrates the reform of economic strategy and the move from raw materials to a more diverse model of growth. To be successful in this process, Azerbaijan needs to keep its focus on the development of high-performance industries, persuade further direct investments in agriculture and education, develop its non-extractive sectors, support innovation and entrepreneurship, and continue its investments in infrastructure. Although the economic diversification in resource-rich countries such as Azerbaijan is a quite difficult process, this is the only way for the country to have a sustainable and strong economy in the future. (Hamidova, et al., 2021)

It is also important to mention that Azerbaijan's goal is while to diversify its economy by improving non-oil sectors at the same time is to increase its regional importance in petroleum. In other words, besides trials to develop other sectors, republic is not only trying to keep its global position as an energy sources' exporter but also to become one of the leading countries ensuring the energy security in the region as we can understand from recently implemented gas pipeline projects TAP and TANAP. Therefore, economic diversification can be considered as an aspect toward sustainable and stronger economic power but not as an aspect taking the country away from oil and gas.

As a result, this study paper attempted to demonstrate historical and current development stages in Azerbaijan's oil & gas industry by analysing in details successes and challenges. In conclusion, according to the initiatives and future plans of country we can say that despite the fact that Azerbaijan is running out its petroleum resources gradually year-by-year, its participation in regional energy initiatives still might bring the country considerable long-term benefits for years to come. By considering involvements of country in outstanding and ensured long-term projects with foreign petroleum companies and world powers toward the diversification and security of energy supply, it's possible to predict that Azerbaijan along with attempts to diversify its economy, will keep its status as one of the world's energy suppliers at least until 2050.

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