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THE ANALYSIS OF THE COMPETITIVE ADVANTAGE OF SAUDI ARABIA ON OIL

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ÖZET

THE ANALYSIS OF THE COMPETITIVE ADVANTAGE OF SAUDI ARABIA ON OIL

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Yüksek Lisans Tezi, İşletme

Tez Danışmanı: Assistant Prof. Dr. Aydan A. ÖZDEMİR

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Bu tez, Suudi Arabistan'ın küresel petrol pazarındaki ve petrokimya endüstrilerindeki konumunu ayrıntılı olarak incelemektedir. Suudi Arabistan Krallığı'nın genel mülkleri ve Suudi Arabistan'daki petrol tarihine de konu açısından önemi nedeniyle değinilmiştir.

Bu tezin ikinci bölümü rekabeti bir kavram olarak incelemektedir. Rekabetçilik tek başına yeterli değildir; hedeflerine ulaşmak için uygun bir stratejiye ve belirli yeteneklere sahip olmak gerekir. Bu faktörler, rekabet avantajı olarak bilinen şeyi oluşturur. Araşırmada hem genel rekabet avantajı kavramını hem de onu etkileyen faktörleri ve Suudi Arabistan'ın petrol endüstrisindeki rekabet avantajını ayrıntılı olarak tartışmaktadır.

NEOM ve Vizyon 2030 gibi Suudi Arabistan'ın geleceğini ilgilendiren projeler, avantajları ve geleceğe yönelik riskleri ile anlatılmakta ve tartışılmaktadır. NEOM'un yasaları, vergi sistemi ve mevzuatı ile bağımsız bir ekonomik bölge olması bekleniyor. Vizyon 2030 ise özel sektör iş gücünün Suudileştirilmesini hedefemekte ve toplam 13 farklı programdan oluşmaktadır.

Bu tezde, rekabet gücünü değerlendirmek için SWOT Analizi kullanılmıştır. Analiz sonuçlarına göre Suudi Arabistanın Petrol pazarındaki zayıflıklar ve fırsatları listelenmiş, ileriye yönelik olarak da hangi fırsatları değerlendireceği tartışılmıştır.

ANAHTAR KELİMELER: Petrol, Rekabet Avantajı, Suudi Arabistan, Porter, Ulusal Rekabet Avantajı

ABSTRACT

THE ANALYSIS OF THE COMPETITIVE ADVANTAGE OF SAUDI ARABIA ON OIL

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Master's, Business Administration

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This paper examines the position of Saudi Arabia in the global oil market and petrochemical industries in detail. The Saudi Arabian Kingdom's general properties and oil history in Saudi Arabia are also touched upon due to their significance for the topic.

The second chapter of this paper examines competition as a concept. Competitiveness is not enough by itself; one must have a corresponding strategy and specific talents in order to reach their target. These factors make up what is known as a competitive advantage. This paper discusses both the general concept of competitive advantage and the factors influencing it and the Saudi Arabian competitive advantage in the oil industry in detail.

Projects concerning Saudi Arabia's future, such as NEOM and Vision 2030, are explained and discussed with their advantages and future risks. NEOM is expected to be an independent economic zone with its laws, tax system, and legislation. Vision 2030, on the other hand, seeks the Saudiization of the private sector's workforce and consists of 13 different programs.

This thesis uses SWOT Analysis for evaluating competitiveness. The rising weaknesses and opportunities are listed according to the analysis results.

KEYWORDS: Oil, Competitive Advantage, Saudi Arabia, Porter, National Competitive Advantage

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LIST OF ABBREVIATIONS

OPEC	Organization of Petroleum Exporting Countries
Saudi Aramco	Saudi Arabian Oil Company
USA	the United States of America
US$	United States Dollar
US	United States
USSR	Union of Soviet Socialist Republics
NGL	Natural Gas Liquids
LPG	Liquefied Petroleum Gas
R&D	Research and Development
API	American Petroleum Institute
GCC	Gulf Cooperation Council
ISO	International Standards Organization
SABIC	Saudi Basic Industries Corporation
WTO	World Trade Organization
NEOM	“City of Robots” Project of Saudi Arabia
SAR	Saudi Arabian Riyal
GDP	Gross Domestic Product
GNP	Gross National Product
SMEs	Small and Medium Sized Enterprises
GHG	Greenhouse Gases
SAMA	The Saudi Arabian Monetary Agency

INTRODUCTION

Saudi Arabia is surrounded by the world's important oil suppliers and the Strait of Hormuz and Bab-el Mandeb, two of the world's most crucial trade points. In fact, the total share of the two straits in the world's offshore oil trade is calculated as 30%. According to the Organization of Petroleum Exporting Countries (OPEC), it has the second largest conventional reserves in the world, after Venezuela, with 266.3 billion barrels (Sönmezoğlu,2012).

All licenses regarding oil production and sale within the borders of Saudi Arabia belong to Saudi Aramco, the country's national oil company. While there are 92 oil fields in total, 12 have 96.34% of the total production. Among these 12 fields, the world's largest conventional reserve Ghawar, an offshore field Safaniya, and six other fields are in the top 20 in terms of volume. The location of the Kingdom of Saudi Arabia is critical in terms of oil presence and ground throughout the world. Due to the existence of such a high level of oil, there is a fact that there is wide-ranging competition compared to other countries (Salisbury, 2015).

The identifying key factors contributing to national advantage can be stated as a nation's conditions, such as factor infrastructure and availability of resources, requesting conditions in the home country, and the presence or absence of related and supporting industries necessary to compete in the global market. The firm's strategy, structure, and competition with other companies affect how firms are established, organized, and managed, and the nature of competition affects the competitive advantage of industries and nations (Sönmezoğlu, 2012). The competitive advantage in Saudi Arabia is due to the ease of access to raw materials, the more favorable economic conditions in its domestic power, and the technological superiority available (Salisbury, 2015).

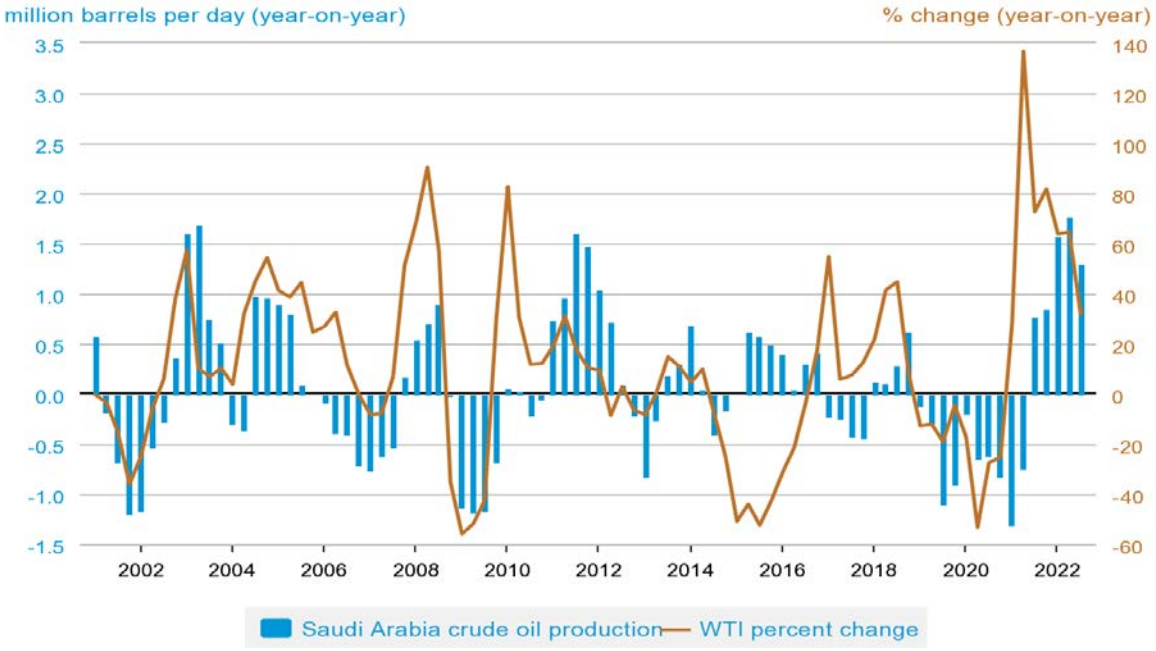
From a global point of view, it can be said that the high number of specified firms ensures variability in terms of competition which provides a suitable environment in the Saudi Arabian region. The existence of different companies in the market reveals macroeconomic events such as exchange rates. Since the oil market has a huge demand, it is quite natural for companies to increase and differentiate in number, which creates a force to differentiate in the Saudi companies' products due to the excess of available raw materials (Pillalamarri, 2015; Yu & Dean, 2001).

Since 1938, the first oil production started, Saudi Arabia has gradually become the biggest producer of the oil market. Since the countries' power comes from their oil reserve capacity and the cost of production, the market structure became an oligopoly of Saudi Arabia with its massive capacity of oil. To balance the market structure, in 1960, the Organization of the Petroleum Exporting (OPEC) was founded. However, among all oil exporting countries, either OPEC member or not, Saudi Arabia still has enormous weight with the largest proven oil reserves and lowest production costs. Due to this invincible power, Saudi Aramco, officially the Saudi Arabian Oil Company (formerly the Arabian-American Oil Company), remained the world's swing producer by the economies of scale of production, which led to the ability to shake the market by either increasing or decreasing the production. (Griffin, 1985; Alhajji & Huettner, 2000; Kaufmann et al., 2004; De Santis, 2003; Sönmezoğlu, 2012)

The main players in the oil market changed in 1979 as a result of the revolution in Iran. The revolution had two significant effects on the oil market. A rapid increase in oil prices and the shortage of oil supply. The former led to the participation of high-cost sources in the market, such as Alaska and the Northern Sea. The shift of the economies of scale due to the increase in prices provoked other countries' participation. The latter closed so rapidly with the new players in the market that the surplus became a problem to solve. In order to balance the oil market and stabilize the oil prices, OPEC and Saudi Arabia decided to reduce production by 20 and 60%, respectively. The required reduction percentages also present Saudi Arabia's power in the oil market. As a dominant figure, Saudi Arabia can also affect the prices by just fiddling with the production scale. (Graph 1). (Griffin, 1985; Alhajji & Huettner, 2000; Kaufmann et al., 2004; De Santis, 2003; Sönmezoğlu,2012; Pillalamarri,2015; Zubaidi & Al-ani, 2021).

The oil market has a fragility regarding price fluctuations. Not just geopolitical events and production scale, all other events may affect the flow of oil products to the market and cause price fluctuations. That's why, after the crisis of 1979, a series of profound price fluctuations occurred in the market. (Graph 2) (Griffin, 1985; Alhajji & Huettner, 2000; Kaufmann et al., 2004; De Santis, 2003; Sönmezoğlu,2012; Pillalamarri,2015; Zubaidi & Al-ani, 2021; Kaufman, 1995).

Graph 1: The effect of Saudi Arabia's crude oil production on the prices



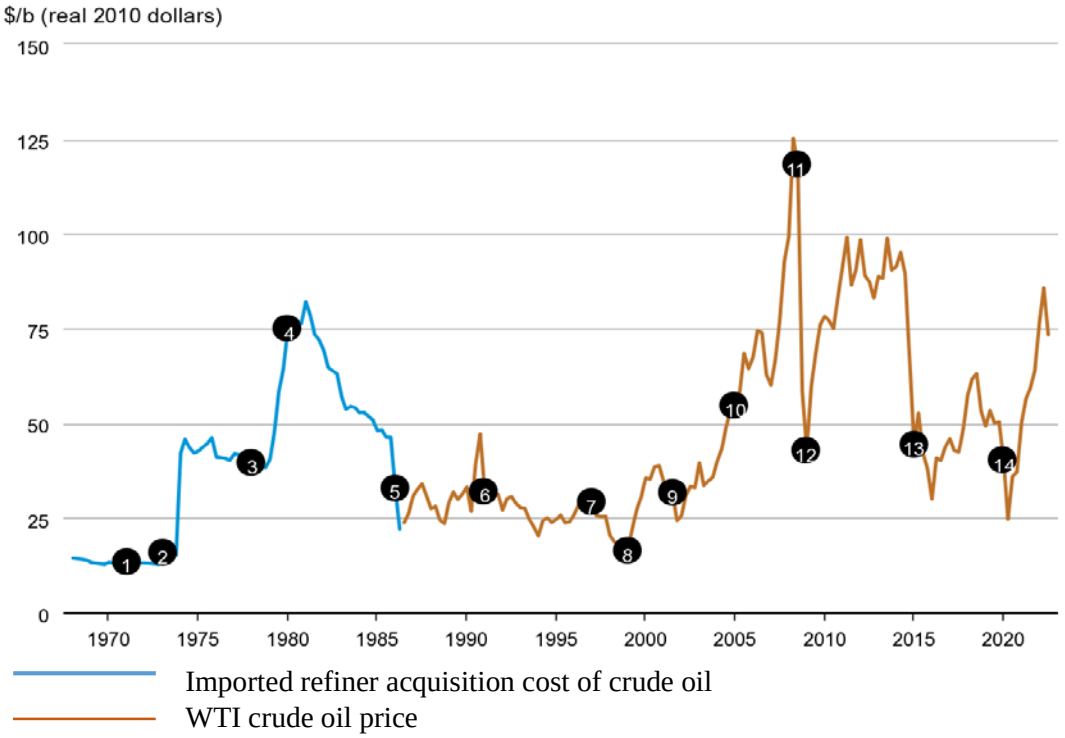
Source: U.S. Energy Information Administration: https://www.eia.gov/finance/markets/crudeoil/supply-opec.php

In the Saudi Kingdom, a competitive advantage emerges in terms of the cost of capital. The efficient infrastructure of the oil reserves enables economies of scale and, in turn, the invincible power of competition (Pillalamarri, 2015). The importance of the infrastructure comes from the depth of the primary oil source. The low-level drilling capacity has provided a certain level of benefits compared to other oil producers in Asia and Europe. The low recovery cost level combined with the high production scale stands out as the starting point for the uncompetitive economies of scale for Saudi Aramco (Pillalamarri, 2015; Shammas, 2000).

Saudi Aramco is one of the largest companies in the world in terms of turnover as of 2020. It has the world's second-largest proven crude oil reserves at 270 billion barrels (43 billion cubic meters) and the largest daily oil production of all oil-producing companies (Mababaya, 2002; Jaffe & Elass, 2007; Abid & Alotaibi, 2020; Guliyev, 2020). Saudi Aramco has been the most significant contributor to the global carbon emissions of any company since 1965. On May 11, 2022, Saudi Aramco became the world's largest (most valuable) company by market capitalization and as an operator of the Master Gas System, the world's largest single hydrocarbon network (SA Annual Report, 2021; Leswing K, 2022). Total crude oil production in 2013 was 3.4 billion barrels (540 million cubic meters), and it manages more

than a hundred oil and gas fields in Saudi Arabia, including 288.4 trillion standard cubic feet of natural gas reserves. Saudi Aramco operates the Ghawar Field, the world's largest onshore oil field, and the Safaniya Field, the world's largest offshore oil field (Hussain, 2014; Yahya & Irfan; 2016; Wada & Tuna, 2017; Rambo et al, 2017). On December 11, 2019, the company's shares started to be traded on the Tadawul stock exchange. Shares soared to 35.2 Saudi riyals, giving a market cap of approximately US$1.88 trillion and crossing the US$2 trillion mark on the second day of trading. In the 2020 Forbes Global 2000, Saudi Aramco was listed as the 5th largest publicly traded company in the world. In March 2021, Saudi Aramco announced that its earnings in 2020 fell by approximately 45% compared to 2019, as worldwide lockdowns in the wake of the COVID-19 pandemic reduced oil demand (Legros & Newman, 2014).

Graph 2: The Fluctuations of the crude oil prices and key events



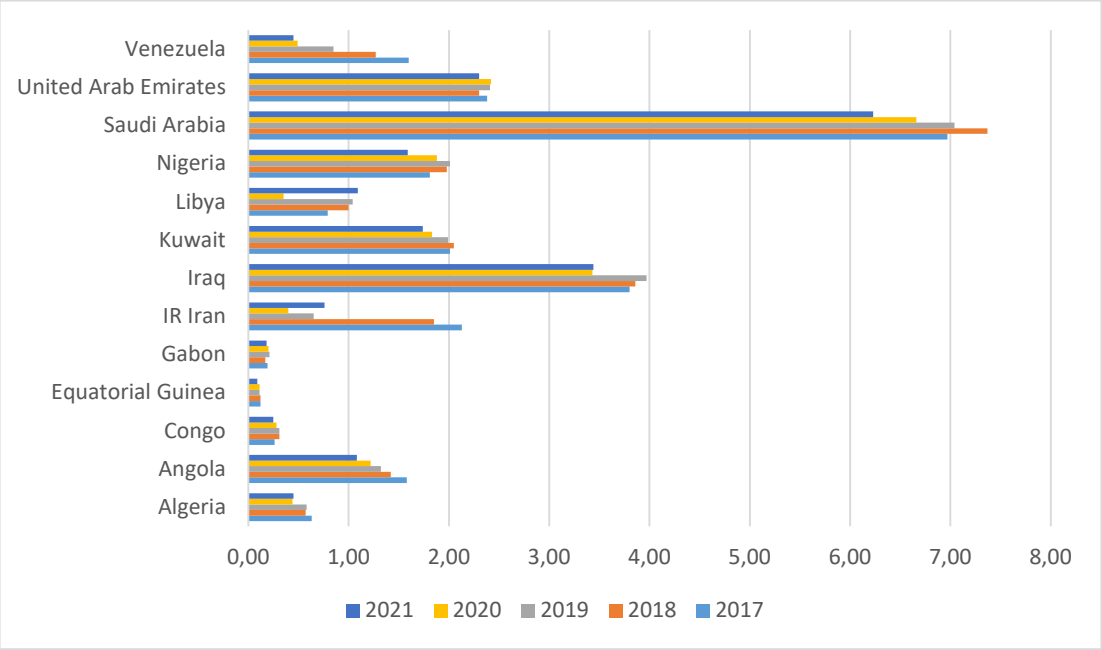
1: U.S. spare capacity exhausted; **2:** Arab Oil Embargo; **3:** Iranian Revolution; **4:** Iran-Iraq War; **5:** Saudis abandon swing producer role; **6:** Iraq invades Kuwait; **7:** Asian financial crisis; **8:** OPEC cuts production targets 1.7 mmbpd;
9: 9-11 attacks; **10:** Low spare capacity; **11:** Global financial collapse; **12:** OPEC cuts production targets 4.2 mmbpd; **13:** OPEC production quota unchanged; **14:** Global pandemic reduces oil demand

Source: U.S. Energy Information Administration:

https://www.eia.gov/finance/markets/crudeoil/spot_prices.php

The economy of Saudi Arabia mainly depends on oil. Throughout the years, the advantages of having the second largest oil reserves and being a swing producer regarding oil toughened the country's economy (Nurunnabi, 2017). Although the economy of Saudi Arabia is known as the 20th largest economy within the framework of the scope economy, in terms of economies of scale, it has the world's 14th-largest economy with a share of 18% in the world's oil reserves. Oil exports have a large percentage of Saudi Arabia's economy; nearly 70% of the country's total exports in terms of value in 2020, and about 53% of the Saudi government's revenues were oil-based (IMF Article IV, 2021; OPEC). That amount of exporting brings Saudi Arabia the leading position regarding the economy of scope (Graph 3).

Graph 3: Crude oil Exports, million barrels

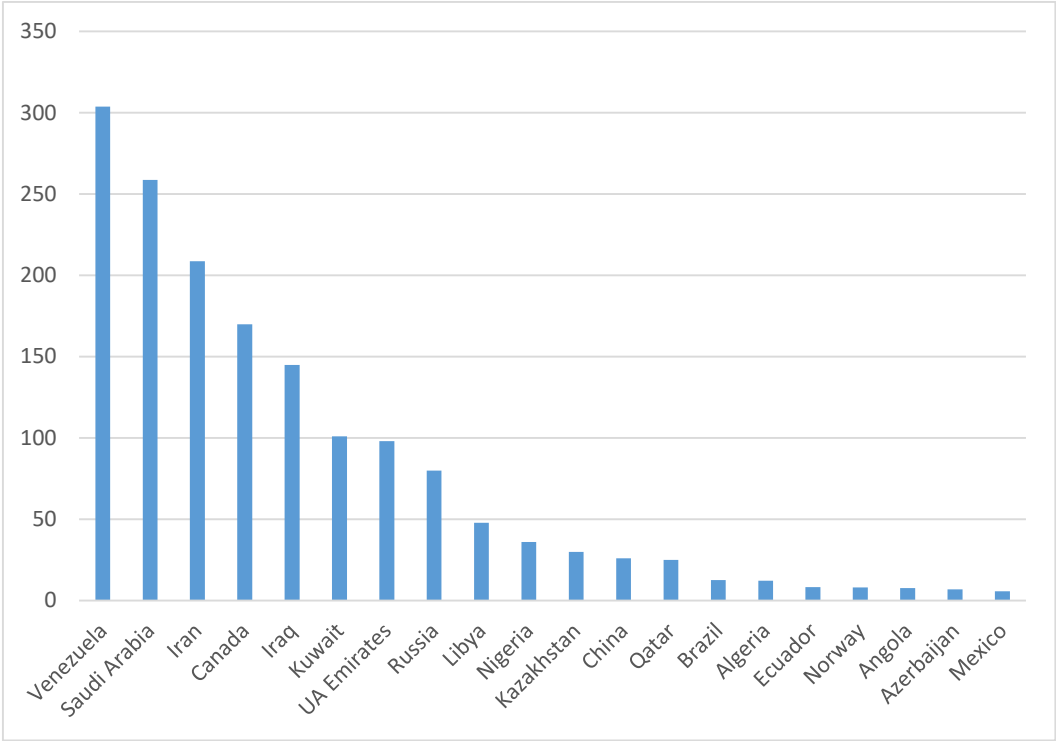


Source: OPEC

OPEC was founded by the most dominant oil market actors, Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela, in 1960. In the following decade, eight other prominent oil producers joined the cooperation; Qatar, Indonesia, Socialist Peoples Libyan Arab Jamahiriya, United Arab Emirates, Algeria, Nigeria, Ecuador, and Gabon. Even though OPEC formed cooperation, the significant comarket competitors' rivalry did not change regarding the demand for the market's largest share (Mabro, 1992; Fattouh, 2007; Fattouh & Mahadeva, 2013; Fattouh & Sen, 2016).

The most challenging competitor of Saudi Arabia has always been Venezuela since the country's oil resource discovery. Venezuela was the leading oil exporter between 1929 and 1969. As a founder of OPEC, Venezuela demanded protection for oil-producer nations from the profound fluctuations of the oil price since all founder members' economy depends on oil production mainly (Gall, 1975). With proven oil reserves of 300 million barrels, Venezuela is the leader of the reserve holders and has undeniable power in the market (Graph 4,5). However, the Venezuelan oil is costly and challenging to extract because it is in the tar dunes, which, in turn, has a disadvantage compared to Saudi Arabia regarding the economies of scale.

Graph 4: The proved oil reserves top 20 countries; million barrels



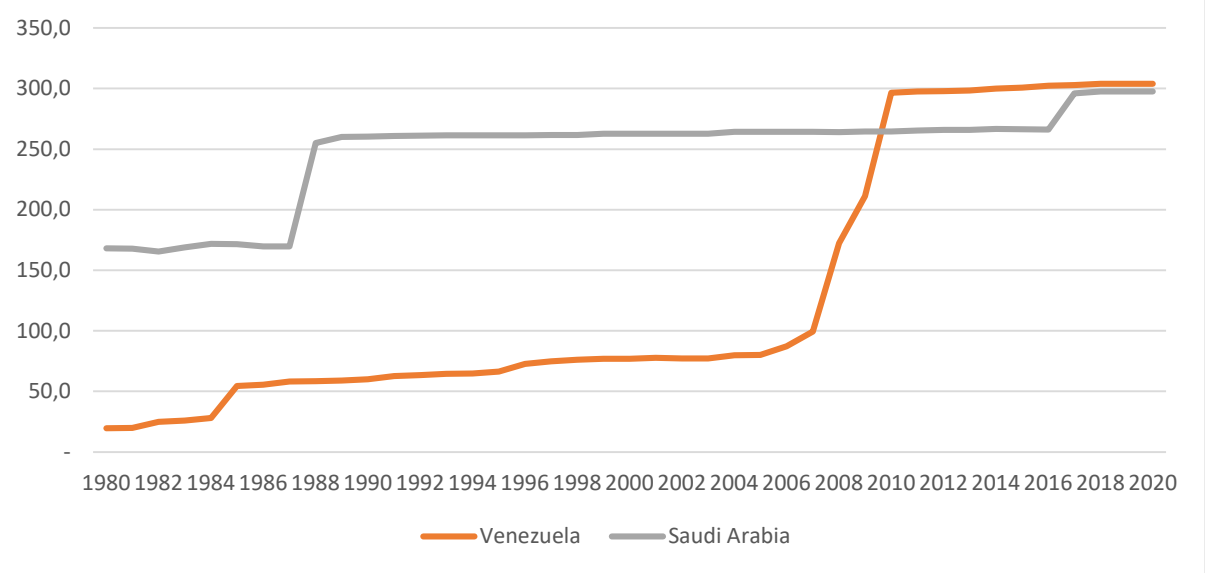
Source: U.S. Energy Information Administration

Regarding the bed structure, Canada has a similar composition a Venezuela. Since the tar sands are much denser in Canada, Venezuela had economies of scale compared to Canada regarding extraction costs. The geological structure of the reserves cuts out the importance of the total reserve capacity from the equation of economies of scale. Even though the total of Venezuela and Canada's total oil reserves are made up of the largest heavy and extra-heavy oil deposits, the drilling cost loosens the competition power (DeNevers, 1966; Dusseault, 2001; Hein, 2006). The disadvantages of oil extraction and drilling costs of

Venezuela and Canada lead Saudi Arabia to act as a sole producer since all Saudi oil is in traditionally accessible oil wells in major oil fields with a lower extraction cost (Kaplan & Aktaş, 2016).

Oil reserves are gaining more and more importance every day. Issues such as the increasing energy demand in the world in the last 10-15 years, environmental concerns, investment, and design costs in alternative energy production sources keep the oil agenda dynamic. As the demand increases, the imbalances in prices and country policies increase the interest in fossil fuels (Kaplan & Aktaş, 2016). Although the United States of America (USA) has a lower reserve compared to Saudi Arabia, from a global perspective, it has a very good position in the market.

Graph 5: The comparison of proven oil reserves between Venezuela and Saudi Arabia through the years of 1980 to 2020, million barrels



Source: B.P. Statistical Review of Energy

All oil-producer nations have faced upon another unexpected hit has that has become during the Covid 19 Pandemic. During the pandemic, all oil exporters faced an unexpected deep fall in oil prices and went negative for the first time in history, which forced the producers to pay buyers to balance the stocks of barrels (Gharib et al. 2021; Arezki & Nguyen, 2020; Wheeler et al., 2020). As the leader of oil exporters, Saudi Arabia had a great shock during the collapse of oil prices. The oil exporting countries had to encompass not only Covid Pandemic but also the oil price shock (Al-Najjar, 2022). Even though Saudi

Arabia urged OPEC countries and Russia to cut down oil production at the beginning of the Covid 19 Pandemic, the alliance could not be reached. As a result, Saudi Arabia increased its production scale, and an enormous amount of oil was released to the market. The production boom resulted in a supply surplus because of the reduced demand regarding the lockdowns due to pandemic restrictions which caused a deep shock in oil prices (Camp et al. 2020). After the release of the Covid 19 Pandemic restrictions, there has been an inflation battle worldwide. Even though oil prices have reached the lowest in history during the pandemic, the uncontrollable inflation rise led the prices to begin to develop after the pandemic. As a result of this price increase, in order to knock off the pump prices, the U.S. government decided to release America's strategic petroleum reserves in the market. This strategic move opposing OPEC countries' decision to increase production was followed by Britain, Japan, China, India, and South Korea (Economist 2021).

The fragility of the oil market has always been a problem for oil-exporting countries, especially for the ones economically dependent on oil exports. Regarding the competitive advantage, unexpected events may affect the strength and opportunities of these countries during the crisis. As a leader of oil exporting countries, Saudi Arabia may need new strategies to develop in order to survive in a world where new energy supplies are being discussed, and a series of unexpected pandemics and crises are forecasted.

I. HISTORY OF OIL

The usage of oil is commonly known for heat purposes. The historical evidence proves that oil was used in the weapons such as flaming arrows in the 13th century. Therefore, the first extraction of oil can be traced to 13th-century Asia. Weaponry production turned into lightning and heating purposed production in the late 1600s. However, mass production reached its potential only in the 1830s. Russia, Poland, Romania, Canada, the USA, and Scotland started to extract oil and refine it as paraffin to meet the demand (Forbes, 2015; Levey, 1961; Hanieh, 2021).

The 1870s changed the game of oil with the foundation of Standard Oil Company by John D. Rockefeller. Rockefeller only dealt with the refinery of the oil, which had a fewer variable cost than extracting the oil, and soon became the leader of the US refined oil market with a share of 90%. As a result of the mass oil production in the US and Russia, prices decreased from $2,56 to $0,56 in 1892 (Yergin, 2011).

Although oil was refined to extract solvents and kerosene, the producers were urged to find new and practical usage areas of oil since the surpluses were poured into rivers or burned. The first revolution started with the invention of two-wheeled cars by Karl Benz, working with kerosene. Later the production of the internal- combustion engine by Karl Benz and Gottlieb Daimler changed the market drastically. Both the oil and automobile industries created a bilateral force that increased production (Mercedes Benz Corporate History). While the production of automobiles was 4000 a year in 1900, with the Model T of Henry Ford launched to the market, the total production rose to 187 thousand a year in 1910 in the USA. The huge production scale of automobiles raised oil prices (Lamberti, 2021). Especially during World War I, oil prices rose from 0,81 to 1,98 in an instant. The growth in the number of cars, trucks, buses, and tractors on the roads created a massive demand for gasoline. By the end of the 1920s, 87% of the world's oil production was released from North America (Yergin, 2011; Robelius, 2007).

In 1914, the first commercial field was explored on the eastern shores of Lake Maracaibo in Venezuela, which was accepted as one of the world's major oil reservoirs. Also, Mexico's Golden Lane discovery was made in 1918, and soon after, Mexico became the second-largest producer of oil in the world (Brown, 1985; Brown, 2022; Robelius, 2007; Yergin, 201).

Enhanced oil usage motivates companies to search for other subsidiary products, such as plastics. The increased commercial sale of automobiles, production of military vehicles, and other subsidiary products created a need for more reserves. Since the refinery of oil has become more profitable than ever, other countries want to be an actor in the market, and searches for oil reserves got a momentum. Starting from 1922, the oil discoveries in Venezuela, Iraq, USSR, Kuwait, and Saudi Arabia made them prominent players in the oil market (Robelius, 2007; Lamberti, 2021).

World War II was when oil had a significant role in depicting its importance for military vehicles. During the war Germany lacked essential oil sources. Together with Japan, they began to produce synthetic oil made from coal. The intense battle between the nations and the need for aviation fuel forced industries to develop new refinery styles and create new products. Both oil and oil products raised the demand as well as supply. The war did not affect the price of oil since the supply and demand created a balance during the war (Robelius, 2007; Lamberti, 2021).

In the 1930s, oil exploration and development in the Middle East got pace. Commercial oil was discovered in various countries, and the discovery of oil in Bahrain accelerated the search for oil in Kuwait and Saudi Arabia. After World War II, all governments decided to nationalize their oil production. Between 1950-1960 Iran, Indonesia, and Saudi Arabia succeeded in nationalizing oil production. In the late 1950s, in order to reduce the oil price, Russia released vast amounts of oil to the market. As a result of this move, British Petroleum (BP), Chevron, Exxon, Gulf Oil, Mobil, Shell, and Texaco, known as the seven sisters, agreed to cut prices on Venezuelan and Arab oil to remain competitive (Sampson, 1975; Yergin, 2011; Robelius, 2007; Lamberti, 2021).

The manipulative price of oil leads to the cooperation of oil-dependent countries, resulting in the formation of OPEC. OPEC's formation ended US and USSR's control in the oil market. Although the collaboration greatly impacted the oil price determination, the oil market's fragility did not change (Hanieh, 2021).

Researchers stated that the world's oil reserves will last until 2050/2060. The limited amount of oil and the invincible dependency on oil lead companies to find energy substitutes such as electricity. Until a new material has been discovered or a known one has been transformed into the primary energy source, the oil will continue to lead the energy market

in its hand as well as the oil-producing nations. (Mercedes Benz Company History; Hirsh et al., 2005; Pirani, 2011)

II. THE KINGDOM OF SAUDI ARABIA

Saudi Arabia, officially the Kingdom of Saudi Arabia, is the largest country in the Arabian Peninsula. Jordan borders it to the northwest, Iraq to the north and northeast, Kuwait, Qatar, Bahrain, and the United Arab Emirates to the east, Oman to the southeast, Yemen to the south, the Persian Gulf to the northeast, and the Red Sea to the west. It is also called the land of the two holy mosques; because, according to Islam, the two holy cities of Mecca and Medina are in this country. Like all Gulf countries in the Middle East, Saudi Arabia is developing rapidly (Zuhur, 2005; Legros & Newman, 2014; Bowen, 2014).

Image 1 : Kingdom of Saudi Arabia (Legros and Newman, 2014:725-770)

The lands of pre-Islamic Arabia, including the borders of present-day modern Arabia, were home to various ancient cultures and civilizations; Arabia's prehistory offers some of the earliest examples of human activity on Earth. Islam, the second most widespread religion in the world, was born in Arabia (Wang, 2014). The Islamic prophet Muhammad united the people of Arabia in the 7th century and made Arabia a single Islamic state. After Muhammad's death in 632, his followers quickly conquered vast and unprecedented lands (from the Iberian Peninsula in the west to Central Asia and parts of South Asia in the east) within decades, extending the borders of the Islamic state beyond Arabia (Nevo, 1998;

Zuhur, 2011; Kaplan & Aktaş, 2016). Currently, Saudi Arabia consists mainly of four distinct historical regions; Hijaz, Najd, Eastern Arabia (Al-Ahsa), and South Arabia (Asir) (Zuhur, 2011).

The Kingdom of Saudi Arabia was founded in 1932 by King Abdulaziz. He united the four regions into a single state in a series of conquests that began in 1902 when his ancestral clan, the House of Saud, took over Riyadh. Saudi Arabia has since become an absolute monarchy, where the king, the Saudi royal family princes, and the country's traditional elite rule a highly authoritarian regime (Bowen, 2014; Kaplan & Aktaş, 2016).

The capital city of Saudi Arabia is Riyadh. It has a population of 33 million in an area of 2.149.6902 m^2. The government type of Saudi Arabia is a mixture of monarchy and Islamic Theocracy. In 1993 quasi-legislative body was formed, and the Consultative Assembly became the formal advisory board of the Kingdom. Wahhabism, an ultra-conservative religious movement within Sunni Islam, has been described as a "dominant feature of Saudi culture". However, the strength of the religious movement has eroded considerably in the 2010s (Iamratanakul et al., 2012). Saudi Arabia continues to define itself in its Basic Law as a sovereign Arab Islamic state with Islam as the official religion, Arabic as the official language, and Riyadh as its capital. Saudi Arabia is sometimes referred to as the "Land of the Two Holy Mosques", referring to the holiest places in Islam, the Masjid al-Haram in Mecca and Medina (Wang, 2014).

III. OIL IN THE KINGDOM OF SAUDI ARABIA

Commercial oil production began in Saudi Arabia on March 3, 1938, followed by several oil reserve findings in the Eastern Region. In September 1945, Aramco (Arabian American Oil Company) celebrated its first 2 million barrels per month, which increased to 21 million at the end of the same year. By the end of 1949, the production scale had risen to 500 thousand barrels a day, achieved by an extraordinary expansion of pumping, pipeline, treating facilities, warehouses, shops, offices, and housing (Clutch, 1965; Almtairi, 1985; Bronson, 2006).

Drilling was mainly concentrated in the Abqaiq field in the late 1940s when the largest oil accumulation on the Ghawar field was discovered. In order to eliminate transportation costs, the pipeline shortcut to the Mediterranean was considered in July 1945. The political tension between the Arab states and Israel forced them to change the line route and delayed the work until 1948. The construction finished on September 1950, and the first tanker was loaded

with Saudi Arabian crude oil in Lebanon. The pipeline capacity was initially 320 thousand barrels a day, then increased to 450 thousand a day in 1957 (Little, 1990; Shlaim, 2004; Kaufman, 2014).

Image 2: Oil In The Kingdom Of Saudi Arabia

The oil production of Aramco increased each year steadily between 1945 and 1975 at an average rate of 19 %. The daily production rate of daily crude oil doubled in 1950 by 500 thousand and continued to double in 1958, 1965, 1970, and 1974 respectively. The production peaked at 9,631,366 barrels per day in 1980. After 40 years of oil discovery, the total commercial quantity became 30 billion barrels (Clark et al, 1995; Mc Murray, 2011; Aramco, 2022).

In order to increase the variety of crude oil products, Aramco started to process and export Natural Gas Liquids (NGL) and Liquefied Petroleum Gas (LPG) besides fuel oil, diesel oil, kerosene, and gasoline. Aramco has sold relatively small amounts of LPG for cooking and heating purposes in Saudi Arabia since the 1950s. Even though the liquid component-associated gas was used to inject it into the reservoirs to sustain the pressure, economic studies showed that it is much more profitable to sell than to inject it. As a result of this cost-purposed analysis, in 1960, Aramco constructed a plant to separate the gas and deposit it. The first shipment of LPG took place in 1961 with an amount of 50 thousand barrels, equivalent to 2.1 million cubic meters of gas. The demand for LPG climbed so rapidly that the initial production scale of 3400 barrels of LPG a day was expanded gradually. The success of Aramco is not limited only to LPG production. The NGL production also climbed so fast that in 1979 Aramco became the world's largest producer (Clark et al., 1995; Demirbaş et al., 2016; Demirbaş, 2016; Sasi et al., 2016).

In 1988, by a Royal Decree, Saudi Aramco was established to take over the operation and management of the Kingdom's oil and gas fields from Aramco. Between 1989 and 1994, Saudi Aramco discovered 15 oil and gas fields with an area of 1,5 million square kilometers. The discoveries let Saudi Aramco increase its production to 18 billion barrels. From an international operations perspective, Saudi Aramco formed business ventures with the USA, South Korea, and the Philippines for marketing and refining purposes in the 1990s. The alliances let the firm lead the oil market in every aspect (Clark et al, 1995, Mc Murray, 2011).

Since the first commercial crude oil reserve was discovered in 1938, the economy of Saudi Arabia mostly depends on oil, and Saudi Aramco is the major economic factor. The structure of the oil reserves lets Saudi Arabia pump oil at the same pace, bringing power to the world oil market. Saudi Arabia has since become the world's second-largest oil producer (after the United States) and the world's largest oil exporter (Simmons, 2006; Ramady, 2010; Zuhur, 2010; Yetiv, 2015). The country has the world's second-largest oil reserves and the sixth-largest gas reserves. With a high economics of scale on the most demanded products, The Kingdom is classified by the World Bank as a high-income economy and the only Arab country among the major economies of the G20 with a high Human Development Index (Richter, 2017; Haque & Khan, 2019; Basangov & Ignatov, 2019; AlGhamdi, 2020).

IV. THE COMPETITIVE ADVANTAGE OF OIL IN THE KINGDOM OF SAUDI ARABIA

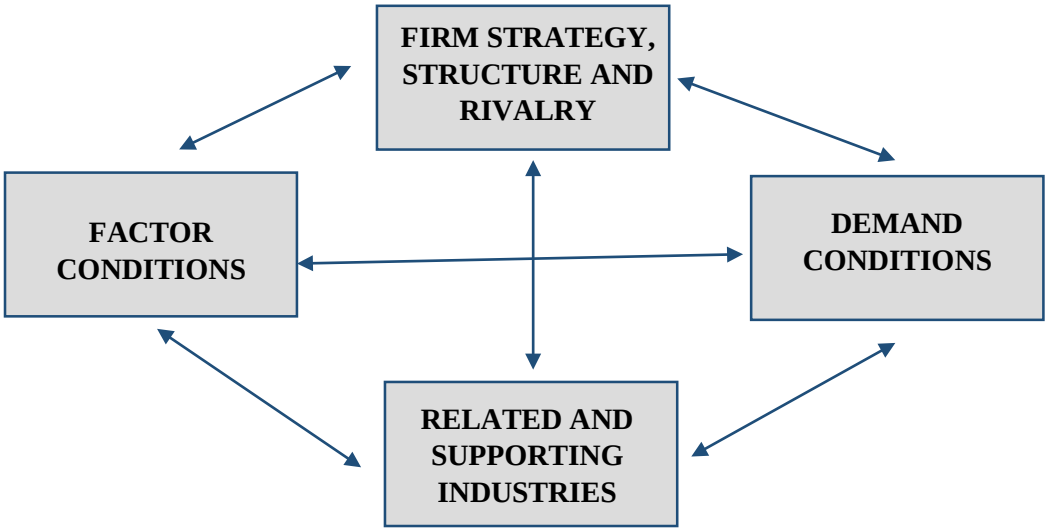
4.1. CONCEPT OF NATIONAL COMPETITIVE ADVANTAGE

Competitive Advantage is defined as "*the conditions that make a business more successful than the businesses it is competing with, or a particular thing that makes it more successful*" (Cambridge Dictionary). Competition is the primary determinant of a firm's success or failure. In order to reach sustainable success, all firms should state their own competitive strategy (Porter, 1990).

As Porter stated in his work titled "The Competitive Advantage of Nations," the natural advantage of a nation comprises some factors such as the influence of the nation on the firm's ability to compete, the home base as a platform for the global strategy, and having the ability to improve, innovate and upgrade the product to sustain the competitive advantage (Porter,

1990). The success of the nations in the international market also depends on several factors. Porter determined these factors as the factor conditions, demand conditions, related and supporting industries, and lastly, the firm's strategy, structure, and the power of rivalry. These determinants create a system that leads a nation's firm to birth and competes (Porter, 1990) (Figure 1).

Figure 1: The determinants of National Advantage



Source: Porter, The Competitive Advantage of Nations

4.1.1. THE DETERMINANTS OF NATIONAL ADVANTAGE

4.1.1.1. FACTOR ENDOWMENT

In order to state the role of factors in competitive advantage, factors can be grouped into broad categories.

i) Human Resources: the quantity, skills, cost of personnel, and working hours

ii) Physical Resources: the abundance, quality, accessibility, and cost of the nation's deposits as well as climatic conditions, geographical size, and location.

iii) Capital Resources: the cost of capital available to finance the industry.

iv) Infrastructure: the type, quality, and user cost of infrastructure affecting the competition.

Even though the combination of these factors determines the competitive advantage of nations, the factor proportions differ widely regarding the type

of industry (Porter, 1990; Engermen & Sokoloff, 2002; Aljarallah, 2010; Ragland et al., 2015).

4.1.1.2. DEMAND CONDITIONS

Home demand conditions significantly affect national competitive advantage in an industry. The most important aspect is the mix and character of home buyers' needs. The home buyers' analysis is important because it reflects the portrait of international buyers' expectations. The size of the segments may have a crucial role in the national advantage in terms of economies of scale. Although larger segments may create advantages for nations, it also brings complexity to acting and sustaining the advantage. Porter claims that this complexity brings the importance of the structure of segments. More important than the segment structure is the nature of the home buyers. The sophisticated and demanding home buyers force firms to produce high-quality products, bringing a sufficient supply for international buyers. Also, the needs of home buyers act as an alert system for the global market in terms of product adaptation. Even though the home market size for the product is essential for the national market, large home market sizes do not bring international success. Sometimes smaller countries have larger markets regarding the uniqueness of the product. The internationalization of the product bears some factors Porter stated. The factors affecting internationalization are having mobile or multinational buyers and the product's transmission to meet foreign buyers' needs (Porter, 1990; Aljarallah, 2010; Oh et al., 2013; Hanafi et al., 2017).

4.1.1.3. RELATED AND SUPPORTING INDUSTRIES

One of the determinants of national competitive advantage is the presence of internationally competitive supplier industries. Especially some widely used products bring out the national firm's competitive advantage. The presence of internationally competitive supplier firms in a nation creates some advantages, such as early and rapid access to the most cost-effective inputs and coordinating home-based suppliers (Porter, 1990, Grant, 1991; Aljarallah, 2010; Hanafi et al., 2017).

Regarding the competitive advantage in related industries, firms can coordinate or share activities in the value chain during the competition, which involves complementary products. The share of activities can be done in technology development, manufacturing, distribution, marketing, or service of the product. This kind of share is often developed in the computer market, creating other products called software, flash storage units, the mouse, and the keyboard. Sharing activities between different firms may lead to alliances. The benefits of both home-based suppliers and related industries depend on access to advanced factors and accurate interpretation skills of home demand conditions (Porter, 1990, Grant, 1991; Hanafi et al., 2017).

4.1.1.4. FIRM STRATEGY, STRUCTURE, AND RIVALRY

The fourth determinant of national competitive advantage is the industry in which all the national firms are created, organized, and managed. The advantage comes from the appropriate match of goals, strategies, and the way of organizing. Also, the rivalry pattern has a significant role in the innovation process leading to international competitive advantage. Since the favored management practices of a nation bring national success, the national differences in management practices develop international success. Another fact in the internationalization of the firms is the government policies that can create a positive or negative climate for industries to act globally (Porter,1979; Porter, 1990; Enright, 1998; Jin & Moon, 2006; Aljarallah, 2010; Bakan & Doğan, 2012).

Even though the harsh domestic rivalry is not related to international success and is sometimes a disadvantage, Porter argues that some firms defined as national champions are internationally competitive due to their improvement and innovation capability. It is a known fact that domestic rivalry has a pushing effect in industries to improve quality and lower product prices. The harsher the domestic rivalry, the more successful the firms in the global market. As the literature analyzed, the domestic firms in the markets are found to be the innovators of the product. Although every industry needs several producers to develop, in some markets, there happens to be a sole producer/seller of the product, which diminishes the effectiveness coming from the rivalry (Porter,1979; Porter, 1990; Enright, 1998; Jin & Moon, 2006; Bakan & Doğan, 2012).

4.1.2. THE ROLE OF CHANCE IN NATIONAL COMPETITIVE ADVANTAGE

Chances are the occurrences of events that have little to do with the nations' circumstances and are outside the firms' power. Chances create discontinuities and nullify the advantages of the firms. Wars, major technological discontinuities, significant shifts in the world financial markets and exchange rates, surges of world/ regional demand, discontinuities in input costs, and political decisions by foreign governments can be given as examples of the chances. All chance-induced events have asymmetric impacts on different nations. In one manner, the main act to handle the challenges of chances can be the nations exploiting capacity. If and only if the nation with the most advantage on the product exists, all chance-induced events may result in a competitive advantage (Porter, 1990; Öz, 2002; Berger, 2008; Aljarallah, 2010; Hanafi et al., 2017).

4.1.3. THE ROLE OF GOVERNMENT IN NATIONAL COMPETITIVE ADVANTAGE

The government policy affects not only the advertising media and regulation of supporting services but also the strategy and structure of the firm, as well as the rivalry through market regulations, tax policy, and antitrust laws. The effect of government policy can effect the national competitive advantage, either positively or negatively. If government regulation or purchases lead to unusual or premature demand distracting local firms from serving the global market, the effect becomes negative. In order to gain success in the international market, governments should reinforce the underlying determinants of national advantage (Porter, 1990, Aggarwal et al., 1990; Porter, 1996; Enright, 2000).

V. THE PURPOSE OF THE STUDY

The study aims to analyze the competitive advantage of Saudi Arabia in oil through the determinants of Porter’s competitive advantage analysis. This study has two dimensions: Saudi Arabia’s current competitive advantage and the expected changes in oil demand regarding the new movement of green energy policies forcing zero carbon emissions. Regarding the latest technological improvements in the energy field, the exit strategy of Saudi Arabia will be discussed.

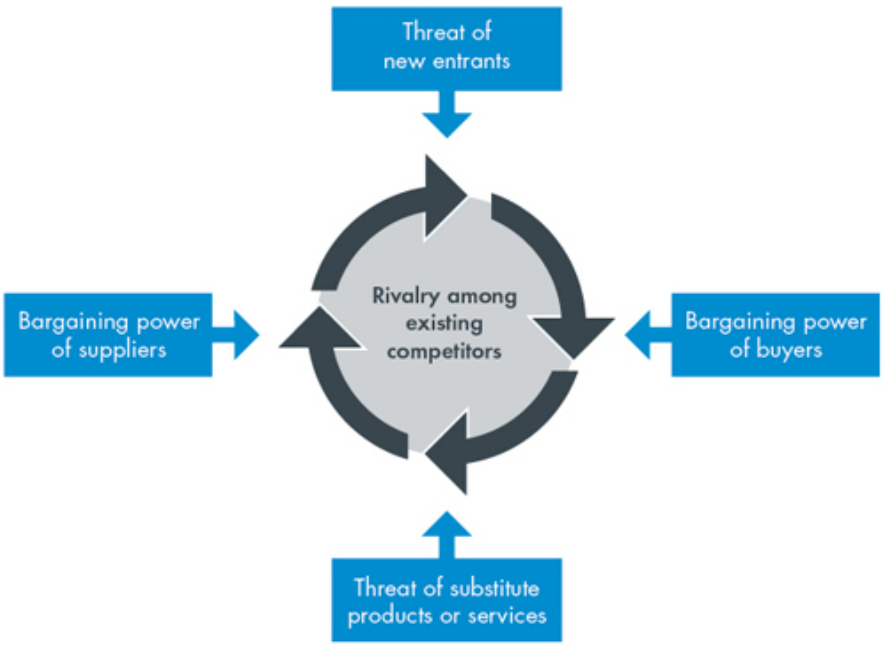
VI. THE METHODOLOGY OF THE STUDY

Porter’s Five Forces Model will analyze the competitive advantage of Saudi Arabia. Even though the nation's competitive advantage has been analyzed by determinants of Factor Conditions, Demand Conditions, Related and Supporting Industries, as well as the Firm’s Strategy, Structure, and Rivalry power, the oil market representative of Saudi Arabia, which is Saudi Aramco is the sole producer of oil and creates a national value which makes the main figure in the analysis. The analysis of competitive advantage was not discussed only by Saudi Arabia as a nation but also by the leading actor Saudi Aramco as a firm since one can not be separated from the other regarding the Saudi Arabian national competitive advantage in the oil market.

6.1. PORTER'S FIVE FORCES MODEL

Even though satisfying the customer needs is the prerequisite for the firms' visibility and success in the market, it is not sufficient, as Porter stated. The new entrants, the value capturing, the industry structure, and the firm’s positioning in the market has an invincible effect on its success. In order to define the factors and form a competitive strategy, Porter's Five Forces Model has become a powerful tool for both institutional size and nationwide (Porter, 1990).

Figure 2: Porter's Five Forces Model



Source:https://www.cgma.org/resources/tools/essential-tools/porters-five-forces.html

6.1.1. THE THREAT OF NEW ENTRANTS

In Porter's five forces model, new entrants often come to the industry to gain market share, new capacity, and resources. In this respect, they pose a threat to other businesses in the industry. However, this threat varies from sector to sector. The threat posed by new entrants depends on possible entry barriers to the industry and moves from competitors. New entrants pressure existing businesses to lower prices and, therefore, profitability. The suggested questions by Porter to be asked regarding the threat posed by new entries are the number of competitors and perceived recognition status, competitors' ability and power status, the pace of development of the market, state of the primary product life cycle, perceived competitive intensity, characteristics of fixed investments, ability to increase capacity, durability, physical life of primary products, standard, similarity and difference status of main products, customers' perception of primary products, and perceived state of being able to leave the job (Porter, 1990; Pfeffer, 1994; Porter, 1997; Bol et al. 2016).

6.1.2. BARGAINING POWER OF SUPPLIERS

Suppliers are individuals or businesses that provide inputs such as raw materials, semi-finished products, energy, and information that businesses need and thus contribute to the creation of products by businesses. In Porter's five-power model, strong suppliers can lower the quality of raw materials, intermediate goods, and services and raise prices. In particular, if there are few suppliers in the industry or the cost of switching suppliers is high, suppliers have a very high bargaining power in the industry. The questions to be answered about the bargaining power of suppliers are the number of suppliers producing the main supplies, the degree of competitiveness in the supply market, the degree of dependence of the business on existing suppliers, different or standard conditions of the supplies, the perceived importance of the supply goods to the business activities, the importance of suppliers' degree of expertise in supply goods, the share of the market in which the business is located in the total sales of the suppliers, the number of companies that have been suppliers in the past, entering the market with vertical integration, the profitability of the enterprise in the final product market, and the possibility of substituting the supplied materials

with different products (Porter, 1980; Porter, 1990; Pfeffer, 1994; Porter, 1997; Coff, 1999).

6.1.3. BARGAINING POWER OF BUYERS

In Porter's five-power model, customers bargain for better quality and better service, forcing prices down according to their bargaining power; they can also reduce the profitability of the sector by pitting competitors against each other. For example, if there are few customers in the sector who buy in volume, this increases the level of competition. Customers are also strong when the sector's products are homogeneous, with no added value. If businesses have high profitability, customers produce industry products themselves by integrating them backward. Questions to be answered about the bargaining power of customers are the number of customers in the main products, the degree of competition intensity in the market, possibilities of strategic cooperation among customers in the market, the different or standard status of the products before the customer, the share of the largest customer in total sales, shares of customers in the first 20% class (Pareto Analysis) in total sales, number of customers entering the market with vertical integration among the customers in the past, the profitability of the business in the market, the degree of dependence of the business on existing customers, and the substitution of main products with value-added products ((Porter, 1980; Porter, 1990; Pfeffer, 1994; Porter, 1997; Coff, 1999).

6.1.4. SUBSTITUTION

In Porter's five-power model, the threat of substitution refers to the competition created in the market by substitute products and the buyer's choice between products that can potentially provide the same level of benefit. For example, Pegasus and Anadolu Jet determine the bus ticket ceiling prices. In general, this example is given in the west in reverse. Substitute products limit the potential profitability of that industry by placing an upper limit on the prices that businesses in the industry can set profitably. Questions to be answered regarding the threat of substitute products are the different or standard status of market (generic) products before the customer, the degree of dependence of customers on the business and products, the cost of switching customers to substitute

products, benefit-price-quality superiority of substitute products over main products, the position of the market (generic) products in the life cycle, and the lack of market (generic) product demand (Porter, 1980; Porter, 1990; Pfeffer, 1994; Porter, 1997; Coff, 1999).

6.1.5. COMPETITION BETWEEN EXISTING COMPETITORS

Arokiasamy noted that the demand determinant favors the clustering of a nation's competitive industries. This demand driver has, in part, made Saudi Arabia's industrial structure unique compared to many of the Middle East's industrial powers (Arokiasamy,2013). Saudi industrial uniqueness also stems from the abundance of medium to large companies that form the backbone of Saudi Arabia's export power. Internal economic factors affecting Saudi industrial productivity include unlimited natural resources, especially oil, large arable land, and Saudi Arabia's cheap energy costs. The economic trends seen in Saudi industries are rapid productivity growth, positive growth in per capita income, increasing world shares of most industries, and availability of domestic investment (Porter, 1980; Porter, 1990; Pfeffer, 1994; Porter, 1997; Coff, 1999).

6.2. COMPETITIVE ADVANTAGE IN THE OIL INDUSTRY

There is the fact that oil-valued disciplines provide an organization with a competitive advantage. How an organization structures its product, operational excellence, and customer proximity are the keys to gaining competitive advantage (Hacıoğlu & Sümer, 2015). It is known that the ability of organizations to use innovation, reputation, and relationships can create a competitive advantage. Apart from these, we can say that competitive advantage comes from the value that organizations create for their customers, the value that exceeds the cost of producing it (Arouri et al., 2012).

An organization's unique resources and capabilities can create a competitive advantage after operations in oil wells. It should be noted that organizations using unique core competencies gain a competitive advantage over their competitors. Core competencies are expressed as organizations' specialized expertise over their competitors (Hacıoğlu & Sümer, 2015). These core competencies include unique access to a wide variety of markets, the ability to deliver value, and competencies that are difficult for competitors to imitate. These competencies can serve upstream or downstream. It is one of the explicit claims that the

evolutionary dynamics of the oil business create a competitive advantage. Competitive advantage can only be realized when an organization is willing to change, flexible, experimenting, and capable of continuous learning (Collis & Montgomery, 1995; Mohammad et al., 2014).

It is argued that pushing oil process innovation, accessibility, and value are the principles that create competitive advantage. It is necessary to recognize the fact that organizations must combine operational activities in consistent harmony with each other for the successful implementation of competitive Strategy (Diriöz, 2012). In conclusion, competitive advantage derives from the entire system of organizational activities. It is also argued that simple consistency in organizational operation in combining activities towards a common competitive goal improves the ability of organizations to maintain their competitive advantage. The latter indicates that an organization should have the ability to manage talent, develop leaders, and specialize in H.R. processes (Mohammad, 2014).

Organizational culture is another element that can increase competitive advantage in the Petroleum industry, defining the way of working that may or may not increase competitive advantage based on business realities and the environment. More often than not, organizational culture defines values, attitudes, and behaviors that can attract or withdraw customers (Diriöz, 2012). Likewise, corporate culture should be able to combine organizational capabilities into a harmonious whole, develop solutions to the problems faced by the organization and prevent the organization from gaining a competitive advantage (Hitka et al., 2015; Milos & Silvia; Abdullah et al.; 2017).

Organizational culture can hinder organizations from using resources for maximum competitive advantage. For an organization to achieve an optimal competitive advantage, the organizational culture must be managed effectively; otherwise, operational excellence and attractiveness will be lost. Corporate long-term competitive advantage is directly proportional to the culture of the organization (Hacıoğlu & Sümer,2015).

Oil industries have their own cultures. How this culture is managed across and within employees, customers and competitors will determine overall competitive advantage (Arouri et al., 2012).

6.3. FACTORS INFLUENCING COMPETITIVE ADVANTAGE IN THE OIL INDUSTRY

Many factors affect competitive advantage. The ability of oil companies to articulate the factors that increase their competitive advantage is seen as the most crucial factor in developing and maintaining competitive advantage. Organizations can no longer do things as usual and expect different results. Therefore, organizational competitive advantage depends on firms' ability to identify, nurture and build key strategic competitive factors for long-term sustainable advantage. Some factors to consider are; price, delivery, customer service, product quality, location, product innovation, and organizational leadership (Demiral et al., 2016).

The margin of benefit and the opportunity cost of customers determine how they respond to an Oil firm's pricing strategy. Some organizations deliberately charge lower than the market price to gain an edge over their competitors and create a competitive advantage. The price may not be the only determining factor in increasing competitive advantage. If a firm can respond to customers faster and solve their problems more quickly, customers may prefer that firm to less agile competitors, even if product prices are higher (Hunt, 2012).

6.3.1.Price

Price is one of the factors affecting competitive advantage. In free markets, it is the norm, not the exception, that competition will limit a Company's pricing freedom. It defines price as a cost tag placed on a service or product because of its value. In their research, Demiral et al. argue that price is a component of the marketing mix, the perception of which can invalidate or validate an Oil service provider. Consumers of petroleum products see price as a subjective factor for any given service (Demiral et al., 2016). The research states that the pricing factor of petroleum products can break or form firms. In conclusion, price is a perception of value. If the customers do not perceive the value offered by the competitors in oil production, the organization is doomed to lose against its competitors (South, 1981; Thompson & Coe, 1997; Singh, 2012; Kaleka & Morgan, 2017).

6.3.2. Location

Location can also be a factor affecting competitive advantage. If the location of gas stations and other centers that customers need to reach for service is primary or easily accessible, customers will tend to seek the services of oil companies for

convenience. The location of any retail business is an important factor affecting the performance and success of that business (Cavuşgil et al., 2012).

6.3.3. Quality

Quality is another factor that can affect competitive advantage. It can be defined as the quality of excellence or superiority that a product or service must reach for a predetermined threshold. In the long run, the oil company with a higher quality product will definitely attract and retain customers. It advocates that quality products are reliable products. Reliable service has a positive trend towards Petrol users, hence loyalty and competitive advantage. It seems that customers are willing to pay for reliable services and will make a precise comparison between the price they pay for Petroleum products and the quality they receive (Cavuşgil et al., 2012).

6.3.4. Innovation

Another critical factor affecting competitive advantage is innovation. In the 21st century, innovation is an essential element of corporate competitiveness. The innovation process is key to the business of oil companies. Innovation in the oil industry is associated with the renewal and evolution of Petroleum products, their quality, and efficiency. To do this, each firm would have to adapt the innovation process with the goodness of fit to integrate the process into the way the firm builds knowledge. Large companies should have their own R&D laboratories to produce knowledge and scientific research to increase their competitive advantage (Büyükkara, 2011).

6.3.5. Leadership

A leader's quality is generally considered the most crucial factor determining an organization's competitive advantage. An effective leader must be sensitive to change and be able to analyze organizational strengths and weaknesses for competitive advantage. In transformational leadership, the leader must also have the ability to identify the need for change, set goals, and guide change while effectively managing the transition. Leaders often shape the size and direction of an organization. The style of the leader often influences the organizational culture of competition. Visionary leaders can see trends and changes in the market and lead their teams into uncharted areas, creating a competitive advantage. Leaders ensure that organizations' sustainability structures and strategies are in place (Hunt, 2012).

Competitive advantage should not be seen through the prism of a single factor but in the myriad of factors that will increase technology integration into company operations (Arouri et al., 2012). The innovative potential of the oil company is not derived from a single specific skill but rather from a set of skills that make up innovative capacity, generate new ideas, identify new market opportunities, and ultimately implement marketability. (Ogutu & Samuel, 2012).

VII. ANALYSIS OF SAUDI ARABIA'S COMPETITIVE ADVANTAGE

7.1. SAUDI ARABIA'S COMPETITIVE ADVANTAGE

It is stated that the owners of the oil fields and wells are the current royal family. There are 12 oil fields, and extractions continue at a certain level (Cavuşgil et al., 2012).

Image 3:Oil Fields (Cavuşgil et al., 2012)

As can be seen in Image 3, the oil wells, according to the specified, are as follows Ghawar, Abqaiq, Safaniya, Abu Sa'fah, Berri, Khrais, Khursaniyah, Manifa, Marjan, Shaybah, Qatif, Zuluf. The characteristics of the wells are given in Table 1.

Competition and its consequences can directly affect the survival of individuals or societies, as in resource or territorial gains (Iamratanakul et al., 2012). In other fields, such as the market or the political sphere, the consequences emerge from social values at a particular historical moment and mainly affect the quality of individual and social life. The results of the competition may include gifts, prizes, plaques, belts, and accolades presented to the winner (Wang, 2014).

Table 1: The characteristics of the wells according to the Location and Oil Type (Cavuşgil et al., 2012).

Field Name	Year of Discovery	First Production	Location	Oil Type	(API)	Sulfur (%)
Ghawar	1948	1951	Road	Light	34	1,9
Abqaiq	1941	1946	Road	Extra Light	36	1,3
Safaniya	1951	1957	Seaway	Heavy	27	3,0
Abu Sa'fah	1963	1968	Seaway	Heavy	29	2,0
Berri	1964	1967	Seaway	Light	38	1,2
Khrais	1957	1970	Road	Light	35	1,7
Khursaniyah	1956	1960	Road	Light	35	2,4
Manifa	1967	1974	Seaway	Heavy	31	13,0
Marjan	1957	1964	Seaway	Middle	29	3,0
Shaybah	1968	1998	Road	Extra Light	42	0,7
Qatif	1947	1951	Road	Light	38	1,6
Zuluf	1965	1973	Seaway	Middle	35	1,7

Saudi Arabia's competitive advantages, like those of other nations, have developed over a long period of time. The fact that it develops over a longer period compared to other countries and disperses over many years reveals that it also provides certain advantages, such

as the strengths of the Saudi Kingdom contributing to its current position in the Middle East and the world (Arokiasamy, 2013).

The government of the Saudi Kingdom has built an excellent infrastructure in two decades and has contributed significantly to the thriving business atmosphere in the country. After 2000, the Kingdom allocated about 1.2 trillion dollars for this purpose. Moreover, there is no currency control, and capital can freely move out. In Saudi Arabia, there is no personal income tax, ten-year tax holidays for production projects, raw materials and components can be imported duty-free, and the protection of private property is ensured.

A crucial consideration will be the state of the macro-economy. Saudi Arabia is one of the wealthiest countries in the world per capita. The sharp rise in oil prices during 1993-1994 and 2000-2001 contributed to the increase of GDP per capita from $1.200 to $16.650 in 1992 and 2001, respectively (Barsan et al.;2013). GDP per capita dropped to $5,500 in the late 1980s, reflecting the decline in production and price trends in the oil industry in the 1990s. Despite the gulf war, GDP remained relatively stable and rose to 10 thousand US Dollars in the 2000s. After 2020, GDP became over 20 thousand US dollars.

The inflation rate was observed to be low by both regional and international standards. The average inflation rate remained below 1%, especially after 2010. The government's subsequent success in controlling the cost of living comes not only through tighter control of the money supply but also by simultaneously putting many goods on the market and subsidizing the prices of many services. Saudi Arabia is committed to pursuing sound macroeconomic policies to stabilize the currency's internal and external values and develop the capital market enough to act as a catalyst for development. The Kingdom continues to work persistently to adopt a smart and rational financial policy (Barsan et al., 2013).

The size of the Saudi market is also attractive to investors as it is the largest market for goods and services in the Arab world. It also has access to markets in other Gulf Cooperation Council (GCC) and Arab countries through its participation in free trade zones (Arouri et al., 2012). One social factor that has strengthened Saudi industries over time is a domestic market that demands quality. One of Saudi Arabia's strengths is consumers' demand for high-quality products. This demand has provided the impetus for establishing leading Saudi industries today. A domestic market that demands quality from domestic producers creates an expectation for quality exports to the rest of the world (Awamley, 2013).

Economic factors are best discussed by focusing on the Saudis' key industrial strengths. The evolution of Saudi assets, both human and capital resources, provided the path to supremacy in the engineering, chemical manufacturing, machinery, and banking industries (Arouri et al., 2012). Some key economic factors contributing to Saudi strengths include strong antitrust legislation, low entry barriers for business, and the development of common standards that promote exports. Saudi antitrust legislation and generally low barriers to entry in many industries have led to fruitful competition in Saudi's stronger industries. This competition has allowed Saudi productivity to increase. In addition, Saudi Arabia is now at the forefront of developing standardized guidelines for industrial export, working closely with the International Standards Organization (ISO) (Awamley,2013).

The capital investment commitment has enabled Saudi Arabia to maintain its position in the highly competitive petrochemical industries (Arokiasamy, 2013). The Saudi commitment to capital investment in machinery and low entry barriers in this industry has helped create Saudi's strong machinery industry. Saudi infrastructure has provided outstanding support for the growth of capital-intensive industrial expansion (Anam & Zaman, 2012). Saudi Arabia is currently providing its modernization, which, among other things, will have the most modern telecommunications and industrial infrastructure in the entire Middle East. It is known that the five competitive forces of industrial profitability are as follows and applied (Anam & Zaman, 2012).

7.1.1. SECTORAL-INDUSTRY ANALYSIS OF SAUDI ARABIA

Saudi Arabia's competitive advantages can be found in a variety of industries. Saudi Arabia is becoming one of the world's largest producers of precious and industrial metals (Awayley, 2013). Saudi Arabia's proven oil reserves are estimated at around 263 billion barrels, and it is a fact that sufficient reserves exist to ensure that Saudi Arabia remains a major oil supplier for at least 100 years. Having an oil reserve that is sufficient in the long term ensures that Saudi Arabia is advantageous in the competition (Ogutu & Samuel, 2012).

The Kingdom's vast oil reserves that dominate the Saudi economy account for about 26 percent of the world's total. The world leader in production and exports, as well as in proven reserves, Saudi Arabia, relies heavily on oil. But while oil is and will continue to be an essential source of income, the Kingdom is increasingly looking to

natural gas as a vehicle for sustainable industrial and economic growth in the twenty-first century (Legros & Newman, 2014). The Kingdom's proven gas reserves are 210 trillion cubic feet as of 2021, making it the fifth largest in the world. A once-wasted energy resource has become the backbone of Saudi Arabia's large and growing industrial sector. Mainly well known, in 1997, the Saudi Basic Industries Corporation (SABIC) plants alone produced 23 million metric tons of natural gas worth $6.4 billion and products of chemical, plastic, fiber, fertilizer, and steel. The chemical sector is the most important economic sector in Saudi Arabia after the oil sector. They also have a significant presence in the machinery sector. While oil and chemical firms are undoubtedly crucial to Saudi Arabia's overall industrial success, some large firms also contribute to Saudi's internal strengths (Ogutu & Samuel, 2012).

Saudi Arabia is demanding to participate in the World Trade Organization (WTO), which is expected to gradually enhance the competitiveness of the Saudi petrochemical industry and strengthen its international market position. This is also likely to improve its access to European and Japanese markets. The key strength of the Saudi petrochemical industry lies in the low-cost feedstock and the low costs of utilities. While this makes the average variable cost lower than its competitors, the average fixed cost remains lower due to the large scale of production. There are also other competitive advantages, as the capital cost is comparatively more bass due to the lower initial cost and the presence of an efficient infrastructure (Büyükkara, 2011).

Major competitive disadvantages are the lack of technological know-how and skills of personnel. Research and development activities are hampered due to this. Other weaknesses in the petrochemical industry in the Kingdom of Saudi Arabia are in the marketing approach, product development, and providing technical support (Bayat et al., 2013).

7.2. THE COMPETITIVE ADVANTAGE ANALYSIS

7.2.1. SWOT ANALYSIS

A) STRENGTHS

As a strength, the determinants of Oil reserves, High foreign exchange reserves, Dollar indexed exchange rate, The region's largest economy, and technological infrastructure can be stated (Demiral, 2016).

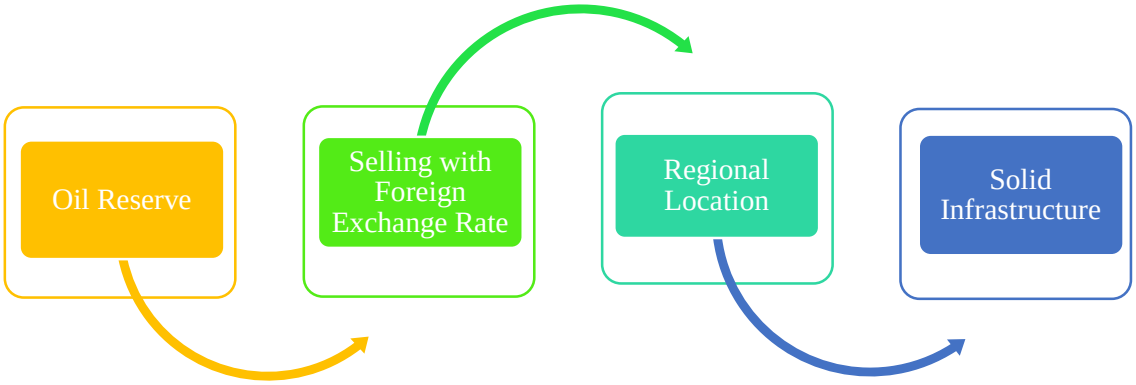


Figure 3: Strengths (Demiral,2016)

Within the SWOT analysis, the most prominent of the Saudi Kingdom's strengths in competitive advantage includes a uniquely organized system that an organization can use better than its competitors. The Kingdom emerges with the choice to make good use of the reserves, using the resources properly. As they are conscious of the existence of the market, they create the system themselves (Pillalamerri, 2019).

OIL RESERVES: The strength coming from the oil reserves can be determined as; Revealing and finding undiscovered reserves, ensuring the correct use of existing reserves, regulating the level of extraction of reserves, and ensuring continuity in reserves. The Kingdom of Saudi Arabia, which achieves this in a specific order, ultimately has the advantage in oil competition. When we look at the world in general, it feels its competitive advantage in a different dimension because it is in the top 5 in terms of reserves (Demiral, 2016).

HIGH-FOREIGN EXCHANGE RATES: Oil-valued disciplines come to the forefront with the exchange rate by providing an organization with a competitive advantage. The Saudi Kingdom provides an advantage by emphasizing the oil sales exchange rate and acting this way. Moreover, there happen to be certain advantages through the correct configuration of the product, operational

excellence, creating a customer network with an exchange rate, increasing the profit margin thanks to the continuous appreciation of the foreign currency, revealing the possibility of revision, foreign currency forms a common spending point (Ekici, 2016, Razek & Mc Quinn, 2021).

The Saudi Kingdom evaluates the advantage it has created due to the foreign exchange sales of oil in the same frame as the cost. It provides a certain level of profit margin by selling the values created by the current oil cost for customers in foreign currency. It is aimed to prevent the occurrence of negativities that will occur by selling in foreign currency since the cost of raw material processing after oil extraction can take a step back in the competitive advantage (Hunt, 2012; Jasser & Banafe, 2005; Razek & Mc Quinn, 2021).

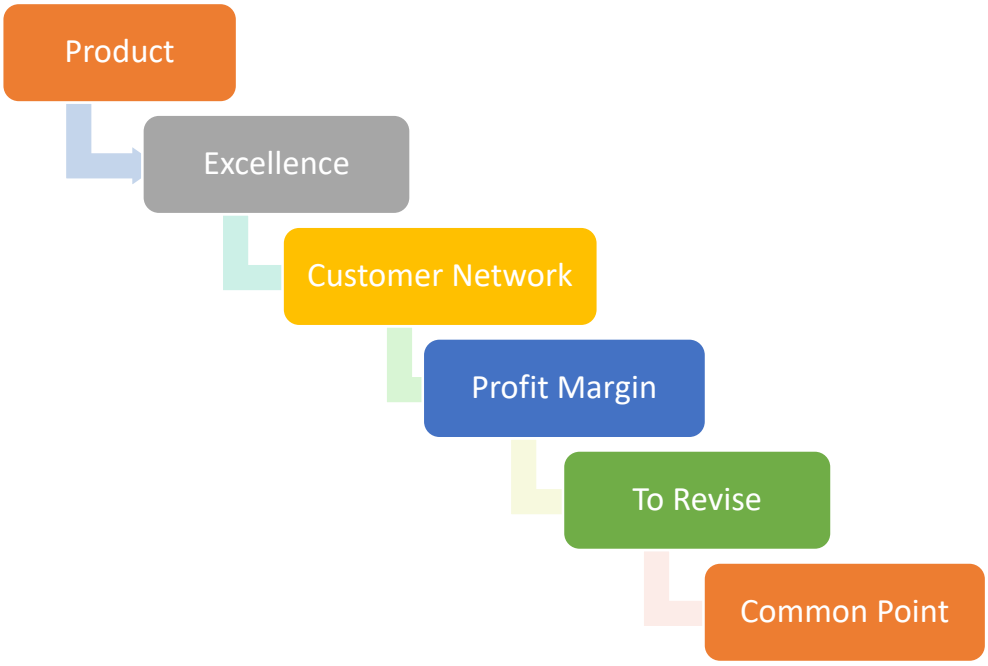


Figure 4: Selling with Exchange Rate (Ekici,2016)

REGIONAL LOCATION: To properly exploit the benefits of the current position in the Saudi Kingdom, we can say that an organization's unique resources and capabilities can create a competitive advantage. Due to the current situation in the Saudi Kingdom, having unique foundations, determining the authority of the

location, and being one step ahead of competitors create a competitive advantage (Kaplan & Aktaş,2016).

The Kingdom of Saudi Arabia has an irregular rectangular structure extending from the northwest to the southeast in the Near East. The country's territory generally consists of low places on the coasts, high mountains near the coast, and high and wide plains in the interior. The Serat Sira Mountains cover its western shores from the Palestinian border to the Yemeni border. To the east of the Hijaz is the Necid Desert. To the south of Nejd is the Dehna or Rubül Hali Desert and to the east is the Nufud Desert. Due to its current location, it is in a good position in oil sales. The country's most important industry is oil and its products. It provides the distribution of existing products within the framework of oil resource locations. It is the largest oil producer in the Middle East. In this respect, it is the third country in the world (Richard, 2016).

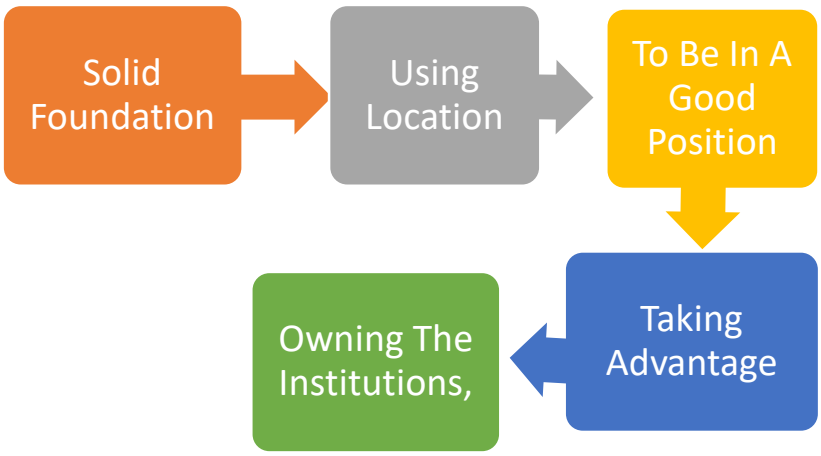


Figure 5: Competitive advantage with foreign exchange (Kaplan & Aktaş,2016).

SOLID INFRASTRUCTURE: In the Saudi Kingdom, solid infrastructure works are advantageous thanks to their correct progress. Within the framework of these core competencies, unparalleled access to a wide variety of markets, the ability to provide value, and competencies that are difficult for competitors to imitate are encompassing advantages.

These competencies can be in upstream or downstream services. There is the reality that organizations must be able to deliver superior value to customers in order to gain a competitive advantage. While the fact that the evolutionary dynamics of the oil and gas business create a competitive advantage is present, this is provided by the infrastructure (Legros & Newman,2014). Combined with a solid infrastructure of competitive advantage, the determinants of businesses' willingness to change, flexibility, desire to experiment, and ability to continuous learning are realizable.

It can be said that competitive advantage can only be achieved by providing the necessary infrastructure for future generations and the infrastructure for market analysis. It is known that pushing innovation, accessibility, and value are the principles that create competitive advantage (Demiral, 2016).

B) WEAKNESSES

Dependence on oil, high investment costs, and business culture can be stated as the weaknesses of both Saudi Arabia and Saudi Aramco. The Saudi Kingdom is known for its weaknesses, especially addiction, characterized by dependence on oil. Since the Saudi Kingdom will come to the point of losing its power in the absence of oil, it is seen that this is the weakest aspect of the country. One of the weaknesses is clean energy, which the Kingdom sees as one of the biggest dangers of the future, and the formation of production with more affordable costs and longer-term functioning (Kobayashi, 2007; Saleh, 2011).

The Saudi Kingdom does not accept foreign investment. Investments coming from abroad have problems in being preferred because they make a turnkey contract themselves instead of transferring them ultimately. In addition, the fact that the investments made for oil are economically high is seen as one of the weaknesses that will come to the fore in a possible problem (Jasimuddin, 2001; Elsheikh, 2003; Agil & Zeller, 2012; Albassam, 2015).

The Saudi Kingdom has differences compared to other countries in terms of business culture. The fact that European standards are not reflected in the business culture in the Saudi Kingdom is seen as another weakness. Economic development will be blocked if they do not bring the business culture to higher standards and

continue not to apply European standards (Rice, 2004; İdris, 2007; Alkathani et al., 2013; Khan & Varshney, 2013) .

C) OPPORTUNITIES

Regarding the competitive advantage of Saudi Arabia/ Saudi Aramco, the Vision 2030 project, diversification of the economy, the national transformation program, and the NEOM Project (Kinninmont, 2017; Buryikov, 2017; Nurunnabi, 2017; Aly, 2019; Alfawzan, 2020; Amran et al. 2020; Grand & Wolff, 2020; Alam et al. 2021).

SAUDI VISION 2030: As a social and economic reform, Saudi Vision 2030 is built on three themes, a vibrant society, a thriving economy, and an ambitious nation. Regarding the new technology and movements toward green energy, by Vision 2030, Saudi Arabia plans to reduce its dependence on oil. The country's diversified natural resources, such as gold, phosphate, uranium, and other valuable minerals, will be considered to cut out the dependence on oil, especially on exports. Also, Saudi Aramco will be transformed into a global industrial conglomerate as a major strength of the country. The diversification of the economy is planned with the encouragement of the major national corporations to enter global markets. During the diversification, the oil and gas sector localization will continue, and planning to double the gas production. Although the oil dependency is intended to be reduced, the plan for Vision 2030 is to expertise in oil and petrochemicals for the development of adjacent and supporting sectors. As a strategy, by 2030, Saudi Arabia is planning to increase the localization of oil and gas sectors from 40% to 75%, raise the share of non-oil exports in non-oil GDP from 16% to 50%, and increase non-oil government revenue from SAR 163 billion to SAR 1 trillion. The main strategy among all is to diversify the product type of Saudi Aramco and enable competition in different markets (VISION 2030, Nurunnabi, 2017; Grand & Wolff, 2020).

Within the scope of the 2030 vision project, the essential plan aims to change the economy's dependence on oil only. Even though the existence of oil, which is at the heart of the country's economy, is known, it is foreseen that there may be changes in the demand rate. Due to technology's continuous development, it aims to focus on energy production. The fact that the economy is progressing on a single item is disturbing the Saudi Kingdom. That's why the Saudi Kingdom

aims for development with the 2030 vision project (Nurunnabi, 2017; Grand & Wolff, 2020).

DIVERSIFICATION OF THE ECONOMY: It is expected that by Vision 2030, the focus on the principle of diversification in the economy will be started, which will also lead to the formation of different export products. Especially in export products, besides oil, petroleum products, and gold reserves are going to be used. The Saudi Kingdom's underground gold reserves are estimated at 323.7 tons. According to the Ministry of Industry and Mineral Resources reports, gold will be mined at 12 points. These areas are already witnessing investment activities by a number of local and international companies. In addition, approximately 5.26 million tons of phosphate fertilizers are processed annually in Saudi Arabia, with a production volume of 68 thousand tons of copper and zinc concentrates and about 24.6 million tons of phosphate ore. The Saudi Kingdom is among the top 5 producers of phosphate fertilizers worldwide (Euchi et al. 2018; Alkhathlan et al., 2020; Hassan, 2020).

Afterward, there is a goal of actively using natural gas reserves to stop imports and exports. Efforts are underway to prevent the economy from trading for imports and to reduce this situation. It is progressed under the name of opportunity studies for the country to become open to the outside, not only for Islamic visits but also for general visits. The sectors to be invested primarily in the plan are Agriculture, Construction materials, Automobile production, Education, Engineering, Health care, Housing, Information and communication technologies, Defense industry, Mining, Renewable energy, Tourism, and Transport (VISION 2030).

The plan adopts a radical approach to changing various aspects of the rentier economy and rentier state social and political regulations. First, it aims to reduce and remove subsidies in the consumption of petroleum products, especially gasoline and diesel, by Saudi citizens to adapt to international market prices and reduce energy consumption. In order to prevent social unrest against these measures, it is planned to make cash transfers to the citizen's account. The plan also includes introducing various taxes to create new revenues (Hacıoğlu, 2015).

THE NATIONAL TRANSFORMATION PROGRAM: The National Transformation Program, one of the plan's main elements, was designed for the Saudiization of the labor market. Migrant workers in Saudi Arabia represented more than 75 percent of the private sector labor market, according to 2016 data. Therefore, the private sector has to pay high wages to Saudi citizens. In the private sector, a Saudi's salary was, on average, five times that of a non-Saudi person. In this respect, while Vision 2030 aims at the Saudiization of the workforce in the private sector, It wants to transfer resources to the private sector and SMEs (in a sense, transfer the rent income to the private sector), train the Saudi workforce and establish the public-private sector wage balance (Hacıoğlu,2015).

THE NEW FUTURE PROJECT (NEOM): The new future project, NEOM, encompasses constructing a new city on 26,500 km^2, covering 50 islands and unoccupied vacant lots. NEOM is planned to operate as an independent economic zone with its own laws, tax system, and legislation. The cost of the project is 500 billion dollars. The first phase of the project is expected to be completed by 2025. The prominent features of NEOM, which is close to the maritime trade routes that also use the Suez Canal, are that it produces and consumes utterly renewable energy, only uses wind and solar power in urban life, and uses a high rate of robots (Arakishan, 2020).

In the project scope, energy and water, transport-mobility, biotechnology, food, advanced technological production, media, fun, and digital sciences are located. The NEOM introduces a new model of urban sustainability powered by 100% renewable energy. With wind and solar resources and the world’s largest hydrogen plant, NEON will move beyond zero carbon to a circular economy. With the planned implementations, Saudi Arabia is planning to be the leader in solar power, wind technology, and green hydrogen (Biryukov, 2017; Alfawzan, 2020).

NEOM will become the world’s first region to be powered 100% by renewable energy. Also, by leveraging an abundant supply of solar and wind, Saudi Arabia will become the first to produce clean, affordable energy for the people and the industry. Also, by building the largest green hydrogen plant, Saudi Arabia plans

to export green energy through the NEOM project (Riera et al., 2022; Noussan, 2020; Krarti & Aldubyan, 2021; Bianco, 2021; Ansari, 2022).

Image 4: Neom Project (Salisbury,2015)

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The Saudi Public Investment Fund, headed by Crown Prince MbS, has financed the project. It is planned to transfer 100 billion dollars to the fund by selling 5 percent of Saudi oil company Aramco. Between 2017 and 2020, President Donald Trump and British Prime Minister Theresa May made initiatives for Aramco to be traded on the New York and London stock exchanges. 483500 international investors were invited to Saudi Arabia to ensure international investors' participation and were informed (Arakishan, 2020).

D) THREATS

THE POSSIBILITY OF NONFULFILLMENT OF THE PROJECTS: One of the main threats is Saudi Arabia's serious concerns about the realization of Vision 2030 and the NEOM Project. First, the fact that similar projects were left unfinished in Saudi Arabia, although the scope was smaller in the past,

constitutes a basis for pessimistic approaches. Another significant obstacle is that international investors' participation in the project requires them to believe there will be a severe transformation in Saudi Arabia (Salisbury, 2015).

Although partial steps have been taken regarding democratization in the country in question, and the use of moderate rhetoric in recent years gives hope for the future, it is far from convincing. In addition, it is tough to break the resistance of the ulama and the political-military elites who are members of the Saudi Arabian dynasty. Finally, the uncertainty of the effects of the rapidly changing political, social, and security problems in the Middle East on the long-term implementation schedule of the project is also a disadvantage (Dean, 2010).

THE FLUCTUATIONS OF OIL PRICES: The price of oil started to fluctuate more beginning from February 2012. While the price of a barrel was 124 USD in the global markets in February 2012, the rapid decline ended at 30 USD per barrel in January 2016. Prices stood at a price range of $65 to $75 per barrel in 2018, with Saudi Arabia and OPEC's agreement on the production cut of oil down 41% from 2014's highest production scale. There have been partial fluctuations since the previous year (Yan, 2012; Alkhatlan, 2014; Colgan, 2014; Baumeister & Kilian 2016; Mert, 2016; Elwanger et al., 2017).

Research has proven that fluctuations in oil prices negatively affect macro and micro-economic indicators and financial stability for both developed and developing and underdeveloped economies. The changes in the annual income from 290 billion dollars in 2012 to 130 billion dollars in 2016 happened due to the decline in oil prices. Saudi Arabia's Gross National Product (GNP) was 800 billion dollars in 2014, which decreased to 661 billion dollars at the end of 2016. The country's foreign exchange reserves were 730 billion dollars in 2014, which dropped to 600 billion dollars in 2016, followed by a gradual decrease ending at 464 billion dollars in March 2020 (Baumeister & Killian, 2016; Hakro & Omezzine, 2016; Hamilton, 1983; Guo & Klieses, 2005; Jiménez-Rodríguez & Sánchez, 2005; Malik, 2008; Bhusal, 2010; Berk & Aydogan, 2012; Farhani, 2012; Ahmad, 2013; Nazir & Qayyum, 2014; Baumeister & Killian, 2016; Hakro & Omezzine, 2016; Eyden et al., 2019, Macrotrends).

The sudden drop in oil prices in mid-2014 coincided with other developments that would adversely affect Saudi Arabia socio-economically and politically in the medium and long term. First of all, rather than the result of a temporary and sudden crisis, the decrease in oil prices is vital for Saudi Arabia because it is the result of the structural change in the factors affecting global oil production and consumption; in other words, global supply and demand. In this context, the discovery of shale gas is one of the factors that cause a change in the oil market (Hacıoğlu, 2015).

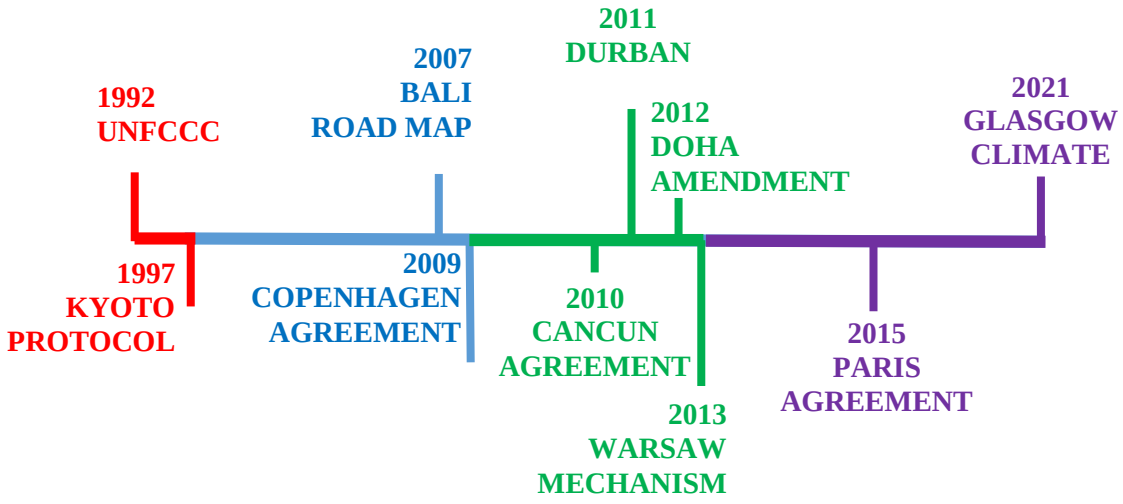
NEW DRILLING TECHNOLOGIES: Another development affecting the energy markets is the use of new drilling technologies in the oil and natural gas sector, the increase in production as a result of new technologies, the expansion of pipelines and other means that enable distribution to global markets, and the entry of more producers into the market. The total oil reserves in the world were 648 billion barrels in 1981; it was determined as 1046 billion barrels in 2000 and 1760 billion barrels in 2018 (Masters et al., 1986; Freudenrich & Strickland, 2001; Radler, 2002; Stuart et al., 2003; Wilson, 2010; Saleh et al. 2013; Jacobs, 2015; Wiercigroch et al., 2017; Liexiang, 2019; BP, 2022).

THE GROWTH OF RENEWABLE ENERGY DEMAND: Sustainable Development Goal number 7 of the United Nations encompasses three key targets: ensure affordable, reliable, and universal access to modern energy services; increase the share of renewable energy in the global energy mix substantially, and double the global rate of improvement in energy efficiency. In order to keep the global surface temperature below 2^{o} Celcius, the energy transition is urgent, and the existing energy sources do not meet the restrictions needed. The transition of energy supplies should be planned and well-designed to address supply and demand needs. The transition processes of the United States, The Russian Federation, China, India, and the European Union follow sustainable development plans until 2050. Regarding the transition process, countries are pursuing ambitious programs like banning the sale of new combustion-engine cars. The ban will be in action for European Union countries by 2035 and China by 2040. From a global perspective, almost all countries banned the sale of fossil fuel vehicles valid from the range of 2030 to 2040, which in turn will reduce the consumption of solid fossil fuels (Kolk & Levy,

2001; Kolk, 2004; Swazo, 2009; Chang, 2010; Kim, 2012; Cozier, 2015; Dimitrov, 2016; Öztig, 2017; Nasiritousi, 2017; Bach 2017; Al-Sarihi, 2019).

Climate change which forced all nations to find new energy sources, came to the world's agenda in 1988 when the hottest summer lived. In 1989, the Intergovernmental Panel on Climate Change (IPCC) was established under United Nations (UN) to find possible ramifications. Since 1989, a series of summits have been organized to find ways to enable the prevention of the worst nightmare of human history (Figure 6) (UN).

Figure 6: The Main Climate Summits

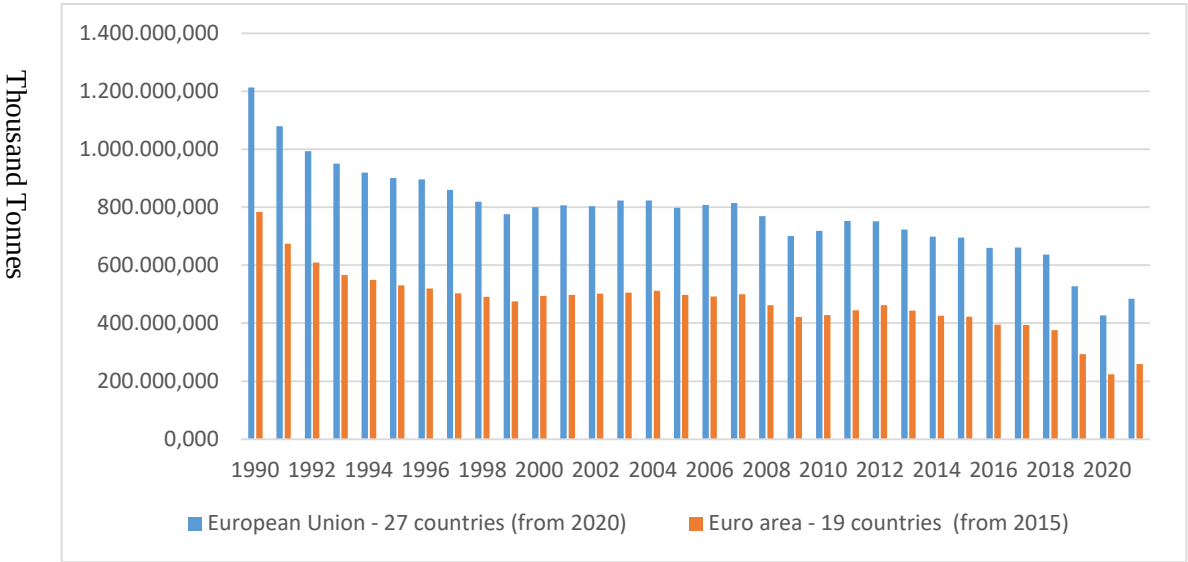


Since the 1990s, prevention measures have been taken to stop climate change. Regarding the prevention measures, one of the most important determinants is reducing fossil energy usage and substituting demand with renewable energy sources. This measure had a tremendous impact throughout the years, and the consumption of fossil fuels declined gradually (Graph 6,7). Global climate change mitigation measures can adversely impact oil-based economic sectors, especially with global regulatory constraints on fossil fuel resources. Since fossil fuels represent more than 70 percent of global GHG emissions, future access to fossil fuel-based energy will need to be constrained to keep climate change safe. The measures taken to reduce carbon emissions and improve energy efficiency did not only occur in Western countries. Saudi Arabia’s trade partners, European countries, China, and India have strict programs to cut Carbon Emissions. The impact of significant changes applied by major importers of Saudi Arabian oil

brings out a threat to the nation's competitive advantage. China and India's most prominent importers are pursuing radical programs such as changing the primary resource for road transportation to electric. All countries contributing the climate change actions are planning drastic measures in the near future (Kolk & Levy, 2001; Kolk, 2004; Connig et al., 2008; Swazo, 2009; Chang, 2010; Kim, 2012; Cozier, 2015; Dimitrov, 2016; Öztig, 2017; Nasiritousi, 2017; Bach 2017; Gielen et al., 2019; Al-Sarihi, 2019).

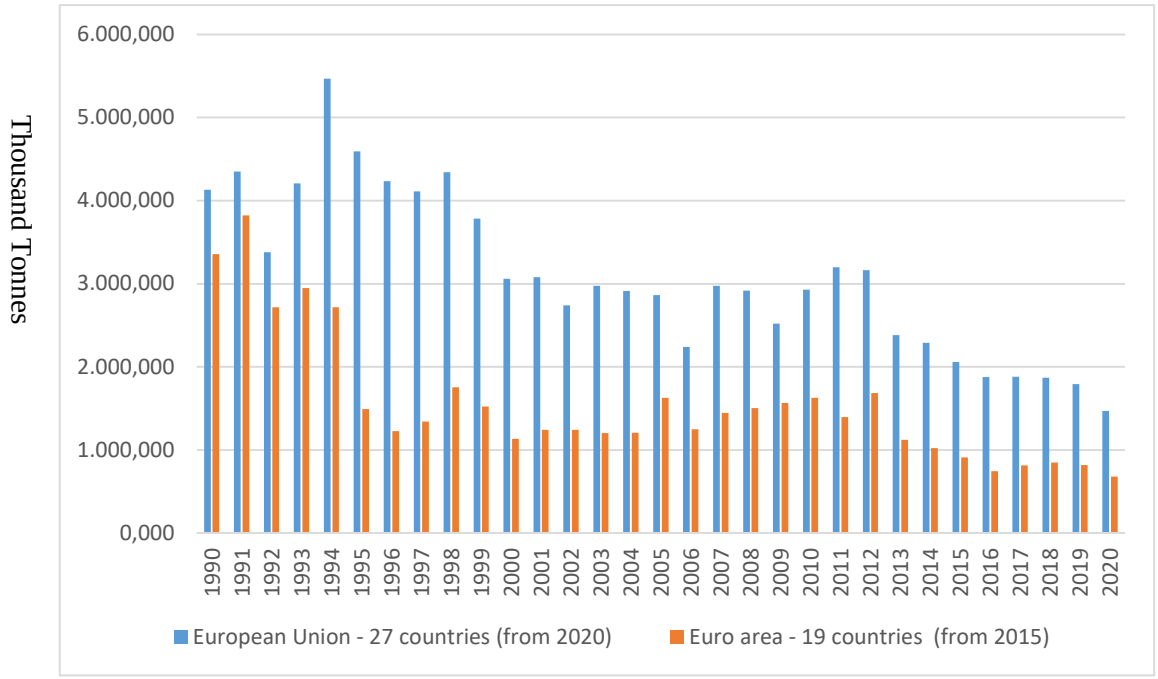
Those having an economic dependency on fossil fuels had losses due to restrictions on fossil fuel usage. Saudi Arabia, the leader of oil exporting countries, has also been affected by adverse side effects throughout the years, starting from the 1990s. As a threat to the oil market, the increasing demand for renewable energy will last until Saudi Arabia starts to export green energy as an exit strategy.

Graph 6: The inland consumption of solid fossil fuels



Source: Eurostat

Graph 7: The energy use of fossil fuels



Source: Eurostat

VIII. DISCUSSION

The economy of the Kingdom of Saudi Arabia depends almost solely on oil. The Saudi Kingdom has the highest proven oil reserves in the World. Saudi Arabia provides 90% of its exports from oil and oil revenues, and the government's budget policies effectively determine the country's economic performance. The Saudi Kingdom has a national competitive advantage in the oil market due to a vast amount of geological favored oil reserves. The government used this advantage successfully, and Saudi Arabia has become the leading oil exporter among all other nations since the 1960s (Almtairi, 1985; Sönmezoğlu, 2012; Wang, 2014; Salisbury, 2015).

The power of being the leader of oil exports allowed Saudi Arabia to affect prices easily. Throughout the history of oil, because of geographical conditions, The Kingdom has always been in the eye of the storm. Especially the gulf crisis had a significant effect on the Saudia economy due to the expectation of possible attacks on Saudi oil fields. No matter the origin of the crisis, Saudi Arabia survived all of them thanks to the advantage of having economies of scale on oil. In general, to cope with the oil surplus, OPEC decided to cut production to stabilize prices. As the history of deduction percentages examined, the deduction percentage of Saudi Arabia triples the total OPEC countries' percentages. Even though the leader of the proved reserves, Venezuela, an OPEC member, did not have to cut that amount. This simple mathematical equation can easily state the power of Saudi Arabia. The guarantee of having reserves that will last up to 2060s makes Saudi Arabia the swing oil producer (Alhajji & Huettner, 2000; Kaufmann et al., 2004; De Santis, 2003; Sönmezoğlu, 2012; Alix et al., 2011). Being the manipulative actor in the oil market does not bring a secure ground for Saudi Arabia. After the Covid-19 pandemic, oil prices rose in other oil-exporting nations such as the US. In order to lower the prices, the US determined to release its strategic petroleum reserves in the market. This strategic move was followed by Britain, Japan, China, India, and South Korea, where OPEC countries decided to cut their production as a counter-move. Although this battle for power in the oil market has always been a conflict between the US and Saudi Arabia, the amount of the reserves gives much more power to the latter to stay on put (Economist, Financial Times).

As an oil export leader, selling products with a foreign exchange rate enables Saudi Arabia to achieve a particular profit margin. Using this strategy, Saudi Arabia prevents negativities occurring from selling in foreign currency (Hunt, 2012). The Saudi Arabian

Monetary Agency (SAMA) has deposited all oil export earnings with a fixed rate of 3.75 SAR per USD since 1986. In the global market, oil transactions happen to be in USD. As of 2022, 80% of global oil transactions are dominated in USD. Having a fixed exchange rate has caused some speculations from time to time depending on the USD's value change. Revaluing SAR has been discussed, and the possible effects on both international and domestic markets were analyzed primarily in the 1990s. Since the Saudi government is the sole recipient of the oil earnings and SAMA is the major source of USD, the routine oil revenue meets the financial and commercial demands, which excludes the intervention to fixed-rate policy (Al-Hamidy & Banafe, 2013; Alkhareif, 2017; Althibani, 2020).

The advantages of fixed rate policy include the prevention of currency crises, lowering transaction costs, stabilizing interest rates, and having the credibility of the adopted currency. The fixed-rate policy also has some disadvantages, such as the lack of monetary autonomy, the inability to absorb real or nominal shocks, and trouble exiting since there is no local alternative (Mirza et al., 2013; Alkhareif, 2017). Although Saudi Arabia benefits from having a fixed rate policy, living the best sides rather than the worse, global political tensions cause attempts to intervene in that policy. Due to the conflict between USA and China that occurred during the Covid 19 Pandemic, China insisted on buying oil in yuan rather than USD. For the first time in the history of the Saudi oil market, the Kingdom plans to sell oil in yuan not to lose a considerable market; a quarter of the total oil exports of Saudi Arabia is going to China. If and only if the global political tensions worsen, the fixed currency regime depending on oil earnings may face adverse effects after four decades (Tamimi, 2012; Chen & Han, 2019; Fulton, 2020; Wang, 2021; Khan, 2022).

Having vast amounts of oil reserves with a low-cost advantage depends on the geographical location of Saudi Arabia. The formation of the oil, ease of extraction, and quality comes from the region's geologic history. Because the Proterozoic-Cambrian transition happened in the Middle East, far-reaching reserves occurred. The conditions for a highly classified oil contains thermally matured source rocks, porous-permeable reservoir rocks, effective extensive cap rocks, and appropriate time relations between oil migration and trap formation, which the region qualified all (Alsharhan & Nairn, 2003). The depth and quality of oil deposits formed during the geological transitions make the main difference in the nation's competitive ability. The oil reserves depth has a considerable effect on the success of Saudi Arabia compared to its major competitors such as Venezuela and Canada. Also, the tar amount of the oil determines the refining process and defines the cost of

production differently. Canada and Venezuela's oils have more tar than Saudi Arabian. Last but not least, the location of the oil deposits has different structures bringing different methods of drilling techniques, where Saudi Arabian oil reserves have the most cost-effective drilling type. Adding up all these advantages, the location of Saudi Arabia brings far more competitive advantages regarding the economies of scale on oil.

The location is important not just for the oil reserve depth and structure but also for trade purposes. Since the first international trade route Silk Road, Saudi Arabia has always been in the middle of global trade. As a region between Europe, Asia, and Africa, Saudi Arabia has a tremendous advantage in the international market. The main component of oil exporting can be defined as the ability of pipeline construction. The location of Saudi Arabia becomes a vital factor regarding cost-effective pipeline construction. Being in the heart of the continents brings out the superiority over its closest competitors, Venezuela and Canada (Al-Hathloul & Edadan, 1993; Fernandes, 2015; Baniya et al., 2020; Ryan et al., 2021). Saudi Arabia is once more planning to benefit from the locational advantage. As a part of zero carbon emission targets, the project NEOM comprises exporting green hydrogen to Europe and Asia through pipelines (NEOM). The plan of becoming a leader in energy exports solely depends on the beneficial geographical advantages (Saleh, 2009; Noussan, 2020; Krarti, 2021; Chenic, 2022; Riera, 2022).

Even though Saudi Arabia’s most prominent aspect is oil, it is also the weakest link. The dependency on oil revenues by more than 50% brings this vulnerability. Even the largest oil reserve capacities have due time; for Saudi Arabia, it is expected by 2050/2060 (Campbell, 1991; Balat, 2006; Saleh, 2009; Zittel & Schindler, 2009; Jaffe, 2016). Also, since the 1990s, prevention measures have been discussed because of climate change and global warming. One of the measures is mitigating the greenhouse effect by reducing carbon emissions and reaching zero carbon emission levels. With the ban on the new internal-combustion engines by 2035, oil product fuel and diesel usage will be on the loose. This will cause a significant decrease in the oil demand and also production (Kalghatgi, 2018; Fulton et al., 2019; Morfeldt, 2021). In the late 1800s, when kerosene production exceeded the demand, the producers started to pour the kerosenes into the rivers. The problem was solved by the new product invention, automobiles. Since the 1990s, measures that have been taken to achieve zero carbon emissions may create a similar picture. The surplus products of oil may soon become worthless. Besides, the restrictions of Covid 19 Pandemic did bring out a reduction in the oil demand, resulting in the payment from producers to buyers. The much

more drastic phase is going to be faced by Saudi Arabia regarding the oil. There will be no more demand for oil as a source of energy. This expected scenario forced Saudi Government to plan an exit strategy as a linear formatted city NEOM that will produce solar energy and green hydrogen to export (Noussan, 2020; Krarti, 2021; Riera, 2022).

NEOM Project is one of the opportunities for Saudi Arabia to continue its competitive advantage in the energy market. The most significant aspect of the project is the construction of a line city. Line city bears a vital factor, eliminating the need for automobiles. With the line-designed city structure, residents may travel from the beginning to the end of the town by using a train powered by electricity. Also, by creating small communities, people may meet their demands. The line city also features a different perspective compared to current city plans. The city will be mountained by walls, covered by solar panels that will not only produce energy but also protect the city from the adverse weather conditions of the desert. The first phase of the project is planned to be completed in 2025 (Saleh, 2009; Noussan, 2020; Krarti, 2021; Chenic, 2022; Riera, 2022; NEOM).

The NEOM Project will be an essential tool for Saudi Arabia to hammer its weakest link and to cope with the threat of the growing demand for renewable energy. The planned wind and solar energy sources as well as the construction of green hydrogen plants, will enable Saudi Arabia to pioneer the energy market as it always did.

The NEOM Project also patches the lack of foreign investment in Saudi Arabia. Even though foreign investments have not been accepted, the enormous financial need for the NEOM Project changed the government's perspective and allowed international investors to provide cash. In order to finance the project, 5% of Saudi Aramco is planned to be sold, and the shares of Aramco will be traded in the New York and London Stock Exchanges. Foreign investment used to be welcomed to build the infrastructure of the oil and gas fields, but the ownership remained at Saudi Aramco. Turnkey contracts are preferred instead of investment (NEOM).

The business culture of Saudi Arabia is another weakness regarding its competitive advantage. The role of religion plays a central part. Religion even determines the workdays; they work from Sunday to Thursday, which affects international business relations. Also, the governing law of the country is Islamic and has many differences regarding daily life, business dealings, and working schedules. The hierarchy is so strict that only the top executives have the decision-making authority. Technical standards are often based on the

International Electrotechnical Commission or International Organization for Standardization which may be difficult for businesses to procure products exported from other countries (Rice, 2004; İdris, 2007; Alkathani et al., 2013; Khan & Varshney, 2013) .

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The differences between the home and host cultures are vital for international collaborations. From the business culture perspective, western companies may have an adaptation problem with the Saudi companies as well as the government. The secularity of the western culture, valuing self-expression and self-criticism are the main contrasts compared to Saudian culture (Ali & Al-Shakis, 1985; Anwar & Chaker, 2003; Chun et al., 2015). In order to collaborate successfully with international firms, the national and organizational culture fit is essential. If there is a contradiction between national and corporate culture fit, adapting the transferred practice will be ineffective and, most of the time, will not have sustainability.

The weaknesses of social and economic life faced by the government and Saudi Vision 2030 have been prepared to be implemented. Vision 2030 is built on three pillars. It focuses on the transformation of the Saudi economy, which has been in constant deficit since 2014, with a rapid decline in foreign currency and increased unemployment and internal unrest, and the Saudi state, which must face the challenges. (Hacıoğlu, 2015).

- The First Pillar: The preservation and development of Riyadh's status as "the heart of the Islamic and Arab World".
- The Second Pillar: Transforming Saudi Arabia into a global investment center, stimulating and diversifying the Saudi economy.
- The Third Pillar: The transformation of Saudi Arabia's geopolitical position into the center of world trade.

The Saudi Kingdom wants to create a table of opportunities and continue its development. In terms of opportunities, there is the vision 2030 project, which primarily aims at development and growth. The 2030 project can be evaluated as an opportunity with the goal of growth in many areas. Although the 2030 project is more prominent in oil, a decrease is also expected in the coming years VISION 2030, Nurunnabi, 2017; Grand & Wolff, 2020).

Another opportunity to form the weakness of dependency on oil and oil products is the diversification of the economy through other underground reserves. The Saudi

Kingdom's gold reserves are estimated at 323.7 tons. On the global size, Saudi gold reserves are not in the top ten reserves; however, Saudi Arabia has the most prominent gold reserve on the regional size. According to the Ministry of Industry and Mineral Resources reports, gold will be mined at 12 different points. These areas are already witnessing investment activities by several local and international companies. In addition, approximately 5.26 million tons of phosphate fertilizers are processed annually in Saudi Arabia, with a production volume of 68 thousand tons of copper and zinc concentrates and about 24.6 million tons of phosphate ore. The Saudi Kingdom is among the top 5 producers of phosphate fertilizers worldwide (2009; Mobbs, 2010; Ramady, 2010; Aldagheiri, 2011; Al-Dubaisi, 2011; Şahin, 2016; du Vanage, 2020).

Also, due to the diversification of the economic plans, privatization has a considerable part. The Privatization Program aims to enhance the role of the private sector in providing services and making government assets available. This will improve the quality of services provided and reduce costs, encouraging economic diversity and development and boosting competitiveness to face regional and international competition. The Program also seeks to attract Foreign Direct Investment and improve the balance of payments. The Program will focus its efforts on continuing to intensify work to enhance the role of the private sector in providing services, maximizing the value gained from government assets, and raising the efficiency of spending (Onour, 2012; Alyagout & Siti-Nabiha, 2013; Khan, 2016; Alhogail, 2017; Rahman & Al-Borie, 2021; Khan & Nasrulddin, 2022).

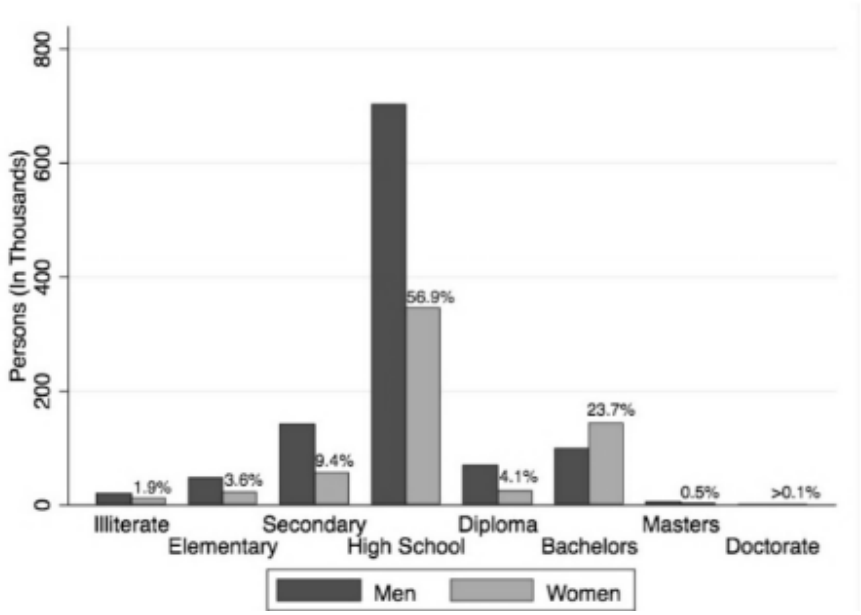
Moreover, sector privatization strategies will be developed in 16 sectors, including transport, health, education, and municipal affairs. This will enable government efforts to focus on legislative and regulatory issues. Since the launching of the program, four milling companies' privatization was completed, and two agreements on the water desalination projects were finalized.

As a part of Vision 2030, the national transformation program was launched in 2016. The program aims to develop the necessary infrastructure and create an environment that enables the public, private and non-profit sectors to achieve Vision 2030. This will be accomplished by attaining governmental operational excellence, supporting digital transformation, allowing the private sector, developing economic partnerships, promoting social development, and ensuring the sustainability of vital resources. During the program's first phase, the improvement in the regulatory framework and services provided to citizens,

empowering women and their participation in the work life and development of the non-profit sector. The improvements in governmental operations will reduce the time spent on red tape bureaucracy, leading to fast solutions to problems. Also, women empowerment, one of the sustainable development goals of the united nations, may boost the eagerness of western companies towards the Kingdom. The restrictions towards women depending on Islamic Law regulations created a barrier with the western world, which also hindered the problem. Empowering women and enabling them to work will have an effect on a positive attitude to the Kingdom (Alfarran et al., 2018; Williams, 2019; Topal, 2019; Al-Qahtani et al., 2020; Al-Qahtani et al., 2020; Parveen, 2021; Okonofua & Omonkhua, 2021).

Giving a work permit to women is not enough regarding the Saudi Arabian labor force. The gender wage gap should be eliminated. In Saudi Arabia, the gender wage gap is 49%. If the education levels, occupation, experience, and industry are taken into consideration while the calculation, the gap decreases by only 6%. In 2019, the employment rate of non-Saudi women was 79%. The studies showed that the education level of Saudi employees shows significant differences, such as the bachelor's degree distribution among gender. The percentage of Saudi women having bachelor's degree is more than Saudi men. (Graph 8). Even though the educational level of Saudi men is lower than women, the wage gap still exists. Nevertheless, the gender wage and labor force nationality gap are shrinking due to developments in Saudi labor policies. With the transformation program of Vision 2030, wage inequality will be fixed, and the percentage of Saudi labor will be increased. Regarding the competitive advantage, wage equality will also improve the capacity to hire a talented, highly educated, and experienced workforce (Killbourne et al., 1994; Budig et al. 2012; Petersen et al., 2014; Balu et al., 2017; Farag, 2019).

Graph 8: The distribution of educational levels of the Saudi workforce according to gender



Source: Alnahda Research Paper, https://www.alnahda.org/files/research_programs/26.pdf

The wage gap between non-Saudi and Saudi employees can also be stated as a threat to Saudi Arabia regarding the competitive advantage since skilled foreign labor will not prefer to work with a lower wage than a Saudi employee with a lower or equal degree. This may have an effect on coping with the threats of the Kingdom, such as the possibility of nonfulfillment of the projects, new drilling technologies, and the growth of renewable energy demand. All of which need skilled and highly educated labor regarding research and development activities. Especially in the construction of the NEOM, the city Robots, a highly experienced international workforce is an obligation in order to complete the project with desired outcomes (Farag, 2019).

The challenge of the construction of NEOM has multiple factors. The design risks associated with the planning phase of projects comprise the scope, contracts, and features that can be categorized into infrastructural projects such as transport, healthcare services, and education. Another risk factor is legal issues that can be associated with safety regulations, disaster management, environmental laws, sustainability aspects, compliance with international regulations, and labor laws. The risks resulting from renegotiations of contracts and the construction can cause cost and time delays in the project realization. The economic viability issues, workforce management, and financial risks should be taken into consideration during the investment phase of the project. The unexpected natural disasters,

extreme weather conditions, terrorism, and a possible war in the region could play a significant role in the fulfillment of the city NEOM (Huq et al. 2007; Murgante & Borruso, 2013; Irimia-Diéguez et al., 2014; Saaty & De Paola 2017; Duan et al. 2019).

Every mega project launched by the government bears additional risks due to the finalization and obtaining desired outcomes. NEOM has had other risks regardless aforementioned factors since it was established and implemented by the Saudi Government. The political instability will hinder the project's success, while the lack of coordination between the government departments will cause delays. Also, integrating innovative technologies in the development of a smart city will carry out the problems of adopting and maintaining data privacy and security, technological acceptance, and the integration of components. Last but not least, gathering all different sociocultural inhabitants under the same roof may cause cultural conflicts during the implementation phase of the project (Abdou, 1996; Davis, 2010; Kitchin & Dodge, 2017; Hvidt, 2019).

As a result, the construction of a new smart city in a short period of time will entail lots of problems. The cultivation of Silicon Valley in the US took many years and lots of investments as the London Underground network. Designing a city powered by artificial intelligence in a short period of time seems surreal since the research on artificial intelligence has not yet been concluded. Besides, the project's sustainability remains questionable since environmental, human resource, and technology risks were identified as high severity (Algunuzi, 2022).

The patches for the weaknesses and threats of Saudi Arabia depend on the projects designed. Vision 2030 and NEOM projects are planned to cover the losses from the energy exports and to carry out Saudi Arabia into a new preferable nation to live. Both projects have challenges and risks. The main problem can be defined as depending on a large-scale project with a short due date. A delay on one item or an error in the hyperloop system to develop may turn upside down all the desired outcomes.

IX. CONCLUSION

As a result of the SWOT analysis, the Saudi Kingdom has weaknesses, strengths, and aspects that can be seen as opportunities. Within the SWOT analysis framework, the Saudi Kingdom has a different working culture compared to other countries, and they have

problems adapting. The fact that they are different in terms of working and commercial culture is also evident in their lifestyles. It seems difficult for them to have problems in bringing the business culture to European standards, due to the fact that it is not possible to change the concepts that are absolutely correct in terms of Islam. In addition, the lack of diversity in the economy and the fact that only oil is earned is another remarkable weakness of the country.

The strengths of the Saudi Kingdom can be stated as Oil reserves, Dollar indexed exchange rate, the region's largest economy, and technological infrastructure. It is in a strong position with the size of the geography and underground resources. Although the subject of oil, which will be variable in the coming years, is in question, the fact that oil is an indispensable resource is known today. The fact that it has a high level of oil reserves throughout the world gives priority to the fact that it will always be in a good position economically. In addition, in terms of reserves, the Saudi Kingdom has gold reserves that can generate high economic income. With the realization of the Neom Project, the Kingdom plans to be a significant exporter of solar energy and green hydrogen. Although the designed Project depicts that expectation, the Project implementation has not been started, and the fulfillment of the desired outcomes is uncertain for the time being.

All strengths enable the Kingdom of Saudi Arabia to take its place in the top 20 economies in the world. The technological infrastructure, which has developed continuously compared to the past years, is in an important position in the Saudi Kingdom. The fact that the technological infrastructure is at the development level ensures the formation of a system while exporting. Built on 10,230 square miles of land stretching across the Kingdom of Saudi Arabia, Jordan, and Egypt, NEOM will provide a high-tech hub for the world's fastest-growing industries. Its strategic location is designed to take advantage of trade routes over the Red Sea, the Gulf of Aqaba, and the Suez Canal. At the same time, a new bridge, the King Salman Bridge, will establish a direct link between Saudi Arabia and Egypt. The formation of such a technological structure brings to the fore the fact that they make them more popular around the world.

In addition to working on a specific program on Strategy implementation, the Saudi Kingdom also wants to implement this application with the 2030 Vision Project and Neom. Developing risk-mitigation plans to ensure the smooth implementation of NEOM should be done thoroughly. While it will be assured that the current weaknesses of the Kingdom are

not limited to oil only, the continuity of oil is not ignored. Efforts to create new resources are at the forefront of a strategy to plant unique strengths to meet future demands and sustain the leadership position in the energy market.

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