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Faculty of Economics and Management

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Diploma Thesis

Crude oil Prices Analysis in Kuwait Economy

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DIPLOMA THESIS ASSIGNMENT

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Crude oil prices analysis in Kuwait economy

Objectives of thesis

The main aim is to research the new dynamics of oil prices and the effects of Kuwait economy development. The goal to analysis how oil can play the role of Kuwait economic development.

Methodology

This thesis is divided in two parts theoretical and practical. The research is the methodology is chosen is influences many decisions including the design advantage and disadvantages of the approach. Regression analysis was used to see the changing between oil prices and exchange rate and Kuwait levels of GDP on the another hand. Data was used from world Bank as I used software MS excel for testing.

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Declaration

I declare that I have worked on my diploma thesis titled "Crude oil Prices Analysis in Kuwait Economy" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break any copyrights.

In Prague on 31.03.2021

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Crude oil Prices Analysis in Kuwait Economy

Abstract

This thesis is focused on analyzing how Crude oil has affected Kuwait's economy. Although we are rapidly moving towards sustainable energy alternatives in the form of solar and wind energy, etc however, most countries still depend on oil as a main source of energy which is evident by the overwhelming presence of internal combustion engines in modern vehicles. It is hard to imagine the countries who their economy mainly depends on oil for their economic growth as it is going to be very challenging. Kuwait is one of these countries that heavily rely on oil as an energy source as not only it is a source of energy for the economy that lets it produce other goods and service, it also generates massive amount of revenue and gives people more opportunities, however, oil also causes economic uncertainty due to many issues, for example, price fluctuation.

The majority of the developing countries depends on crude oil more than developed countries as oil is the major source of energy for their economy's growth. Though more developed countries have more oil reserve stored in case of any future economic crisis.

This thesis, is divided in two parts, theoretical and practical. Theoretical part deals with the history of crude oil, oil as an energy source, production and consumption, world oil reserves, global oil market, OPEC and OPEC policies, demand and supply of the commodity of crude oil, determinants of oil price and, overview of oil export around the world.

The practical part focuses on the overview of Kuwait's economic development, energy sector and oil imports, the development of linear regression model illustrating the importance of oil prices. Foreign exchange rate on the gross domestic products (GDP) of Kuwait. One of the primary factors is rapid development of alternative sustainable source of energy that can significantly impact the forecasted values.

Keywords: oil market, regression analysis, economy of Kuwait, energy resources, economic growth, export, gross domestic product.

Analýza cen ropy v kuvajtské ekonomice

Abstrakt

Tato práce je zaměřena na analýzu toho, jak ropa ovlivnila kuvajtskou ekonomiku. Ačkoli rychle přecházíme k udržitelným alternativám energie ve formě solární a větrné energie atd., Většina zemí je stále závislá na ropě jako hlavním zdroji energie, což je zřejmé z drtivé přítomnosti spalovacích motorů v moderních vozidlech. Je těžké si představit země, jejichž ekonomika je pro svůj ekonomický růst závislá hlavně na ropě, protože to bude velmi náročné. Kuvajt je jednou z těchto zemí, které se do značné míry spoléhají na ropu jako na zdroj energie, protože je nejen zdrojem energie pro ekonomiku, která jí umožňuje vyrábět další zboží a služby, ale také generuje obrovské výnosy a dává lidem více příležitostí, ropa také způsobuje ekonomickou nejistotu kvůli mnoha problémům, například kolísání cen.

Většina rozvojových zemí závisí více na ropě než vyspělé země, protože ropa je hlavním zdrojem energie pro růst jejich ekonomiky. Myšlenky, že vyspělejší země mají více ropných rezerv uložených pro případ jakékoli budoucí hospodářské krize.

Tato práce je rozdělena na dvě části, teoretickou a praktickou. Teoretická část pojednává o historii ropy, ropě jako zdroji energie, výrobě a spotřebě, světových zásobách ropy, globálním trhu s ropou, OPEC a politikách OPEC, poptávce a nabídce komodity ropy, determinantech ceny ropy a přehledu exportu ropy do celého světa.

Praktická část se zaměřuje na přehled ekonomického rozvoje Kuvajtu, energetického sektoru a dovozu ropy, vývoj modelu lineární regrese ilustrující důležitost cen ropy. Směnný kurz hrubého domácího produktu (HDP) Kuvajtu. Jedním z hlavních faktorů je rychlý rozvoj udržitelného alternativního zdroje energie, který může významně ovlivnit předpokládané hodnoty.

Klíčová slova: ropný trh, regresní analýza, ekonomika Kuvajtu, energetické zdroje, ekonomický růst, export, hrubý domácí produkt.

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1 Introduction

Oil has been and still is one of the most essential commodities over centuries. The second statement depended on innovation in the energy sector which is increasing due to widespread concern over climate and environmental issues. There have been developments in the oil industry recently, for example, The United states of America has increased their abilities to produce oil at becoming self-sustainable in the process and emerging as major a player in the oil energy industry. OPEC policies had to adapt with all these developments as well as the State of Kuwait

Prior to U.S becoming a self-sustainable nation, it was once one of the biggest importers of oil and the biggest consumer until this present time. Additionally, the oil reserves of the middle east have decreased for the past two decades as a share of global oil reserves. Other pressures were applied by the environmental and sustainable energy. Concerns have put Kuwait crossroad where undoubtedly actions and decisions were taken to prove the importance of the economy. To understand how we got to this crossroad we must analyze the history of the commodity in order to comprehend the situation as to how the GDP is dependent on oil as a source of revenue. The supply and demand of the energy sector in Kuwait will be examined to form prediction about what might lay ahead of this crossroad.

2 Objectives and Methodology

2.1 Objectives

The main aim of the thesis is to research the new dynamics of oil costs and the effects on Kuwait's financial Development.

The goal is to analysis how oil can play the role of Kuwait's economic development.

2.2 Methodology

This work is divided in two parts, theoretical and practical. The theoretical part uses an inductive approach where it sees an overview about the energy sector, specifically, the oil sector and a descriptive approach. The second part that is the practical, descriptive and deductive approach were used as well as regression analysis method to analysis the changing of oil prices and exchange rate.

3 Literature Review

3.1 Energy Sector: key specificities

When examining the energy area and its particularities, it is most importantly worth unmistakably characterizing and understanding the key hypothetical viewpoints identified with the energy area, and disclosing the primary terms to be consequently utilized and all the more profoundly explored in the proposition.

Energy is a wide term gotten from physical science, and it might have an incredible number of translations relying upon the specific methodology picked by the scientist, and on the specific part of energy examined or arranged. In the broadest terms, energy can be characterized as any framework's ability to play out its capacities or work of any sort. Consequently, it tends to be expressed that any living body or living being characteristically has its energy which is thusly changed into work yields. Energy has its own inputs (Steger, 2005). For instance, living organisms take their energy from food and water, while machines, robots and other anthropogenic mechanisms take their energy from fuel, electricity, etc. (Brown, 2002)

According to the perspective of material science, energy can take two unique structures: potential or motor energy. Potential energy is the one which a creature or machine stores and can thusly use for guaranteeing its exercises. Simultaneously, dynamic energy is the one which exists during the cycle of development. As per the laws of material science, potential energy can change into dynamic energy, and the other way around. This law likewise applies to the change of various sorts of energy into its different kinds (for example, heat into power energy or active water energy into hydropower). (Steger, 2005)

The kinds of energy are tremendously variegated also. Specifically, they incorporate, yet are not restricted to warm, synthetic, atomic, electrical, sunlight-based energy, etc. This arrangement of energy depends on the source which guarantees the age of energy. Energy has been assuming a fundamental part in the association of human exercises since the old occasions, as the preservation and viable utilization of energy precondition not just the working of complex mechanical and designing frameworks, yet additionally the actual

essentials of human existence, to be specific the support of body heat, avoidance of freezing, utilization of nourishment for viable work, etc. With the course of time, mankind advanced, and the utilization of energy turned out to be considerably more significant with the mechanical advancement, especially when complex cycles were placed into impact. The energy assets currently were utilized all the more effectively by mankind, and their improvement escalated with the developing mechanical creation. The energy area is given specific consideration starting today, in the states of globalization, by the entirety of the world's nations. This is because of the way that energy has since a long time ago become an essential asset of the best significance. Consequently, it guarantees the working of every single monetary branch, and the presence of the populace, and in this way is key for any state. (Wiser, 2000)

3.2 Oil as an Energy Resources

When exploring fuel sources, it merits considering oil, as the part of oil in the worldwide energy market is pivotal. This is because of the way that throughout the previous 40 years, oil has consistently stayed the primary wellspring of energy as far as worldwide utilization. Starting today, the portion of oil actually stays at a degree of more than 30% regarding worldwide energy utilization, even in spite of the continually promoted pattern of the utilization of elective fuel sources. This implies that oil beats other energy assets regarding its utilization in the corporate area and the arrangement of the populace with fundamental wares through force creation. (iea, 2017)

In this manner, understanding the significant portion of oil in worldwide energy utilization, it turns out to be certain that oil assumes a significant part in the arrangement of the energy area's ordinary and continuous activity fair and square of individual states, yet additionally fair and square of the whole global economy. Without the adequate arrangement with oil, most nations become incapable to guarantee the best activity of their public economy. (Research, 2003)

Oil as an energy asset has a significant explicitness and disposition: raw petroleum as such can once in a while be burned-through underway by organizations or by family units. To

devour oil for creating energy, its refinement is required. Accordingly, nations without the accessibility of oil refinement offices are compelled to import part of energy assets from on board, regardless of whether they have oil stores. Likewise, it ought to be perceived that the different phases of oil creation raise the expense of utilization of this energy asset, because of which it turns out to be more costly. With the improvement of new innovations and the developing significance of biofuels and different elective energy assets, the utilization of oil may turn out to be less powerful, and this may prompt its substitution by other energy assets in significant part. (Investing.com, 2016)

Also, in the light of the recent negative dynamics of oil prices, the effectiveness of oil production has sharply fallen together with the financial benefits which oil producers may draw from their trade activities. This poses under doubt the subsequent prospects of oil as an energy resource on the one hand, but on the other hand, this may also generate higher demand on the part of net energy importers, as purchasing oil has already become cheaper. (Looney, 2012)

The current circumstance in the worldwide oil market will be researched later in this theory. Notwithstanding, now, it is significant specifically that starting today, oil assumes a significant part not just as an energy asset. It is likewise a central point influencing the design, bearings, and extent of worldwide relations. Because of the essential significance of oil as an energy asset, it to a great extent influences how the net shippers and exporters collaborate, which endeavors they embrace to protect their undeniable degree of energy security and freedom, how they attempt to expand the design of their oil imports, and how they accomplish balance regarding their energy utilization.

3.3 The History of Crude oil

Crude oil has been known to individuals since old occasions. It was gathered from the outside of open supplies and utilized in development, medication, as a fuel, for illuminating presences and making the weapon. Roughly 6000 BC. On the banks of Euphrates stream, individuals discovered petrol bitumen, which was utilized in development and as a waterproof material. The Egyptians utilized raw petroleum as

treating. As indicated by the Herodotus declaration, oil bitumen was utilized in developing of Babylon. Additionally, he portrayed the old method of petrol creation: "To the well, whence men raise black-top and salt and oil. This is to it instead of a can therewith he that brings dunks into the well, and afterward fills a tank, whence what is drawn is filled another tank, and goes three different ways: the black-top of unrefined petroleum and its thickness – the hazier is oil, the higher its thickness is. Raw petroleum was known to the Greeks and Romans. Ancient Greek doctor Hippocrates left many recipes, that concluded this combustible liquid. The Romans gave it the name, which then passed in many languages – oleum Petra, "the stone oil". The heirs of the Greeks, the Byzantines created with a help of the petroleum a super weapon of the early Middle Ages – "The Greek fire". (Forbes, 1972)

Oil has been utilized since the time old occasions when it was utilized for basically meds and building purposes, yet its potential worth hadn't been acknowledged until the nineteenth and twentieth hundreds of years. In 1855, Benjamin Sillian, science teacher at Yale, found that oil refining could make ointments and be utilized as a wellspring of light. He had discovered a less expensive substitute of whale oil or gaseous petrol for light. Hence, the interest for gaseous petrol and whale oil diminished and the interest for oil expanded in light of the fact that it was a less expensive substitute. The interest for oil expanded because of the expanding number of purchasers. Accordingly, the quantity of purchasers is an interest variable for oil. Since the interest expanded more benefit searchers understood the advantages they could make get from selling oil accordingly they needed to discover approaches to get it. (mirnefti, 2016) (mirnefti, 2016)

The start of petrol exchange was noted in 1264 and in 1500 in Poland, unexpectedly, the raw petroleum was utilized to enlighten the roads. Even though oil was known to individuals for exceptionally long occasions, present day unrefined petroleum creation began since 1848 in the Bibi-Heybat oil field, Kuwait. There, in 1847 the principal investigation unrefined petroleum all around was bored with a profundity of 21 meters. The main current sort of oil very much was exhausted in 1848.

Oil is the principal wellspring of energy for a high number of businesses. Space businesses would make a fantastic model like most enterprises have been looking for an

inexhaustible wellspring of energy and some of them are very near it. One model would be Automobile industry. Since Tesla's forward leap with electric vehicles a significant high number of organizations are attempting to duplicate it on alternate method of transportation like Trains, Truck and so on Nonetheless, Space enterprises still totally relies upon oil as wellspring of energy to dispatch their supporters from earth and most specialists propose that the business will proceed with the utilization of oil as energy for in any event the impending century. (mirnefti, 2016)

That was only one model and there are numerous different ventures who completely rely upon oil as energy subsequently making unrefined petroleum a need of the world. Accordingly, assisting the nations rich with this common asset with worldwide exchange. Oil is not just a significant wellspring of energy; notwithstanding, it additionally turned into the fundamental hotspot for at any rate many various modern items. Notwithstanding the way that many industrialized nations are endeavoring to chop down the utilization of oil and supplanting it with different wellsprings of energy, for example, environmentally friendly power (sunlight based and wind energy) and other perpetual energies yet oil will stay an essential item that controls the fate of the world just as its economy and it is likewise a significant ware for the global exchange. (mirnefti, 2016)

3.4 Characteristics of Crude Oil

The Bureau of Mines characterizes rough oils as paraffin, transitional, cross breed and naphthene base. Be that as it may, unrefined oils can't be sanely assembled into these four classes because no two oils are actually.

The same and truth be told they range from nearly water white items at one outrageous to strong bituminous materials at the other. The significant burn act eristic of the paraffin base oils is their appropriateness for oil Manufacture while the remarkable property of the naphthene base oils is the prevalent enemy of thump gas contained in them. An average naphthene base oil contains no wax while half and half base oils contain wax; even though their overall properties are those of naphthene base oils. In the past these two sorts have been assembled under one general arrangement, to be specific, black-top base. By and

large there are two significant gatherings of rough oils—that is, middle base oils are like paraffin base oils, and half-breed base oils are like naphthene base oils. (Dept, 2009)

One strategy for contrasting rough oils is the level of gas versus the gravity of the unrefined petroleum. In representation, a 20 gravity naph-thene oil may contain 20% of gas, while a halfway base oil that contains 20% of fuel will have a gravity of around 30, and the gravity of a paraffin base oil will be considerably higher. Be that as it may, a somewhat wide scope of gas content is conceivable inside any of the groupings, for example a 30-gravity transitional or JNlid Continent unrefined petroleum may contain somewhere in the range of 10 and 30% of fuel. Another significant contrast between rough oils is the gravity of the items delivered from them. Accordingly, the gas from paraffin, blended and naphthene base oils will have gravities individually of 62, of 58-60, and as low as 47. Since men in this region know about 58-60 gravity gas, it is hard to showcase the 47-gravity assortment, even though it as a rule is a prevalent engine fuel. By and large, the paraffin base oils contain little sulfur and can be handily refined though the naphthene base oils frequently contain as high as one percent of sulfur and require lively synthetic treatment. (Dept, 2009)

Right now, the provided cost estimates for low and high gravity unrefined oils give off an impression of being unfair. But when managing especially poisonous crudes the low gravity rough oils can be refined at a more noteworthy benefit. This is to a great extent the aftereffect of the expanding interest for high octane number gas. The octane number of the gas from paraffin crudes is poor to such an extent that extra preparing, known as changing, should be rehearsed to make it into a reasonable engine fuel, while gas from. (Dept, 2009)

3.4.1 The Crude Oil Recovery

Until the second 50% of the nineteenth century, the raw petroleum was chiefly utilized in the crude. In certain spots, the unrefined petroleum was gathered from the water surface, yet these days this characteristic wonder does not exist, so the unrefined petroleum is removed with an assistance of boreholes (oil wells). This strategy was begun in the

nineteenth century, the first oil all around was based on the Apsheron Peninsula in 1848. (Hyne, 1984)

The advancement of oil fields is done through the development of oil wells and the oil mine techniques. By the methods of extraction of well liquid, present day procedures are partitioned into a wellspring (the liquid yield is because of the distinction in pressing factor in the repository and the pressing factor of the oil wellhead), fake lift (gas lift) and siphoning.

The unrefined petroleum recuperation is made dynamically in 3 phases:

Primary recovery stage (Kareem stage)

At this stage, the crude oil is pushed up to the surface by the common underground pressure or siphoned by the counterfeit lift. At this progression unrefined petroleum is removed by 5-15% of the aggregate sum accessible.

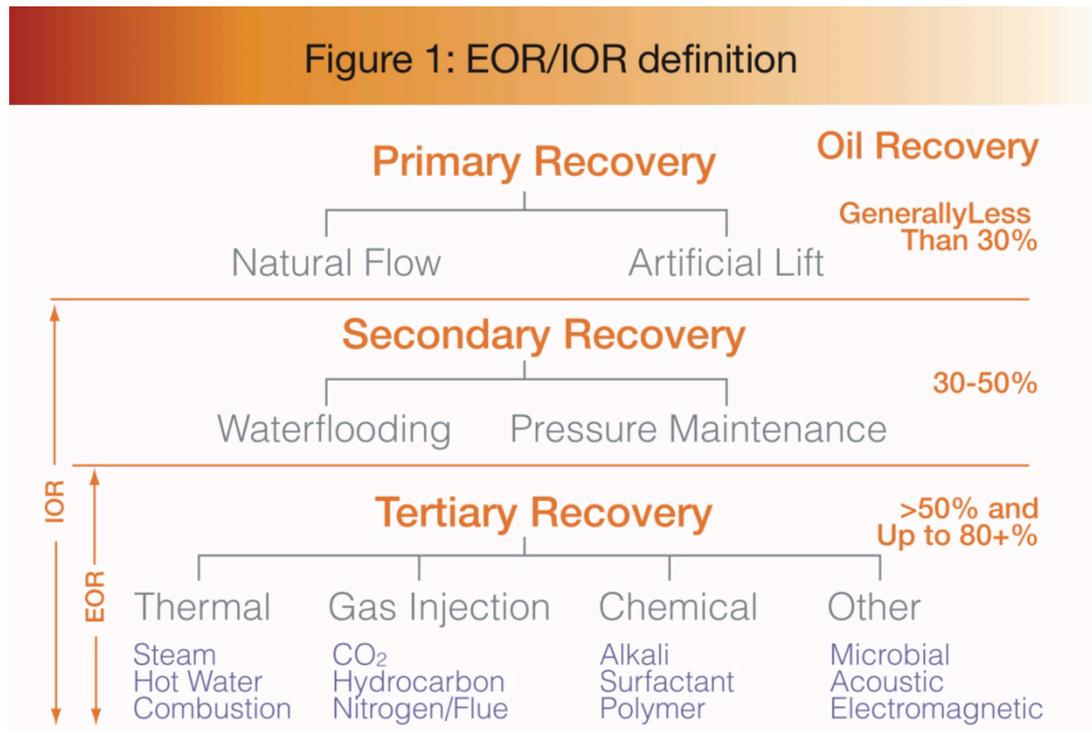
Secondary recovery stage.

Progressed auxiliary recuperation or improved oil recuperation (IOR) is utilized when the common unrefined petroleum stream is not sufficient for extraction. For its expanding, it is important to build the pressing factor of supplies by infusion of water or flammable gas. IOR permits acquiring 35-45% of unrefined petroleum removed.

Tertiary recovery stage

Tertiary stage or Upgraded Oil Recuperation (EOR) can be applied when IOR is inconceivable, yet extraction is as yet beneficial, and the oil costs are high. To improve the unrefined petroleum stream, it is conceivable to utilize steam (to thickness diminish), flammable gas or substance infusions. When utilizing EOR the extraction of unrefined petroleum increments by another 5-15%. (Petroleum, 2010)

Figure 1: Oil recovery

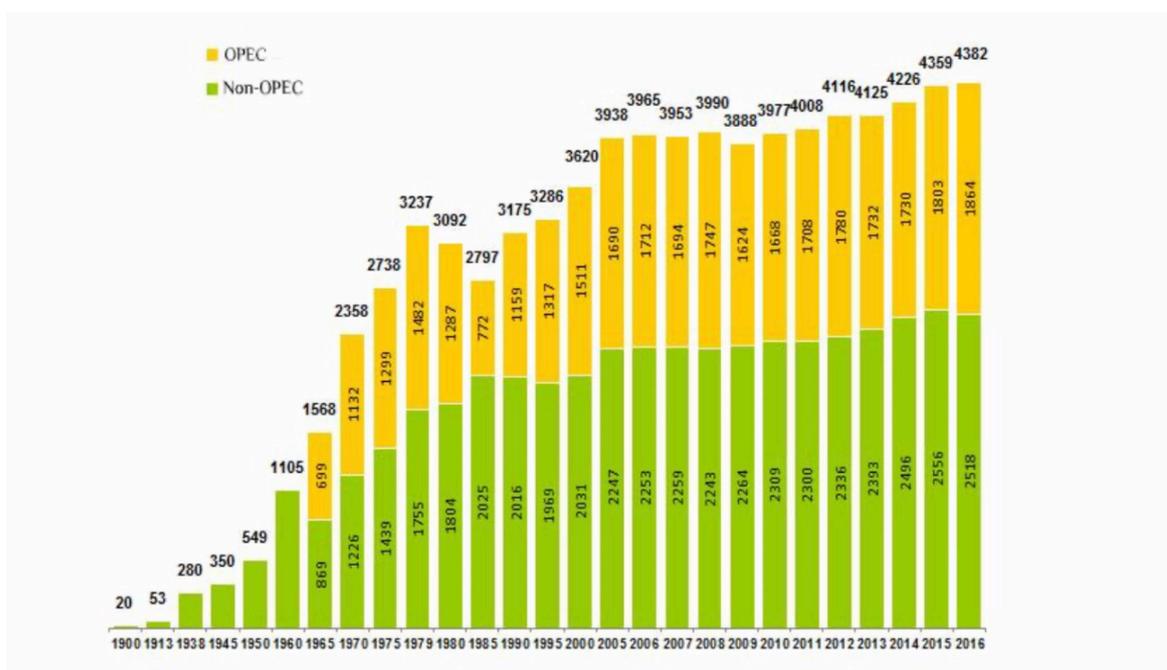


Sources: http://www.worldpetroleum.org/docs/docs/publications/2010yearbook/P64-69_Kokal-%20Al_Kaabi.pdf

3.4.2 The Production of Crude Oil

Restrictively, the world raw petroleum creation can be partitioned into 2 phases: from the earliest starting point until 1979 when the principal relative limit of oil creation (3235 million tons) was reached, the second stage from 1979 to the present. From 1920 until 1970 the raw petroleum creation was expanding a seemingly endless amount of time after year and expanding twice for at regular intervals. Since 1979, the world oil creation development rate has eased back down and in 1980 there was a decay, however in spite of this, the oil creation is developing consistently.

Figure 2: Dynamics of Oil Production in the World, Million Tons



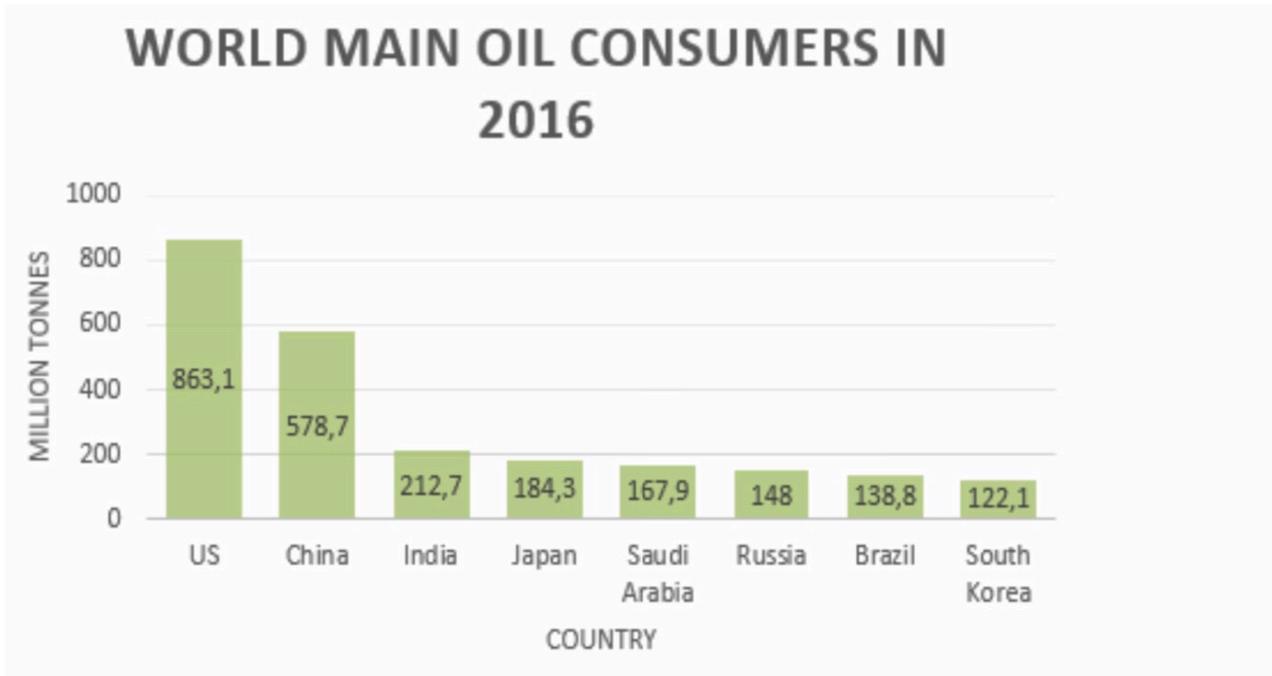
Sources: <https://vseonefti.ru/upstream/>

In 2016, the main world petroleum producers were Saudi Arabia with production share 13.4% (585.7 mln.t); Russia 12.6% (554.3 mln.t), United States with 12.4 (543.0 mln.t), Iraq, 5,0% (218,9 mln.t), Canada 5,0% (218,2 mln.t) and Iran 4,9% (216,4 mln.t) with growth rate per annum 2,9% in Saudi Arabia, 2,2% in Russia, (-4,2%) in U.S, 10.8% in Iraq, 0,9% in Canada, 18,9% in Iran. In general, in 2016, the world produced 4382.4 million tons of oil with growth rate 0.3%, which is the slowest growth since 2013. (bp, 2010)

3.5 Crude Oil consumption

Global oil consumption in 2016 grew by 1.6%, which is 1,6 million barrels per day. It is the 2nd consecutive year of oil consumption growth for the last 10 years. In total, in 2016 the world consumed 4418.2 million tons of oil. The main consumers are the United States with consumption share 19.5%, China 13.1%, India 4.8%, Saudi Arabia 3.8%, Russia 3.3%, Brazil 3.1%, and South Korea 2.8%. (bp, 2010)

Figure 3: World Main Oil Consumers 2016



Sources: <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-%20statistical-review-of-world-energy-2017-full-report.pdf>

3.6 The World Oil Reserve

Oil is a natural resource formed by the decay of organic matter over millions of years. And like many other natural resources, oil cannot be produced, only extracted where it already exists. Unlike every other natural resource, oil is the lifeblood of the global economy. The world derives over a third of its total energy production from oil, more than any other source by far. As a result, the countries that control the world's oil reserves often have disproportionate geopolitical and economic power. (CHEN, 2020)

Different insights may have assorted numbers, it relies upon the systems, that can be utilized during the counts. Additionally, it is exceptionally difficult to get honest data, in light of the fact that the information can be changed for the various purposes. Inside the origination of raw petroleum holds, there are a few characterizations: ultimately. To the oil saves have a place flammable gas fluid, recoverable asset, demonstrated, likely and potential stores. URR is the all-out amount of unrefined petroleum that will actually be extricated and delivered, that keep expanding as financial aspects change, innovation advances and information develops. The eventually recoverable asset is isolated into three

characterizations: combined creation, found stores and unfamiliar asset. Found stores are characterized as a circulation of likelihood and are isolated into demonstrated, plausible and potential stores. Demonstrated stores are the stores, which have 90% of likelihood, that the oil will be removed. Since it is difficult to recuperate all the oil from its repository, demonstrated, plausible and potential stores are and just extent of oil set up. The extent of oil to saves for a given field is regularly named as the factor of recuperation, which may change throughout the time dependent on a few factors, for example, working history, the financial aspects of field and creating innovations. Likewise, the factor of recuperation may build utilizing a few interests in auxiliary recuperation, that can assist with upgrading the pressing factor inside the supply. holds get the opportunity half of being in fact and financially producible, and the likelihood of potential stores is critical, however under half. In the complete oil saves just, demonstrated stores are checked. Since the development of raw petroleum is a long cycle, we devour it quicker than Nature makes new oil saves, so why the measure of these stores is limited, and we call raw petroleum as non-inexhaustible material. We can regularly hear that here will be no oil soon on the planet, yet the unrefined petroleum will be too costly to even consider utilizing long. (CHEN, 2020)

In 2016 there was an increment in demonstrated stores by 0.9%, that is 15 billion barrels. Basically, the expansion came from Iraq (10 billion barrels) and Russia (7 billion barrels). The measure of demonstrated stores in 2016 is 1707 billion barrels altogether, which implies that it is sufficient to guarantee the World by the worldwide creation for a very long time at the 2016 level. terms of oil saves, the key pretends OPEC Part Nations, where 81.5% of the world's demonstrated stores are situated, of which 65.5% of stores are in the Center East. It is acknowledged by the creating advancements, such as, improved recovery. Proven saves in these nations make a characteristic of 1,216.78 billion barrels. Toward the finish of 2016, the biggest oil holds have Venezuela 302.25 billion barrels, following by Saudi Arabia, which has 266.21 billion barrels, Iran with 157,20 billion barrels and Iraq, measuring Non-OPEC part nations have 18.5% of the absolute oil saves, it is 275,38 billion barrels. The biggest stores among them have Canada - 169,709 billion barrels, Russia with 80,000 billion barrels, US, whose measure of stores altogether expanded from 20,68 billion barrels in 2013 and now make a characteristic of 39,230 billion barrels and Kazakhstan, which has 30,000 billion barrels. was supplanted by China,

that has 25,620 billion barrels. The all out demonstrated stores in Mexico are 7,640 billion barrels, that has diminished since 2014 when the aggregate sum was 10, 07 billion barrels. The greater part of these nations produces a greater amount of raw petroleum than they use, so they can trade supposed 'dark brilliant'. Some of them are parting to expand their force of arrangement, oversee world inventory and impact cost. Since the World have the restricted measure of unrefined petroleum, the exporters keep the costs high. (bp, 2010)

Figure 4: Distribution of Proved Reserves in 1996, 2006 and 2016



Sources: <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-oil.pdf>

3.7 Determinants of Crude Oil Price

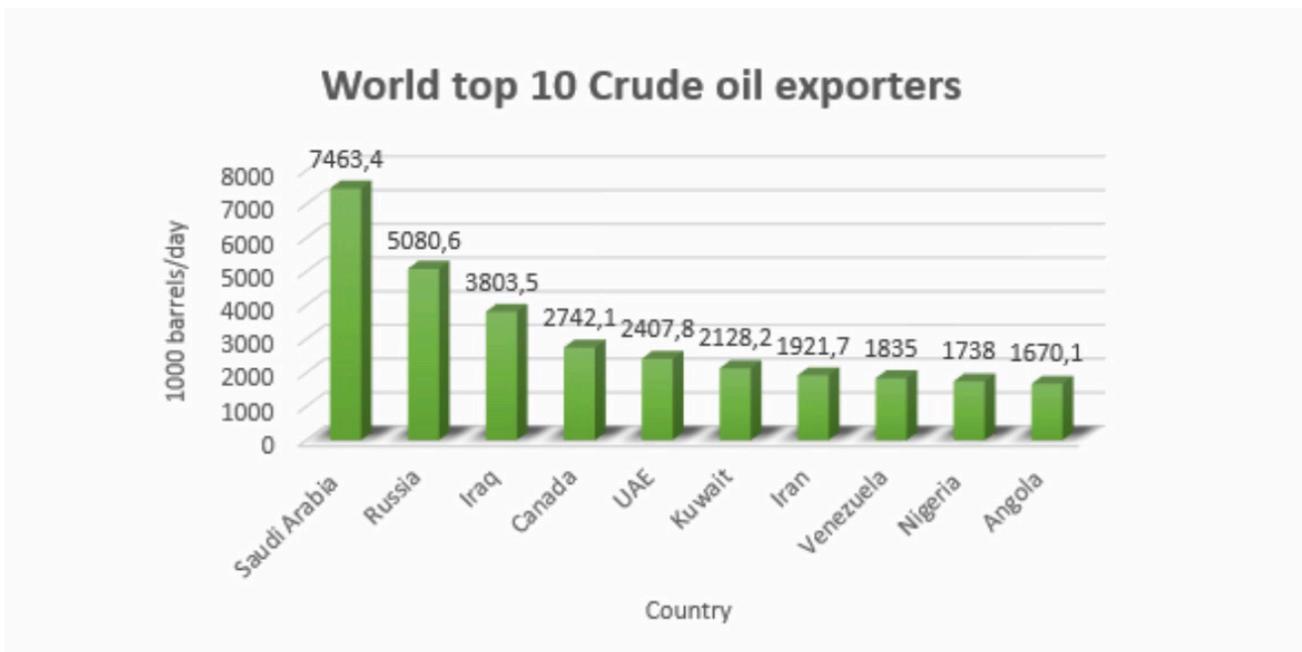
Crude oil is a perhaps the most generally exchanged item the world. It is self-evident, that the cost of raw petroleum cannot be a similar constantly, there are a few factors that influence the oil value vacillations the dynamic of interest and supply, that impact the cost of all items on the planet markets.

energy, the cost of crude oil firmly identified with nearby and worldwide economy developments. In light of this, the cost of oil is additionally affected by international occasions and money related and monetary approaches of nations. As we probably are aware, the Middle East is the biggest oil trade district on the planet, and huge effect on the unrefined petroleum cost has the Organization of Petroleum Exporting Countries, which incorporates the fundamental piece of Middle East fare pioneers. Another significant actuality is a cash. Oil exchange is done through the money of benchmarks, which is a US dollar. Appreciation or devaluation of US dollar influences the raw petroleum value everywhere on the world. (Parra, 2009)

3.8 Overview of Oil Export Around the World

In this present day, our society and industry do rely on the usage of crude oil. The Middle Eastern countries are known for being the important countries for exporting crude oil. Middle Eastern countries considered to have the highest dollar value worth of crude oil exports in the year 2017 with 42.4 % of globally exported crude oil. (Workman, 2017) At the continent level, almost half of crude oil exports comes from the Asian countries which accounted 49.4 %. Europe supplies about 18 % of the overall total, followed by Africa at the rate of 13.4 % Saudi Arabia is known for being the largest country to export crude oil, holding about around 18 % of the world's proven petroleum reserves. It is responsible for about 15.9 % of the world total crude oil export with the total of US\$133.6 billion in value. The second largest exporting country for crude oil is Russia responsible for about 11.1 % of the total crude oil export having a total of \$93.3 billion in value. The graph below shows the top countries must match. and lastly North America at 11.4 %. five countries for crude oil export in the year 2017. (Workman, 2017)

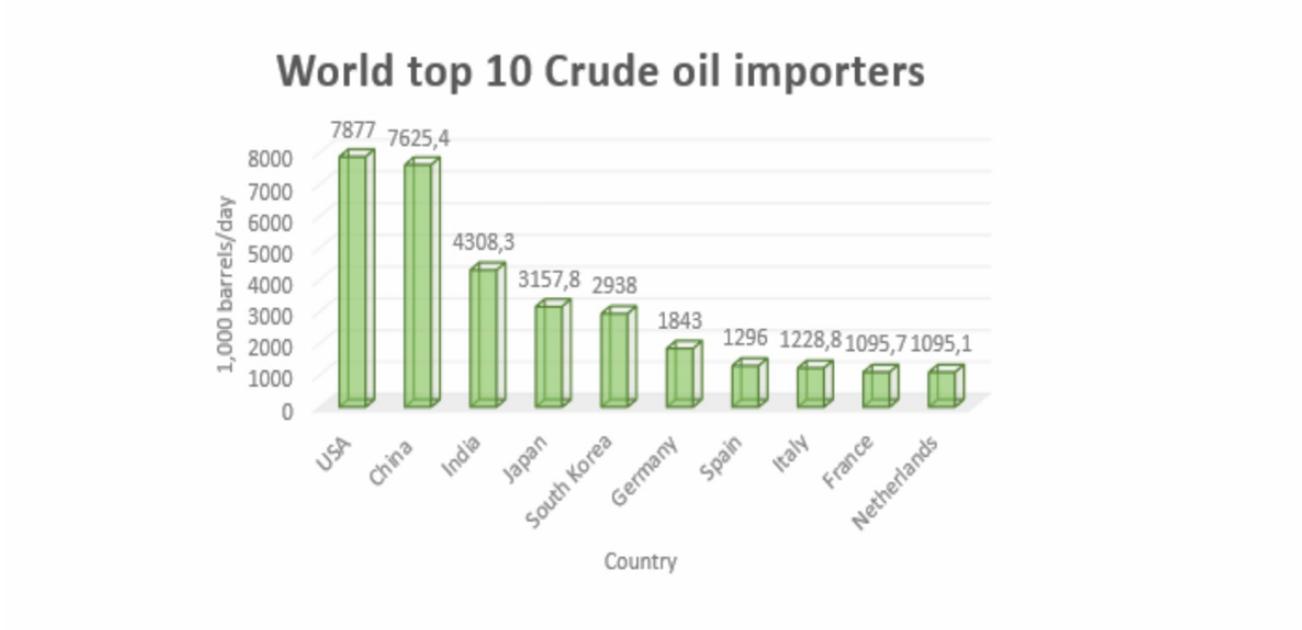
Figure 5: World Top 10 Crude Oil Exporters



Sources:

https://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2017_13062017.pdf

Figure 6: World 10 Crude Oil Importers



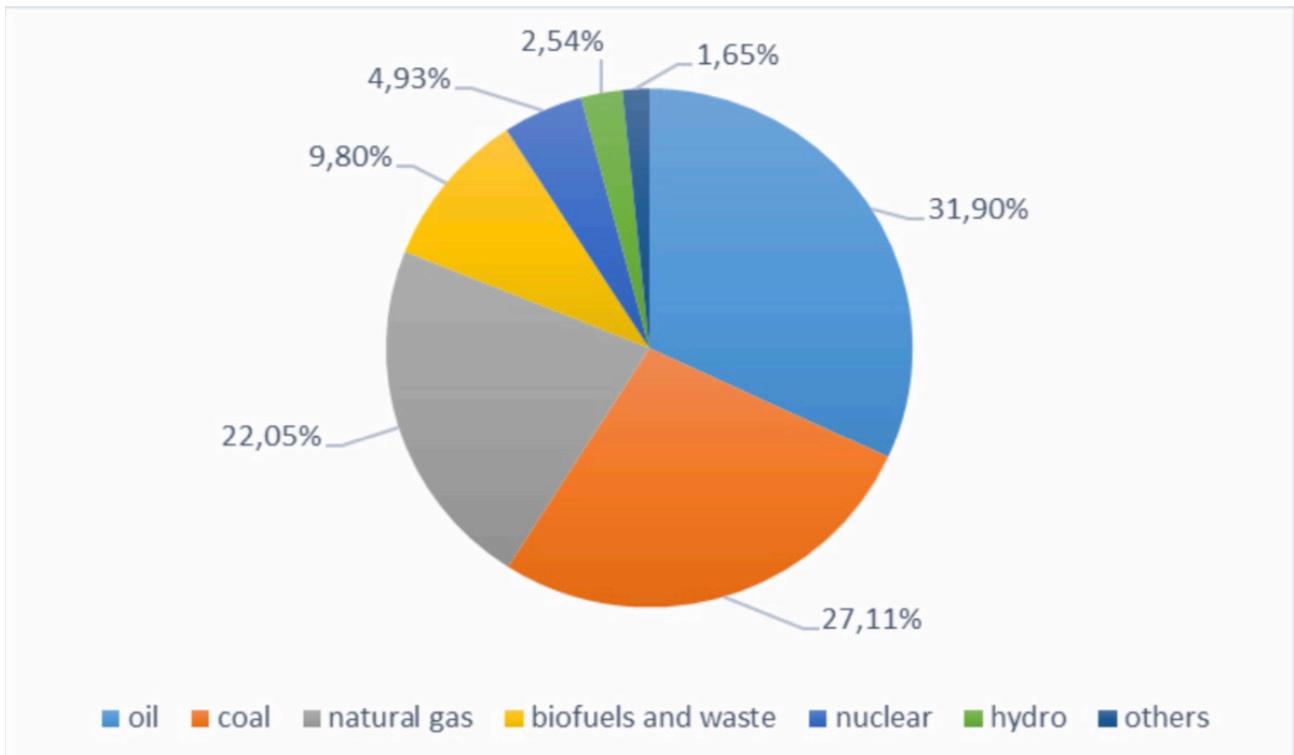
Sources:

https://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2017_13062017.pdf

3.9 Global Oil Market: Key Trends and Tendencies

Understanding the latest things and inclinations in the worldwide oil market and its general design is a significant assignment inside the structure of this paper, as it ought to permit comprehend the functional circumstance in the oil market in which works, remembering the latest propensities for this market regarding oil value elements.

Figure 7: Global Structure of Energy Consumption by Source, as of 2016

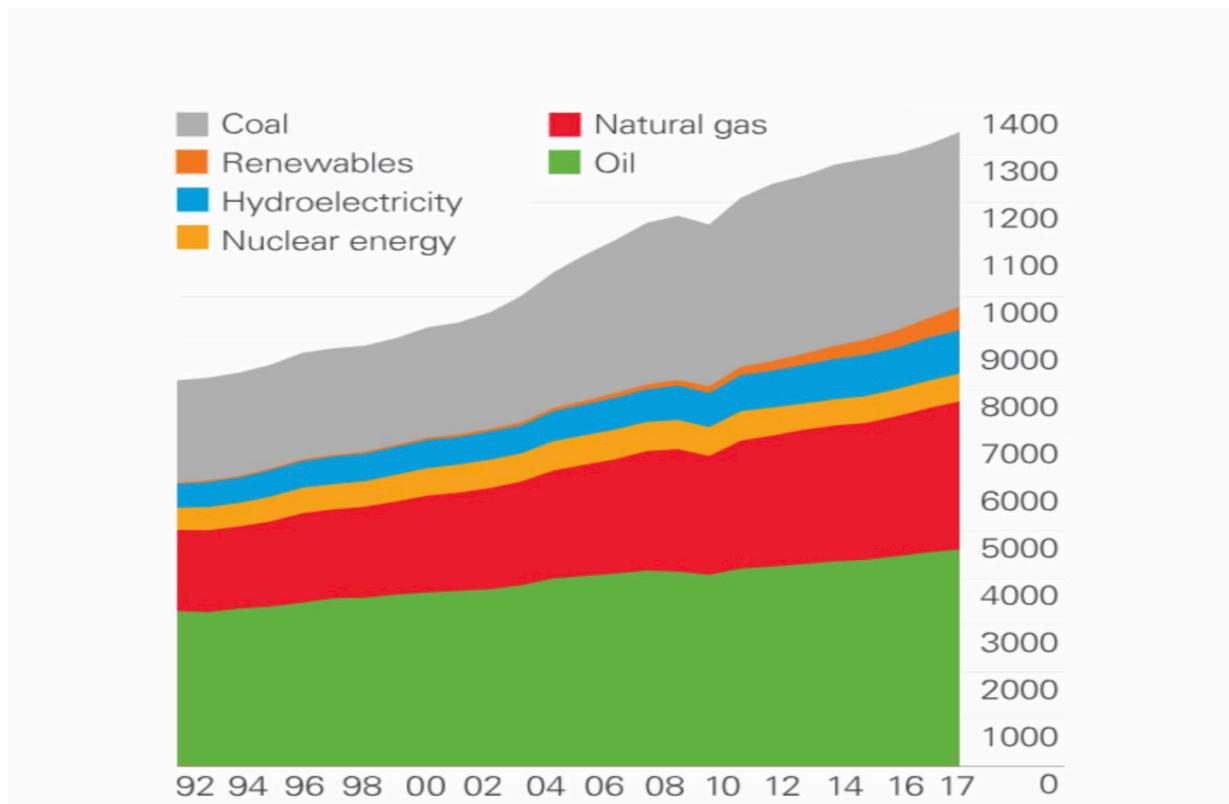


Source: International Energy Agency 2018

As Figure 7 above represents, oil is the main wellspring of energy utilization on the worldwide scale starting today. Hence, the total portion of oil in worldwide energy utilization adds up to as much as 31.9%, for example very nearly 1/3 of total worldwide utilization. Other most significant assets as far as worldwide utilization incorporates coal (27.11%), and flammable gas (22.05%). The portions of other fuel sources like thermal power, hydropower, biofuels, and elective fuel sources like sunlight based, wind energy, and so forth are altogether more modest.

In general, it tends to be expressed that this design stresses unequivocally the significance of oil as an energy asset which has just been expressed before throughout this examination. Worldwide creation is to the biggest degree reliant on oil, and consequently the viability of the oil market's activity preconditions enormously the general improvement of the worldwide economy, and of individual nations.

Figure 8: Global Dynamics of Energy Consumption by Source in 1992-2017

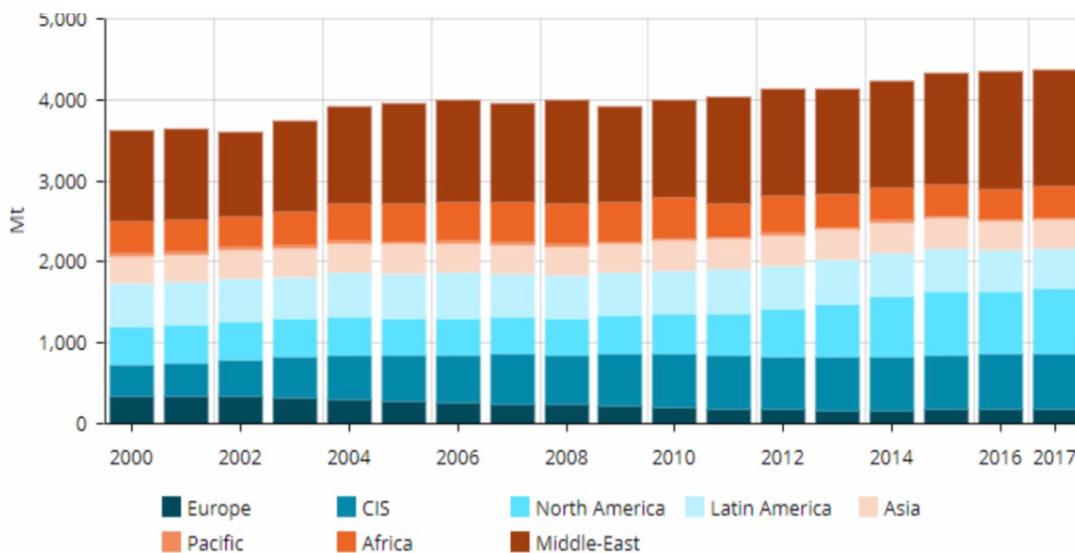


Source: BP statistical Review of World Energy 2018

Figure 8 above represents the elements of energy utilization by various sorts of fuel sources. As can be seen from the graph, worldwide energy utilization will in general keep consistently developing. This may outline the way that the worldwide economy is consistently creating, and hence requires more prominent and more noteworthy energy utilization volumes with the point of guaranteeing the chances for its resulting development and improvement. In any case, with regards to oil as an energy asset, we can see from the graph that its total offer in worldwide energy utilization has been contracting recently, even notwithstanding the way that it actually keeps up the main situations on the

worldwide scale in those terms. Simultaneously, it is additionally significant the developing significance of elective fuel sources, which become especially significant and amazing in created states. (BP statistical Review of World Energy 2018).

Figure 9: Statistics of Global Crude Oil Production in 2000-2017, in Mt

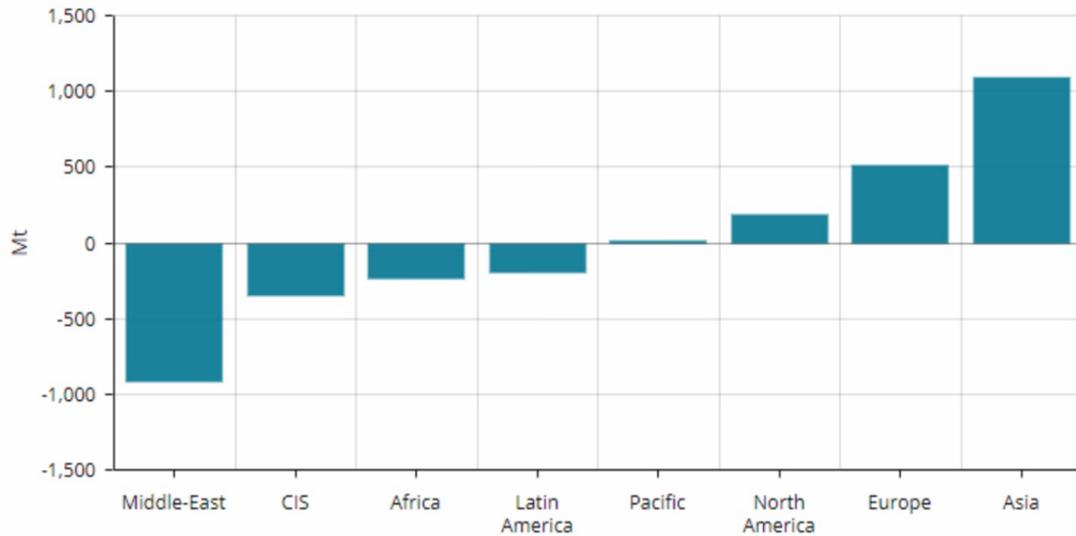


Source: Enerdata 2018

Figure 9 above outlines more explicitly the new elements of worldwide oil creation. As can be seen from the outline, this figure has been consistently developing since the year 2010, for example after the recuperation from the worldwide monetary and financial emergency. Besides, since 2011, worldwide yearly oil creation has consistently stayed at a degree of more than 4,000 Mt and surpassed 4,200 Mt in 2015. Those patterns accentuate that even in spite of oil's contracting share in worldwide energy utilization, the supreme volumes of the asset's utilization have been consistently developing as of late, which implies that the outright interest for oil around the planet will in general continue to develop.

Simultaneously, it is additionally significant from the diagram that the world's driving district regarding oil creation is without a doubt the Middle East followed by North America and the CIS nations.

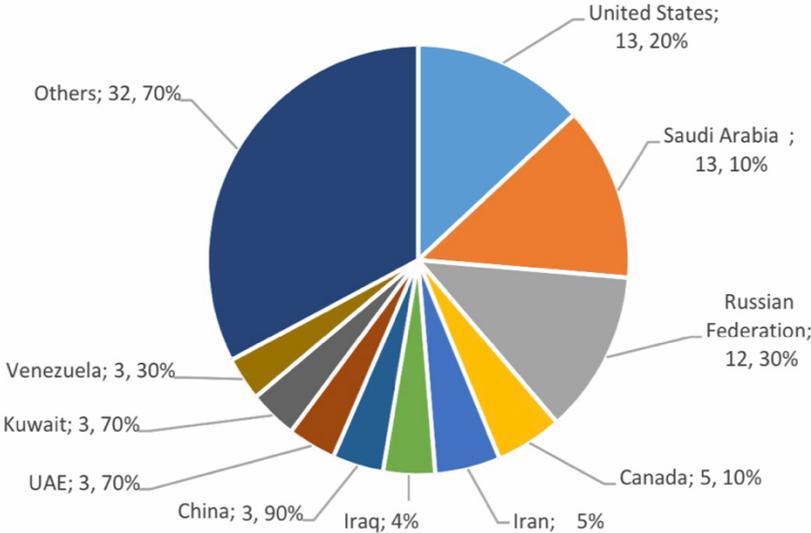
Figure 10: Statistics of Global Crude Oil Trade, as of 2017 (Top Importers), in Mt



Source: Enerdata 2018

Figure 10 shows the equilibrium of the world's distinctive area exchange oil as an energy asset. As can be seen from the graph, the principle top net exporter of unrefined petroleum starting at 2017 is the Middle East followed by the CIS nations. Simultaneously, Asia, Europe and North America are net oil shippers, even regardless of the way that nations, for example, the US or Canada are among the world's chiefs as far as oil creation. This is because of the way that those created states devour incredible measures of energy assets for guaranteeing the best working of their public economy, and thus do not fulfil their public interest from oil utilizing just homegrown oil sources. Additionally, this relies on the public strategies in the oil area and the heading of the market's advancement recognized by the public specialists of the separate state. (Blas and Hurst 2016).

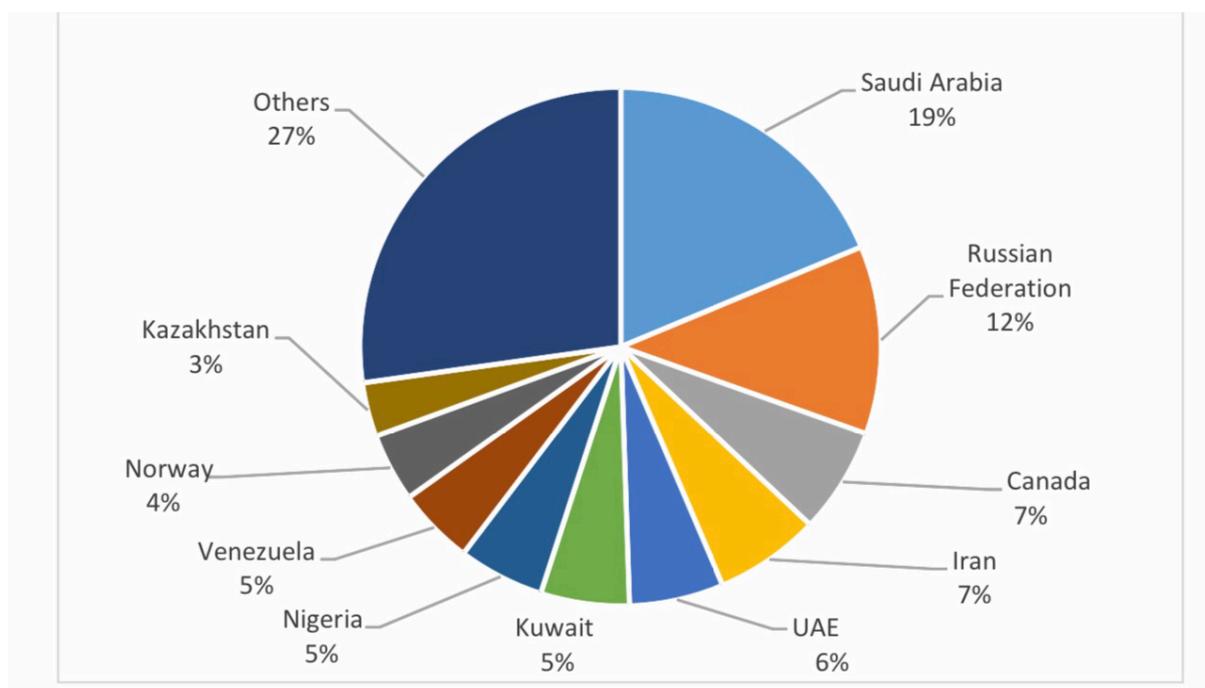
Figure 11: World’s Top Oil Producers, as of 2017



Source: Enerdata 2018

Figure 11 above delineates the current design of worldwide oil creation regarding its outright volume in the breakdown by states. As can be seen from the diagram, the world's significant oil maker starting today is United States, which alone records for 13.2% of worldwide oil creation. Other significant states in this setting incorporate the Saudi Arabia (13.1%), and the Russian Federation (12.3%). Subsequently, as can be seen from this data, both worldwide superpowers are among the worldwide pioneers regarding oil creation. This is one of the elements which adds to the specific job of energy in worldwide international relations, and further stresses the specific pretended by this essential asset. Other major worldwide oil makers incorporate Canada (5.1%), Iran (5%), Iraq (4%), China (3.9%), UAE (3.7%), Kuwait (3.7%), and Venezuela (3.3%). The 10 previously mentioned states in total record for 67.3% of worldwide oil creation, while the total portion of any remaining states is altogether more modest and makes up just less that 1/3 of worldwide oil creation.

Figure 12: World's Top Net Oil Exporters, as of 2017



Source: Enerdata 2018

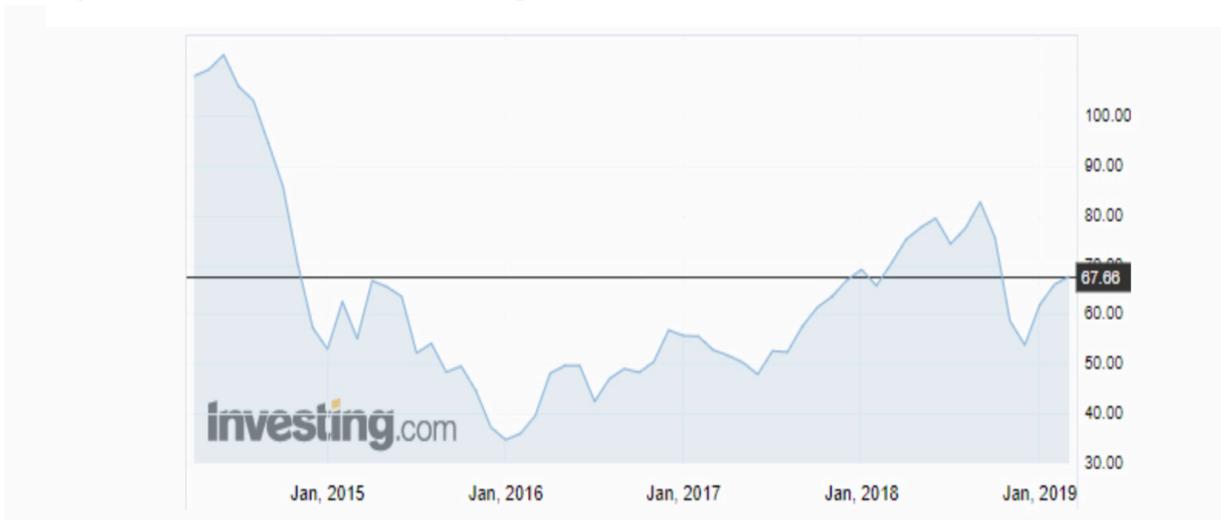
Figure 12 above delineates the world's present significant net exporters of oil. As can be seen from the diagram, those nations incorporate Saudi Arabia (19%), the Russian Federation (12%), Canada (7%), Iran (7%), UAE (6%), Kuwait (5%), and so on the best 10 worldwide net exporters of oil represent 73% of worldwide net oil sends out in total. Simultaneously, it significant the shortfall of the US on the outline. This is because of the way that, in spite of being a significant worldwide oil maker, the US had been having a boycott of all oil sends out until 2016, when it was at long last lifted, which previously supported the improvement of the American oil area, and all the more by and large, gave a significant stimulus to the US public economy for its ensuing development. (Blas and Hurst 2016).

Presently, it merits concentrating on another principal part of the worldwide oil market, and to be specific the latest things in the market regarding the costs for oil and their latent capacity further developments which certainly influence the chances for significant oil exporters to guarantee their financial turn of events and development.

To give figures with respect to the elements of oil costs in 2019, it is worth initially noticing that there are three primary benchmark raw petroleum grade utilized in the global oil valuing system: Brent, WTI, and

Dubai/Oman. Be that as it may, the most generally acknowledged benchmark oil grade for following any oil value elements in the worldwide market is Brent. In this way, our examination will be founded on the investigation of value development of Brent

Figure 13: Brent Oil Price Dynamics per Barrel in 2014-2019



Source: Investing 2019

The graph above outlines the elements of Brent oil costs in 2014-2019. During this period, the most exorbitant cost for a barrel of Brent was seen in June 2014 and added up to USD 112.36 per barrel. Nonetheless, as the figure delineates, since the second 50% of 2014, oil costs had begun dropping pointedly, and just a slight improvement (anyway still far lower when contrasted with the earlier years) was seen in 2016.

Figure 14: Brent Oil Price Dynamics per Barrel in December 2018 -March 2019



Be that as it may, nearer to the year-end of 2018, Brent oil costs started to rise once more. Consequently, while the cost for Brent had added up to USD 61.55 per barrel on December 14, 2018, it previously raised to USD 67.66 by March 14, 2019 (the last exchanging day as of the date this paper is composed), just somewhat dropped to USD 50.47 by December 26, 2018.

In this way, generally, we can see that the elements of the cost for Brent unrefined petroleum vary a lot and are not steady. This accentuates the need to figure the costs for oil in the following year, as oil is an essential asset for all nations influencing the compelling exercises of the specialists, corporate and private area, and furthermore to a great extent preconditioning the level of states' public safety all in all.

Above all else, it ought to be noted here that from the years 2017 and 2018, the Organization of the Petroleum Exporting Countries (OPEC) including part states which are among the worldwide pioneers in oil creation settled upon the foundation of a cap for oil creation in 2017 (the principal such advance inside the most recent 8 years). The cap esteem is set to be 44.3 million barrels every day. As per specialists, this progression may predefine the development of oil costs in 2018-2019. (Bloomberg 2019).

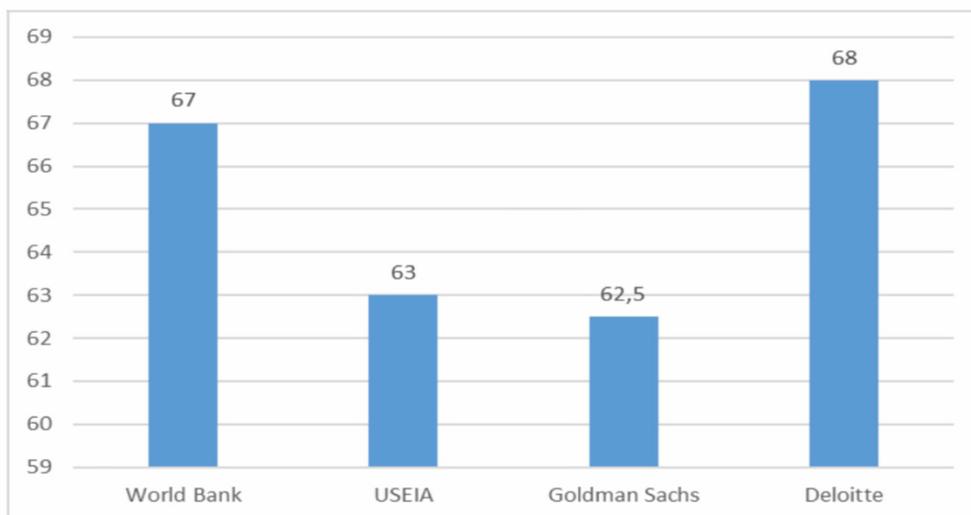
The World Bank's underlying figure at Brent oil costs in 2019-2020 had expressed a normal cost of USD 67 for every barrel. The world Bank expects oil costs to average USD 67 for every barrel this year that is \$ 2 less one year from now than gauge last June, the Bank said in its Global monetary Outlook report, in which it additionally updated its development conjectures against the foundation of the "obscuring of the sky" for the world economy. (Source for Oil & Energy News 2019).

The US Energy Information Administration's (autonomous body inside the design of the Federal Statistical System) estimate distributed on March 12, 2019, states that the cost for Brent in 2019 will add up to USD 63 for every barrel by and large. For example, slight dropped is required when contrasted with 2018. In 2020, their conjecture again drops to USD 62 for every barrel all things considered. When contrasting this gauge and the one given by the World Bank, it tends to be expressed that it is 5.97% lower. (US Energy Information Administration 2019).

As per Goldman Sachs (one of the world's significant speculation organizations), the costs for Brent oil are required to add up to roughly USD 62.5 per barrel in 2019. That is 10% lower than their past estimate of USD 70 for every barrel. The oil market will be offset with lower negligible expenses in 2019, given more significant levels of stores at the start of the year, a consistent blow in shale creation development in 2018 during minor expense expansion, more fragile than recently expected, and assumptions for request development and an increment in ease creation limit. This estimate is 0.8 % lower when contrasted with the USEIA or 6.7% lower when contrasted with the World Bank. (Consumer News and Business Channel 2019).

Deloitte's (one of the world's significant review organizations and suppliers of expert administrations) conjecture the greatest cost for Brent oil in 2019: Brent oil price. (Deloitte 2018)

Figure 15: Brent Oil Price in USD per Barrel Forecasts for 2019



Source: Source for Oil & Energy News 2019, US Energy Information Administration 201, Consumer News and Business Channel 2019, Deloitte 2019

Figure 15 above shows the synopsis of significant Brent oil value gauges for 2019. As can be seen from the outline, the gauges given by the US Energy Information Administration,

Goldman Sachs, are somewhat equivalent, while Deloitte's figure regulates a more exorbitant cost for Brent raw petroleum grade per barrel in 2019.

In total, in view of the above gauges and the data portrayed in this paper, it very well may be expressed, that Brent oil costs in average are relied upon to residual lower in 2019, with perhaps just the smallest upward development conceivable, which is somewhat immaterial.

No recuperation in oil cost ought not out of the ordinary for 2019, and the circumstance with oil costs ought to be required to remain generally equivalent to in 2018.

Presently, having examined the most noticeable patterns and elements in the worldwide oil market, we may underline again the essential significance of oil as an energy asset. Considering that reality, in the following section of the theory, energy security will be given specific consideration.

3.10 OPEC

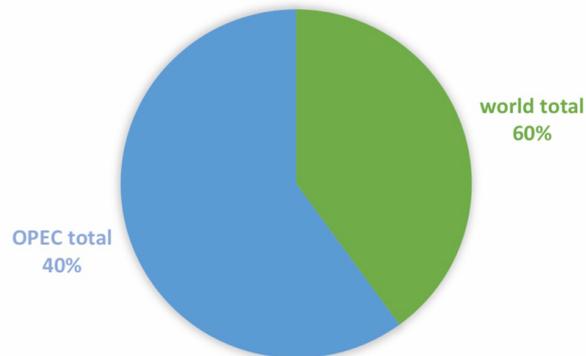
Association of Petroleum Exporting Countries is a worldwide association, that arranges part oil strategies and gives a specialized and monetary guide to its part states. OPEC was made in 1960 at the Baghdad Conference. The Founding individuals were Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. These individuals were subsequently joined by 10 other part states: Angola (2007), Algeria (1969), Ecuador (1973), Equatorial Guinea (2017), Gabon (1975), Indonesia (1962) Libya (1962), Nigeria (1971), Qatar (1961), and UAE (1967). Indonesia suspended its enrollment in 2009, reactivated it in January 2016, yet suspended it indeed in November 2016. In December Ecuador halted its enrollment, yet in October 2017 chose to rejoin. As a result of differences in term of extraction limit, Gabon ended in January 1995 ³⁷and went into Organization indeed in July 2016. These days OPEC incorporates 14-part states. OPEC central command was in Geneva however was moved to Vienna.

3.10.1 OPEC Policies

OPEC extricates 40% and controls practically 50% of the world's oil trades. OPEC oil holds measured ~80% of the worldwide demonstrated oil saves (1,216.78 billion barrels), the most measures of OPEC saves are situated in the Middle East (65.6% of the OPEC all out). OPEC goes about as a cartel, dealing with the oil supply to set the oil cost on the worldwide market. OPEC is attempting to evade the variances, that may impact economies of delivering and burning-through nations. Part states set standards for the measure of unrefined petroleum removed in a specific period and this is a way what OPEC means for the worldwide oil market and the cost of oil. In light of a legitimate concern for OPEC, as a cartel is to keep the oil costs as high as it is conceivable while holding its offer on the world market. It occurs, that some part states break the arrangements and concentrate more than they expected to remove as per the quantities, for this situation, Saudi Arabia, as the most impressive part, which gives almost 30% of total. over-limit extraction, Saudi Arabia diminishes its creation to keep the cost at the attractive level. In 1983 and 1984 the oil extraction was decreased, notwithstanding the way that creation limit was multiple times higher. The improvement of advancing innovations has affected the worldwide cost of unrefined petroleum and has reduced the OPEC's force on the world business sectors in result the worldwide oil extraction has expanded, and costs fundamentally have dropped, what left OPEC in a sensitive circumstance. In June 2016, to push the greater expense makers out of the market and recover the worldwide piece of the pie, OPEC chose to keep the creation at the significant levels and henceforth low costs.

Figure 16: OPEC Totally Crude Oil Production

CRUDE OIL PRODUCTION



Source: OPEC

3.10.2 OPEC Basket Price

OPEC crate or OPEC Reference Basket (ORB) is a weighted normal spot costs for fundamental evaluations of oil, delivered by individuals, including Algerian Saharan Blend, Angolan Girassol, Ecuadorian Oriente, Equatorial Guinea's Zafiro, Rabi Light from Gabon, Iran Heavy (Islamic Republic of Iran), Iraqi Basra Light, Kuwait Export (Kuwait), Libyan Es Sider, Nigerian Bonny Light, Qatar Marine (Qatar), Arab Light from Saudi Arabia, UAE's. math normal of seven rough oils: Algerian Saharan Blend, Indonesian Minas, Nigerian Bonny Light, Saudi Arab Light, Dubai Fateh, Venezuelan Tia Juana Light, and Mexican Isthmus (which is non-OPEC raw petroleum type) In 2005 OPEC individuals chose to change the cost computing technique and the bin arrangement also. In 2016 OPEC individuals presented the change, which should better address the oil quality.

3.11 World Oil Supply and Demand

Enormous number of components influence oil supply. Previously existing volume of oil in various geographic districts around the planet would be one.

Two of primary factor of oil supply would be portrayed by one being current stock and yield and other is future inventory and hold. Current stock is being diminished as most oil association are wanting to diminish the creation of oil of their individuals to impact the

costs of oil and locate a superior rate for this ware. Choices like this will prompt worldwide diminishing of oil supply. The association of interest and supply decides the cost of all items on the market. The value, which is classified "balance cost". An expansion popular prompts an increment in a cost and supply of an item, and an increment in stock prompts decline in a cost and interest for an item. Eventually, all vacillations of organic market led to balance. Demand relies upon the few elements like buyer inclinations, pay, notice and so forth Over the long haul, an interest for unrefined petroleum relies upon the worldwide monetary development, specifically on the development in assembling, transportation, power, and delivery areas. A decrease on the planet economy will lessen the oil interest. Filling in the complete interest of unrefined petroleum gives the financial development of nations which are the greatest oil buyers: China, USA, Russia, India, Brazil and so on from the finish of 2015 to the furthest limit of 2016 the raw petroleum request rose from 95.49 million barrels/day to 96.95 million barrels/day. The most elevated part in term of supply plays the OPEC association, whose individuals produce about 40% of worldwide unrefined petroleum creation. Toward the finish of 2016, OPEC oil supply was 33.43 million barrels/day, yet toward the start of 2017, it tumbled to 32.07 million barrels/day because of lower yield in Saudi Arabia, Angola, and Venezuela. Worldwide inventory additionally went down from 98.22 million barrels/day toward the finish of 2016 to 96.62 million barrels/day at the asking of 2017. To make a trade of products and enterprises, the purchasers and venders should concede to the benchmark oil price was at the highest level in more the 2 years in December 2016.

Figure 17: World Oil Demand

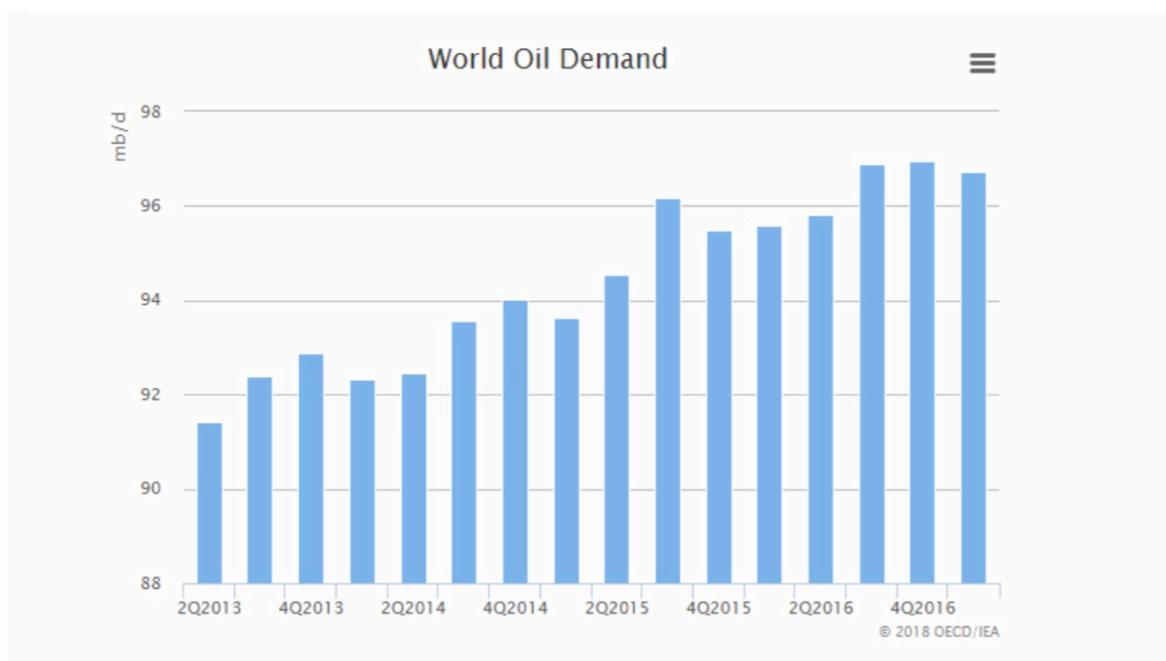
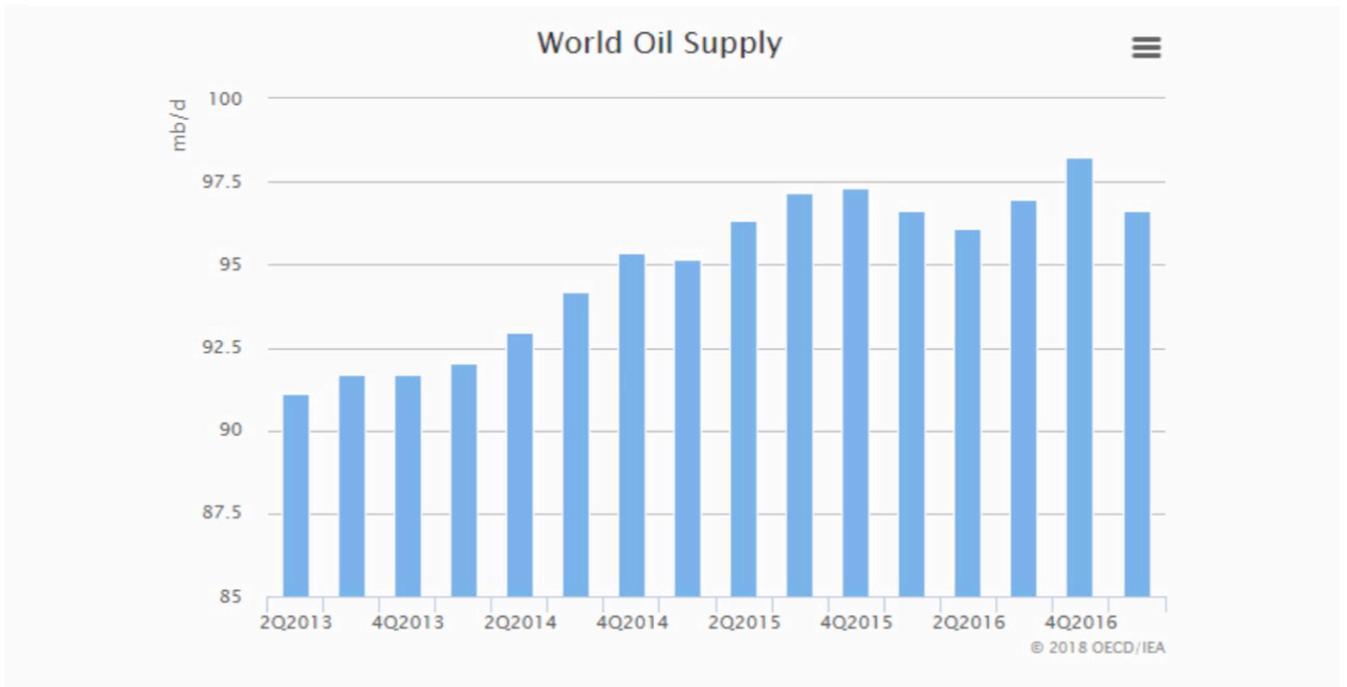


Figure 18: World Oil Supply



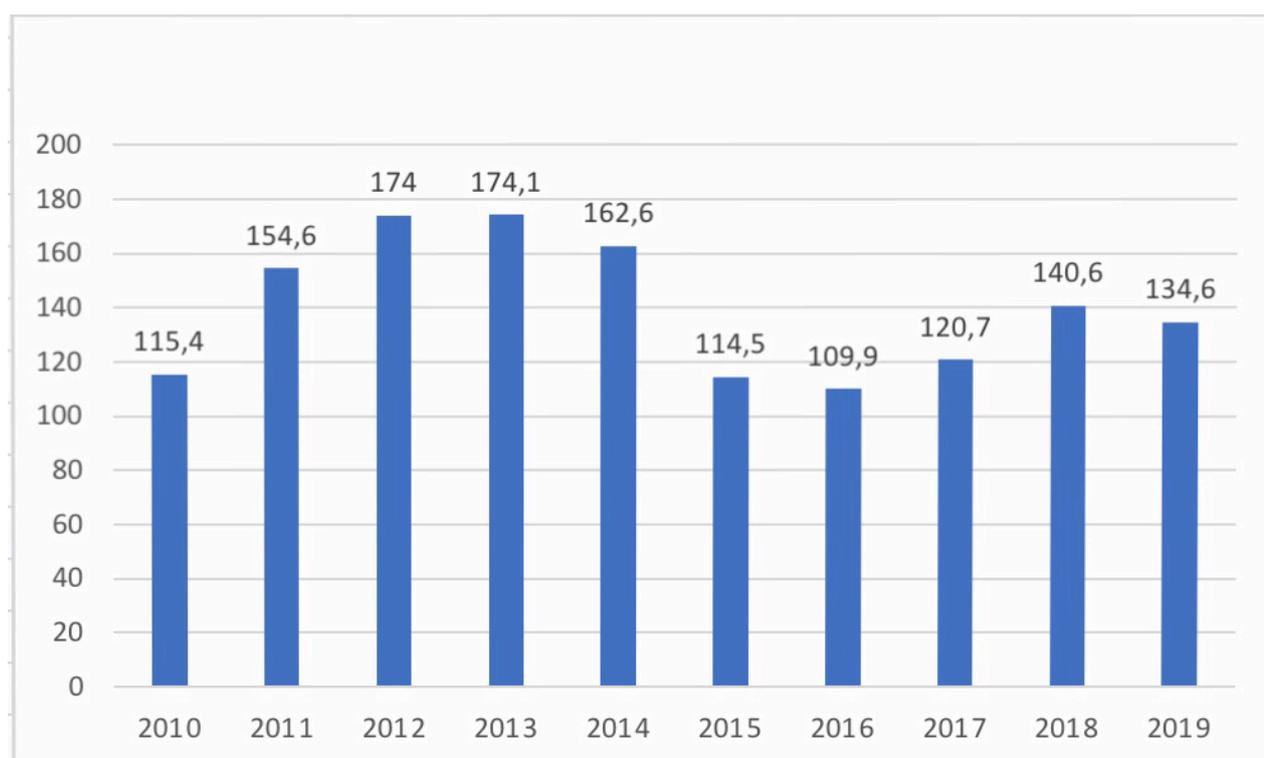
Practical Part

4 Overview of Kuwait's Economic Development

Kuwait is a model example of an oil-based economy. The oil sector contributes over one-third of GDP and over 90 per cent of exports. Economic diversification for Kuwait means reducing the heavy dependency on the oil sector. It also implicitly includes reducing the direct role of the public sector while increasing private sector activities and hence the private sector's size and role in the economy.

4.1 Dynamics of Kuwait's GDP (Nominal)

Figure 19: Dynamics of Kuwait GDP (Nominal) 2010-2019, in Current USD Billion



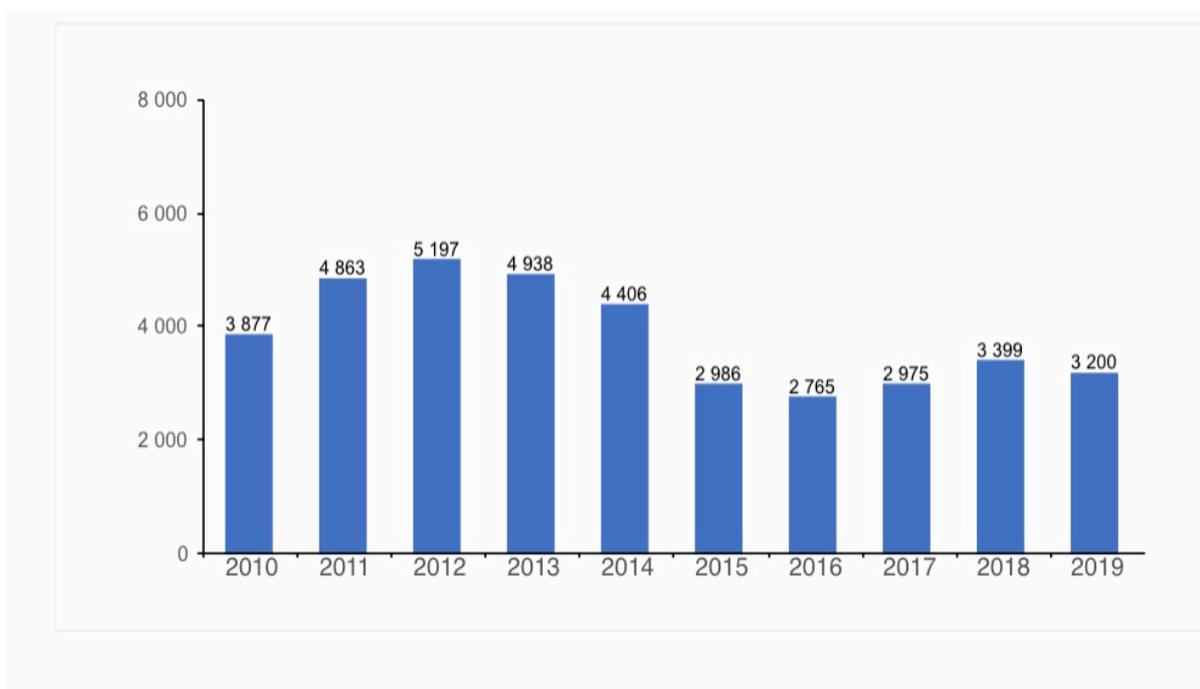
Source: World Bank 2016

As can be seen from Figure 19 above, Kuwait total national output has shown negative elements recently, the country's GDP had the developing from the 2010-2019,

from 2019 dropped down. decline in the degree of Kuwait GDP in 2010 made up compared to previous year. even in 2012, after the beginning of the Arab spring, the country's GDP had not been dependent certain years particularly intense contracting. Which it has negative affect in the country.

4.1.1 Dynamics of Kuwait's GDP (Nominal) Per Capita

Figure 20: Dynamics of Kuwait GDP (Nominal) per Capita in 2010-2019, in Current USD

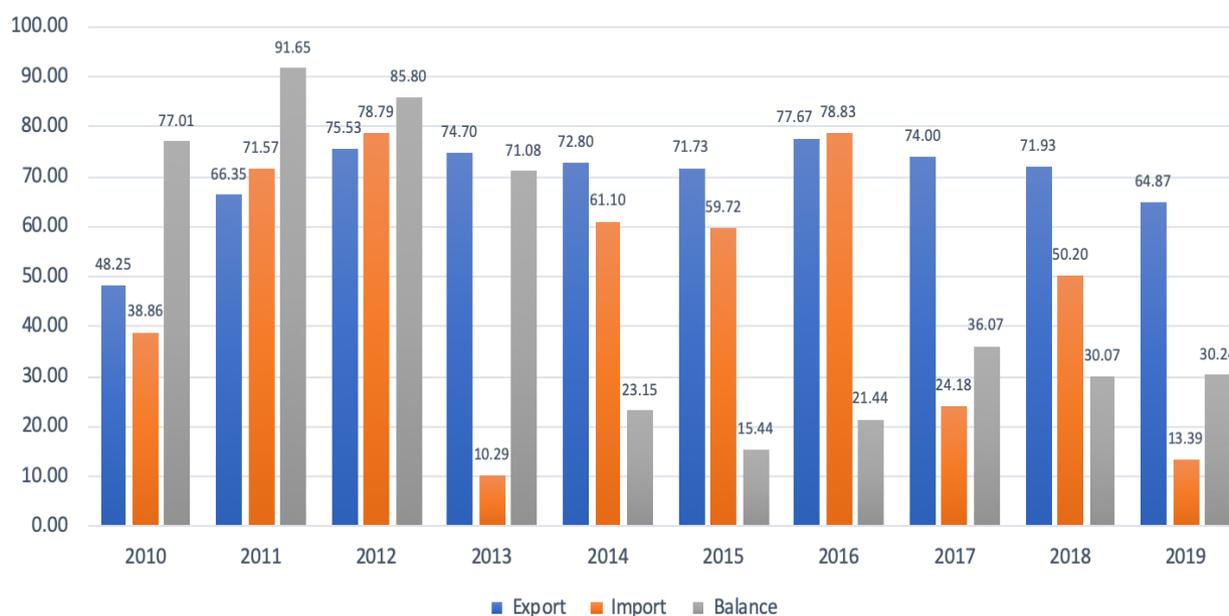


Source: World Bank 2016

As can be seen from Figure 20 above, Kuwait GDP per capital output has shown negative elements recently. the country's GDP had been developing from the year 2010-2019, from that point strongly dropped in 2019. Kuwait GDP per capita went down to USD 3,200, and hence was lower compared to the previous years. This pattern is negative for the country, as it implies that Kuwait population make less, and its purchasing power will in general continue to fall, which is negative for both the Kuwait national economy and the population general expectations for living standards.

4.1.2 Dynamics of Kuwait's Foreign Trade

Figure 21: Dynamics of Kuwait Foreign Trade in 2010-2019, in Current USD Billion

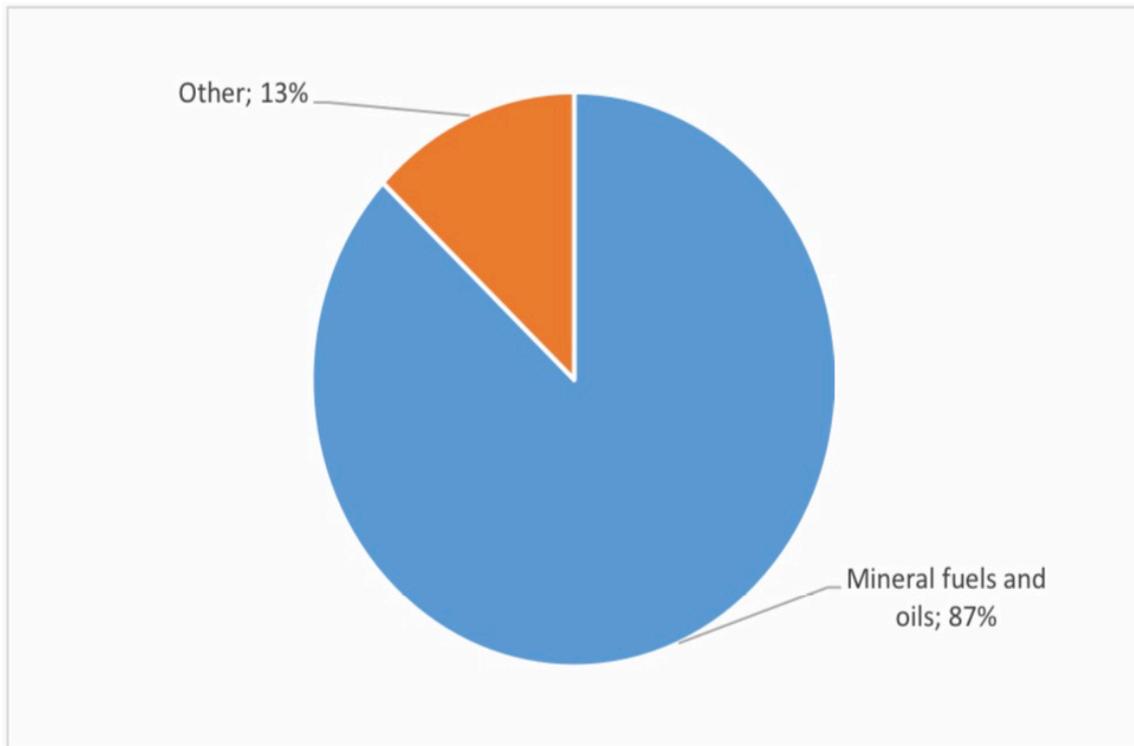


Source: World Bank 2016

Figure above 21 depicts the most recent dynamics of Kuwait key foreign trade indicators. As can be seen from the chart, the country's exports have been dropping down, same with imports have been down, to the contrary. Thus, in 2019 Kuwait total exports amounted to USD 64,87 billion, which was almost 10% lower compared to the previous year. Also, this figure is the lowest throughout the entire period investigated. At the same time, Kuwait imports amounted to USD 13.39 billion in 2019, and thus were 39% lowest compared to 2018, and 3.39% higher compared to 2013. In the long run, those two trends of tendencies led to a major shrinkage of Kuwait balance of foreign trade, which reached its record low value for the recent years, and amounted to only USD 30.24 billion. This situation means that Kuwait net proceeds from foreign trade, they might even become negative in the near future.

4.1.3 Kuwait Trades

Figure 22: Kuwait's Trade



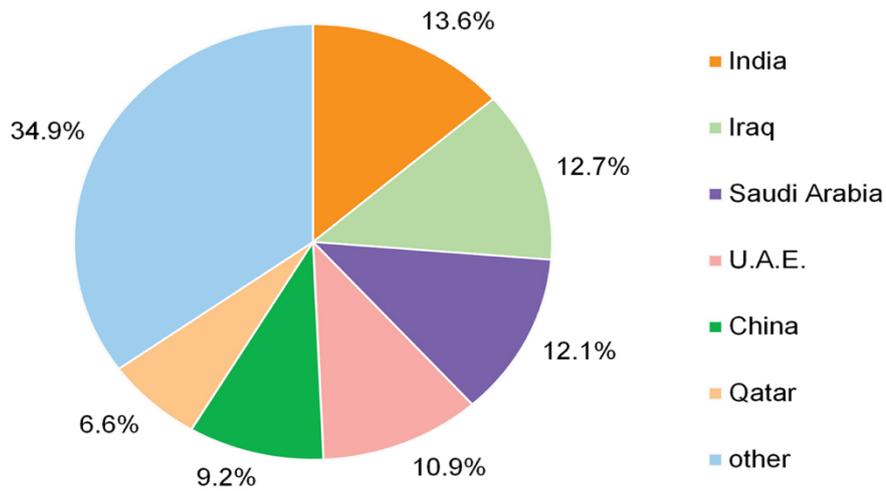
Source: International Trade Center 2016

Figure above uncovers the design of Kuwait trades. As can be seen from the diagram, mineral-fuels, total export is of mineral fuels is 87%. This implies that Kuwait is reliant on its energy sector, as it assumes a fundamental part in Kuwait monetary advancement through. Likewise, this finding further features the significance of this analysis paper, it shows the need to the connection between's worldwide oil costs and Kuwait total national output.

4.1.4 Kuwait's Oil Export

Figure 23: Structure of Kuwait Exports by Partner Countries, as of 2017

Kuwait major export destinations (2017)*



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*Excludes petroleum.

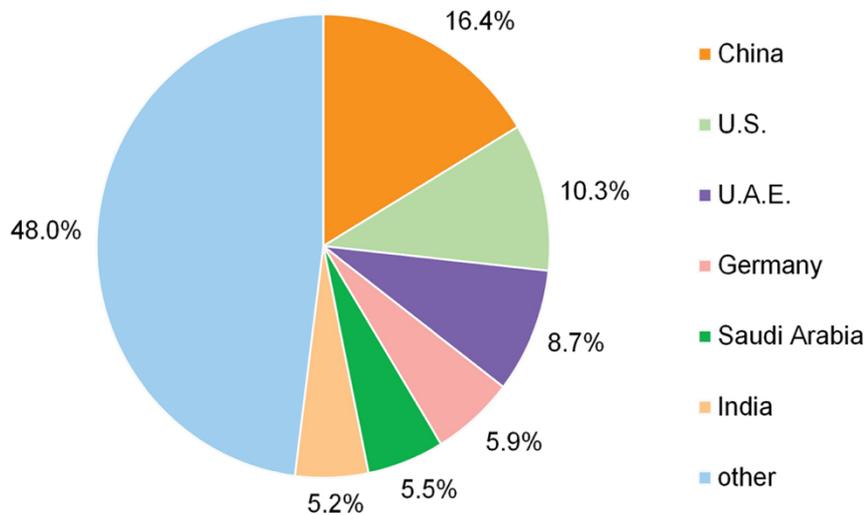
Source: *International Trade Center 2017*

As Figure above illustrates, Kuwait top export destinations the exports as of India (13.6%), Iraq, Saudi Arabia. The figure shows the export of oil mostly to with Asia and the Middle East become the most important markets.

Kuwait's Oil Import

Figure 24: Kuwait's Oil Import

Kuwait major import sources (2017)



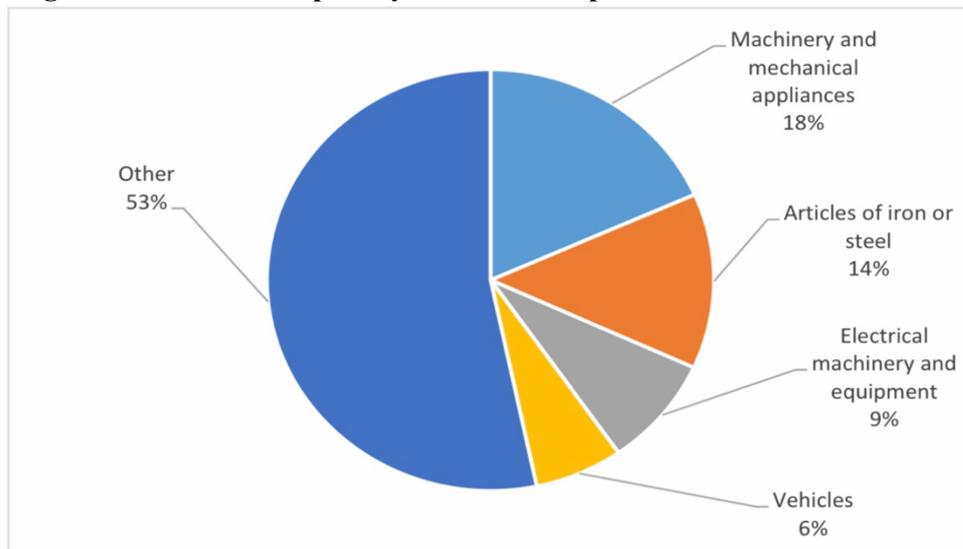
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Source: *International Trade Center 2017*

Figure above the structure of Kuwait imports by the main countries. As can be seen from the chart, those include China (16.4%), U.S (10.3%), the U.A.E, Germany, and Saudi Arabia. In this context, it is worth noting Kuwait dependence on China.

4.1.5 Kuwait's Import by Product Groups

Figure 25: Kuwait's Import by Product Groups



Source: International Trade Center 2016

While Kuwait Mainly exports raw materials, and oil, the country's imports are mostly constituted machinery, as shows Figure above. This shows Kuwait import technological products. the country's dependence on raw materials.

4.1.6 Dynamics of Kuwait's Annual Inflation (CPI) and the Unemployment Rate

Figure 26: Dynamics of Kuwait's Annual Inflation (CPI) and the Unemployment Rate



Source: World Bank 2016

Figure above depicts dynamics of Kuwait at the period between 2010 and 2019 in terms of the country's inflation rate (CPI), and the total rate of unemployment among the aggregate labour force. As can be seen from the chart, Kuwait total unemployment has been steadily increasing in recent years. The contraction rate of unemployment in Kuwait negative on the country, as it means there is not enough opportunities for the population, as for the inflation rate, it has remained not stable in recent years. Thus, in 2019, inflation rise by 1.5% percentage points. Overall, the figures of inflation varied from 1.09% to 4.83% in 2010-2019.

4.2 Development of Linear Regression Analysis Model

The main aim of this research paper is to analysis whether there is any important correlation between international oil prices and the gross domestic product of Kuwait. linear regression analysis will be used, multiple linear regressions. The equation of multiple linear regression is as follows:

We will have two sets of variables with the framework of the multiple regression:

$$\mathbf{Y = b_0 + b_1X_1 + b_2X_2}$$

1. Independent variables:

The International oil price (X1 variable). Is the first independent variable in our multiple regression analysis. This variable will show us how the prices can affect the GDP in Kuwait, and this demonstrate if it can be negatively or positively.

Kuwaiti to United States dollar exchange rate (X2 variable). This is the second independent variable which will be considered within our multiple regression analysis. As

Kuwait is much dependent on exports, any exchange rate fluctuations may be important for shaping the actual figures of Kuwait GDP.

2. Dependent Variables:

Dependent variable (Y variable): Kuwait GDP. To this research, determine Kuwait's GDP (nominal) in current U.S dollars. This indicator has been chosen as the dependent variable as it describes Kuwait's actual economic achievements. Moreover, Kuwait's GDP has dropped recently dropped prices for oil. Therefore, selecting both variables for our multiple regression analysis should allow reveal the correlation between them.

The period to be analysed within the framework of this linear regression analysis is the years 2010-2019 for which explicit data are available on all the three variables outlined above.

We have to analysis Kuwait dynamics in terms of GDP. now focus more in detail on the two independent variables. As Table 1 show, oil prices have been demonstrating unstable growth dynamics in previous years. However, at this point, it is worth additionally noting that similar change oil prices did not get affect in the years 2014-2015, Influenced by the events of the Arab Spring and the developments associated with it, prices began to decline at the end of 2014, to continue declining until it reached at the end of 2015, then increased in early 2016. Those fluctuations should help us identify the correlation between Kuwait GDP and oil prices more easily.

At the same time, as regards the market exchange rate between the KWD and the US dollar, the Table show clearly that the KWD had remained more expensive compared to the US dollar up until 2011 it had even been growing to the US dollar. However, in 2019, the KWD to USD exchange rate dropped.

Table 1: Dynamics of Multiple Regression Variables in 2010-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GDP, in USD billion	115,4	154,6	174	174,1	162,6	114,5	109,9	120,7	140,6	134,6
Oil prices, in USD per bl	90,01	104,23	101,19	105,48	60,6	36,57	52,62	61,19	53,96	63,53
KWD to USD	3,543	4,603	3,554	3,538	3,423	3,296	3,273	3,308	3,287	3,292

Now, considering the above-mentioned data, a regression analysis using the Microsoft Excel software built-in regression tool. The summary output of the regression analysis is presented below:

Table 2: Summary Output for Multiple Regression Using the Developed Model

Regression statistics								
Multiple R	0.650							
R square	0.422							
Adjusted R square	0.257							
Standard Error	21.507							
Observation	10							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	2	2368.295	1184.147	2.560	0.146			
Residual	7	3237.765	462.538					
Total	9	5606.060						
	Coefficients	Standard Error	T Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	25.204	424.388	0.059	0.954	-978.314	1028.721	-978.314	1028.721
X Variable 1	0.538	0.751	0.716	0.497	-1.238	2.314	-1.238	2.314
X Variable 2	22.177	139.059	0.159	0.878	-306.646	315.000	-306.646	351.000

Source: Own Calculations

This mean the information above mean should be noted that the R-squared value is positive. This means that the developed model's predictive capacity is greater to 0. Therefore, we can see the changes in Kuwait gross domestic product using the two sets of independent variables. Therefore, there is no sense in interpreting the numerical information above, as the practical value of those results is more than zero.

We can unite two sets of independent variables, one of which may show well the variations in the dependent variable, while the other cannot. Therefore, let us now analysis separate multiple regressions for X1 variable and Y, and for X2 variable and Y and

consider simple linear regression models. This is the equations of simple linear regressions:

$$Y = a + bX_1$$

$$Y = a + bX_2$$

Table 3: Summary Output for Regression Using Only X1 Variable Oil Prices

Source: Own Calculations

Regression statistics								
Multiple R	0.648							
R square	0.420							
Adjusted R square	0.348							
Standard Error	20.154							
Observation	10							
ANOVA								
	dF	SS	MS	F	Significance F			
Regression	1	2356.531	2356.531	5.802	0.04			
Residual	8	3249.529	406.191					
Total	9	5606.060						
	Coefficients	Standard Error	T Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	92.794	20.648	4.494	0.002	45.180	140.409	45.180	140.409
X Variable 1	0.649	0.269	2.409	0.043	0.028	1.270	0.028	1.270

Source: Own Calculations

Table above the results of regression analysis calculated with only one independent variable, what's more, specifically oil prices. As can be seen from the table, for this adjusted, the changed R-squared is positive also., it very well may be expressed that the adjustments in global oil costs in the time frame from 2010 to 2019 can work well for

portraying Kuwait financial outcomes regarding the nation's GDP. the variable is not appropriate for our exploration. Be that as it may, how about we attempt to run our relapse investigation utilizing just the second autonomous variable (KWD to USD exchange rate).

Table 4: Summary Output for Regression Using Only X2 Variable (Kuwaiti to USD Excarnate)

Regression statistics								
Multiple R	0.617							
R square	0.380							
Adjusted R square	0.303							
Standard Error	20.842							
Observation	10							
ANOVA								
	dF	SS	MS	F	Significance F			
Regression	1	2131.04	2131.04	4.906	0.058			
Residual	8	3475.02	434.38					
Total	9	5606.06						
	Coefficients	Standard Error	T Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-249.496	176.018	-1.417	0.194	-655.393	156.402	-655.393	156.402
X Variable 1	114.194	51.556	2.215	0.058	-4.695	233.083	-4.695	233.083

Source: Own Calculations

In the table above the independent variable shows the change in KWD to USD as the adjusted R squared value for analysis with independent variable is positive as well.

4.3 Impact of Oil Prices on the Economy of Kuwait

The findings obtained and described in the previous chapter allow us stating that there is relationship between worldwide oil costs and the GDP figure accomplished by Kuwait. Besides, we have demonstrated that the whole model which was created as a reason for this analysis is feasible or right, as it does not give any genuinely huge chance to portray changes in Kuwait GDP through changes in either global oil costs or the Kuwait to United States dollar exchange rate.

This allows us drawing a conclusion that there is indeed direct correlation between oil prices and Kuwait economic growth. Also, on the off chance that we return to previous table the past the elements of the two autonomous factors and the one ward variable picked as the reason for our different relapse model, we can see that even outwardly, there has not been any immediate relationship as of late. Along these lines, during the years 2014-2015 (Arab spring development), Kuwait all out GDP figures kept developing, the variances which happened with Kuwait GDP were clearly in opposition to the course of worldwide oil prices development. Also, the Kuwait kept developing notwithstanding any progressions in both the nation's GDP and global costs.

What do the above discoveries allow us stating with regards to this research. All things considered, most importantly, the model is for sure genuinely unviable: we can see from the information that there were nonconcurrent developments of oil costs and Kuwait GDP in the examined period. However, this implies that there is direct correlation. In any case, should not something be said about any roundabout connection, As has been expressed before in this examination, Kuwait National economy is largely dependent on the oil sector due to its large share in the country's exports. Moreover, according to expert estimates, the recent positive developments in terms of Kuwait GDP may be well linked with oil prices.

Based on the above information, and question arises on how oil prices and Kuwait financial development, for example GDP, can be connected in a roundabout way. The past discoveries of this proposal permit expressing that the connecting component might be Kuwait sends out, where oil represents 87% of the all-out traded esteem. Along these lines,

we should research assumption by running a regression analysis with one independent variable, and in particular Kuwait total exports.

$$Y = a + bX^3$$

Where:

Y- dependent variable (Kuwait GDP)

X3- independent variable (Kuwait's exports)

Dynamics of the chose multiple regression variables in 2010-2019.

Table 5: Dynamics of Multiple Regression Variables in 2010-2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GDP, in USD billion.	115,4	154,6	174	174,1	162,6	114,5	109,9	120,7	140,6	134,6
Export in USD billion	48,25	66,35	75,33	74,7	72,8	71,73	77,67	74,1	71,93	64,87

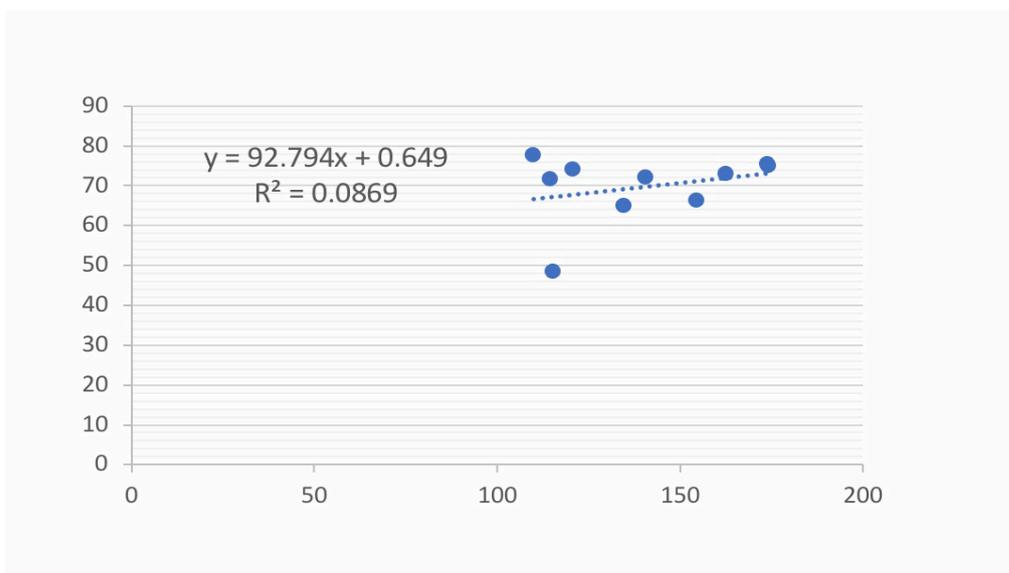
Source: Own Calculations

Table 6: Summary Output for Regression Using X3 Variable (Aggregate Exports)

Regression statistics								
Multiple R	0.295							
R square	0.087							
Adjusted R square	-0.027							
Standard Error	25.296							
Observation	10							
ANOVA								
	dF	SS	MS	F	Significance F			
Regression	1	486.898	486.898	0.761	0.408			
Residual	8	5119.162	639.895					
Total	9	5606.060						
Coefficients								
	Coefficients	Standard Error	T Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	79.815	69.572	1.147	0.284	-80.620	240.249	-80.620	240.249
X Variable 1	0.864	0.991	0.872	0.408	-1.420	3.149	-1.420	3.149

Source: Own Calculations

Figure 27: Summary Output for Regression Using X3 Variable (Aggregate Exports)



Source: Own Calculations

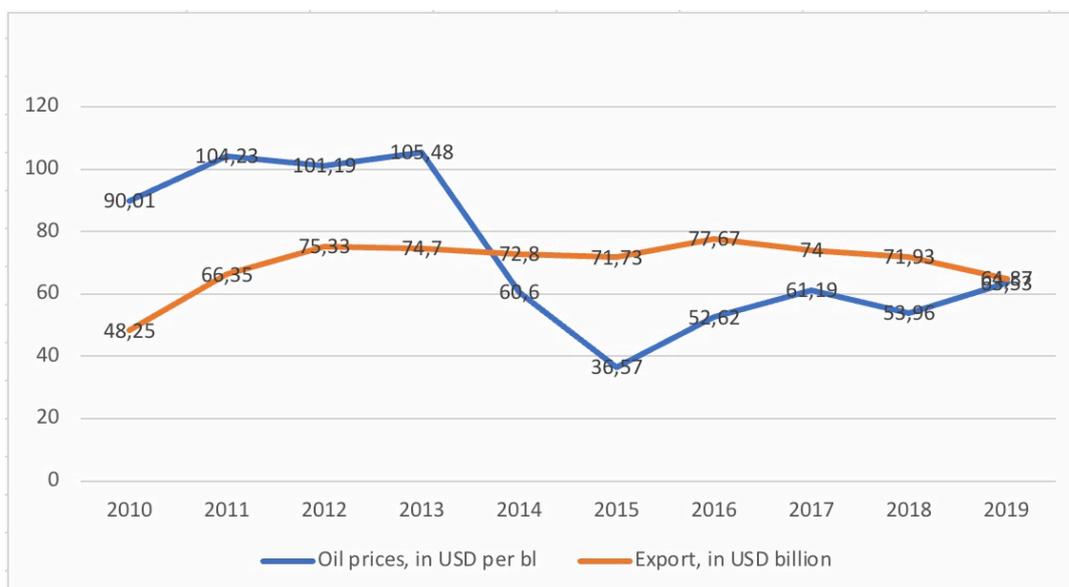
As can be seen from Table 6 and Figure above, the R-squared value for the analysis with Kuwait exports as the independent variable and Kuwait GDP as the dependent variable is to 0.087, while the adjusted R-squared value makes up -0.027. This allows us stating that changes in the total value of X variable (Kuwait total exports) describe effectively changes of Y variable (Kuwait GDP). however, there is no relationship between the two variables, and the results tell that through this regression analysis in details with the aim to understand.

As it shown in the table, the p-value for X variable is considerably lower than 0.05. This allows us stating that the null hypothesis can be rejected in this case. In other words, the low p-value means that the results of our regression analysis are indeed meaningful and statistically significant. This is further confirmed by the low value of the F-significance parameter, which illustrates that the regression model chosen is statistically significant.

The multiple R value exceeds 0.2 and is quite low meaning that there is a weak relationship between the two variables.

Therefore, overall, it can be stated that, in contrast to oil prices and the Kuwait to USD exchange rate, the values of Kuwait exports can be indeed used effectively for the purpose of describing the changes in Kuwait GDP. Thus, probably, it is worth investigating more in detail how Kuwait exports are affected by international oil prices to understand whether the dropping oil prices can lead to the country's dropping export.

Figure 28: Illustration of the Dynamics of Kuwait Exports and International Oil Prices



Source: Previous findings of the research

In the chart above, the trends of international oil prices and Kuwait exports have been very comparable in recent years. The only drastic difference that we can see on the chart is the year 2019 has been dropping down, i.e. Despite the dropping oil prices, this year's exports didn't compare grew compare to previous Years in Kuwait So, it is worth understanding while this occurred. Previous Years, Kuwait's oil exports were affected by pressure on the country's commitment to the agreement of OPEC.

Significant oil exporters were yet ready to acquire critical benefits to the accessibility of huge scope future agreements for oil supplies went into in earlier years at greater costs. trade was performed dependent on before prospects contracts, for example the cost for oil under those.

contracts were fixed at more higher levels, which added to Kuwait exceptional outcomes as Result of the exports. Regardless of the dropping adequacy of oil deals, Kuwait had the option to satisfy an extraordinary number of monetarily compelling arrangements, raising fundamentally the general volume of oil trades, and furthermore their financial value despite the diminished price of oil per barrel.

Thus, we can clarify this discrepancy by the facts portrayed previously. Consequently, it very well may be expressed that Kuwait genuine GDP esteems cannot be seen completely through the estimation of Kuwait trades, similarly as the last cannot be seen distinctly through oil costs. Indeed, even in the states of dropping oil costs, Kuwait has freedoms to guarantee compelling fares and even GDP development. Thusly, the right now dropping oil costs do not mean Kuwait extreme absence of freedoms to improve the circumstance if the costs for oil are not reestablished.

Considering the above realities, in the following part of the proposition, we will forecast for the future of the Kuwait economy, to be specific with regards to the energy sector.

5 Results and Discussion

The main finding that has been derived throughout the course of this research in line with the topic and aim of the thesis is the fact that we have identified any direct correlation between the shifts in oil prices and shifts in Kuwait gross domestic product for the years 2010-2019. It should be noted that this finding does not mean that there is no interconnection at all between the two variables. A major point which we have revealed is the fact that part of Kuwait oil contracts is executed on futures terms. In between years 2013-2019, Kuwait had major futures contracts with foreign importers of oil, while the actual market conjuncture changed, and the prices for oil dropped. As a result, as we observed on the statistical data provided in this research, Kuwait GDP was growing despite the positive tendencies in the international oil market.

This fact significantly hindered the effectiveness of the model developed for the regression analysis investigating Kuwait GDP in the interlinking with its oil prices and the Kuwaiti to USD exchange rate. As such futures contracts Kuwait in 2016, the country's GDP dropped sharply together with a major recession in the global oil market. Moreover, according to expert estimates which we have provided in this thesis, the recent shrinkage of Kuwait GDP is linked tightly with the dropping prices for oil in the international market.

However, we have conducted another regression analysis, taking Kuwait exports as the only independent variable and the country's GDP as the dependent variable. The results of regression analysis under the new model proved that it is statistically significant and has a high predictive value. Therefore, we drew a conclusion that there is direct interconnection between Kuwait gross domestic product and the country's total exports. At the same time, we cannot neglect that the dropping prices for oil affect adversely the country's exports which consist of oil to 87%.

Based on the previous findings of this thesis, I believe that this is due to the aforesaid issues with futures contracts. Exports proceeds are calculated in accounting for the particular year, and do not include the state's possible future income from foreign trade. As a result, when comparing export proceeds and GDP within the same time span, we get justified results. To the contrary, futures contracts with oil prices in fact make a shift in the

application of prices. While the actual prices for oil maybe low, the previous ones which are stipulated in oil contracts may be high. This situation existed in 2013, but still exist now. As a result, regression analysis shows that there is no direct correlation between international oil prices and Kuwait GDP. however, we have identified that there is indeed an interconnection between the international oil market conjuncture and the current economic situation in Kuwait and this is the most valuable finding of this paper.

Based on this, I believe that the subsequent growth prospects of Kuwait are rather much limited. At least when speaking of the short-term perspective, we can be confident that no major surge in oil prices should occur. The plummeting prices in the oil market have been a predominant trend for 2 years, and therefore it can be stated definitely that Kuwait does not have futures contracts which could temporarily improve the situation. Therefore, at least when speaking of the next few years, we should not expect Kuwait GDP returning to its previous figures.

As for the recommendations which might be provided to Kuwait in terms of its economy in the context of the international oil market conjuncture, in my opinion, the main advice which should be implemented by the Kuwait authorities is the need to diversify the local economy. The recent development of the situation proves that the excessive dependence on oil exports is very negative for Kuwait.

Any major negative tendencies in the global oil market harm the country's economy greatly, and Kuwait cannot resolve those issues, as its economy does not have any opportunities to get boosted through other sectors. For the best results in its economic achievements, Kuwait should focus on attracting foreign investors to provide financing to the country's national economy, namely, the focus could be put on other industrial sectors where Kuwait has preconditions for the subsequent growth, and on the tertiary sector, as services account for

The greatest share of GDP in developed states. If the country's authorities can diversify their economy and to decrease Kuwait dependence on oil exports and the conjuncture of the international oil market, the country will be likely to achieve greater economic stability, and an overall higher level of its national security

6 Conclusion

Oil is a strategic resource in the global geopolitical arena. Despite the recent tendencies for the growing share of alternative energy sources, oil remains the world's major energy resource in terms of consumption. As a result, countries which are abundant in oil have an important economic and geopolitical value on the global scale. However, recently the oil market has been in a major recession. Namely, international oil prices have been dropping recently, and this affected much the countries whose national economies are largely dependent upon oil.

In the practical part of this thesis, the interdependence between international oil prices and Kuwait's gross domestic product were evaluated. The results of the regression model developed for running the required computations proved that in 2010- 2019, no correlation was observed between Kuwait GDP and international oil prices. However, as we noted, this is largely since previously, Kuwait had been able to benefit from futures contracts for sales of oil at higher prices, while as of today, such opportunities do not exist. Nevertheless, Kuwait aggregate exports are largely dependent on the prices of oil in the international market, and we have revealed that they directly affect Kuwait economic growth opportunities reflected in the country's GDP values. Therefore, we can be confident that oil prices still do affect Kuwait gross domestic product, even though indirectly.

Nevertheless, the findings of this research allow stating that an interconnection still exists between oil and Kuwait GDP, namely in the context of Kuwait oil exports. As stated earlier, the major problem for the computation of oil prices' effects is the fact that part of the deals for oil exports are performed under futures contracts. In 2013- 2014, the share of such contracts was high in Kuwait exports contracts, and as a result, the country was able to sell great amounts of oil at high prices despite the negative price tendencies. As of today, there are no such opportunities, and therefore the country's GDP is dropping together with the oil prices. Due to such great mutual fluctuations, the regression analysis model did not reveal any direct correlation, and therefore the hypothesis can be disapproved.

Therefore, we can state that Kuwait is much dependent on the overall oil market conjuncture, even though our regression analysis revealed such correlation only for oil exports.

To improve the current negative situation with Kuwait dropping GDP in the light of the dropping oil exports, the country's authorities should focus on changing their economic policies in a way to reduce the economy's dependence of oil, and to diversify it for greater independence, stability, and security. This might require major investment on the part of foreign investors, and also significant time expenditures, but in the long run, this should provide Kuwait with much greater opportunities to easily withstand any subsequent shocks in the global oil market, thus raising the country's overall financial prospects.

However, it should also be stated that as of today, major international organizations and private companies provide forecasts for the international oil markets mainly only for a 1-year perspective, and therefore we cannot judge upon the subsequent tendencies in oil prices. If they return to their previous levels in the mid-term perspective, Kuwaiti will be able to raise its proceeds from exports, and thus, in the long run, its gross domestic product. The framework of this thesis can be used for any subsequent analysis of other states and their interconnection with oil prices or other economic variables.

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