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DIPLOMA THESIS

The dependency of EU on crude oil, case study of Middle East crude oil

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Prague 2011 ©

Declaration

I declare that I have worked on the Diploma thesis “The dependency of EU on crude oil, case study of the Middle East oil” on my own and I have used only the sources mentioned in the references.

Prague, April 1, 2011

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Cleland Fiifi Afful

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**The dependency of EU on crude oil, case study of
Middle East crude oil**

**Závislost Evropské unie na ropě Blízkého
východ**

Souhrn

Surová ropa představuje jeden z nejdůležitějších makroekonomických faktorů ve světovém hospodářství. Je používána napříč všemi obory, od hnojiv a pesticidů v rostlinné výrobě, plastu v našem zubním kartáčku, o palivu pro dopravu nemluvě. Surová ropa je páteří všech ekonomik, ať už z pohledu vývozních zemí nebo dovozních zemí. Bez volného přístupu k ropě za rozumné ceny by se světová ekonomika mohla zhroutit. Je statisticky dokázáno, že Evropská Unie je ze 42.40 % závislá na dovozu ropy ze států bývalého Sovětského svazu a z 17.09 % závislá na dovozu ropy z Blízkého východu . [EC-Directorate-General for Energy 2010]. Na Blízkém východě se nacházejí největší zásoby surové ropy na světě. The Gulf Corporation Council (GCC) a Evropská Unie (EU) líčí vztah mezi dvěma regionálními celky založené na spolupráci a obchodu. Nicméně, bylo by mnohem lepší, kdyby EU nemusela být závislá na dodávkách ropy z cizích států, protože tato závislost má své problémy. To se ale nikdy nestane vzhledem k tomu, že EU má vyšší spotřebu než produkci, a také, že EU není tolik podstatné zásoby ropy

Klíčová slova: surová ropa, Evropská Unie, Blízký východ, zásoby ropy, GCC, závislost na ropě, dovoz ropy

Summary

Crude Oil represents one of the most important macroeconomic factors in the world economy. Its uses range from petroleum base fertilizer and pesticide for crop production, plastic in our toothbrush, fuel for transportation to mention but a few. Crude oil is the backbone of all economies, be it from the point of view an exporter nations or the importer nation. Without free access to oil at reasonable prices, the global economy could collapse. It is statistically proven that the EU is 42.40 % dependent on crude oil import from the states of Former Soviet Union and 17.09 % dependent on Middle East's oil import. [EC-Directorate-General for Energy 2010] The Middle East has the biggest crude oil reserves in the world. The Gulf Corporation Council (GCC) and the European Union (EU) depicts the relationship between two regional blocs' base on cooperation and trade. However, it would be much better if the EU would not be dependent on crude oil supplies from foreign states since this dependency has its inherent problems, but this will never happen due to the fact that the EU has a higher consumption than production and also that the EU has not so much substantial oil reserves.

Keywords: crude oil, European Union, Middle East, oil reserves, GCC, oil dependency, oil import

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1. Introduction

In the words of Jimmy Carter, 39th U.S. President, of what is known as Malaise Speech, "This intolerable dependence on foreign oil threatens our economic independence and the very security of our nation. The energy crisis is real. It is worldwide. It is a clear and present danger to our nation. These are facts and we simply must face them."¹ This and many other quotes set the tone for one of the most look at topics of recent years; Oil dependency. Throughout the 19th century nearly half of the world's crude oil supply came from the gushing oil fields surrounding the Azeri City Baku. Petroleum at the time supplied only about four percent of the World's energy, giving the Caspian region little strategic advantage on the international stage. But as the world economy embarked on a step growth trajectory, dependence on petroleum grew significantly. Today, the major part of the world's primary energy consumption (35 %) is supplied by oil, followed by coal (27%) and natural gas (23%). [EIA, 2007] Transport relies to well over 90 percent on oil, be it transport on roads, by ships or by aircrafts. Looking at this phenomena of high reliance on oil, be it transportation or the world economy as a whole and the fact that substitution of crude oil by other fossil or renewable energy source is far fetch at the moment, the future availability of crude oil is highly important. It will be also a fair assumption to say that every economy "runs on oil", that is, oil that "fuels our economy". From this assumption one can say that since we measure our material welfare (income) by the economy, it will be safe to conclude our income is based on oil consumption. Further, adverse supply shocks can cause a recession (a fall in output) with increasing prices. This phenomenon is known as stagflation. Example is the dramatic increase in oil prices which caused the stagflation of the 1970s.

¹ <http://www.pbs.org/wgbh/americanexperience/features/primary-resources/carter-crisis/>

Because of the undeniable importance of crude oil, this work will look at some basic information of this non-renewable resource such as history of oil (with interest to Gulf Cooperation Council- GCC countries) and what entails oil pricing.

The Middle East is home to some of the world's largest oil reserves, mainly in Saudi Arabia, which is a member of the GCC. This integration associates six states in Persian Gulf and it is very important for international trade and commerce with the rest of the world. That is why the EU-GCC relation is of importance in this discussion. The choice of the GCC is purely because their similar histories and geographic proximity allow for a more homogeneous sample and so one that does not require as many controls in the empirical specification. Moreover, these countries participate in a common economic union and so a specific analysis of this union seems warranted.

This thesis will thus describe and analyzes issues of crude oil dependence, mainly the problems related to the European region (the European Union). The EU has no significant crude oil reserves and thus the production can never satisfy the EU's high consumption. That is why Europe is heavily dependent on imported crude oil from foreign countries, primarily from Russia and Middle East. Thus the aim of this work is to show the EU dependence on crude oil originating from Middle East countries with special emphasis on the Gulf Cooperation Council.

2. Objectives of the thesis and the methodology

The aim of this thesis is to deal with the problems of the EU dependency on crude oil originating from Middle East countries integrated within the Gulf Cooperation Council.

The major objectives are to describe the GCC member states and their contribute to global crude oil production, to demonstrate how far is the EU dependent on imported crude oil and to show some threat of this dependency and recommendation on how to reduce dependency since there is no way it can be eradicated.

In this thesis was used the quantitative method which helped the author to identify patterns and relationship in the data used. Much of the work, presented here, is just statistical or data analysis in order to identify trends or certain behaviors in time series of resource data. Locating and obtaining good data is essential and sometimes quite challenging. The analysis of dependence is based primarily on secondary data which are easily observed and are more reliable than the reserve data. The reason being that most of the reserve data are regarded as state secrets by some of the oil rich countries and so access to them are really hard plus the risk of their validity are usually contested. Secondary data were collected through published researches, literature and Internet articles. Petroleum related trade journals and statistical yearbooks from various oil companies have shown to be an important source of production data. There were also used the author's own calculations which are based on various books and several Internet sources. The predictions are based also on the observed result and views by experts on the field.

3. Literature overview: World and European Crude oil

3.1 History of crude oil

Crude oil has been used for various purposes dating back thousands of years. As far back as the time of Noah mankind has been leaning heavily on these crude natural products more generally called petro bitumen and which could be found at earth's surface in pools and small wells. Natural pitch and asphalt were used to seal boats such as the ark, built structures such as the biblical tower of Babel. The Egyptians bought asphalt from the peoples of the Dead Sea area to balm their deceased. Greece and Rome used petroleum for cosmetic purposes, warfare and illumination, and Emperor Nero even embraced the morbid habit of having arrested Christians covered with pitch and igniting them to illuminate his wanton parties as human torches².

Old Chinese in 4th century were the first to drill wells to collect it, the oil was burned to evaporate brine and produce salt. The wells were dug using bits attached to bamboo poles and they were up to 240m deep. By the 10th century oil wells and salt springs were connected by extensive bamboo pipelines. That time the first streets of Baghdad were paved with tar, derived from petroleum accessible from natural fields in the region. Oil fields near Baku, Azerbaijan originally exploited in the 9th century were described in 13th century by Marco Polo in his book 'The Million'. He depicted the output of those wells as hundreds of shiploads.

It is believed that the modern history of petroleum began in the middle of 19th century, with the discovery of the process of refining kerosene from coal by Canadian Abraham Pineo Gesner. In 1852 Ignacy Łukasiewicz improved his method to develop means of refining kerosene from more readily available "rock-oil" (petr-oleum) seeps. The first rock mine oil was built in Bóbrka in Poland 1853. One year after Benjamin Siliman at Yale University in New

² http://www.pafko.com/history/h_petro.html

Heaven was the first one to fractionate petroleum by distillation. The first Russian refinery in the oil fields in Baku built in 1861 produced about 90% of the world's oil. The first oil well in North America was Oil Springs in Ontario, Canada dug in 1858. The US petroleum industry began with Edwin Drake's 21m deep oil well on Oil Creek in Pennsylvania in 1859³.

The 1800s saw industrial growth fuelled by the demand for kerosene and oil lamps. With Edison's invention of an electric light-bulb in 1878 however this infant industry in the U.S. came to a slow halt, because the demand for kerosene was eliminated. Soon afterwards oil burners for steam engines were used to power machines and later locomotives. In 1886 Karl Benz and Gottlieb Daimler introduced first gasoline-powered automobiles in Europe leading to increased demand that has largely sustained the industry to this day.

Oil facilities become targets during World War II owing to significant oil fields discovered in Dutch East Indies (Sumatra, 1885), Iran (Masjed Soleiman, 1908), Canada (province Alberta, 1910), Peru, Venezuela and Mexico.

Though coal was still the world's foremost fuel in mid-1950s, oil quickly took over. Following the two oil crisis of 1973 and 1979, there was significant interest about oil supply levels. This brought to light the concern that oil is a limited resource that will eventually run out. However, a period of increased production and reduced demand caused an oil glut in the 1980s.

Today, it is an undeniable fact that most vehicular fuel needs are met by oil. Petroleum's worth as a portable, dense energy source powering the vast majority of vehicles and as the base of many industrial chemicals makes it one of the world's most important commodities whose access man will fight for to protect, as evident in World War II, the Persian Gulf Wars (Iran-Iraq War, Operation Desert Storm and the Iraq War).

³ http://www.astm.org/COMMIT/D02/to1899_index.html

3.2 History of crude oil in the Middle East (GCC)

The oil wealth of the Middle East has created great empires and increases the living standard of the inhabitants of this region. It has also had its own share of war to protect this natural resource, realigned twentieth-century politics, given birth to regional and trading blocs -GCC, OPEC etc. It's thus safe to say that the huge reserves found in the Middle East have played a tremendously important role in shaping the world we live in today. Below is a basic overview when the crude oil was found and has been produced in the member states of GCC integration. [Maitah, 2004]

Bahrain

- first discovered: in 1932 (first in the Persian Gulf)
- beginning of production: in 1934

Kuwait

- first discovered: in 1938
- beginning of production: 1946

Oman

- first discovered: 1960, 1964 (Yibal and neighbouring Fahud)
- beginning of production: in 1960 (was unable to export oil until 1967)

Saudi Arabia

- first discovered: in 1938 (Dammam number 7)
- beginning of production: in 1938

Qatar

- first discovered: in 1940 (Dukhan Field)
- beginning of production: in 1940

United Arab Emirates

- first discovered: in 1958 (beneath the coastal waters of Abu Dhabi),
- beginning of production: in 1962

3.3 World crude oil prices

The price of petroleum as quoted in the news generally refers to a spot price of either WTI/Light Crude as traded on the New York Mercantile Exchange (NYMEX) for delivery in Cushing, Oklahoma, or of Brent as traded on Intercontinental Exchange (ICE) for delivery at Sullom Voe (Shetland, Scotland). Also International Petroleum Exchange in London and Singapore International Monetary Exchange. Movements in these exchanges and speculations on oil futures also have a significant bearing on oil prices [Maitah, 2004].

The price of a barrel of oil is highly dependent on both its grade, determined by factors such as its specific gravity or API (American Petroleum Institute) gravity (is a measure of how heavy or light a petroleum liquid is compared to water) and its sulphur content, and its location. The vast majority of oil is not traded on an exchange but on an over-the-counter basis. Other important benchmarks include Dubai, Tapis, and the OPEC basket. The Energy Information Administration (EIA) uses the imported refiner acquisition cost, the weighted average cost of all oil imported into the US, as its "world oil price".

The demand for oil is highly dependent on global macroeconomic conditions. Some economists believe, high oil prices generally have a large negative impact on the global economic growth. Others argue that the run-up in oil prices over the past few years actually led to the acceleration in global growth.

The Organization of the Petroleum Exporting Countries (OPEC) was formed to control the price of oil, and essentially worked as a cartel. There is a mistaken belief that OPEC sets the global oil prices, this was so till the mid-1980s. Its focus now is to stabilize global oil markets by restraining their productions.

Oil price reached a record peak in July 2008 and since then has undergone a significant decrease. On December 23, 2008, WTI crude oil spot price fell to US\$30.28 a barrel, the lowest since the global financial crisis began, and has

been trading between US\$35 a barrel and US\$82 a barrel in 2009.

Demand and supply forces are at the head of primarily influences of the global oil market prices. The level of supply is largely dependent on the availability of oil in the reserves. Supply shortage causes an upward movement in the price pressure. To a certain extent supply levels are established by OPEC.

The volatility and sensitivity of crude oil market price cannot be ignored since a minor disturbance can lead to an increase in price in a short amount of time as displayed in Chart 1. Some experts even believe the sensitivity of the market is so high that analogically to some extent the flapping of a butterfly's wing in any part of the Middle East or Russia can result in a tornado-like scarcity in the EU⁴.

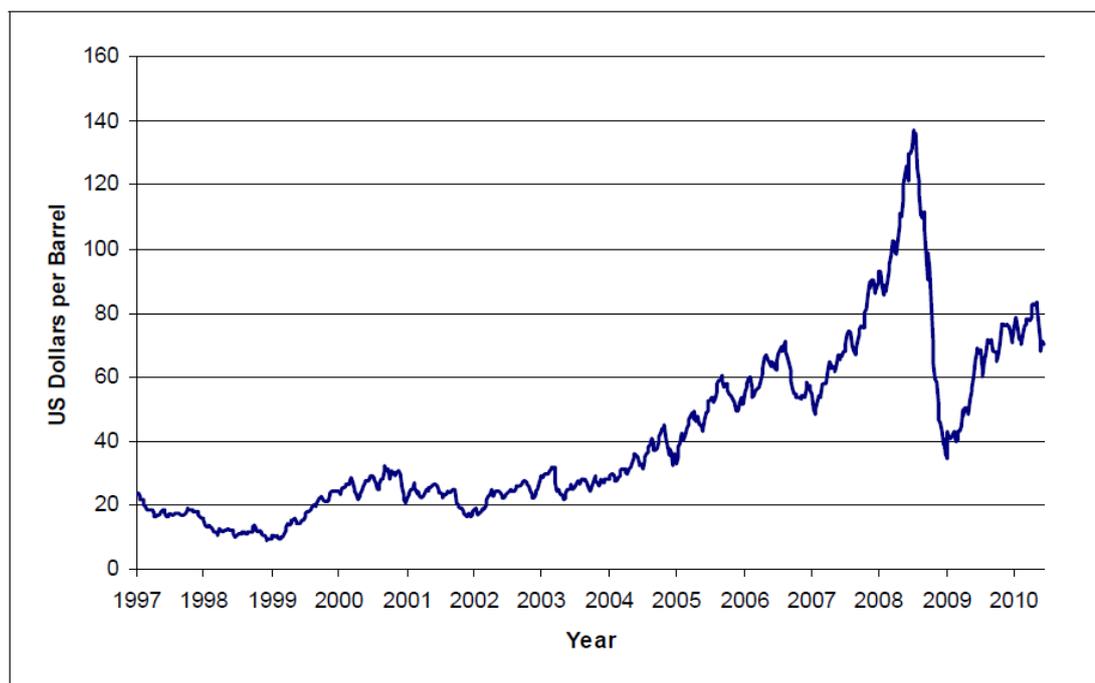


Chart No.1 Graph of cost of oil 1997-2010

Source: EIA Weekly All Countries Spot Price FOB Weighted by Estimated Export Volume (Dollars per Barrel)

⁴ Bang, Guri (2010) "Energy security and climate change concerns: Triggers for energy policy change in the United States?", Energy Policy, Volume 38, Issue 4, Energy Security - Concepts and Indicators with regular papers, April 2010, Pages 1645-1653

3.4 World crude oil reserves

The crude oil reserves are defined as “quantities of petroleum claimed to be commercially recoverable by application of development projects to known accumulations under defined conditions”⁵. All reserves are divided into two groups, such as proven reserves and unproven reserves according to the relative degree of uncertainty (see Chart 2).

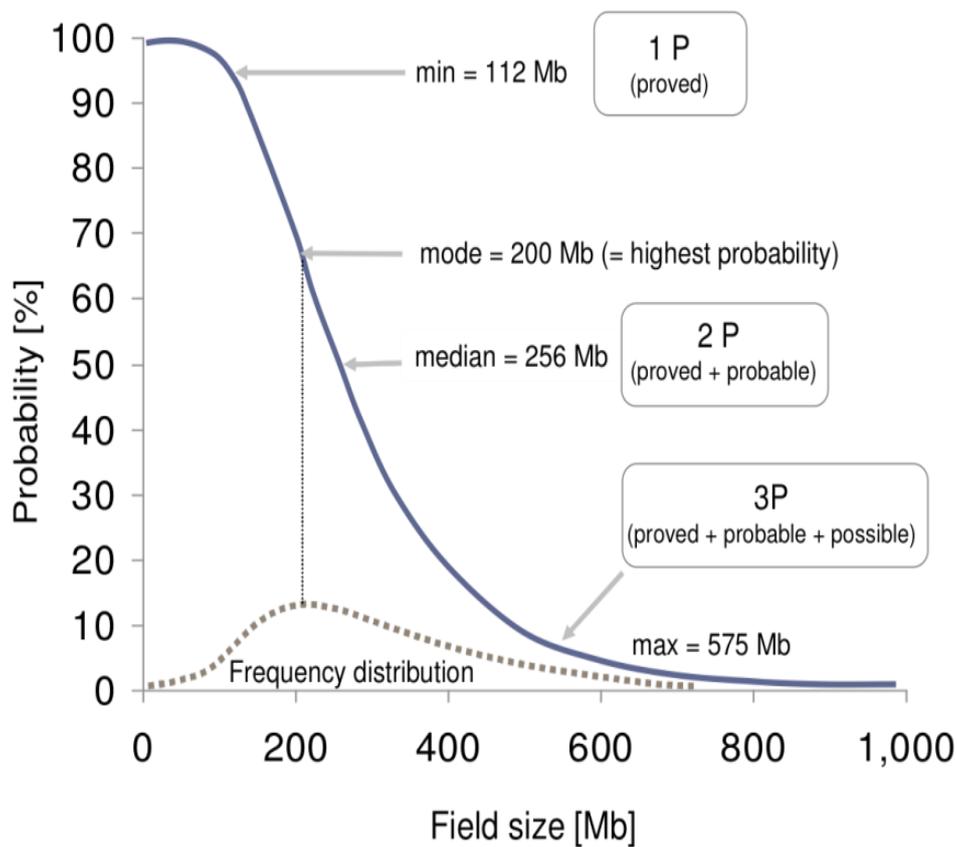


Chart No.2: Reserve assessment of the recoverable crude oil

Source: Petroconsultants, 1995

⁵ Petroleum Resources Management System, Society of Petroleum Engineers, 2007, page 3.

- Proven reserves (P90, P1)⁶: are those that “have a 90 % of confidence to be recoverable under existing political and economic conditions and using existing technology”⁷. These are only ones that are allowed to oil companies to give them to investors according to the US Securities and Exchange Commission. It has been estimated the current proven crude oil reserves in 2009 (see Chart 3).

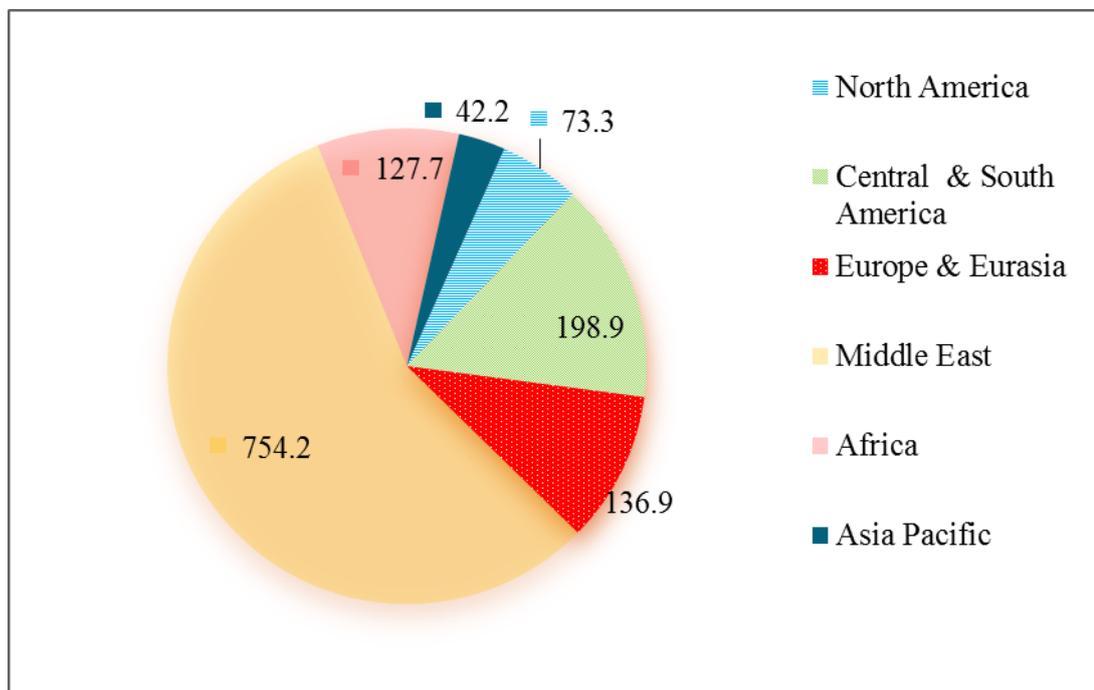


Chart No.3: World Proven Oil Reserves in 2010 Estimates (billion barrels)

Source: BP/ own chart

From chart 3 the Middle East is home to the world’s greatest proven crude oil reserves, approximately about 56.5% of the total world reserve followed closely by Central and South America 14.9% Europe and Eurasia 10.3% Africa 9.6% N. America 5.5% and finally Asia Pacific 3.2% [BP2010]

⁶ , "Glossary of Terms Used in Petroleum Reserves/Resources" (PDF). Society of Petroleum Engineers. 2005., page 10.

⁷ "Glossary of Terms Used in Petroleum Reserves/Resources" (PDF). Society of Petroleum Engineers. 2005, page 10.

According to the topic of this thesis the author herein add the most discussed oil reserves in Middle East- concretely those in the GCC integration (Chart 4).

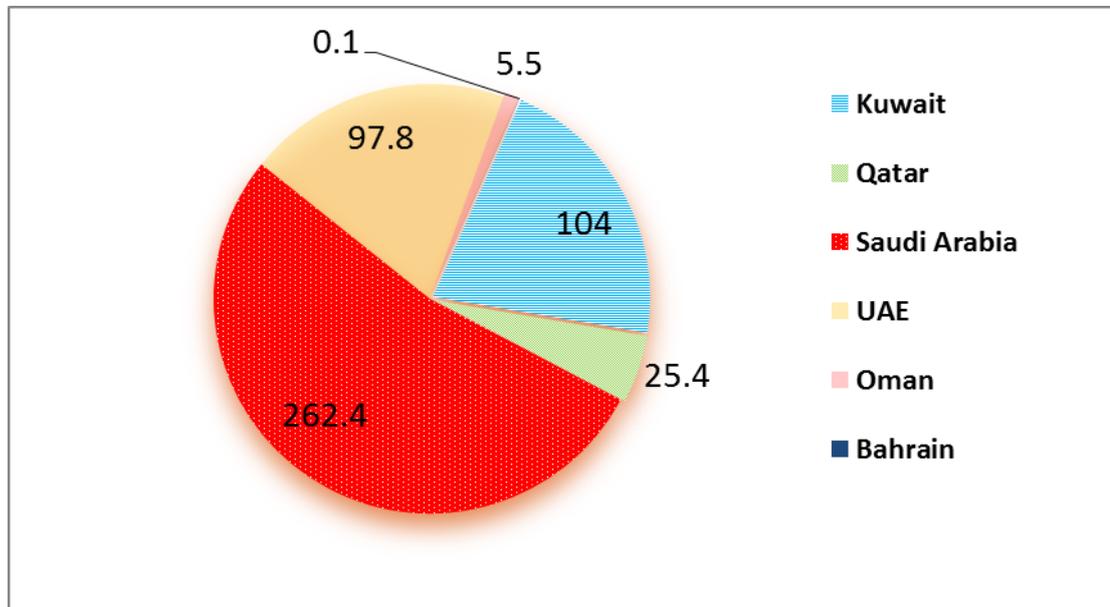


Chart No.4: GCC Proven Oil Reserves in 2009 Estimates (billion barrels)

Source: EIA/ own chart

- Unproven reserves:
 - Probable (P50, P2)⁸: these reserves have 50 % of confidence of recovery.
 - Possible (P10, P3)⁹: are those that have at least 10 % of confidence that they will be produced. This group is used to be more specific about future reserves and methods.
- There exist also the strategic reserves, which are not included in proven reserves but these are used by many countries to control their reserves, and thus their national security. At present, the strategic reserves are 4.1 billion barrels (EIA).

⁸ "Glossary of Terms Used in Petroleum Reserves/Resources" (PDF). Society of Petroleum Engineers. 2005, page 9.

⁹ "Glossary of Terms Used in Petroleum Reserves/Resources" (PDF). Society of Petroleum Engineers. 2005, page 8.

3.5 Production of crude oil

Production of crude oil refers to how much crude oil is extracted from proven reserves. Mentioned above, the Middle East countries have the largest crude oil reserves in the world. It is approximately 56 % of all reserves. In comparison, Europe including Former Soviet Union has overall share of 10 % (see Chart 3).

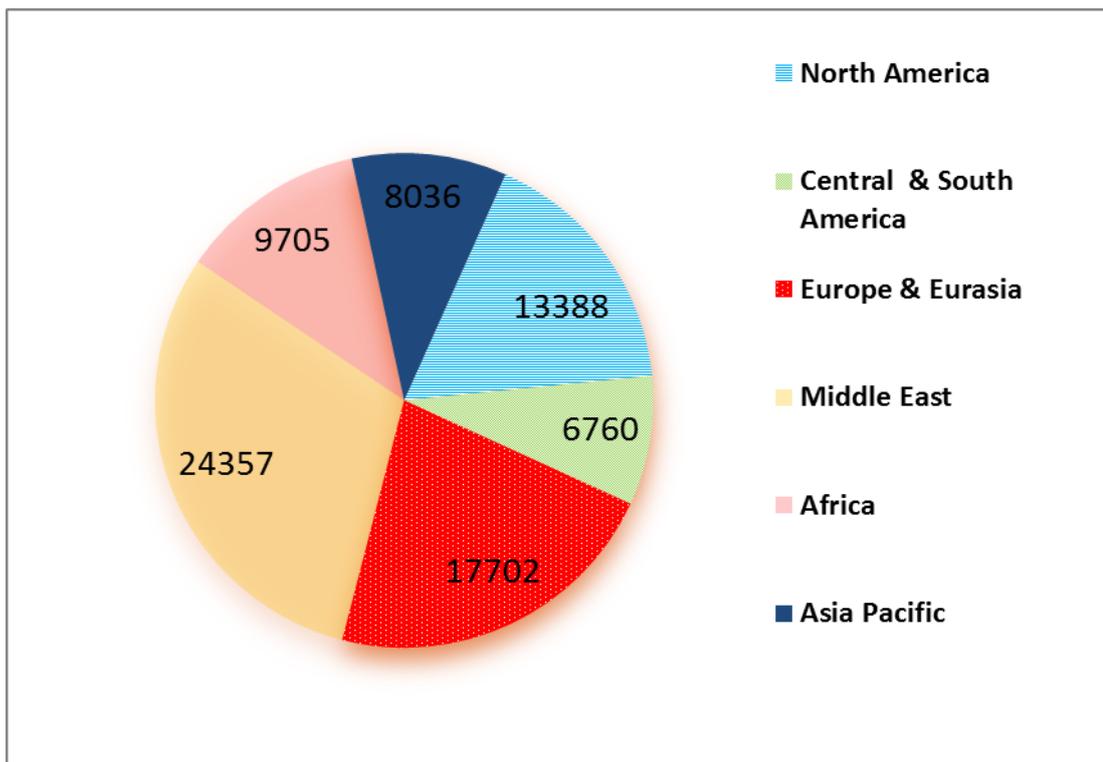


Chart No.5: World Oil Production in 2009 (thousand barrels daily)

Source: BP, 2010/ own chart

So it means that Europe even with Russia (the biggest crude oil producer) cannot be compared with Middle East production per day. Thus, this is the reason to see Middle East as the number one oil producers of all. There are two states out of top five oil producers from the Middle East region. These are namely Saudi Arabia with the biggest share of 26 % and second one is Iran with 13 % (see Chart 6).

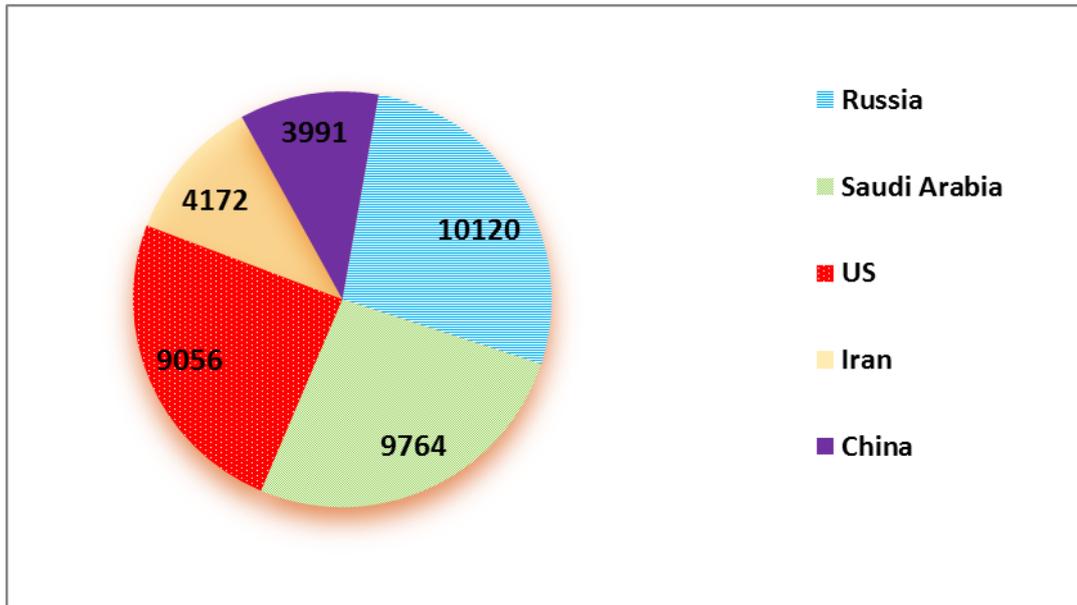


Chart No.6: Top 5 Producers in 2009 (thousand barrels daily)

Source: The World Factbook/ own chart

With interest on the GCC countries we can observe that the GCC share of the Middle East production has reached almost 17,124 thousands bbl. per day (see Chart 7) out of 24,395 thousand bbl. per day of the whole Middle East production. All the six GCC states are important oil producers with minimum oil consumption of course.

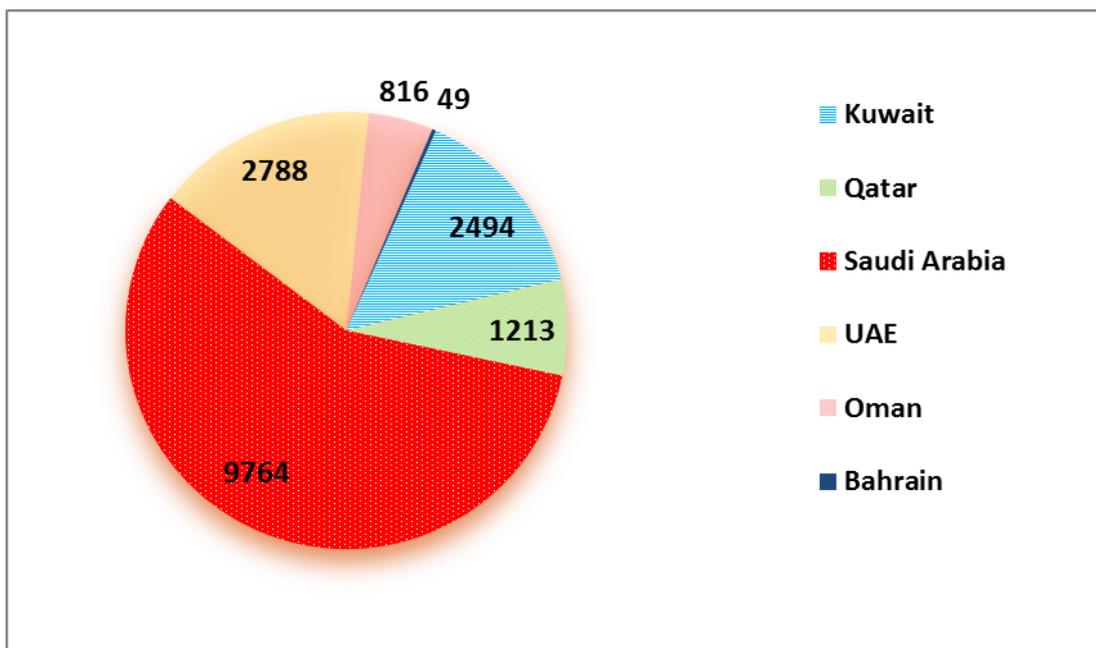


Chart No.7: GCC Oil Production in 2009 (thousand barrels daily)

Source: The World Factbook/ own chart

According to the BP Statistical review, global oil production fell by 2 million b/d in 2009, or 2.6%, the largest decline since 1982. OPEC production fell by 2.5 million bbl. /d; Saudi Arabian output fell by 1.1 million bbl. /d, the world's largest volumetric decline. Production outside OPEC rose by 450,000 bbl. /d, led by an increase of 460,000 bbl. /d in the US, the largest increase in the world and the strongest US growth since 1970. [BP 2010]

3.6 Crude oil consumption

Oil consumption is noticeable and it grows rapidly. One possible reason may be that the oil is a high-energy content; it is liquid, easily produced and transportable fuel. Plus it has been and still is the cheapest transportation fuel of all.

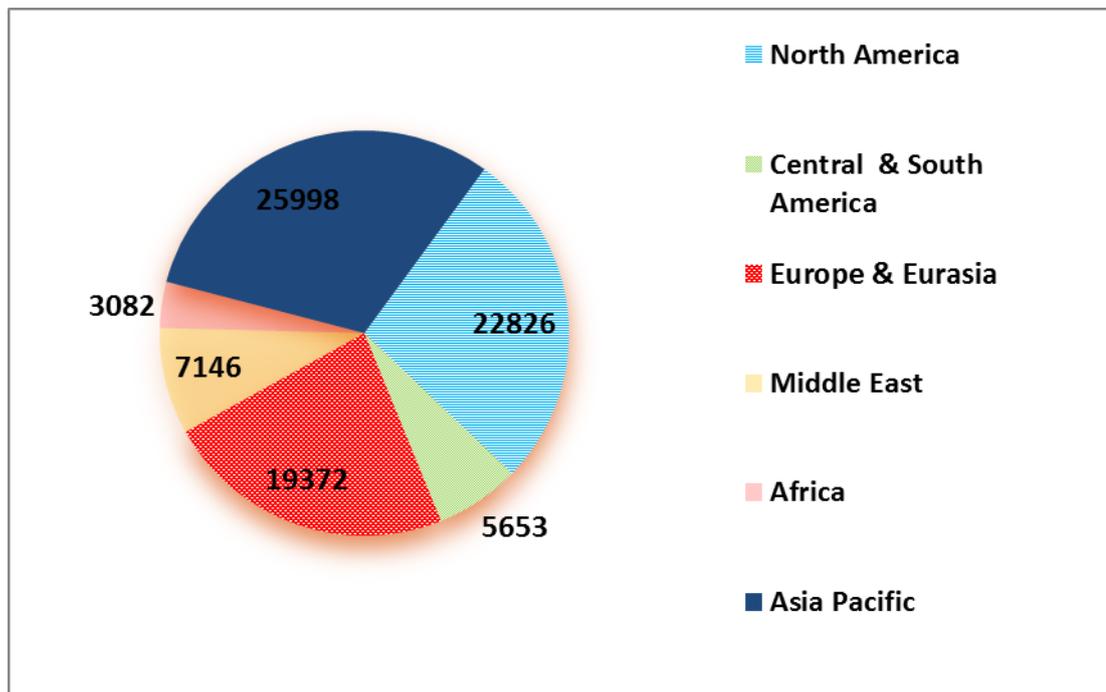


Chart No.8: World Oil Consumption in 2009 (thousand barrels daily)

Source: BP/ own chart

The world oil consumption grows every year by approximately 1.2 % although not the case in 2009 when global oil consumption declined by 1.2 million barrels per day (bbl/d), or 1.7%, the largest decline since 1982. OECD consumption fell by 4.8% a fourth consecutive decline. Outside the OECD, consumption growth slowed to 860,000bbl/d, or 2.1%, the weakest percentage growth since 2001. China, India and Middle Eastern countries accounted for all of the non-OECD growth. Thus in 2009 the total world oil consumption was 84,077 thousand bbl/day (see Chart 8 above) from which the US, the biggest oil consumer, had 18,690 thousands bbl/day share .The EU is second placed with 13,630 thousands bbl/day, China followed with 8,200 thousands bbl/day [BP2010]. The fourth, fifth and sixth place belongs to Japan and Russia following by India respectively (Chart 9).

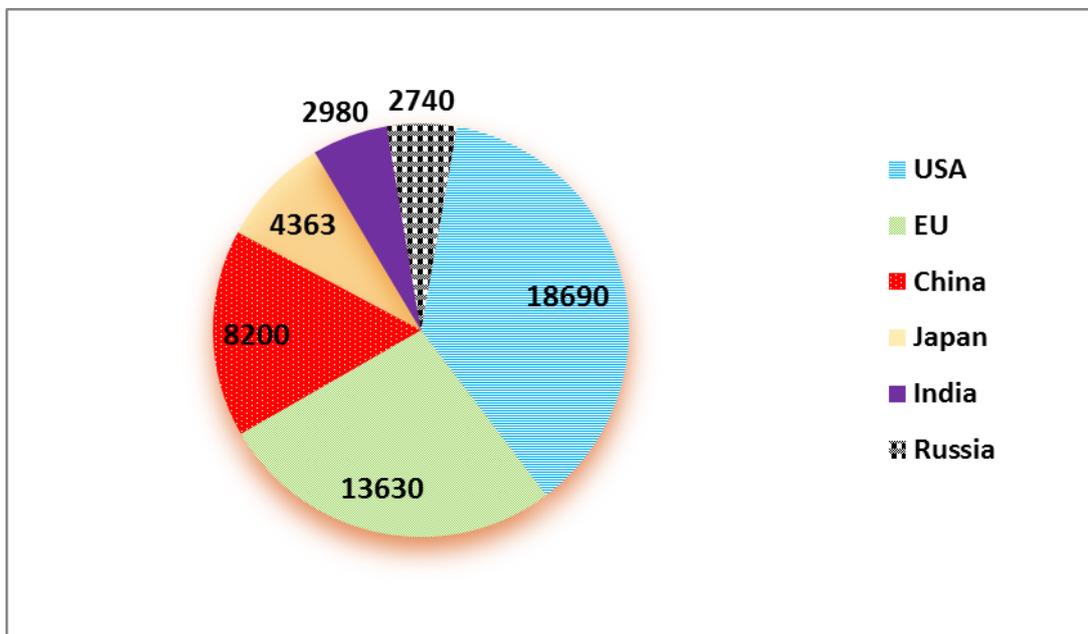


Chart No.9: Top 6 Oil Consumers in 2009 (thousand barrels daily)

Source: The World Factbook/ own chart

In percentage, the US decreased their oil consumption by 0.1 % and the EU declined the consumption by 2.6 % that is for sure made by significant decline in

Germany's oil consumption by 9 % which is the largest oil consumption decline in the world together with Switzerland. Unfortunately Switzerland does not belong to the EU. On the other hand, Slovak Republic increased its oil consumption by 10.3 % in 2007 and also Middle East oil consumption rose by 4.4 % in 2007 [BP 2008].

Experts believe future oil consumption is set to rise because crude oil is the cheapest transportation fuel and there is no chance to transform it into alternative fuel. "It will be possible only if we will produce enough corn, make enough ethanol, collect enough biomass and after that we can forget about importing oil but this is nonsense."¹⁰

3.7 The Gulf Cooperation Council

The Gulf Cooperation Council is made up of six member states: Saudi Arabia, Kuwait, Bahrain, the United Arab Emirates, Oman and Qatar. Between them, they control almost half the world's known oil reserves. Not all of the "Gulf states" are members of the council. Iran and Iraq are excluded. Yemen is under negotiations for GCC membership and it seems to join by 2016. Its rise can be traced to the time of sharp confrontation between two super-powers - the USSR and the USA. "The main goal of the leadership of the Gulf States, which took the decision to develop cooperation and coordination of the policy, was their eagerness to avoid the danger to be involved in this confrontation. In the GCC documents member-states declared that they would like to defend themselves and to ensure that the region would not be turned into an area of struggle between the superpowers with their immense means of mass destruction"¹¹

With headquarters in Riyadh, Saudi Arabia, The Gulf Cooperation Council was established in 1981 to, according to its charter, "effect coordination, integration

¹⁰ Flynt Leverett, Institute of Technology, 2007, page 2.

¹¹ Kuwait News Agency. Special Dossier, Al-Kuwait, 1984, page 21.

and inter-connection among the Member States in all fields, formulating similar regulations in various fields such as economy, finance, trade, customs, tourism, legislation, administration in order to achieve unity” and stress “the special relations, common qualities and similar systems founded on the creed of Islam, faith in a common destiny and sharing one goal” defined by the Arab identity¹². Presenting a united front against the rumbles across the Persian Gulf-- the Iranian Revolution and the Iran-Iraq War and the fears that it would destabilize the regimes of the Arab Peninsula, none of the GCC countries is a democracy.

On paper, the GCC has the resemblance of a European Union-style common market. The GCC aims to develop common regulations in economic and financial affairs, commerce, customs and communications, and education and culture. It also aims to foster "scientific and technological progress in the fields of industry, mining, agriculture, water and animal resources; to establish scientific research; to establish joint ventures and encourage cooperation by the private sector for the good of their peoples."¹³

In reality, the GCC has had somewhat of a harder time translating goals into reality. For example, its plan for a common currency planned for 2010 has also been extended and its plan to have a common defence force of 100,000 troops has faltered, furthermore, its customs union, launched in 2003 is not fully implemented. But in the face of all this the GCC had secured achievement in many fields for example in 1991 the GCC countries joined with Egypt and Syria to create a regional peacekeeping force. An aid fund was also established to promote development in Arab states; it was used to help liberate Kuwait in 1991. In 2003 GCC members eliminated tariffs on trade between member nations and established common external tariffs.

¹² <http://www.gcc-sg.org/eng/index895b.html?action=Sec-Show&ID=3>

¹³ http://www.fatf-gafi.org/document/9/0,3746,en_32250379_32236869_34438857_1_1_1_1,00.html

3.7.1 The GCC Member States (see Map 1)

“Over the past three decades the member states of the Gulf cooperation Council have witnessed an unprecedented economic and social transformation. Oil proceeds have been used to modernize infrastructure, create employment and improve social indicators, while the countries have been able to accumulate official reserves, maintain relatively low external debt, and remain important donors to poor countries”¹⁴.

There is a basic overview about each member country according to the CIA, The World Factbook.

United Arab Emirates

- Area: 83,600 km²
- Population: 4,975mil (2010)
- Population Growth: 3.561% (2010 est.)
- GDP: (2010 est.)
 - purchasing power parity: \$199.8billion
 - official exchange rate: \$239.7 billion
 - real growth rate: 2.6%
 - per capita (PPP): \$40,200
- Unemployment rate: 2.1% (2001)¹⁵

The Kingdom of Bahrain

- Area: 741 km²
- Population: 738,004 (2009 est.)
- Population Growth: 1.285 % (July 2010 est.)
- GDP: (2009 est.)

¹⁴ Fasano, Ugo, Iqbal, Zubair; GCC Countries: From Oil Dependency to Diversification, page 2.

¹⁵ <https://www.cia.gov/library/publications/the-world-factbook/geos/ae.html>

- purchasing power parity: \$28.31 billion
- official exchange rate: \$20.21 billion
- real growth rate: 3.1 %
- per capita (PPP): \$38.800
- Unemployment rate: 15 % (2005)¹⁶

The Kingdom of Saudi Arabia

- Area: 2,149,690 km²
- Population: 25,731,776 (2010 est.)
- Population Growth: 1.548 % (2010 est.)
- GDP: (2008 est.)
 - purchasing power parity: \$592.3 billion
 - official exchange rate: \$369.7 billion
 - real growth rate: 0.1 %
 - per capita (PPP): \$20,600
- Unemployment rate: 11.7 % (2009)¹⁷

The Sultanate of Oman

- Area: 309,500km²
- Population: 2,967,717 (2010 est.)
- Population Growth: 1.996% (2010 est.)
- GDP: (2010 est.)
 - purchasing power parity: \$76.53 billion
 - official exchange rate: \$53.78 billion
 - real growth rate: 3.6%
 - per capita (PPP): \$25,800
- Unemployment rate: 15 % (2004 est.)¹⁸

¹⁶ <https://www.cia.gov/library/publications/the-world-factbook/geos/ba.html>

¹⁷ <https://www.cia.gov/library/publications/the-world-factbook/geos/sa.html>

¹⁸ <https://www.cia.gov/library/publications/the-world-factbook/geos/mu.html>

The State of Qatar

- Area: 11,586 km²
- Population: 848,016 (July 2010 est.)
- Population Growth: 0.81% (2010 est.)
- GDP: (2010 est.)
 - purchasing power parity: \$122.2 billion
 - official exchange rate: \$126.5 billion
 - real growth rate: 19.4%
 - per capita (PPP): \$145,300
- Unemployment rate: 0.5 % (2010 est.)¹⁹

The State of Kuwait

- Area: 17,818 km²
- Population: 2,595,628 (2010 est.)
- Population Growth: 1.986% (2010 est.)
- GDP: (2010 est.)
 - purchasing power parity: \$144.3 billion
 - official exchange rate: \$117.3 billion
 - real growth rate: 3.2 %
 - per capita (PPP): \$51,700

Unemployment rate: 2.2 % (2004 est.)²⁰

¹⁹ <https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html>

²⁰ <https://www.cia.gov/library/publications/the-world-factbook/geos/ku.html>

3.8 The EU and GCC: Economic and Political relations

In recent years there have been a new trend in the process of global integration, countries have come together to form not only political blocs but trading ones as well, bloc-to-bloc relations have also increase in bid to find peace and economic well-being. The relation between two regional organizations - the European Union (EU) on one hand and the Gulf Cooperation Council (GCC) on the other hand is an example of this new trend. The EU and the GCC enjoys a special political and economic relationship which have developed slowly and initially mainly on bilateral basis from the early beginnings of the GCC in 1981. The survival of this relation has hinged and intensified not only in connection with growing interdependence of oil-exporter and oil- importer but also on issues dealing with security and cooperation in all spheres of life. The EU is attractive for the GCC for many reasons. To start with, it is an example of successful regional cooperation. An editorial of the Saudi daily Arab News read for instance: ‘the European Union (is) the most recent example. Nations with centuries of war and mayhem behind them have now erased, for all practical purposes, the borders dividing them. Not a single cent is spent on defending themselves from any other EU member. Their resources, in their entirety, are spent on giving their peoples a better life-better health care, better education, better everything. When Europe, with all its different languages, religions and cultures and memories of conquests and defeats could do that, can't this region-kept divided by nothing but lack of vision-cooperate to build?’²¹

The discovering of crude oil in 1930s was very important period in Middle East history. Before this time, the Arabian Peninsula had stayed important sea-route to the east, later the area became very important source of energetic raw material for the whole world. The strengthening of territorial demand was closely linked with

²¹ Arab News, London, 18 April 2001

the licensing of the oil concessions. These concessions were offered to the big foreign oil companies by the monarch of each sultanate. Because of that, even though most part of this area was under British rule, the United States interest rose over time. The British domination over the Persian Gulf ended during 1950-1960.

“This relation is a new trend in terms of global integration which is closely connected with growing dependence on crude oil import and export all over the world. The member states of GCC are trying to be an internal part of world community”²². Surprisingly this relationship is not new; the Arab Gulf states had been part of the so-called Euro-Arab Dialogue, which had been formally launched in 1974. But that Dialogue had collapsed by 1989, and had, even before that, achieved relatively little: it had always suffered from the opposed perceptions of the two sides about the purpose of the dialogue, the Arab side wishing it to be primarily political, the Europeans economic and technical. The first meeting of EU and GCC took place in Saudi Arabia in 1983. With some difficulties however, negotiations started one year later.

The 1988 EU-GCC Cooperation Agreement encouraged trade and economic cooperation. In the Bahrain summit, in December 1988, the Supreme Council of the GCC has examined the agreement of cooperation signed in Luxemburg on 15 June 1988 between the Gulf Cooperation Council, on the one hand, and the European Community (EC), on the other, and decided to approve it. “The first major milestone of EU-GCC multilateral engagement is the 1989 cooperation agreement which set the stage for negotiations of a free trade agreement (FTA) and stipulated annual meetings of EU and GCC foreign ministers through a joint council/ministerial meeting. Cooperation in energy, industry, trade and services, agriculture, fisheries, investment, science, technology and the environment were

²² Elena Melkumyan, EU-GCC relations in the global context, page 1.

envisaged, all in line with the primarily economic nature of EU-GCC relations”²³. This agreement went into effect on January 1, 1990.

“This agreement, comprising the institutional framework for the relationship between the European Union and the GCC, states three general objectives: Relations between the European Community and the GCC countries shall be strengthened by placing them in an institutional framework; economic and technical cooperation relations are to be broadened; and development and diversification in the GCC countries shall be promoted, thus reinforcing these countries' role in contributing to peace and stability in the region”²⁴. “At that time, the trade balance with the GCC was still negative, with the EU imports accounting for around 41 billion euro and exports accounting for around 13 billion euro”²⁵.

January, 2003 marked another important year in the EU-GCC cooperation (negotiation about free trade went into effect). The agreement included a statement that every GCC state has to create a custom union to integrate its economy. According to the Cooperation Agreement, both leaders of the EU and GCC have to meet every year (Joint Council Meeting). They also agreed to reinforce cooperation in the question of energy and on quick conclusion of understanding on energy cooperation on May 15, 2006 in Brussels²⁶.

The most important year for negotiating and strengthening the relation between these two giants was the year 2004. There have been made some institutional changes and the main fifth enlargement of the European Union. The EU became bigger by 10 new member states (Czech Republic, Slovak Republic, Poland, Slovenia, Hungary, Cyprus, Malta, Lithuania, Latvia and Estonia). On this same

²³ Steffen Hertog, EU-GCC Relations in the Era of the Second Oil Boom, CAP Working Paper, December 2007, page 4

²⁴ Sahel, The European Union and the Gulf Cooperation Council: A growing partnership, Volume VII, October 1990, No., Middle East Policy Council

²⁵ *Savage B.* The EU and the GCC: A growing partnership ,GCC-EU Research Bulletin. Gulf Research Center. Issue N1, 2005, page 6

²⁶ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/er/89619.pdf

year there was also the NATO Conference in Istanbul where the GCC provides an initial scope for security cooperation in the Gulf area and enlarged NATO's role in this region. In the words of Heidi Huuhtanen from Finish Institute of International Affairs "Turning the EU-GCC relations into more politically substantial dialogue would have to include the necessity that the EU would become an actor with more serious weight in the region"²⁷.

Barriers to effective negotiation between the GCC and the EU can be assessed to be based on differences mainly in political systems, culture, different religion and understanding the religion, different types of market systems and different level of intervention to the economy of the states.

The framework of the relation between EU and GCC is defined by first World oil market. The GCC share on the overall energetic needs of the EU is around 60%. The Middle East countries play significant role in terms of imported crude oil to the EU. And for the future they will be even more important in importing oil as well as natural gas because of problems emanating from Russian imports.

Further, the framework is based on improvement in trade and investments which can be achieved through improvement in negotiation and ironing out of differences. Business cooperation between EU and GCC will set different dimension on reaching the Free Trade Area between them (the negotiation about this issue stopped in December 2008). It is comforting to note that the situation has improved since Saudi Arabia became a member of WTO.

Thirdly, the frame work revolves around global strategic development. After the September 11 and other terroristic attacks in Madrid or Riyadh awareness and security has been high in all front, the stable political situation in each state could be interrupted by any of the global issues, especially world market development

²⁷ *Huuhtanen H.*, EU-GCC relations: towards a more political partnership? // GCC-EU Research Bulletin. Gulf Research Center. Issue N1. Dubai, 2005, page 13

with the energetic raw materials and petrochemical products. And during the 2010–11 Middle East and North Africa protests -an ‘unprecedented’ revolutionary wave of demonstrations and protests which have been taking place in the Middle East and North Africa since 18 December 2010. To date, Tunisia, Egypt and Libya have seen revolutions of historical consequence, Algeria, Bahrain, Djibouti, Iran, Iraq, Jordan, Oman and Yemen have all seen major protests, and minor incidents have occurred in Kuwait, Lebanon, Mauritania, Morocco, Saudi Arabia, Sudan, Syria and Western, each ruling family is more and more aware of the fact that their living standards are linked together with providing extra benefits for the citizens in form of easy approach to education, to effect appropriate health care and other advantages. And that is why they have to strengthen safety inside the country as well as outside.

The states of the European Union are after Asia the second largest export market from the GCC and after USA the second most important source of direct investments into GCC countries. The EU investments are more spread to various kinds of industry. Crude oil and its derivatives stands for 95% of GCC export to the European Union. This undeniable fact affects that both economies are very sensitive to crude oil price fluctuation.

4. EU dependency on Middle East crude oil

4.1 General Dependency

It is no myth that European Union has no bigger oil reserves, just only some in North Sea- the proven reserves at the end of 2009 was 6.3 thousand million bbl. These reserves are in the United Kingdom (3.1 thousand million bbl), Denmark (900 million bbl), Italy (900 million bbl), Romania (500 million bbl) and other small ones making up the 6.3 thousand million bbl [BP 2010]. These numbers are quite ridiculous when compared to the EU consumption which is 670.8 million tonnes (14,143 thousands barrel daily) and the EU oil production is about 98.7 million tonnes (2,082 thousands barrel per day) in 2009 [BP 2010]. By comparing these numbers it is safe to say that the EU is heavily dependent on imported crude oil. According to the British Petroleum statistics and as shown in Chart 9 it is obvious that the European Union is the main importer with 10,308 thousands bbl/day of crude even before US [BP 2010].

The North America has quite big crude oil reserves especially in US, Canada and also in Mexico. The largest reserves are in US- 28.4 thousands million barrels, followed by Canada with 33.2 thousands million barrels and Mexico with “only” 11.7 thousands million barrels. It is interesting to note that by end of 1989 Mexico had the largest proven reserves in North America with about 52.0 thousands million barrels. Between the years 1997-2006 the oil reserves in Mexico had declined to 12.8 thousands million barrels. And during the same time proven reserves were found in Canada and their reserves rose to present number. [BP 2010]

The US crude oil production is 325.3 million barrels (7,196 thousand barrels daily) and oil consumption reached 842.9 million barrels (18,686 thousand barrels a day) in 2009 [BP 2010]. With consideration on the US consumption, which highly exceeds the production and despite the fact that the US has “good” oil reserves, they are also very dependent on importing crude oil from the foreign

states. It is based on this that the US is the second biggest crude oil importer (see Chart 10).

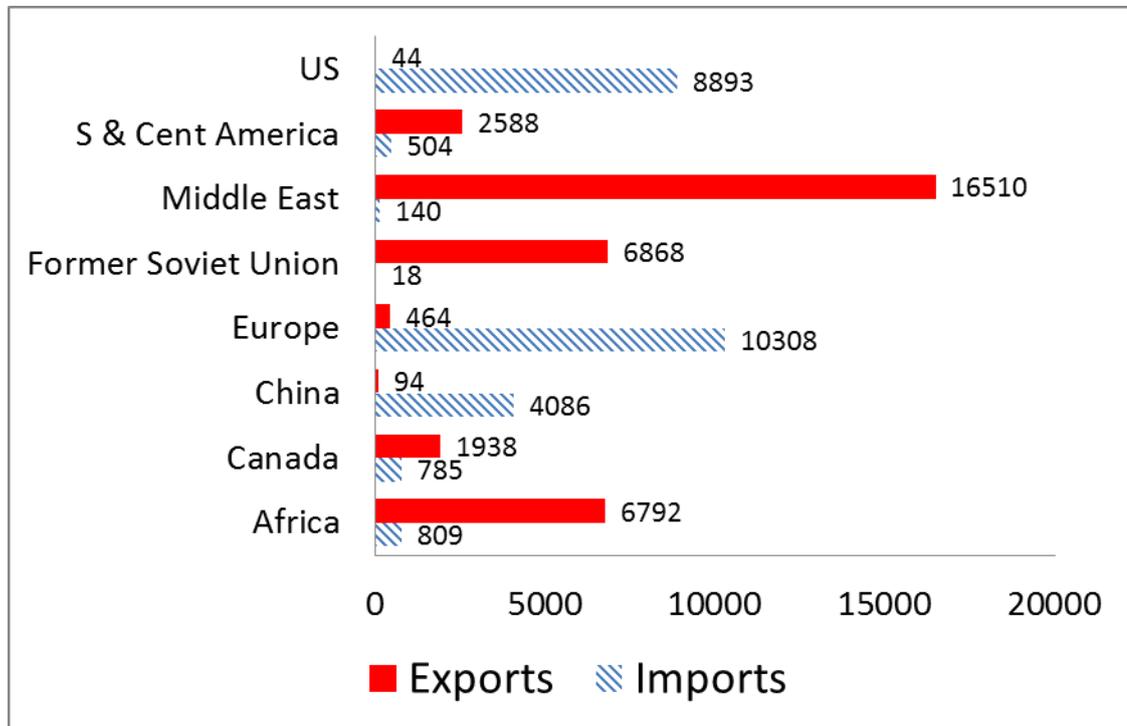


Chart No.10: Oil Importers in 2009 (thousand barrels daily)

Source: BP/ own chart

4.2 Crude Oil export and import: Middle East and EU respectively

European countries are heavily dependent on imported crude oil. As it was already mentioned, it is one of the biggest oil consumer but unfortunately not the biggest crude oil producer. The European Union produced 98.7 million tonnes of crude oil in 2009. It is 2.6 % of total world production in 2009. The European oil consumption exceeds its own production more than six times. Only one possible solution of this problem is importing crude oil from abroad. Europe has four major crude oil suppliers. They are Russia (Former Soviet Union), Middle East, Africa and South & Central America.

The table below (Table No.1) shows how much and from whom is crude oil being imported to Europe. This can be compared with the United State to see the extent of the dependence. It is obvious that Europe is the major importer of crude oil and mainly dependent on oil supply from the Former Soviet Union.

Inter-area movements 2009														
Million tonnes From	To													Total
	US	Canada	Mexico	S. & Cent. America	Europe	Africa	Australasia	China	India	Japan	Singapore	Other Asia Pacific	Rest of World	
US	-	7.2	15.4	27.9	20.3	2.9	0.7	2.8	1.5	3.7	6.9	0.7	1.7	91.7
Canada	121.7	-	0.1	0.1	0.3	-	-	-	-	-	-	-	-	122.2
Mexico	61.2	1.1	-	1.6	5.6	-	-	-	1.9	0.1	0.3	-	-	71.9
S. & Cent. America	115.7	5.3	0.8	-	21.0	1.1	-	17.7	9.9	0.3	10.5	0.9	0.1	183.3
Europe	36.2	13.8	3.9	3.9	-	18.7	0.1	0.6	0.3	0.6	6.1	1.9	9.8	96.0
Former Soviet Union	28.7	4.0	0.1	0.2	347.8	1.4	0.9	26.6	1.0	8.9	6.9	13.4	7.1	447.1
Middle East	86.9	5.0	0.6	5.4	105.9	33.5	5.8	103.2	110.1	179.4	48.0	230.0	-	913.8
North Africa	28.2	5.1	-	4.3	81.0	-	0.3	8.9	4.5	0.3	0.2	3.3	0.1	136.4
West Africa	79.2	3.9	0.2	14.8	48.3	3.9	0.5	41.7	17.4	0.3	-	7.4	0.1	217.6
East & Southern Africa	-	-	-	-	0.1	-	-	12.2	0.9	-	0.1	1.7	-	15.1
Australasia	0.8	-	-	-	-	-	-	1.6	0.1	2.9	3.4	5.9	-	14.8
China	0.5	0.1	0.1	4.0	1.8	0.7	0.4	-	0.6	1.5	4.7	18.8	0.9	34.1
India	0.7	-	-	1.0	3.5	0.4	-	-	1.7	5.5	21.7	0.9	0.9	35.5
Japan	-	0.1	0.1	0.1	1.1	-	2.4	3.6	0.1	-	6.5	2.6	-	16.5
Singapore	-	0.1	0.1	0.3	1.9	2.5	10.9	6.6	2.5	0.9	-	47.8	0.8	74.4
Other Asia Pacific	5.1	0.2	0.2	2.8	4.4	0.4	16.6	27.5	5.4	10.0	26.8	-	0.7	100.1
Unidentified*	-	8.7	-	-	22.1	2.8	-	-	-	1.1	-	-	-	36.0
Total imports	564.5	54.4	21.5	66.4	665.5	68.1	40.0	253.3	156.2	211.8	126.1	356.2	22.5	###
Thousand barrels daily														
US	-	150	322	583	424	60	15	58	30	78	145	15	37	1916
Canada	2464	-	2	2	7	-	-	-	-	1	-	1	-	2476
Mexico	1234	22	-	33	113	-	-	-	37	3	6	-	-	1450
S. & Cent. America	2345	108	16	-	428	22	-	360	200	6	219	19	3	3725
Europe	750	280	82	82	-	390	2	13	6	12	128	38	204	1987
Former Soviet Union	591	81	2	5	7043	28	18	539	21	179	143	271	144	9065
Middle East	1747	100	12	108	2135	674	116	2078	2215	3619	974	4647	-	18426
North Africa	376	103	1	88	1036	-	6	180	90	7	5	66	3	2760
West Africa	1593	78	3	298	970	77	9	837	350	7	1	148	3	4373
East & Southern Africa	-	-	-	-	3	-	-	245	18	-	3	34	1	303
Australasia	15	-	-	-	1	-	-	33	3	60	69	119	-	300
China	10	1	1	83	38	15	8	-	13	31	99	392	19	709
India	14	-	-	20	74	8	-	-	4	-	35	115	453	742
Japan	-	1	2	1	23	-	49	76	1	-	136	55	1	345
Singapore	-	3	2	6	39	51	227	138	52	19	-	1000	17	1552
Other Asia Pacific	105	4	5	58	92	9	336	567	110	204	556	-	14	2059
Unidentified*	-	174	-	-	458	57	30	-	-	22	-	-	-	741
Total imports	11445	1105	448	1366	13465	1391	817	5127	3145	4283	2598	7258	464	52930

* Includes changes in the quantity of oil in transit, movements not otherwise shown, unidentified military use, etc.
† Less than 0.05.
‡ Less than 0.5.

Table No.1: Crude oil Inter-Area Movements in 2009

Source: BP

But the EU's second biggest supplier is the Middle East region with 105.9 million tonnes of crude oil. Another supplier is North (81 million tonnes) and West Africa (48.3 million tonnes) (see Table No.1) [BP 2010]. Saudi Arabia is the main oil supplier from the GCC region.

The domination of import of Crude oil from the Former Soviet Union makes it impossible to write anything on the EU crude oil dependence without it. Yet, the EU's dependency on Russian energy supplies in future may not be as high as some prognoses state. As Götz's study shows, thanks to the huge investments into transport infrastructure – pipelines and liquefied natural gas capabilities - by

2020 the Middle Eastern and North African Countries could together provide more natural gas supplies to Europe than Russia²⁸ and so will be the case for crude oil. Further Crude oil exports from Russia currently are constrained by the limited capacity of an aging pipeline network

In conclusion, the actual dependence of the EU on crude oil import is interesting. Table 2 gives the gross inland consumption of oil in the EU and compares it with the net oil imports for the period from 2000 to 2008. The rate of oil dependence has remained relatively high (above 75% before 2004 Eastern enlargements and above 80% from 2004) for the whole period, pointing out the vulnerability of the EU economy to hypothetical future oil shocks in the future

	Oil Consumption	Net Oil Import	Crude Oil Dependency %
2000	662,433	494,118	75%
2001	656,088	503,689	77%
2002	648,750	489,719	75%
2003	665,674	517,885	78%
2004	682,317	546,410	82%
2005	684,463	558,709	81%
2006	673,150	560,330	83%
2007	663,715	550,417	83%
2008	664,090	559,709	84%

Table No.2: The EU Dependence in Percentage

Source: Eurostat and own calculation

Note: Gross Consumption and Net oil imports in thousand tonne

²⁸ Götz, Roland. Rußlands Energiestrategie und die Energieversorgung Europas. Deutsches Institut für Internationale Politik und Sicherheit. Berlin, March 2004, p. 18.

4.3 Energetic relations between GCC and EU

Interdependency is the usual word that comes into mind when you look at both importing and exporting countries in terms of crude oil, although this term is lost usually when it is looked at from the point of view of importing countries like the EU. Interdependency because exporting countries needs market for their goods and the revenue from it is use to develop their economy. Disruptions in supply also affect exporting countries. When there is supply disruption, crude oil surplus production become prominent as it balances the lack of crude oil²⁹. The average OPEC surplus crude oil production is 2.8 million barrels per day in the years 2000-2010. [EIA2010]

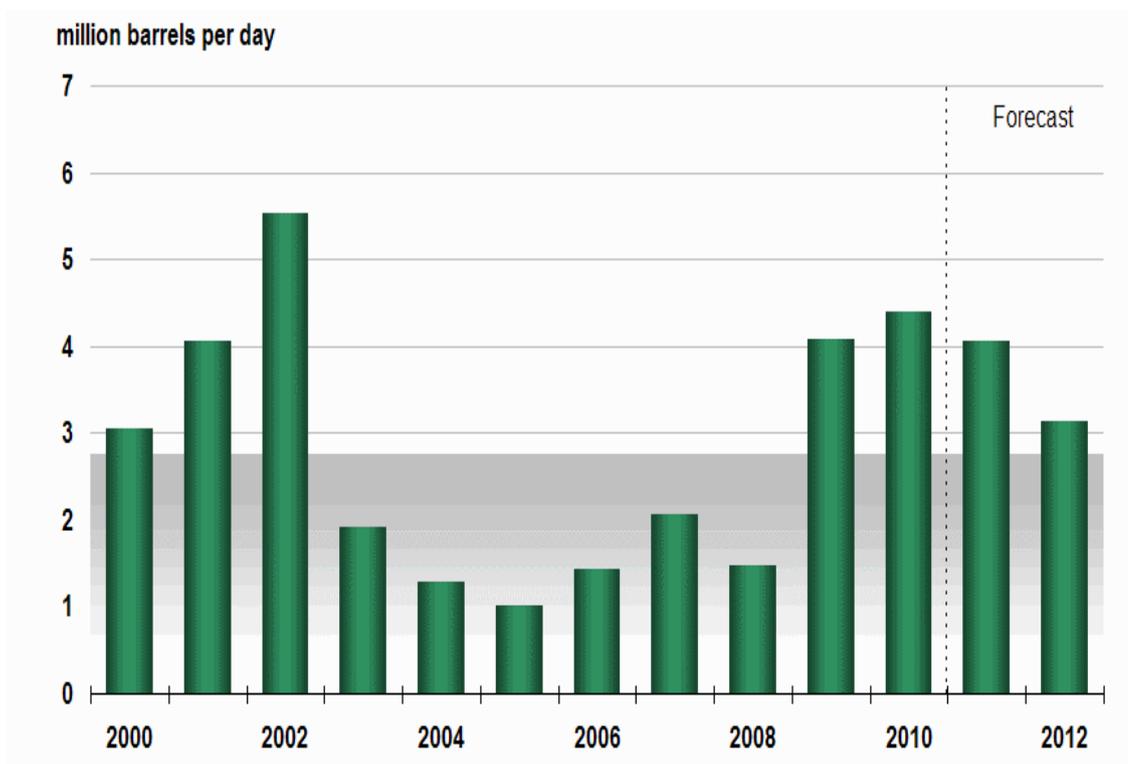


Chart No.11: OPEC Crude Oil Surplus Production

source: EIA (Energy Information Administration)

²⁹ Mansoor Maitah, Ekonomické vztahy zemí GCC a EU, www.maitah.com/wp-content/ekonomicke-vztahy-gcc-a-eu.doc, page 14

The European Union is very dependent on crude oil from the GCC integration. The relations between EU and GCC are characterized by the dependence on each other in the energetic point of view. According to the European Commission Directorate-General for Energy in the year 2010 the percentage of registered Crude Oil Imports and Deliveries in the European Union from the Middle East was 17.09 % of the total. Out of this percentage 3 GCC members; Oman, Kuwait and Saudi Arabia contributes 0.03%, 0.66 % and 6.01 % respectively³⁰

Crude oil is the most important commodity in the European Union and its share on consumption in 45 %, natural gas 22 % and coal 16 % in the EU. Because of the fact that oil share on consumption is significant and probably is going to be higher and the view held by many that the EU should diversify its oil suppliers, the EU dependence of oil from the GCC states is going to increase in long-term

³⁰ <http://ec.europa.eu/energy/observatory/oil/doc/import/coi/eu-coi-from-extra-eu-2009-01-12.pdf>

4.4 Threats of Dependency

The importance of crude oil to the economic wellbeing of the world cannot be neglected. As pointed out earlier, it is a fair assumption to say that every economy “runs on oil”, that is, oil “fuels our economy”, couple with the phenomena of stagflation, it is evident there is a high risk on being dependent on crude oil. But for the EU whose crude oil production is believed to have already peaked and have no option but to import, a real look at some of these threats of dependence will make it possible for one to be able to make a recommendation on how to reduce it since eradicating it is impossible unless there can be found by stroke of miracle new oil fields. It is also worth noting that most of the threats of Crude oil dependence of recent years have been nailed down to the economic effects with special emphasis on the issue of price volatility (rise and fall) and its rippling effects on the economy and the living standard as a whole, this in the author’s opinion is true but then but then the effects stretch as far as political, social, environmental sometime directly or indirectly.

Crude oil is being used by major energy suppliers like Russia, Saudi Arabia, and Iran etc. to pursue their strategic and political objectives. Major energy consumers notably the European Union, the United States to mention but a few are finding that their growing dependence on imported crude oil increases their strategic vulnerability and constrains their ability to pursue a broad range of foreign policy and national security objectives. Dependence also puts the European Union into increasing competition with other importing countries, China and India are real examples with their rapidly growing economies. At best, these trends will challenge the EU’s foreign policy; at worst, they will strain relations between the European Union and these countries.

To further expunge this point is the fact oil dependent makes countries always prone to subtly modify their policies to be more congenial to suppliers. For example the European Union, are more reluctant to confront difficult issues with Russia and Iran because of their dependence on imported oil and gas as well

as the desire to pursue business opportunities in those countries³¹. These phenomena constrain the ability of the EU to form partnerships in cases that is needed to achieve common objectives. Closely link to this point is the fact that all consuming countries, including the EU, are more constrained in dealing with producing states when oil markets are tight. To cite one current example, concern about losing Iran's share of world oil exports will cause importing states to be reluctant to take action against Iran's nuclear program.

Moreso, revenues from oil and gas exports can undermine local governance. The European Union has an interest in promoting good governance both for its own sake and because it encourages investment that can increase the level and security of supply. Countries that are politically unstable and poorly governed often struggle with the task of responsibly managing the large revenues that come from their oil exports. The elements of good governance include democratic accountability, low corruption, and fiscal transparency. Production in fragile regions, such as the riots that is sweeping the Arab world in 2010/2011, can lead to shaky supply which could harm the economy of oil dependent countries . Totalitarian governments that have control over revenue flowing from oil can entrench their rule. And if there are uprising like as in Libya which is a source of EU oil import then the situation become alarming.

Furthermore, the environmental problem associated with oil dependence is many. Carbon dioxide emission from burnt oil stays in the atmosphere and it is known as a key pollutant. On this same environmental issue is the situation of oil spillage whih contaminate land and water supply and eventually being harmful to marine ecosystem. Example of this is the Bahamian oil tanker the Prestige, which on 13 November 2002 sunk on the seas of Spain and some part of France polluting the sea³².

Also as said earlier because of the EU's over reliance on crude oil , supply shortfall would lead to economic turmoil. Serious impact will be felt on

³¹ www.cfr.org/content/publications/attachments/EnergyTFR.pdf

³² <http://www.black-tides.com/uk/pollution/black-tides/recent-spills-in-europe.php>

transportation of people, food, and other goods. Industries like agriculture and the plastics industries are also affected. The high transportation costs will eventually lead to inflation and reduce demand for products while at the same time bring down the tourism, the airline industry, and the automobile industry. In terms of agriculture, high fuel costs would put a strain on the common agriculture policy which already is taking a big chunk of the EU budget.

4.5 The European Union Common Energy Policy

The 1973 oil crisis opened the Pandora box for the EU (the then EC) to take a second look at its energy policy. 1974 saw the European Council adopting a programme that prioritised getting energy from as many different sources as possible.

But it was not until 1995, 2001 and 2003 that the European Commission attempted to define 'An Energy Policy for the EU'. The whole idea of this was focused on liberalizing the energy market through competition, business transparency and finally a secured supply of energy.

The catalyst that led to another look at the EU energy situation was when Russia stopped the flow of gas into the Ukraine in 2006 and into Belarus in 2007. These two countries acted as transit states for many European countries, so these acts led to supply crises. In response the European Council proposed a new Energy Plan for Europe (EPE) in April 2007, and the Lisbon Treaty (2007) emphasizing 'solidarity' on energy policy. Even though this did not solve the problem because Russia again stopped the flow of gas into the Ukraine in 2009 and into Belarus in 2010, significantly reducing the supply to 18 EU states, it was a step to finding a solution to the energy dependence.

The Energy Plan for Europe (EPE) entails

- a common energy foreign policy
- Creating an internal market for energy, this is on the basis of measures to increase competition, encourage investment and boost interconnections between national energy grids.
- guaranteeing security of supply, that is, the EU wants to strengthen its ability to cope with supply crises
- Promoting the use of renewable energy. An increase in the use of renewable energy, to 20% of all energy consumed.
- Making available funds for research that will bring down the price of renewable energy and low-carbon technology and through this find an effective ways of increasing energy efficiency; the idea is to construct 12 plants that will demonstrate sustainable fossil fuel technologies, such as carbon capture and also research programs on nuclear waste management.

The underlying idea here is to negotiate and diversify the supply of energy as one bloc with an eye on secure and consistent supply while at the same time sustaining the life of the human race and the planet. The problem that emanate from this is most member states believe energy supply is critical to future national security and should remain under the control of nation states.

Thus in the words of Wolfgang Schüssel, Austrian Chancellor, 2006-‘each country should be able to choose its energy sources. We in Austria have opted for nuclear freedom as our solution and we shall abide by it. Each country must be able to keep its freedom to choose. However, we need European security standards, more investment in renewable energy and we must make full use of all possibilities that are important for us and the environment’.³³

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http://www.eu2006.at/en/News/Speeches_Interviews/1801schuesselredeep.html?month=3&day=1

4.6 Recommendation to Reduce dependency

In all this issue of oil dependence lies the question of whether The EU can salvage the situation. In many ways the common energy policy is a step in the right direction. On the other hand, there is the growing consensus that European Union countries' situations are too different for a common policy to make sense. This brings us back to the question, are there anyways to go about managing the dependence. The answer is yes:

Firstly, the European Union must work more closely with major oil suppliers, notably member countries of the GCC, to detect and deter attacks on their infrastructure as well as the maintenance of peace in these areas. Greater efforts are needed to harden the energy infrastructure against both attacks and natural disasters. Most of the oil spike of years gone by can be hinge on unrest from oil production areas- violence in Iraq/ attacks on Iraq's petroleum infrastructure, concerns about terrorism in Saudi Arabia, the Israeli-Palestinian conflict to mention but a few are. What this means is that for the EU to have constant and uninterrupted supply which will come at cheap price there is the need to work hand in hand with producing countries to create this stable supply and this can only be achieve when the supply environment enjoy a sense of peace. This can be a short term mechanism.

Secondly, the area of transport represents perhaps the greatest challenge to both aims of reducing dependency as well as the biggest opportunity if tackled effectively. Crude oil fuels 98% of the EU's transport³⁴ and given the fact that it accounts for the greatest amount of CO2 emissions it also poses the most significant challenge to the EU. Thus, if the use of crude oil in the area of transport is lessened this will have a considerable and positive impact on the dependency meter. To do this the EU will need to pay particular attention to

³⁴ Eurostat pocketbooks, Energy, transport and environment indicators, 2009 edition, p. 18, 22, 32, 33, 48

alternative fuels that reduce the negative consequences that come from the regions reliance on imported oil. For example, biomass-derived liquids (such as ethanol) can be looked at since there are strides being made in this field. The current generation of hybrid-electric vehicles may be supplanted by “plug-in hybrids,” which allow some fraction of the mileage to be powered by electricity that is charged from the grid, perhaps leading to an eventual transition to fully electric vehicles

A further policy which the European Union could follow to prepare for future price swings would be to encourage large energy users to hedge their future energy requirements. Many corporate energy users already engage in hedging. Such a policy would have to be accompanied by accounting regulations to assure that consumers correctly evaluate the long-term viability of hedging counterparties. The recent collapse of Enron in the United States should encourage hedgers everywhere to re-examine carefully their contracts for future energy supplies.

Further, while the EU has found a way to effectively engage internationally on the issue of climate change their approach has failed in the area of supply security in terms of crude oil. For the EU to deal effectively in the short term with this dependency, more attention should be paid to supply security. The EU has had considerable success in sustainability when it comes to issues of crude oil dependency. As said earlier, there have been more individual member state approach when it comes to issue of crude oil although there have been calls for an integrated and joint look at the situation in recent years than was before. This hopefully indicates a movement towards a stronger stance internationally. But in order to improve its position in the global crude oil market the EU should begin to behave in a manner more in keeping with geopolitical interests. The nature of the EU's engagement internationally requires a shift in thinking. If The EU presents a united stance they will become a stronger player with their combined buying power but at the same time, the must play by some rules set by dominant

players in the crude oil market, especially the suppliers. In doing this, the EU will be adapted to the rules in time and will use their influence in other economic spheres to push their preferences.

In conclusion of these points, the EU should enhanced cooperation between regions, cities, and towns within the EU as well as with cities in the developing world and other third countries through information sharing. Such policy should be geared at encouraging information on alternative forms of transport. Or for example encouraging and education on schemes like the public bicycle schemes, Cycle to Work Scheme and many others that have been introduced to great success in many EU cities like Dublin, Lyon etc.³⁵

³⁵ http://www.niches-transport.org/fileadmin/archive/Deliverables/D4.3b_5.8_b_PolicyNotes/14397_pn4_public_bikes_ok_lo_w.pdf

5. Conclusion

The main purpose of this thesis was to analyse the European Union's dependency on crude oil supply originating from the Middle East. The author paid special emphasis on the 6 states (Saudi Arabia, Kuwait, Bahrain, Qatar, Oman and United Arab Emirates) that makes up the Gulf Corporation Council. Before providing an answer to the question of whether the EU is dependent on crude oil from the Middle East, the major findings of this research will be summated.

The first chapter of this work introduced the topic by giving a brief history of crude oil. From the history, it was made clear that the use of crude oil can be trace as far as the biblical time of Noah and the ark as well as the story of the tower of Babel. It was also known to have been used about 4,000 years ago to fortify walls in ancient Babylon. The modern history however began in mid-19th century (1846) with discovery of the process of refining kerosene from coal. The world's first commercial oil well was drilled in Poland in 1853 while in 1854 petroleum was firstly fractionate by distillation. The 1886 saw Karl Benz and Gottlieb Daimler introduced first gasoline-powered automobiles in Europe leading to increased demand that has largely sustained the industry to this day. The mid 1900s saw the US becoming leading producer but this was later taking over by Saudi Arabia and then Russia. With regards to the GCC bloc oil discoveries were made in years 1932-1964 with Bahrain(1932), Saudi Arabia(1938), Kuwait(1938) Qatar(1940) , United Arab Emirates(1958) and finally Oman (1960). Two oil crisis (in 1973 and 1979) brought the world to it toes leading to a significant interest about oil supply levels. It is no wonder any surprise that about 90 % of vehicle fuel needs are met by oil.

The history of the price of crude oil was shown to have not followed a consistent pattern apart from the pattern of price fluctuation over the time. The Organization of the Petroleum Exporting Countries (OPEC) was formed in 1960 to control the price of oil. A step further in the analysis showed that the largest crude oil

reserves are situated in Middle East (56 % of world oil reserves), with Saudi Arabia as the biggest producer in this region. The Middle East is the biggest oil producing region with 30 % share of the world total. While Russia disposes off Saudi Arabia as the biggest producer in terms of countries.

From the oil consumption point of view, the USA has been the biggest consumer for years, currently with 18,690 thousand barrels per day and closely followed by the EU with 13,630 thousand barrels per day. And even though world oil consumption grows every year by approximately 1.2 % this was not the case in 2009 when global oil consumption declined by 1.7%, the largest decline since 1982

Further the interesting history the Gulf Cooperation Council which was established in 1981 in Abu Dhabi was looked at. Its foundation was based on its charter, “effect coordination, integration and inter-connection among the Member States in all fields, formulating similar regulations in various fields such as economy, finance, trade, customs, tourism, legislation, administration in order to achieve unity” and stress “the special relations, common qualities and similar systems founded on the creed of Islam, faith in a common destiny and sharing one goal” defined by the Arab identity. A critical look at the membership shows a sense of economic growth that can be looked at from the point of view of being an oil rich region and using the resource to achieve a purpose.

An analysis of the relationship between the EU and the GCC dating back to the latter’s beginning was also looked. The first meeting of these two regional blocks was in 1983 in Saudi Arabia. Five years later the Cooperation Agreement was signed. The framework of EU-GCC cooperation is defined not only by the world oil market but improvement in trade and investments which can be achieved through improvement in negotiation and ironing out of differences and global strategic development. The GCC-EU relations are based on bilateralism because there are certain interests on both sides. The EU is after Asia the second largest

export market for the GCC and after USA the second most important source of direct investments into GCC countries. Both sides therefore benefit from the relationship.

The next chapter talks about the issue of dependency. In looking at this, the general dependency of the EU was looked. From statistical data available on energy, crude oil is the most important energetic commodity in EU with the 45 % share on EU consumption followed by gas (22 %) and coal (16 %). It is well documented fact that the EU has no significant bigger oil reserves. Further it is apparent from the data that the EU's consumption (670.8 million tonnes) is about six times the production (98.7 million tonnes) meaning the EU is heavily dependent on crude oil imports.

Four major oil suppliers is the source of solution to the EU problem: Former Soviet Union (Russia) with 42.40 %, Middle East with 17.09%, Africa with 21.62 % and South & Central America with 3.30 %, other European Countries plus Norway contribute to the remainder of 15.59 %.[EC-Directorate-General for Energy 2010] The EU dependency is present, the rate of it has remained relatively high (above 75% before 2004 Eastern enlargements and above 80% from 2004) and it will increase rapidly because the oil production in OECD Europe has already peaked in 2000. The probably production is set to naturally go down with time. This means the demand for oil supply will grow.

It is at this juncture that it is fair to pose the question, why there is the chance of the EU being dependent on the Middle East despite the fact that Russia is the EU's main supply?

The answer is simple at the beginning of year 2009 the natural gas supplies to Europe from Russia were struggling. States which totally depended on Russian's gas supplies were facing huge difficulties with the supply of natural gas. The same can happen with crude oil.

Further there is also the fear that Russia will and is abusing the oil dependency of the EU for its geopolitical goals. This fear is based on the fact, that Russia may "turn off the taps" in order to pursue its geopolitical strategic interests as was the case in Ukraine after the pro-western Orange Revolution of Viktor Yushchenko in January 2006.

For a long-term period the Middle East is the most important and irreplaceable oil supplier in terms of world proven crude oil reserves. The only problem with the Middle East supply is problem with world terrorism or local and global political tensions as is the case now (2010/2011).

Thus it looks like no matter where the supply comes there seem to be a problem with dependency. Some of the threat apart from the supply dilemma includes the environmental problem associated carbon dioxide, price and supply fluctuation and its consequent effect on the economy and the potential abuse of suppliers to use it for their own political motive.

From the threat envisage by this dependence, the author then went on to look at EU policies that may help curb the threat of dependency. The European Union Common Energy Policy was looked at, from its history to what it entails. And the basic idea of it is to negotiate and diversify the supply of energy as one bloc with an eye on secure and consistent supply while at the same time sustaining the life of the human race and the planet. Even though this is in the right direction, the problem associated is that there is the growing consensus that European Union countries' situations are too different for a common energy policy to make sense.

The key point for conclusion is that the EU is highly dependent on crude oil as shown in this work. Further the threat posed by the dependency does not affect only the economy of the EU but also the political, environmental and social life of the member states. The onus therefore lie on member states of the EU must therefore put their strength together to find solutions. As Wolfgang Schüssel, Austrian Chancellor, 2006 puts it "reducing dependence on one supplier,

diversification, accumulating stocks and security of energy networks requires us to adopt a long-term perspective and not to strive for short-term gain. Long-term solutions for Europe are the only possible answer. But it is also a question of alternatives”³⁶

³⁶ http://www.eu2006.at/en/News/Speeches_Interviews/1801schuesselredeep.html?month=3&day=1

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8. Abbreviations

API	the American Petroleum Institute
BP	the British Petroleum
EIA	the Energy Information Administration
EU	the European Union
FTA	the Free Trade Agreement
GCC	the Gulf Cooperation Council
GDP	Gross Domestic Product
ICE	the Intercontinental Exchange
KSA	the Kingdom of Saudi Arabia
NATO	the North Atlantic Treaty Organization
NYMEX	the New York Mercantile Exchange
OAPEC	the Organization of Arab Petroleum Exporting Countries
OECD	the Organization for Economic Cooperation and Development
OPEC	the Organization of Petroleum Exporting Countries
PPP	Purchasing Power Parity
UEA	the United Arab Emirates
UK	the United Kingdom
UN	the United Nations
US(A)	the United States of America
USSR	the Union of Soviet Socialist Republics
WTI	the West Texas Intermediate (also Texas Light Sweet)
WTO	the World Trade Organization
bil	billion (thousand million)
bl/d	barrels/day
mil	million

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Source: The Crunch Magazine (www.thecrunchmagazine.wordpress.com)