

CHAPTER III
THE DECLINING OF WORLD OIL PRICE
AS THE DYNAMIC CRISIS OF SAUDI ARABIA

The previous chapter explains about Saudi Arabia and the development of Saudi Arabia's Oil Industry since the oil discovery was conducted in Saudi Arabia. This section explains more about the declining of world oil price itself that become a source of the crisis on this case.

Volatility in oil prices is one of the critical things for investors because the role of oil as an energy source important now is for all countries in the world. Fundamentally, commodity prices are determined by supply and demand will be the commodity itself. In the context of the oil commodity prices, this chapter will also explain some important factors to consider in the context of the oil prices movement.

A. Oil as an Energy Resource and Source of War/Conflict

Oil is a natural resource that has a tremendous natural wealth for the life of the world community. Petroleum, everyone knows is a resource that cannot be reproduced. Everyone knows we need the oil with pretty much any kind of it. Gas, gasoline, pertamax, benzene, diesel, asphalt, kerosene and more of them are the result of the oil that has good usability for the transportation, industrial, household

and so on. Oil has the advantage of both import and export to the country. Most of the countries that have a wealth of natural resources are developed countries.

Since oil began to be found commercially by Colonel Edwin L. Drake in 1859 in Titusville, Pennsylvania, the role of oil began to shift the coal that time it was still a major energy source (The American Oil & Gas Historical Society (AOGHS) , n.d). Its liquid, easy to transport and piped, relatively cleaner than coal, easier to store and produce a variety of derivative versatile products, making petroleum the source of the most strategic energy within a relatively short time. The heart of the world economy, especially the manufacturing sector is growing rapidly at the time, since the second half of the 19th century, spurred by this hydrocarbon energy sources.

The incorporation of Saudi Arabia in OPEC since 1960 is evidence that the oil in Saudi Arabia is the most important commodity for them (Niblock & Malik, 2007). Even the liberal countries such as the United States have its own considerations of the existence of the monarchy in Saudi Arabia on the supply of oil in the country. Oil is one of influential commodity in the industrial era. Since World War I, oil emerged as a major energy source which is vital for the survival of the industry and a war of a state (Morgenthau, 1948).

All industrial equipment, military vehicles and equipment fueled by oil as a form of modern equipment and it became a very significant technology achievement at the time. In the end, the dependence on oil determines the top position in the strength of a country's international position. The emergence of oil

as a raw material which is absolutely needed by all country has caused a shift in the relative strength of the countries that are politically prominent (Morgenthau, 1948).

Industrial-economic dependence on petroleum energy lasted to this day, both in developing and developed countries. For developed countries, although oil only accounts for a small portion of their Gross National Product, but petroleum is an important factor that drives the wheels of their industrial economy. Therefore, oil is not only an energy commodity, but has become a world political commodity.

Discussing on oil geopolitics cannot be separated from these two actors: the United States and the Middle East. The second actor is the most influential on the political constellation of the world's oil. It was easy to understand, considering the first actor, the United States, is the world's largest oil consumer. While the second actor, the Middle East is the producer and the ruler of the largest oil reserves in the world.

Middle East is a biggest regional producer of mineral resources anywhere in the world because 65 percent of world oil reserves exist in the Middle East. The average of Middle Eastern countries is a rich country. Saudi Arabia is the best oil-producing country in the world.

Middle East which is dominated by desert suddenly become contested territory many industrial countries as the most optimal oil producer ever. The need for oil is a priority of the superpower countries because their oil consumption is

very high. Soviet Union self-sufficient in oil could be a major force to their rival, the United States, the Cold War was a proof that the oil was the benchmark power of a country.

Since oil was discovered in the country in the 1930s, Saudi Arabia has been the largest oil producer in the world and is known as a stable and prosperous country. Furthermore, the success of being an oil producing country is also followed by Iraq estimated for about 112 billion barrels that makes them become the big oil producing country after Saudi Arabia.

Because of its oil wealth, the countries in the Middle East have a particular appeal for other countries. In the post-World War II, the West actually began to retreat and Colonials Empire was lost. Afterwards, the Arabian nationalism start develop, Islamic fundamentalism emerged later. On the one hand, the West began to rely heavily on the Persian Gulf countries for its energy sources (Huntington, 1997). That's the reason why super power countries such as the United States was to establish a good relations with the countries of the Middle East and Saudi Arabia as the biggest oil producing country, because Saudi Arabia is one of the most vital alliance for the United States in the Middle East.

B. Causes of World Oil Price's Movement

Oil, like other commodities, also has some factor as a determinant of product's price. Several things can cause the oil price movement, but only four

main factors that actually influence it, they are demand, supply, geopolitics and the future trading (speculators).

1. Demand

As with other commodities, oil prices in the long-run term is affected by the demand. Looking at the data that the world population increased significantly in the last 10 years, the number of the population is a real market of oil. The graph below is an example of three countries that have large populations, China, India, and Indonesia, where a total of three reached about 40% of world population:

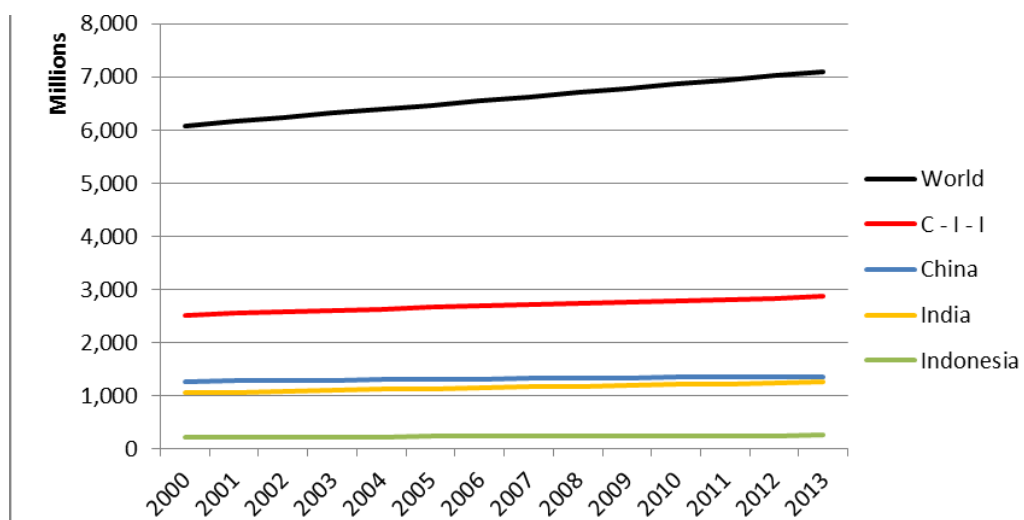


Chart 3.1
Populated Countries' Population Movement (World Bank, 2014)

In these three countries are also experiencing economic growth above the average of world economic growth as shown in the graph below:

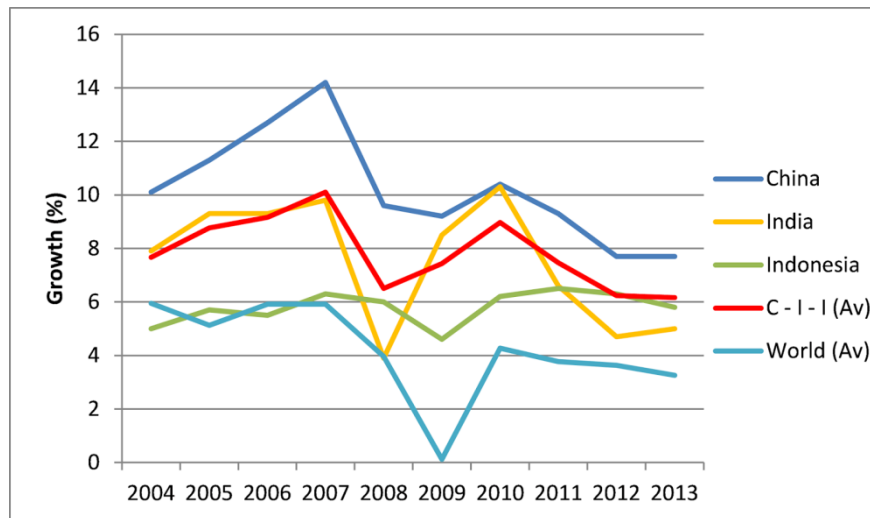


Chart 3.2
Populated Countries' Economic Growth (World Bank, 2014)

Which according to the Organization for Economic Co-operation and Development (OECD) study (Fournier, 2013) as in the chart below, the three countries have the long-run income elasticity of oil demand higher than in developed countries (USA, EU, & Japan). It means that the strong economic growth of the three (and the other countries developing countries) is a real demand of oil market and it affects oil prices.

	United States	Japan	European Union	Other OECD	China	India	Indonesia	Rest of World
Long-run price elasticity	-0.115	-0.248	-0.095	-0.205	-0.238	-0.255	-0.383	-0.180
Long-run income elasticity	0.502	0.603	0.344	0.644	0.903	1.014	1.284	0.840
Short-run price elasticity	-0.023	0.000	0.006	0.000	0.083	0.000	0.130	-0.001
Short-run income elasticity	0.868	1.279	0.000	0.000	1.885	0.000	0.000	1.053

Table 3.1

Key demand-side parameter used in the baseline simulation (Fournier, 2013)

The study strengthened by the IEA that looked at the relations between fuel consumption and economic growth in the non-OECD countries (EIA, 2014). The results are as follows, that economic growth affects the fuel consumption which is refined from oil.

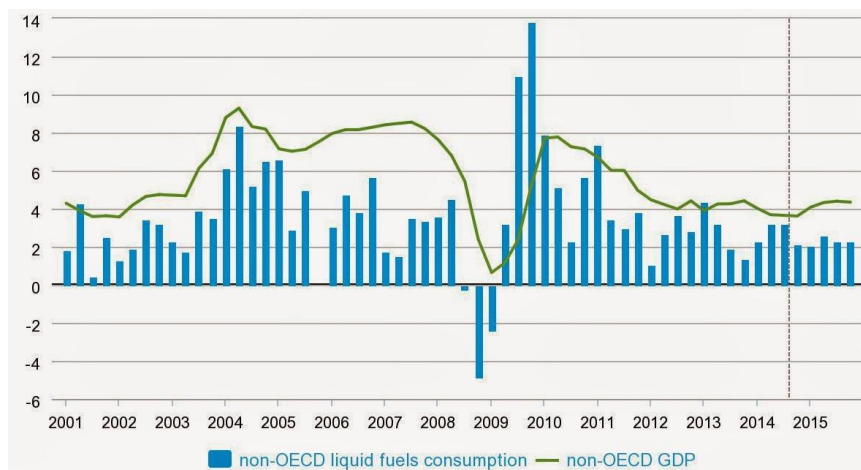


Chart 3.3

Non-EDC Liquid Fuels Consumption and GDP (EIA, 2014)

Therefore, from the charts above shows that the world oil demand is strongly influenced by the economic conditions of the world, particularly developing countries. Although many industries are getting interested in using green and sustainable energy, the fact remains that we are still heavily dependent on oil, and oil consumption in the world is still growing also because there remains a correlation between the largest oil consumer and the largest oil-producing country. It should be noted that 1 barrel is identical to 159 liters. Below is data from total oil consumed from 10 countries in barrels per day:

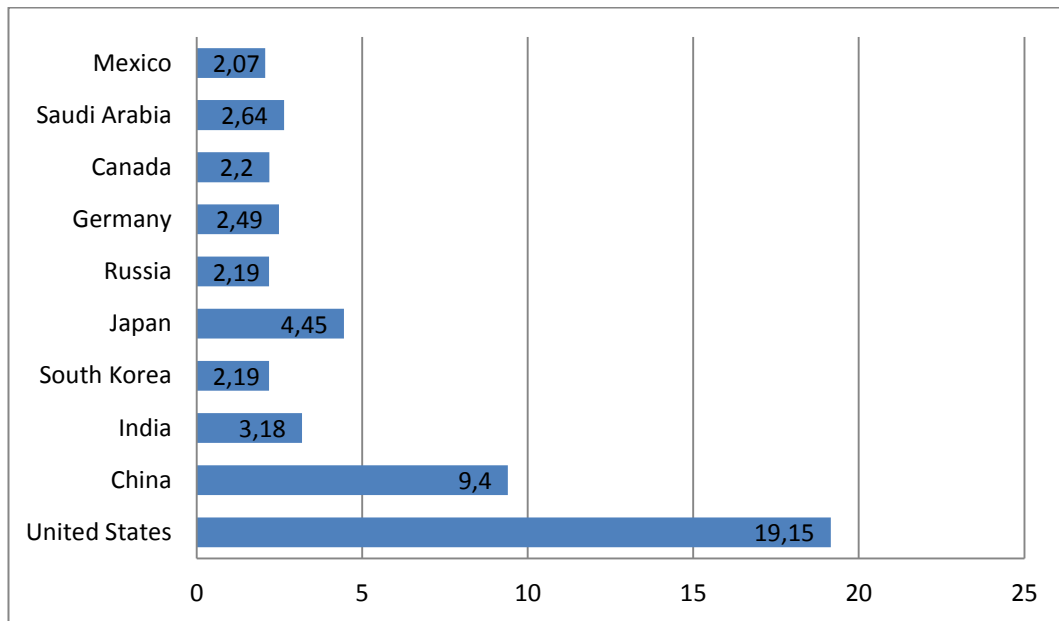


Chart 3.4

Top 10 of Oil Consumers in million barrels per day (mmbbl/day) (IndexMundi, 2014)

2. Supply

On the supply point of view, of the end of easy oil era¹ makes the cost of finding or discovery, development and production of oil more expensive. Based on the price index compiled by IHS (IHS, 2014) using 2000 as a base index (100) of Upstream Capital Cost Index (UCCI), a proprietary index of the rate of inflation seen in the costs associated with the construction of a global portfolio of 28 upstream oil and gas projects, the cost of capital needed up significantly as illustrated chart below.

¹ This nowadays era, when the oil already discovered.

Although, generally, the movement is following the oil prices, but when the oil price drops extreme, the drop by UCCI is not like the drop in oil prices. It means that, the cost of increasingly expensive oil projects compared to the rise in oil prices.

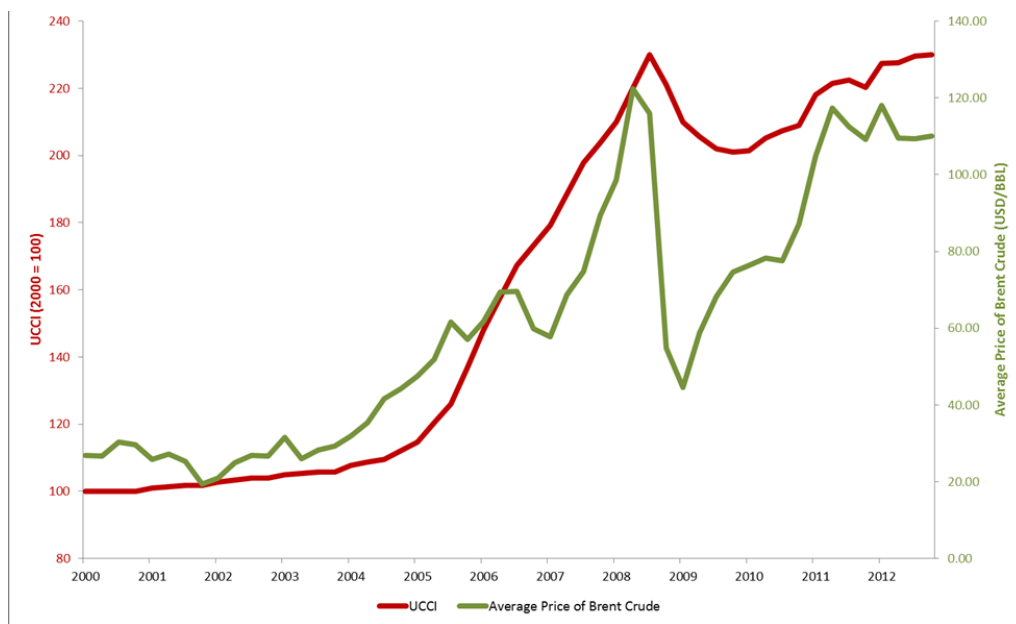


Chart 3.5

UCCI vs Brent Crude² Price (IHS, 2014)

With the expensive cost of condition, there is a chance the price could rise if spare capacity is low, then the manufacturer has hope to run a new projects. In world of business and the wider economy, the dynamic model of interaction between demand-supply could be described along with the associated environmental the system scheme as follows:

² *Brent Crude* is a major trading classification of sweet light crude oil that serves as a major benchmark price for purchases of oil worldwide

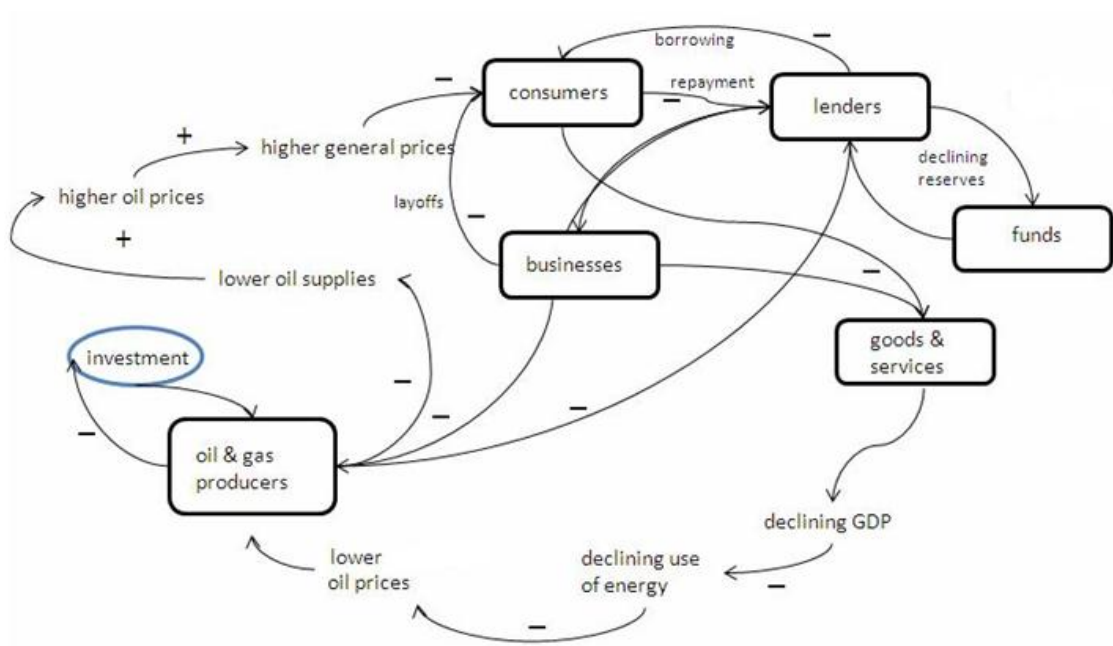


Figure 3.1

Dynamic Model of Interaction between Demand-Supply (Mobus, 2010)

3. Geopolitics

The following chart of the movement of oil prices since 1861 below shows that geopolitical factors is quite often affecting oil prices. History recorded at least three times that there was an extreme movement in oil prices before the year 2000. The first in 1973 when the Yom Kippur war between the Arab worlds and Israel that occupied Palestine. At the time, the Arab world cut oil production (oil embargo) and issued new tax rules that caused oil prices rose to 12 US \$ / barrel.

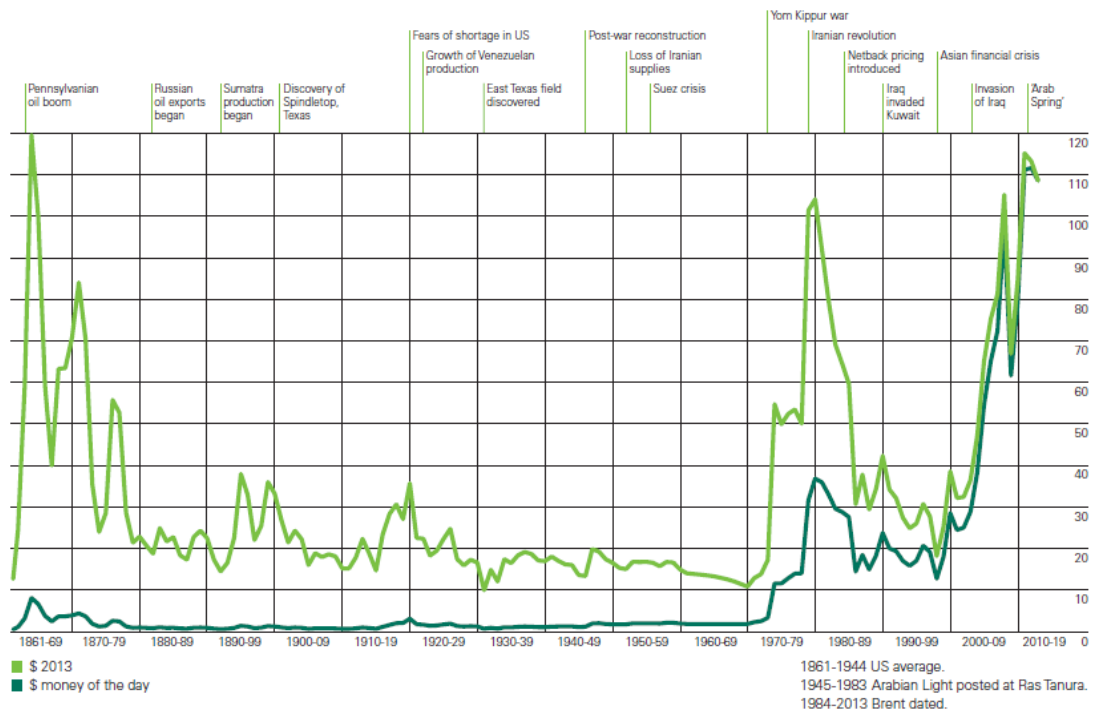


Chart 3.6

Crude Oil Prices Movement from 1861-2013 (British Petroleum, June 2014)

The second event that give an impact for oil prices was on the period of 1979-1981 when the Iran-Iraq war which both are members of OPEC, causing oil prices to 34 US \$ / barrel. While the third was the decline in prices to \$ 7 / barrel in 1984 to 1986 due to the restriction of OPEC quotas failed and oil price wars when Saudi oil trying to get back to maintain dominance in the market (market share).

Although a study by Killian (2014) stated that the political events, especially in the middle east only has little effect on oil prices, but the incident clearly contribute to changing expectations in the oil market afterwards, especially

the possibility of reduced supply from oil producers that could cause oil prices rise. (Kilian, 2014)

4. Future Trading

Actually, there are two types of markets in the world oil market, they are physical markets (wet oil market) and paper oil market. The physical market is the real deal when the seller to sell and deliver oil to the buyer. While the paper is to make the oil market as an investment instrument (speculation), either in the form of a futures contract which is merchantability, bundled with other commodities, even used as underlying assets for a wide range of derivatives products.

Interestingly, the activities in both markets affect each other. Physical market will see movements in paper market prices which they will see the future expectations, while the paper market will see the real deal today to build those expectations. Based on the following EIA statistic, the paper market significantly increased and it shows that the oil is an attractive commodity investment (speculation) for the investors:

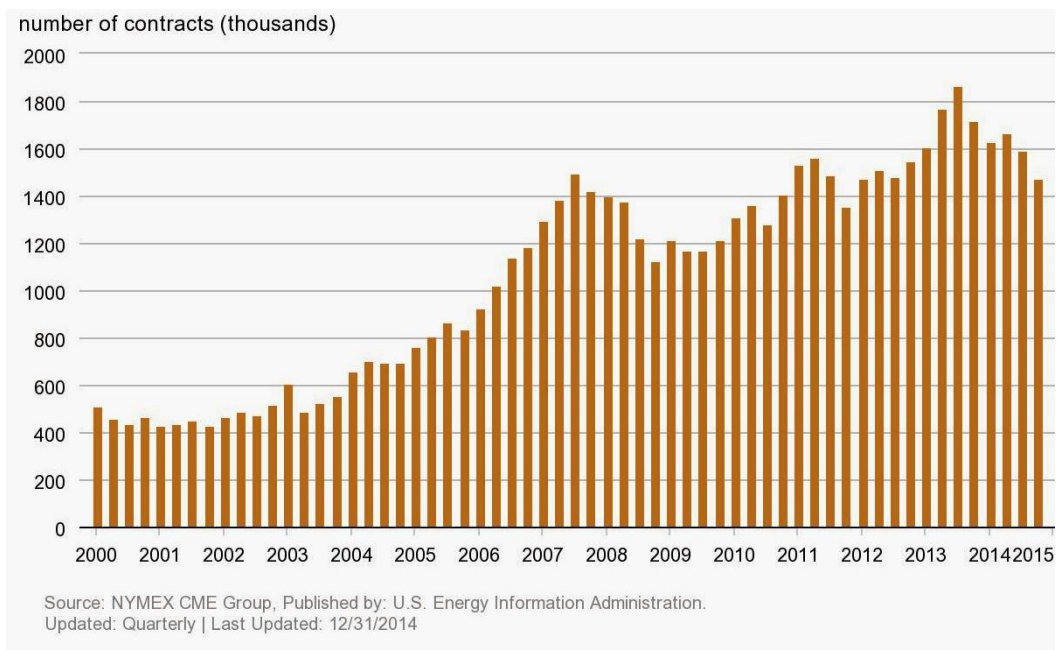


Chart 3.7

Average Daily Open Interest in Crude Oil Futures
on U.S. Exchange (EIA, 2014)

Thus, the combination of the above four factors that caused oil prices to move dynamically so that no one can predict exactly.

C. Economy-Political Dynamics of Saudi Arabia: New King, New

Government

Economic of Saudi Arabia now has experienced shocks from cheap oil prices. Crude oil sold in the market has decreased, from an average of \$ 100 per barrel in 2014 until the end of 2015 reached \$ 36.57 per barrel (Worldbank, 2017). As a country that specialize oil as its main source of exports, Saudi Arabia is very affected by this price reduction.

Coincidentally, at the same time when the price of oil reached a low point in 2015, King Abdullah bin Abdulaziz died in January 2015. He was replaced by the new king, Salman bin Abdulaziz, who was chosen to commit to make a major economic changes in the Kingdom. Crown Prince, Mohammed bin Salman, has sufficient authority over the economy and foreign policy and Khalid al-Falih, the new oil minister who in lieu of office replacing Ali al-Naimi has been in power since the oil crisis of 1980.

The new Foreign Minister, Adel Al-Jubeir has been observed that Saudi Arabia has undergone major changes in the last generation, including major improvements in infant mortality, literacy, and educational achievements of women (Jubeir, 2006). However, the oil crisis and a change of government provide the unusual opportunity to implement major changes in economic policy Arabia in the future. This period may be a critical point of history that resulted in fundamental economic reform, but there is also strong resistance to change from powerful former.

D. The Dynamic Crisis of World Oil Price in 2014-2015

After the 2008 crisis that hit the economy of the United States (US) and Europe, which followed the economic crisis that hit China since 2014, the world economic is now back by the crisis. The reason of the world's economic crisis was the fall in world oil prices at their lowest level since 1990 (Timelines, 2015). As a result, many oil company's profit was falling down and countries that rely on oil revenues are under threat of bankruptcy.

The fall in oil prices caused by factors that are fundamental, and not for speculation. These factors are, first, new technological discoveries of shale oil and shale gas in the United States (US). This new technological discoveries led to the US less dependent on imported oil because back then the US itself was become the largest oil consumer in the world. Second, the weakening of the Chinese economy due to the collapse of financial markets that was triggered by the decline in the property market and infrastructure in the country. Third, its own oil production at the level of overproduction (excess production) as well as the rise in oil prices that have tended unnatural. Thus, lower oil prices are likely to persist in the long term.

Shale oil is oil contained in a kind of soft rocks. The oil in these rocks is extracted by heating or other techniques. With the discovery of abundant oil shale reserves, the United States has oil reserves to meet its needs for hundreds of years into the future.

The oil shale industry is abandoned in the early 20th century, when the discovery of sources of oil and gas in very large numbers at the beginning of the 20th century. The cost of producing shale oil is far more expensive than petroleum production even in comparison with the cost of oil production off shore or in the sea though. Stories change as oil prices continue to rise even to the number above 100 US \$ per barrel in the first years of the beginning of the 21st century. At that time, once calculated that the cost of producing shale oil ranges from 70-90 US \$ per barrel. At that time also some countries constantly began to make oil shale

technologies and updated a new technology on it. Among countries that have no oil resources or less source, shale oil is used as energy reserves in the country. These countries include Canada, USA, New Zealand, Sweden, South Africa, and Spain and even there is a country that continues to produce shale oil, which is Estonia, Brazil and China (EIA, 2015).

By 2005, oil shale technology has managed to reduce production costs to below US \$ 50 per barrel and in 2010, the production costs are even below 40 US \$ per barrel. American began producing shale oil and gas on a large scale so that the last few years Americans no longer need oil imports and it caused oil prices to fall.

OPEC oil exporting organization under the leadership of Saudi Arabia tried to stem the shale oil by increasing production of OPEC countries, there was a glut of oil, the abundant oil in the world because that oil prices fall further. The decline in world oil prices are currently below the cost of production is somewhat difficult for the producers of shale oil because the factor of this decline is due to "oil war" between countries of OPEC, led by Saudi Arabia against producers of shale oil.

Supply of shale oil that continues to grow, making the world oil prices in 2014-2015 is to falling down. OPEC, although prices continue to fall, does not want to lower the production because it would not relinquish its market share to American shale oil producer. Back to the crude oil vs. shale oil, with the current world of science capabilities that have been helped by the sophistication of

computer technology, it is possible to find a new method of shale oil production at a lower cost that makes the oil price will decrease. If that so, it can be predicted how the future crude oil companies with not-so-big revenue from their crude oil production