United states oil dependence essay sample

1. Introduction

In *The Economist* edition few moths ago, there was a highlight about the importance of oil price in influencing the macroeconomics of a country. The article focuses on the influence of OPEC in determining of the world's oil price. According to article, last year when oil price reached $80 a barrel, the fact was oil was not in short supply and he stocks was huge. However, the price was high due to oil producing countries did not increase the production and thus leave very few spare capacity.

For instances, few months ago, Saudi Arabia, as the country that holds the largest oil reserves commenced cutting oil production. This cut is officially made in the regular meeting of OPEC (Organization of the Petroleum Exporting Countries). The result of the formalized decision is members of OPEC produces less than 1 million barrel a day. Since the worldwide demand continues rising more than 1 million barrel a day (into 84 millions), the oil price was high.

The situation occurs again in these days as oil price skyrockets near to $100 a barrel. Immediately, the condition forces government in several countries to make appropriate correction in their budget in order to minimize skyrocketing deficit for 2007 fiscal year.

2. Thesis Statement

Despite the threat of skyrocketing oil price that will impact on retail price on most merchandise, still we, consumers, hardly reduce the consumption of gasoline that means we contribute to the increase demands for oil. In large scale, the condition refers that a country has a heavy dependence on oil as energy to run millions of vehicles, run factory machines, light up electricity in rural areas, and many more.

Concerning the oil dependence, this paper will highlight several problem and possible solutions that have been attempted or proposed in order to run away from oil dependence in the U. S. In addition, it also explains the reasons why the proposed solutions have failed or why potential solutions will or will not work. Some issues that this paper will take into account include industrial revolution, OPEC, environmentalist, and the continual efforts to develop alternative energy.

3. Problems

In the second half of 2007, the oil price seemed unstoppable as it is near to $100 a barrel. In an article at www. oil-price. net, an author presents a reliving expectation that in the future the U. S. consumption will drop significantly as alternative energy starts take places. According to analysts, the most attractive solution to energy crisis is the use of bio fuel to run vehicles and machines at plants. This solution has risen dramatically in use in major European countries like Germany and Netherlands (JeriCan, 2007).

However, the use of bio fuel in large number also presents another problem as it cause shortage of vegetable oil quickly. The situation also causes another major issue like global warming as many forests in tropical countries are transformed into palm oil plants.

Figure 1 Oil price as of December 3, 2007

Source: http://oil-price. net/dashboard. php? lang= en

Figure 1 shows recent figure on crude oil price that almost doubles in 2007. Concerning several efforts on reducing the oil consumption and raising the use of alternative energy, below is several factors that influence the U. S oil dependence.

4. Causes/Reasons for U. S. Oil Dependence

In business, the role of technology is unavoidably apparent when the industrial revolution broke. People have changed their perspective significantly regarding technology and its effect on human lives. Afterwards, some amount of human labor were replaced by machines as business entrepreneurs realized that one sophisticated machine can do the job of 20 men inside factories. This gave birth to automation of factories, offices and practically the automation of business as happened in revolution industry.

The important technological development commenced in the Britain when the country experienced industrial revolution that spawns three major technological developments; they are steam engine, metal industry, and textile industry. Interestingly, during the revolution industry, the invention of one technology leads to another invention.

The invention of steam engine originated in the increasing demands for yarn, which in turn drives the industrialization of textile industry. The industrialization occurred when James Watt invented steam engine that supported the increasing number of refined cotton products (SEA. CA, 2003).

In addition, the industrialization of metal industry happened when the use of iron and steel are widespread. The invention of metal as raw materials are significantly important since it becomes the materials that speed up the industrialization. For example, the use of coal is beneficial for smelting. Meanwhile, the extensive use of metal has encouraged the development of steam-powered train, which encouraged people to move and thus conduct trade from one country to another (SEA. CA, 2003).

The third industry that affected by revolution industry is textile industry in which invention of Spinning Jenny and Water Frame has supported textile industry in the Britain to be the world's largest wool trading country. Spinning Jenny, for instance, allow the increasing number of finished cotton. Meanwhile, Water Frame enables textile industry to produce yarn faster and stronger thread (SEA. CA, 2003).

Since all machines in the factories need fuel to run them, they become the energy drain that consumes oil and its derivatives (high speed diesel) in large quantity. That underlies the facts that U. S. becomes one of the world's largest oil consumption (SEA. CA, 2003).

Figure 2 World Oil Consumption as of 2004

Source: http://www. thewe. cc/thewei/&_/images6/iran/world_oil_consumption. jpe

The oil consumption in the U. S. undoubtedly continues rising as the result of a large number of factories and its machines that fueled by oil and its derivatives like diesel etcetera. Figure 3 shows that oil consumption in the U. S. since 1950 – 2003.

Figure 3 Oil consumption trends

Source: http://www. ornl. gov/info/ornlreview/v38_1_05/images/a04_oil_full. jpg

In order to fulfill the need for over 58% imported crude oil, U. S. has many sources as shown in the figure 4. The figure highlights that U. S. has great dependence on oil supply from Middle East that cause the country to involve actively in the tension that happen in the region.

Figure 4 Origins of U. S. Imported Oil

Source: http://supplyexcellence. com/blog/wp-content/uploads/2007/03/US %20Oil%20Imports%20by%20Country. jpg

Challenges for U. S. Oil Dependence: OPEC

Political factors

Despite the strong indication that exogenous political factor might be the cause of most oil price shocks, analysts have no choice but to admit that the 1999-2000 oil price increase was engineered by the OPEC oil cartel. OPEC is an organization that composes of seven oil-producing countries (Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela) which are heavily reliant on oil revenues as their main source of income.

Since oil revenues are so vital for the countries' income, OPEC aims to bring stability to the oil market by calculating then adjusting their oil output to ensure a balance between supply and demand. Currently, OPEC's eleven members represent 40 percent of the world's oil output and possess over three-quarters of the world’s total proven crude oil reserves (Banerjee, 2001).

The conclusion was taken from the fact that this particular cartel suddenly acquired new powers in March 1999 and just two years later seemed to be in the verge of collapse. The theory regarding the involvement of cartel in determining oil prices are stated in the standard theoretical models of cartels such as Rotemberg & Saloner and Green & Porter. The formation of cartels is based on the logic that oil producers trade off the immediate gains from abandoning the cartel against the present value of the future cartel rents foregone. Thus, if all else equal, low real interest rates as in the 1970’s should be conducive to the formation of cartels, and the opposite is also true (Banerjee, 2001).

The theory also indicated that the lack of producer’s ability to detect other cartel members’ cheats by exceeding their production quota will create a procyclical ability of cartels to keep prices high. In times of low demand, as prices fall below trigger point, cartel members will choose to flood the market with their output. Thus, strong economic expansion will lead to stronger oil cartels and major recession will weaken them (Banerjee, 2001).

Environmentalists

Despite the increasing use of oil to run economies in the U. S., it also raises concerns over the impact on environment as the use of fossil fuel becomes the major driving factors that cause global warming.

For this reason, many American environmentalists suggest that U. S. must start initiatives to reduce the dependence on oil use by using several kinds of energy alternatives. They also believe that the country can get rid of using oil and use other alternative energy by 2050 (Energy Information Administration, 2006)

Alternative Fuel

In terms of oil consumption, customers tend to decrease the use of gasoline to bring down the costs associated with it. One of the solutions is by using more fuel-efficient cars or buy new hybrid cars. The need for hybrid card and other vehicle that use energy alternative is driven by the fact that in the U. S., vehicles use up the oil reserve. Figure 5 shows the use of alternative energy that increases the fuel mileage of vehicle in order to reduce the oil consumption.

Figure 5 Alternative fuel and hybrid vehicles

Source: Energy Information Administration, 2006

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