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Gasoline's High Price Prompts Discussion

To What Degree is the United States "Dependent" on Foreign Oil?

- The notion that the United States is "dependent" on Persian Gulf countries for oil is inaccurate. World events do affect the price Americans pay for gasoline, but "dependence" does not accurately portray the relationship between oil consumers and oil producers.
- Of the nearly 20.7 million barrels of oil consumed each day in the United States, only 11.1 percent of it comes from Persian Gulf countries.
- As a percentage of U.S. GDP, the value of Saudi oil consumed by Americans, assuming a price of $70/barrel, is only 0.31 percent.
- The value of Saudi oil sales into the United States accounts for 11.4 percent of Saudi Arabia's GDP. By that measure, it could be argued that Saudi Arabia is the more dependent partner in this economic relationship.
- Supply disruptions anywhere in the world, whether artificially precipitated by a foreign government, or caused by security threats or natural occurrences, have the same effect everywhere. This is true whether a country is capable of fully supplying its own oil demand or fully depends on foreign supplies.
- For example, the oil shock set off by the Iranian revolution in 1978 had a similar effect on gasoline prices in Great Britain, which produces more oil than it uses, as it did on gasoline prices in Japan, which imports 100 percent of the oil it consumes.
- The power of the so-called oil weapon is overstated. The 1973 oil embargo failed to achieve its political objective of reducing support for Israel, and in the long-run inflicted far more damage on the instigators of the embargo than on the intended targets.
- Immediate reduction in oil consumption in the United States would likely increase the Persian Gulf countries' global market share.

Introduction

The high price of gasoline, due to rising global demand for oil and political instability in several major oil producing countries, has reinvigorated the debate over oil use and the relationship of the United States with oil producing countries, particularly those in the Persian Gulf. It is often implied that reducing oil imports into the United States would protect U.S. consumers from rising gasoline prices caused by foreign events.

A correct understanding of the world oil market provides a different perspective. The global nature of oil markets, the fungibility of oil as a commodity, and its affordability relative to the alternatives available today leads inexorably to the conclusion that oil will continue to play a major role in the U.S. economy into the foreseeable future, as will imports of foreign oil. Only drastic reductions in U.S. oil use would substantially reduce or eliminate imports of foreign oil or protect consumers from often volatile oil markets.

In the short- to intermediate-term, the focus should be on increasing the affordability and reliability of oil supplies by increasing global supply and diversifying the sources of supply, which includes developing domestic oil supplies. Congress's role should be to remove obstacles to these goals.

The Nature of the U.S. "Dependency" on Foreign Oil

The notion that the United States is "dependent" on Persian Gulf countries for oil is inaccurate. Of the nearly 20.7 million barrels of oil consumed each day in the United States, only 11.1 percent of it comes from Persian Gulf countries.[1] Nearly 35 percent of U.S. consumption is domestically produced.[2] OPEC countries, which include Persian Gulf countries as well as Algeria, Indonesia, Nigeria, and Venezuela, supply a total of just over one-quarter of U.S. consumption.

Canada and Mexico are the top two foreign suppliers to the United States, providing a combined 18.5 percent of U.S. consumption.[3] Thus, over half of the oil consumed in the United States comes from North America. The chart on the following page shows U.S. crude oil and petroleum product imports per day by country of origin, and the percentage contribution to total U.S. consumption.

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[1]EIA, *Petroleum Supply Monthly*, February 2006.

[2]U.S. Energy Information Administration (EIA), "U.S. Product Supplied for Crude Oil and Petroleum Products," *Petroleum Navigator* – http://tonto.eia.doe.gov/dnav/pet/pet_cons _ psup _dc_nus_mbbl_a.htm.

[3]EIA, February 2006.

Year-to-Date Imports of Crude Oil and Petroleum Products into the United States by Country of Origin, January - December 2005		
Country of Origin	Imports (thousands of barrels per day)	Percent of total U.S. consumption
Canada	2,172	10.5
Mexico	1,646	8.0
Saudi Arabia	1,523	7.4
Venezuela	1,506	7.3
Nigeria	1,147	5.5
Iraq	522	2.5
Algeria	477	2.3
Angola	465	2.2
Russia	398	2.0
United Kingdom	387	1.9
Other	3,284	15.9
Total	**13,527**	**65.3**
OPEC	5,508	26.6
Persian Gulf	2,298	11.1

Source: EIA, *Petroleum Supply Monthly*, February, 2006

This is not to say that what happens in the Persian Gulf region does not affect U.S. gasoline prices. Because oil is a world commodity, events there do, indeed, have a direct and worldwide effect. However, it is important to put Persian Gulf import levels in a broader perspective.

"Dependency" and Saudi Arabia

Ultimately, world events do affect the price Americans pay for gasoline, but "dependence" does not accurately portray the relationship between oil consumers and oil producers. For example, in 2005, Saudi Arabia supplied about 7.4 percent of total U.S. consumption. On the other hand, the United States consumed about 16 percent of Saudi Arabia's total oil production.[4] As a percentage of U.S. GDP, the value of Saudi oil consumed by Americans, assuming a price of $70/barrel, is only 0.31 percent. But the value of its oil sales into the United States accounts for 11.4 percent of Saudi Arabia's GDP. By that measure, it could be argued that Saudi Arabia is the more dependent partner in this economic relationship.[5]

[4]Saudi Arabia produces 9.5 million barrels of crude oil per day. See, U.S. Central Intelligence Agency (CIA), *World Fact Book*, 2006.

[5]U.S. GDP for 2005 was $12.41 trillion. Saudi Arabia's GDP for 2005 was $340.6 billion. See CIA, 2006.

Portion of U.S. GDP Dependent on Saudi Imports	0.3%
Portion of Saudi GDP Dependent on U.S. Exports	11.4%

In reality, however, neither country is "dependent" on the other. The government of Saudi Arabia and its U.S. customers engage in voluntary and mutually beneficial trade. Either party is free to end the relationship at any time, with no ill effect on the other. That's because the world oil market is a single market, and oil sells at a single world price. The price is determined by worldwide oil supply and demand. Thus, if Saudi Arabia decided to stop selling oil to the United States, it would merely divert supplies to other countries, and other countries would divert supplies to the United States. Since global supply and demand would remain unchanged, all else being equal, there would be no change in the world price for oil and no economic effect.[6] In this sense, neither trading partner is dependent on the other.

On the other hand, Saudi Arabia has, until recently, been able to affect the world price of oil by reducing or increasing production. This is due to its unique position of being both the world's lowest-cost producer and also owner of the largest, most easily accessible, spare production capacity. This gave Saudi Arabia a certain amount of market power that no other producer shared. In that sense, the whole world was "dependent" on Saudi Arabia, simply because Saudi Arabia could single-handedly affect total supply. However, with rapidly rising world oil demand, Saudi Arabia has struggled to maintain a spare capacity cushion.[7]

Supply Disruptions: Damaging Regardless of "Dependence"

The nature of the world oil market means that any supply disruption anywhere in the world, whether artificially precipitated by a foreign government, or caused by security threats or natural occurrences, has the same effect everywhere. This is true whether a country is capable of fully supplying its own oil demand or fully depends on foreign supplies. For example, the oil shock set off by the Iranian revolution in 1978 had a similar effect on gasoline prices in Great Britain, which produces more oil than it uses, as it did on gasoline prices in Japan, which imports 100 percent of the oil it consumes.[8] Nor has Britain's oil self-sufficiency protected it against more recent oil shocks. Most recently, the dispute over Iran's nuclear weapons program is a major reason why oil prices jumped to more than $70 per barrel in April. The effect on gasoline

[6]Jerry Taylor, "CNOOC Bid for Unocal No Threat to Energy Security," *Free Trade Bulletin*, Cato Institute, July 19, 2005.

[7]EIA, *Country Analysis Briefs – Saudi Arabia*, August 2005 – http://www.eia.doe.gov/emeu/cabs/saudi.html

[8]Jerry Taylor, Testimony before the House Armed Services Committee, July 13, 2005.

prices in the United States, which has banned oil imports from Iran since 1979, was similar to that experienced in countries that do import oil from Iran.[9]

Thus, independence from foreign oil supplies provides no protection against supply disruptions abroad and no guarantee that supplies will be secure in the future. The only way to become truly independent of foreign oil would be to stop using oil altogether, which would prove far more costly than $70/barrel oil.

The Oil Weapon: Why Embargoes Don't Work

Proponents of independence from foreign oil often warn of the oil "weapon" that the Persian Gulf countries wield. It is true that political instability and the threat of terrorism can and do cause price volatility in the world oil market. This is unfortunate and costly, but the effectiveness of the oil weapon may be overstated.

Consumers in the United States have never been denied access to oil. Anyone willing to pay the current price for oil can have all the oil he wants. This was even true during the much misunderstood 1973 oil embargo, in which several Arab countries imposed an embargo on the United States and the Netherlands for supporting Israel in the 1973 war. The embargo itself had no economic effect on the United States, simply because, as noted above, the supply of oil on the world market did not change due to the embargo. The oil was simply diverted and had no effect on the world price. What did have an economic effect was that, in conjunction with the embargo, those Arab countries also cut production significantly, leading to a 70-percent increase in the world oil price, generating massive short-term oil revenues for Arab countries (as for all producers).[10]

However, the embargo failed to achieve its political objective of reducing support for Israel, and in the long-run inflicted far more damage on the instigators of the embargo than on the intended targets. The effects of the embargo were mitigated in the U.S. and other countries by increasing oil imports from other countries, by conservation, by substitution, and by increased domestic production. By 1980, Arab countries had lost billions in oil revenues and market share to non-OPEC countries.[11] The Arab states learned a valuable lesson from this episode and are unlikely to repeat the mistake. Even Osama bin Laden, known to engage in economic warfare rhetoric, showed that he recognized the reality of the current situation in his acknowledgment that the Arab countries will continue selling their oil: "We are not going to drink it," he said.[12]

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[9] *CNNMoney.com*, "Will Iran dispute push oil to $130?" February 27, 2006 – http://money.cnn.com/2006/02/07/news/international/iran_oil/index.htm.

[10] A.F. Alhajji, "The oil weapon: past, present, and future," *The Oil and Gas Journal*, May 2, 2005.

[11] A.F. Alhajji, May 2, 2005.

[12] *New York Times*, "Burn, Baby, Burn," February 7, 2006.

The most recent oil embargo was attempted by Saddam Hussein. He announced on April 8, 2002, that Iraq would suspend oil exports for 30 days or until Israel withdrew from the Palestinian territories. Rather than join the embargo, OPEC stated that it would intervene to make up any shortfall.[13] The price impact was small as a result – about a dollar for a barrel of North Sea Brent crude and about 67 cents for a barrel of crude on the New York Mercantile Exchange. Iraq resumed exports after a month, stating that the embargo "did not find a response from Arab oil-producing brothers to take similar measures so that it would succeed."[14]

Finally, it is worth noting that the oil weapon, to the extent that it exists at all, would be far less of a threat now than it was in 1973, because the U.S. economy has become less energy-intensive through efficiency improvements, which occur as a matter of course in market economies. Data from the Bureau of Economic Affairs shows that, in 1980, which was the last time the price of gasoline exceeded $3 per gallon (inflation-adjusted), one in every 20 consumer dollars was spent on gasoline. In 2005, only one in 30 consumer dollars was spent on gasoline.[15] Also, the amount of oil used to produce a dollar of GDP has decreased over time. In the last 30 years, the U.S. economy has grown by 150 percent, while energy consumption has increased by 25 percent.[16] This decoupling of economic growth and energy use means that supply disruptions have a smaller economic effect than they once did. It is important to recognize that this efficiency did not come about due to government mandates but through the efforts of businesses and individuals seeking to maximize profits by reducing energy costs.

Reducing Dependency Would Increase Persian Gulf Market Share

Proponents of an immediate reduction in oil consumption in the United States would do well to consider that this tack is likely to increase the Persian Gulf countries' global market share. This is because the U.S. accounts for a quarter of total world oil consumption; if it drastically cut its consumption, the world price would also fall significantly, reducing production. Say the world price of oil fell to $15/barrel. Any producer that could not produce oil for less than $15/barrel would stop producing. Some of those high-cost producers include U.S. producers, but, more importantly, they also include friendly foreign producers. A low-cost producer, such as Saudi Arabia, would increase its overall market share and its percentage contribution to U.S. consumption. With higher prices, higher-cost producers come online and Persian Gulf countries, which are typically low-cost producers, lose market share. Indeed, over the last few years, the Persian Gulf's contribution to U.S. energy consumption has fallen – from around 23 percent in the late 1990s to 17 percent now – as the world price of oil has risen.[17]

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[13] *Associated Press*, "Iraq Announces Cut in Oil Exports," April 8, 2002.

[14] *Associated Press*, "Iraq Decides to Resume Oil Exports," May 6, 2002.

[15] Bureau of Economic Affairs, *National Economic Accounts*, April 28, 2006 – http://www.bea.gov/bea/dn1.htm.

[16] Daniel Yergin, Testimony before the U.S. House Committee Energy and Commerce, May 4, 2006.

[17] EIA, *Petroleum Supply Monthly*, January 23, 2006.

Conclusion

Only drastic reductions in U.S. oil use would lead to elimination of oil imports. Until then, the United States will continue to import oil. And U.S. consumers will pay the world price for oil, which is determined on world markets by global supply and demand, regardless of the quantity of imports.

Rather than blame our energy woes too much on so-called dependence on foreign oil, the focus should be on increasing the affordability and reliability of oil supplies (the most cost-effective source of fuel available) by increasing global supply and diversifying the sources of supply. Congress's role should be to remove obstacles to this goal.