Y669 IPE: Oil Politics

October 5, 2010
World Energy Consumption, 1965-2005, in Terawatts (TW)
Top Consuming Countries, 1960-2005, in Million Barrels per Day

Figure 9-5. World Consumption of Petroleum, 1960-2005, in Millions of Barrels per Day

OPEC Headquarters, Vienna

Sheik Ahmed Zaki Yamani
### Table 9-1. Members of OPEC

<table>
<thead>
<tr>
<th>Country</th>
<th>Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>1969</td>
</tr>
<tr>
<td>Angola</td>
<td>2007</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Rejoined 2008</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1962</td>
</tr>
<tr>
<td>Iran</td>
<td>1960</td>
</tr>
<tr>
<td>Iraq</td>
<td>1960</td>
</tr>
<tr>
<td>Kuwait</td>
<td>1960</td>
</tr>
<tr>
<td>Libya</td>
<td>1962</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1971</td>
</tr>
<tr>
<td>Qatar</td>
<td>1961</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1960</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>1967</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1960</td>
</tr>
</tbody>
</table>
Organization of Oil Exporting Countries

**OPEC Share of World Crude Oil Reserves (2006)**

- **OPEC**
  - 922 bn barrels
  - 77%
- **Non-OPEC**
  - 273 bn barrels
  - 23%

The diagram shows the percentage of world crude oil reserves held by OPEC and non-OPEC countries, with OPEC holding a significant majority.
Major Crude Oil Reserves, 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>Billions of barrels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>266.8</td>
</tr>
<tr>
<td>Canada</td>
<td>178.8</td>
</tr>
<tr>
<td>Iran</td>
<td>132.5</td>
</tr>
<tr>
<td>Iraq</td>
<td>115.0</td>
</tr>
<tr>
<td>Kuwait</td>
<td>104.0</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>97.8</td>
</tr>
<tr>
<td>Venezuela</td>
<td>79.7</td>
</tr>
<tr>
<td>Russia</td>
<td>60.0</td>
</tr>
<tr>
<td>Libya</td>
<td>39.1</td>
</tr>
<tr>
<td>Nigeria</td>
<td>35.9</td>
</tr>
<tr>
<td>United States</td>
<td>21.4</td>
</tr>
<tr>
<td>China</td>
<td>18.3</td>
</tr>
<tr>
<td>Qatar</td>
<td>15.2</td>
</tr>
<tr>
<td>Mexico</td>
<td>12.9</td>
</tr>
<tr>
<td>Algeria</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Source: Jean-Paul Rodrigue, Dept. of Economics & Geography, Hofstra University
Figure 9-4. Production of Crude Petroleum by OPEC Countries, 1970-2007, in Millions of Barrels per Day

Figure 9-7. OPEC and Non-OPEC Oil Production, 1970-2007, in Millions of Barrels per Day

Major Oil Routes & Chokepoints, 2000

Source: Jean-Paul Rodrigue, Dept. of Economics & Geography, Hofstra University
Price of Oil, Nominal and Real
1861-2006, $ per Barrel

Figure 9-14.
U.S. Gasoline Prices in Current and Constant 2007 Prices, 1919-2007, in Cents per Gallon

Spot Prices, 1980-2010

Source: U.S. Energy Information Administration
Gasoline Prices in Pennies per Gallon, 1973-2010

(Chart showing the price of gasoline from 1973 to 2010, with a significant increase in prices starting around 1995.)
Real Price of Oil and Major Disruptions in World Oil Supply

$ per barrel (2005 US$)

Annual Demand Increase in Mill brls/day

- Suez War
- 6 Days
- OPEC Embargo
- Iranian Revolution
- Iran / Iraq War
- Gulf War
Figure 9-8. U.S. Production, Consumption, and Imports of Crude Petroleum, 1949-2007, in Millions of Barrels per Day

Challenges to the Seven Sisters and the rise of the cartel (OPEC)

- “Oligopsony = An oligopsony is a market form in which the number of buyers are small while the number of sellers in theory could be large.”
  - The Seven Sisters were also an oligopsony!

- “A cartel is a group of formally independent producers whose goal it is to fix prices, to limit supply and to limit competition.”

- OPEC was formed in 1960, but its effects were most dramatic in 1974.

- OPEC sought to counterbalance the Seven Sisters.

Definitions from Wikipedia
Conservation Measures Taken after the Oil Price Shocks of the 1970s

- Higher taxes on gasoline and fuel oil in Western Europe
- Fuel efficiency standards for motor vehicles in the US
- Accelerated adoption of energy-efficient heating for homes, offices, and factories
- General substitution of energy-conserving technologies for energy-intensive technologies
Oil Prices have less impact on US Economy

The Energy Intensity of Output has Declined Markedly

This doesn’t mean the US is consuming less oil, just that it is more efficient at utilizing oil to produce.
What Role Did Energy Politics Play in September 11? In...

- Afghanistan
- Central Asia
- The Middle East
- The Rest of the World
Afghanistan itself has few exportable energy resources.

- Its main value from an energy standpoint stems from the fact that it offers a route for Caspian energy to the sea via Pakistan.
There are large deposits of oil and natural gas in the Caspian Sea region.

The main problem is getting these resources to markets.

Pipelines are required to service the large markets in North America, Europe, and E. Asia.
Two Pipelines in Greater Detail

Main participants in these two pipelines:

**Tengiz to Novorossiysk**
- Russian Federation 24%
- Repub. Of Kazakhstan 19%
- Sultanate of Oman 7%
- Chevron 15%
- LUKARCO 12.5%
- Rosneft/Shell 7.5%
- Mobil 7.5%
- Agip 2%

**Turkmenistan to Pakistan:**
- Unocal, Gazprom, Hyundai, Itochu, Delta Oil (Saudi Arabia)
What is the Role of Saudi Arabia within OPEC?

- It is the largest single supplier of oil.
- The small Saudi population permits them the luxury of varying the amount of oil that they sell (thereby controlling prices):
  - When they want the price to increase they sell less
  - When they want the price to decrease they sell more
Figure 9-10. Saudi Export Revenues and Foreign Currency Reserves, 1960-2005, in Billions of Current Dollars

Source: World Development Indicators 2007; and Saudi Arabian Monetary Agency, Annual Report, Monetary and Banking Statistics.