

## **The Petroleum Market: 1970-2001**

Revised: August 28, 2002

The world oil market has been through tremendous changes in the past thirty years. These changes have affected the structure of the market and led to significant fluctuations in price and output (cf Exhibits 1 and 2). But why have oil prices been so much more volatile than prices of most other goods?

### **Power in the World Oil Market**

Prior to 1970, world oil prices were set through negotiations among major private sector companies, including Standard Oil of New Jersey (Exxon), Standard Oil of California, the Texas Company, and Royal Dutch Shell. In the early 1970s, however, supply and pricing power were gradually transferred from private companies to the governments of major oil producing countries.

The Organization of Petroleum Exporting Countries (OPEC) was born in 1960 with member countries Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. Qatar, Indonesia, Libya, the United Arab Emirates, and Algeria joined in the ensuing decade. In October of 1970, Libya became the first OPEC member to independently increase its posted price and tax rate on oil produced by private companies. By tradition, prices were posted in US dollars. Iran and Kuwait followed Libya in November of the same year. By December, OPEC countries had all established a minimum 55 percent oil tax rate for private oil companies. In January 1971, six OPEC governments and twenty-two major oil companies gathered in Teheran. The oil companies agreed to accept the 55% oil production tax, which led to an immediate increase in world prices. Meanwhile, Algeria, Libya, Iraq, and Kuwait nationalized the majority of western oil assets during the period of 1971 through 1974.

### **1973 and Its Aftermath**

1973 was a turning point in the petroleum market. In April, OPEC countries agreed to increase posted oil prices by 5.7% to counter a decline in the value of the dollar. In October, the Yom Kippur War in October 1973 triggered the first major oil production cut by the OPEC countries. In response to the war, OPEC countries agreed to an oil embargo against the United States, the Netherlands, Portugal, Rhodesia, and South Africa. In November, they announced a 25% cut in production. Crude prices increased sharply from \$5.12 to \$11.65 a barrel.

In the first half of 1974, OPEC countries lifted the oil embargo and export restrictions against the United States and the Netherlands. At the same time, Iraq announced intentions to increase its production capacity to 3.5 million barrels per day by 1975 and to 6 million barrels per day by 1976. Nevertheless, expansion of the US and other economies supported a price in the \$15/barrel range.

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## **1978 to 1990**

Political developments from 1978 to 1980 led to a second drop in oil supply, which drove the price above \$30. In 1978, Iranian students increased their protests against the government of Shah Reza Pahlavi. The government responded by arresting a number of opposition leaders. The climate of political unrest led to the departure of foreign oil production workers. Iranian oil production dropped from 1.5 million to 500 thousand barrels per day. In January of 1979, the government was forced to resign and Ayatollah Khomeini was declared the country's new leader. Meanwhile, Saudi Arabia announced a significant cut in oil production with a ceiling of 9.5 million barrels per day. The drastic production cuts led to massive shortages in oil importing countries, including the United States. In November 1979, some Iranian citizens took over the American embassy in Tehran, holding its inhabitants hostage. In response, the US cancelled all Iranian imports. Iran followed with the cancellation of all contracts with the US oil companies. By the end of 1979, the world crude oil price reached \$24 per barrel.

Oil-related turmoil continued in 1980. In September, war between Iraq and Iran erupted over the Shatt al Arab waterway. The conflict led to the bombing and destruction of several oil production facilities in both countries. By the end of 1980, the world price of crude reached \$32 per barrel.

Curiously, by the mid-1980s, the price had fallen to \$11 per barrel. Since inflation had increased prices by at least a factor of two since 1973, this effectively returned oil prices to their pre-1973 levels. Analysts cited the increased use of alternative energy resources and greater efforts at conservation.

## **Invasion of Kuwait**

In August 1990, Iraqi troops occupied Kuwait. The invasion created a decline of 4 million barrels per day in world's oil production. Crude oil prices surged to \$32 per barrel. Coinciding with the start of allied military action against Iraq in January of 1991, the US initiated a direct withdrawal of 33.75 million barrels from the country's Strategic Petroleum Reserve. The withdrawal compensated losses in production due to the destruction of oil facilities in Kuwait. By March of 1991, the surplus of unsold oil held by oil producers exceeded 80 million barrels. As a result, OPEC countries announced a production cut to 22.3 million barrels per day. Kuwait resumed oil production in January 1992 with 400 thousand barrels per day. An oil embargo was imposed on Iraq's oil exports.

## **1998-2000**

The period from 1998 to 2000 witnessed a wide range of political, economic, and environmental events directly relevant to the world oil market. As a result of the 1998 Asian financial crisis, oil consumption in Japan, Korea, Thailand, and Indonesia dropped by approximately 0.5 million barrels per day. Moreover, South Korea's oil refineries cut operations to approximately 80% of capacity.

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During the same period, oil production was affected by a number of events. In 1998, the United Nations approved a resolution allowing Iraq to increase oil exports as part of the humanitarian oil-for-food program. Iraq's export capacity increased from 1.6 million barrels per day to 1.9 million barrels per day. Other OPEC countries, however, reduced their production twice in 1998: by 1.245 million barrels per day in March and by another 1.355 million barrels per day in June. Significant non-OPEC oil producers, including Russia, Oman, and Mexico, also agreed to cut production by a total of 0.5 million barrels per day. These reductions continued into 1999. In March, OPEC members agreed to a further cut of 1.716 million barrels per day and non-OPEC oil producers pledged to cut their oil production by 388 thousand barrels per day. Meanwhile, a booming US economy increased its use of oil and other sources of energy.

### **September 11**

A combination of a recession in economic activity and a sharp drop in oil needs following the tragic events of September 11, 2001, led to some softening in oil markets. In response, OPEC members agreed in December to reduce oil production by 1.5 million barrels per day for a period of six months. Following the OPEC decision, Russia and Norway pledged to cut oil production by 150 thousand barrels per day each. Mexico also announced an export cut of 100 thousand barrels per day.

### **Questions for Analysis**

Explain how each of the events described above affected the world market for oil, as summarized by Exhibits 1 and 2. Specifically, use a supply and demand diagram to explain:

- (a) Why the price of oil rose sharply in 1973, 1979, and 1990.
- (b) Why the price fell between 1980 and 1982, and again between 1982 and 1985.

### **Additional Information Sources**

Additional information is available at:

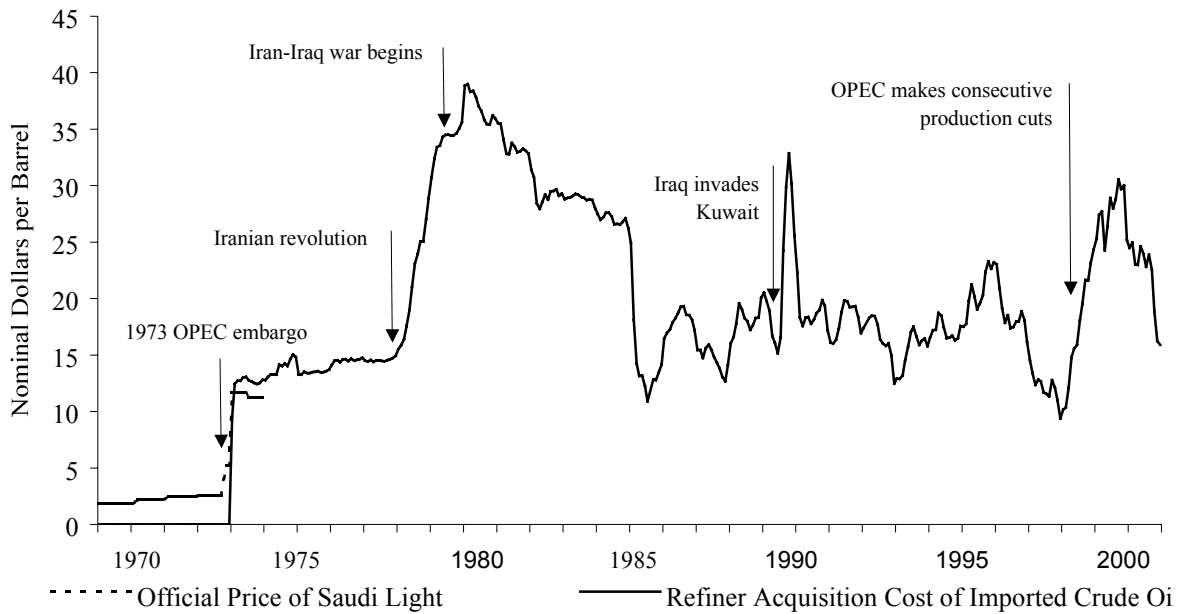
- OPEC: <http://www.opec.org>
- US Energy Information Administration: <http://www.eia.doe.gov/emeu/cabs/chron.html>
- David Rousseau's political overview (he's a political scientist at Penn): <http://www.ssc.upenn.edu/polisci/psci260/OPECweb/OPECHIST.HTM>
- WTRG's price charts: <http://www.wtrg.com/prices.htm>

### **Notes**

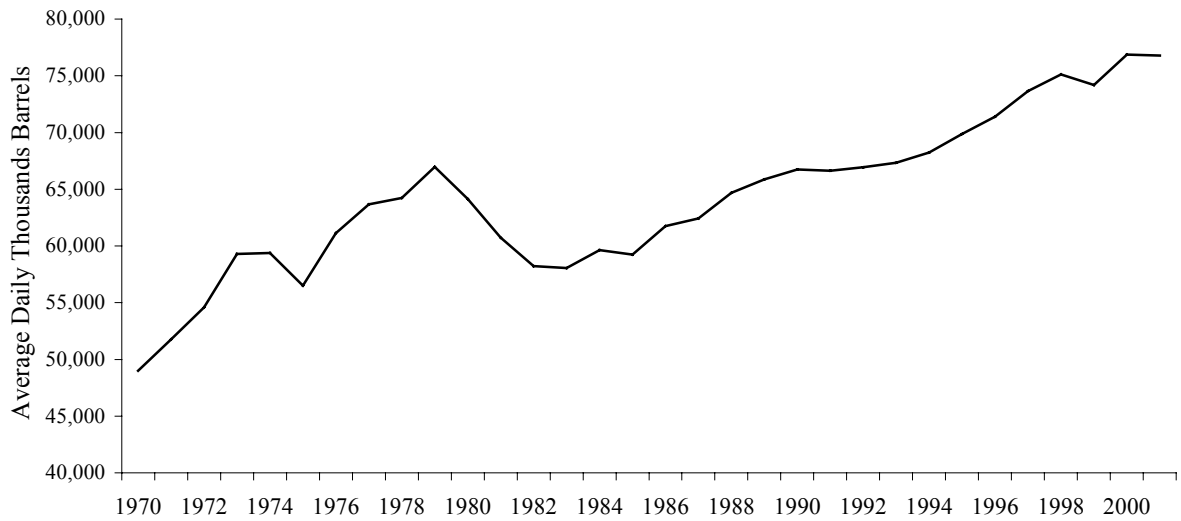
*Written by Dmitri E. Ponomarev under the supervision of David Backus and Luis Cabral, this case was prepared for the purpose of class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. © 2002 David Backus and Luis Cabral.*

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**Exhibit 1**  
**World Oil Prices (Monthly Averages), 1970-2001**



**Exhibit 2**  
**World Oil Average Daily Supply, 1973-2001**



**Source:** Energy Information Administration, [www.eia.doe.gov](http://www.eia.doe.gov).