Organization of Petroleum Exporting Countries

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Agenda

- History
- Debunking the Myth
- OPEC v. CIPEC
- OPEC in Action
- Alternatives to OPEC
- Conclusion
A cartel is defined as successful if it is able to raise the market price at least three times the marginal production cost of the member with the highest production cost.

- in Perloff & Carlton
The Organization of the Petroleum Exporting Countries (OPEC) is a permanent, intergovernmental organization, created at the Baghdad Conference on September 10–14, 1960, by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
"OPEC's objective is to co-ordinate and unify petroleum policies among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry." - opec.org

OPEC Press Conference in Vienna
OPEC History
OPEC was founded in Baghdad in response to a 1960 law instituted by American President Dwight Eisenhower.

The law forced quotas on Venezuelan and Persian Gulf oil imports, preferring the Canadian and Mexican oil industries.

Asserts its member countries’ rights in global oil market dominated by others.

Membership grew to 10 nations.
OPEC rises to international prominence

Member countries establish major say in global prices of crude oil

An oil pricing crises leads to a steep increase in the price of crude oil (1973-74)
A steady decline in prices led to awareness of the need for joint action among oil producers.

Environmental issues begin to appear on the international agenda.
History - 1990s

- Mega-mergers among major international oil companies fueled by technological advances
- Climate change negotiations threatened heavy decreases in future oil demand
History - Today

- Prices reached a high of $145+ a barrel in July 2008
- Price dropped to $32 a barrel Dec. 2008
- U.S. consumer demand for oil dropped by 8%
- The weakening of the global economy also decreased demand for energy sources
- Jan. 2009 - OPEC slashed global output by 5%
Debunking the Myths
Debunking the Myth

Myth:
🌟 U.S. oil shortage and gas station lines in 1973-1974 were caused by OPEC’s U.S. oil “embargo”

Debunked:
🌟 Oil is a fungible (replaceable) commodity => arbitrage (differing prices in a market) possibilities exist

🌟 Shortages were caused by price and allocation controls on crude oil and refined products originally imposed by Nixon (1971)
A price ceiling imposed by the Nixon Administration caused a shortage of oil.
Debunking the Myth

Myth:
[*] Illegal? Though cartels are technically illegal, no one has been able to shut OPEC down

Debunked:
[*] OPEC is operated by national governments and is recognized as a legal entity by U.S. foreign trade laws
[*] OPEC holds summits in Vienna and meets publicly

OPEC v. CIPEC
Conseil intergouvernemental des pays exportateurs de cuivre

Intergovernmental Council of Countries Exporters of Copper
1967 - 1988 (12 years)

Composed of Chile, Peru, Zaire, Zambia, AUS, Indonesia, Yugoslavia, and Papua New Guinea (8 countries)

Copper demand is very elastic so it failed

In 1974 members “cheated” and did not reduce production as much as was agreed upon in their contract
# OPEC v. CIPEC

<table>
<thead>
<tr>
<th>OPEC</th>
<th>CIPEC</th>
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<tbody>
<tr>
<td>World demand for crude very inelastic</td>
<td>World demand for copper elastic</td>
</tr>
<tr>
<td>When first formed held 2/3 of world oil reserves</td>
<td>Held 1/3 of world’s non-communist copper production</td>
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<tr>
<td>Initially OPEC quadrupled world oil price</td>
<td>Unable to raise copper prices</td>
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<tr>
<td>Faces relatively inelastic fringe supply</td>
<td>Demand for copper elastic (recyclable and substitutable)</td>
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<tr>
<td>Continuing</td>
<td>Collapsed in 1988</td>
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OPEC in Action
## OPEC Flows of Crude and Refined Oil, 2007

(Thousand Barrels per Day)

<table>
<thead>
<tr>
<th>Region</th>
<th>Europe</th>
<th>North America</th>
<th>Asia and Pacific</th>
<th>Latin America</th>
<th>Africa</th>
<th>Middle East</th>
<th>Total World</th>
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<td>321</td>
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<td>84</td>
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<td>0</td>
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<td>871</td>
<td>18</td>
<td>0</td>
<td>2,738</td>
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</table>
Net Export Revenue

Oil price reaches highest point in July 2008 ($145)

$3 => $12
OPEC Reserves

OPEC Share of World Crude Oil Reserves (2007)

Non-OPEC 265 bn barrels 22%
OPEC 939 bn barrels 78%

Libya, S.P.A.J.
Nigeria
Qatar
Kuwait
Iraq
Iran, I.R.
UAE
Venezuela
Angola
Algeria
Indonesia
Ecuador
Competition

- OPEC’s ability to control oil prices has diminished somewhat since 1971
- Discovery and development of large oil reserves in the Gulf of Mexico and the North Sea
- The opening up of Russian oil reserves
Competition
Oil Producing Countries
How Oil Prices Affect the Global Economy

How dependent is a country on imported oil?

What is the ability of consumers to decrease consumption, or switch to alternatives?

Net effect on the world economy of OPEC’s major price increases has always been negative
How Higher Oil Prices Affect OECD Countries

Organization for Economic Co-operation and Development - an international organization of 30 democratic countries with high income economies that collects data and monitors trends.

- In the short run, higher oil prices have an unfavorable impact in OECD countries (2008).
- Oil activity accounts for 1% of GDP.
- Long term impact is more limited.
How Higher Oil Prices Affect Developing Countries

- Economic impact is commonly more prominent than for OECD countries
- Economies are more fragile and oil intensive
- Energy intensive manufacturing
- Oil accounts for a larger share of GDP - around 3%
- Inefficiency - two times the oil for same output
Alternatives to OPEC
HEVs reduce emissions and fuel use through increased fuel economy

Americans are currently buying more than 20,000 HEVs per month

1.6% of annual U.S. market of light-duty vehicles but only 0.2% of total U.S. light-duty fleet.

Still, HEVs impact and set a standard of achievement for high fuel economy and low emissions

Contests between car-makers to supply latest high-tech, clean and green technologies

A cornflower blue Prius
Domestic HEV Sales

The chart above illustrates the domestic HEV sales from 1999 to 2007. It shows the sales data for various models, including Saturn Aura, Lexus LS600hL, Saturn Vue, Nissan Altima, Toyota Camry, Lexus GS 450h, Mercury Mariner, Toyota Highlander, Lexus RX 400h, Honda Accord, Ford Escape, Honda Civic, Toyota Prius, and Honda Insight. The sales figures are represented on a bar chart with years on the x-axis and vehicles sold on the y-axis.
## HEV Sales Estimates, 1999 - 2007

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<td>4,726</td>
<td>2,216</td>
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<td>666</td>
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<td>15,556</td>
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<td>53,991</td>
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<td>13,700</td>
<td>21,800</td>
<td>25,571</td>
<td>18,797</td>
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<td>Ford Escape</td>
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<td>2,993</td>
<td>15,800</td>
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<td>Honda Accord</td>
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<td>20,674</td>
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<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>772</td>
</tr>
</tbody>
</table>

Biofuels

- Produced from living organisms or metabolic by-products (organic or food waste products)
- To be considered a biofuel, the fuel must contain over 80% renewable materials
- Originally derived from photosynthesis process and can therefore be referred to as a solar energy source.
- Biofuels are still a work-in-progress
- Impact on bio-diversity and farmer’s incentives may become perverted; non-sustainable biofuel production
- Net effect is a reduction in greenhouse gas when compared to “traditional” fuels
Share of biofuel production in total road-fuel market
Ethanol

“A political boondoggle” *(Rolling Stone)*

International Institute for Sustainable Energy found that ethanol subsidies amount to as much as $1.38/gallon - about 1/2 of ethanol’s market price

Why the misguided hype?

Panic

Iowa - the largest corn producing state

Iraq - “If you love America, how can you not love ethanol?”

Infrastructure problems
Tar Sands

- Tar Sands (Oil Sands) are made up of clay, sand, water and bitumen (a heavy black oil).
- They are mined and then refined into oil.
- The mining process is far more complex and expensive than mining conventional oil.
- The largest deposits are in Canada and Venezuela.
Conclusion

- Oil demand is very inelastic in OECD and developing countries, hence OPEC’s market power.
- Energy alternatives are being developed, which could affect OPEC’s market power.
- With more substitutes, demand for oil would be more elastic.
We Shouldn’t All be Oil Men
Confused? Questions?
Sources

- http://www.opec.org/aboutus/history/history.htm
- www1.eere.energy.gov/.../facts/2008_fotw514.html