OPEC, a cartel.

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What is a cartel?

"An association of firms that explicitly coordinates its pricing or output activities"

– Carlton and Perloff

Characteristics of a successful cartel

- Large, infrequent purchases
- Homogeneous goods
- Few firms
- Barriers to entry
- Divided market

A cartel is defined as successful it it is able to raise the market price at least three times the marginal production cost of the member with the highest production cost.

- Carlton and Perloff

Why do cartels form?

"United we stand, divided we fall"
– Aesop

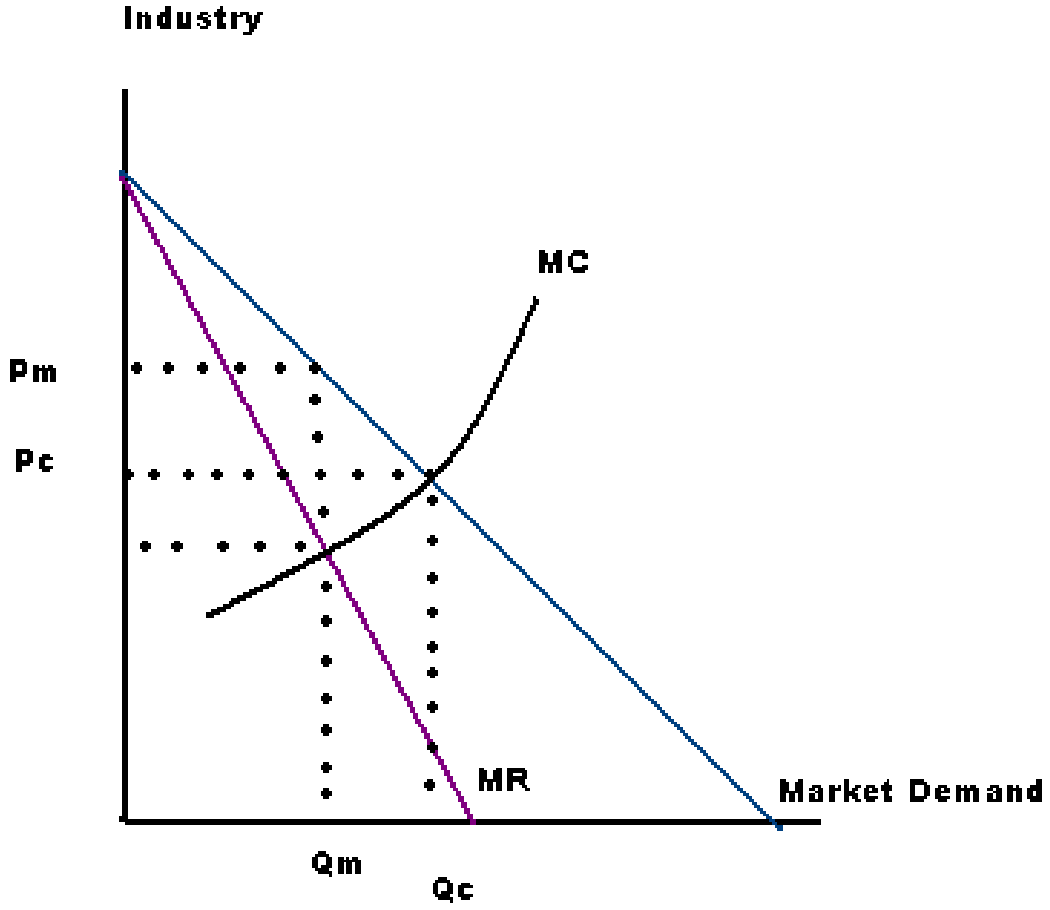
Cartels form because firms want to increase their own profits.

Firms can earn more profit by working together rather than independently.

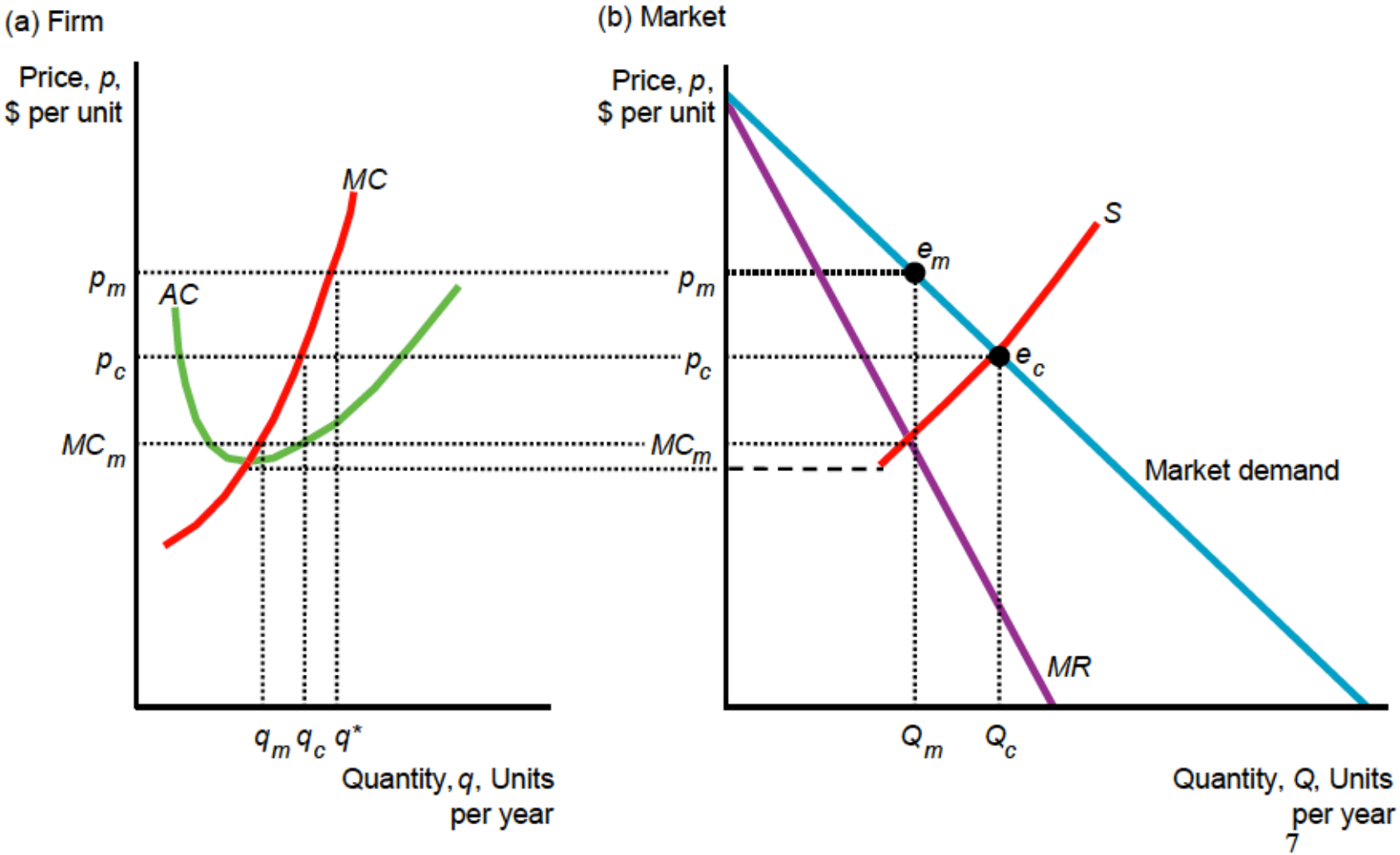
Cartels are most likely to occur in oligopolistic markets where there are only a few firms.

The cartel increases its profits by lowering the aggregate cartel output to Q_m, where MR=MC.

The price rises to P_m.



Competition vs. Cartel



Source: Jeffrey M. Perloff, *Microeconomics*, 3rd Ed., 2004, p. 435

How do cartels benefit?

- Can control the market
- Can set high prices
- Low organizational costs

Collusion

- Cooperating firms have a dominating strategy, which leads to a profit that is less than what they could achieve if they cooperated or chose alternative strategies.
- Each cartel member has incentives to cheat on the agreement by increasing output.

Prisoner’s Dilemma

	Prisoner B Stays Silent	**Prisoner B Betrays**
Prisoner A Stays Silent	Each serves 6 months	Prisoner A: 10 years Prisoner B: goes free
Prisoner A Betrays	Prisoner A: goes free Prisoner B: 10 years	Each serves 5 years

Why don’t firms cooperate?

- Firms don’t cooperate due to a lack of trust.
- Each firm can profitably use low-output strategy only if it trusts other firms.
- Each firm has a substantial profit incentive to cheat on a collusive agreement.

How do we prevent cheating?

- They face an inelastic demand and produce a large share of the market.
- There are few firms in the market.
- Prices are widely known and do not fluctuate independently.
- All cartel members sell identical products at the same point in the distribution chain.

Reasons for US Antitrust Laws

- Cartels are illegal
  - Prevents competition
  - Creates deadweight loss
    - Consumers gain when cartels fail
    - The larger the market share of the cartel the greater the efficiency cost of the cartel

Antitrust Laws on Cartels

- The difficulty in stopping cartels is secrecy.
- Department of Justice
  - Sherman Antitrust Act in 1809
  - Federal Trade Commission Act of 1914

Leniency Programs

Are increased profits greater than the risk of being caught?

The programs pressure cartel members to reveal themselves in exchange for partial or full exemption from sanctions

(reduced large fines and jail time)

Aren’t cartels illegal?

Government has blocked efforts to punish certain cartels because it might only incite retaliation, hurt domestic business, and injure international relations.

http://www.youtube.com/watch?v=Q1kkKISloRs


Castrol
Optimol
Mobil

OPEC is a successful cartel.

The Organization of the Petroleum Exporting Countries is a permanent intergovernmental organization, created at the Baghdad Conference in 1960. Participating countries include:

Iran
Iraq
Kuwait
Saudi Arabia
Venezuela
Qatar
Indonesia

Nigeria
Ecuador
Angola
Gabon
Algeria
United Arab Emirates
Socialist Peoples Libyan Arab Jamahiriya

OPEC objectives

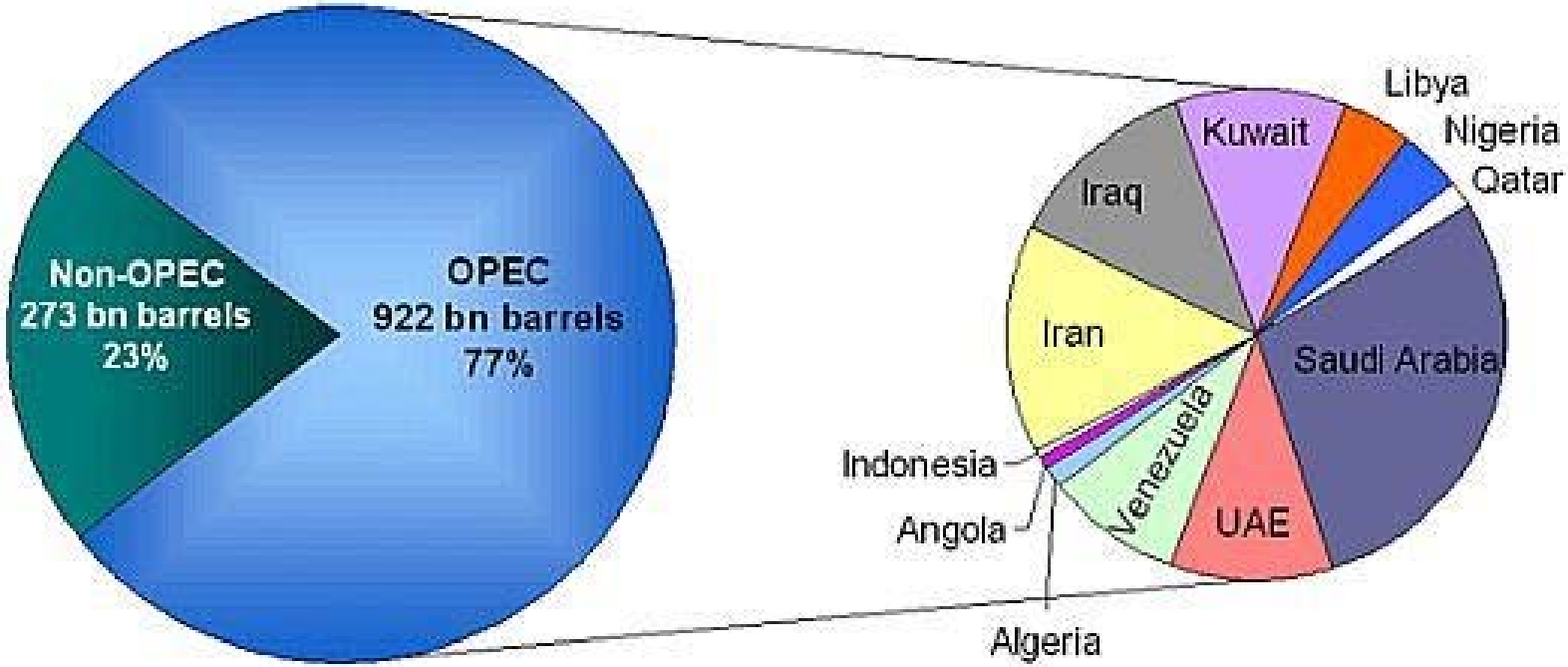
"…to coordinate and unify petroleum policies among member countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry."

Oil Embargo

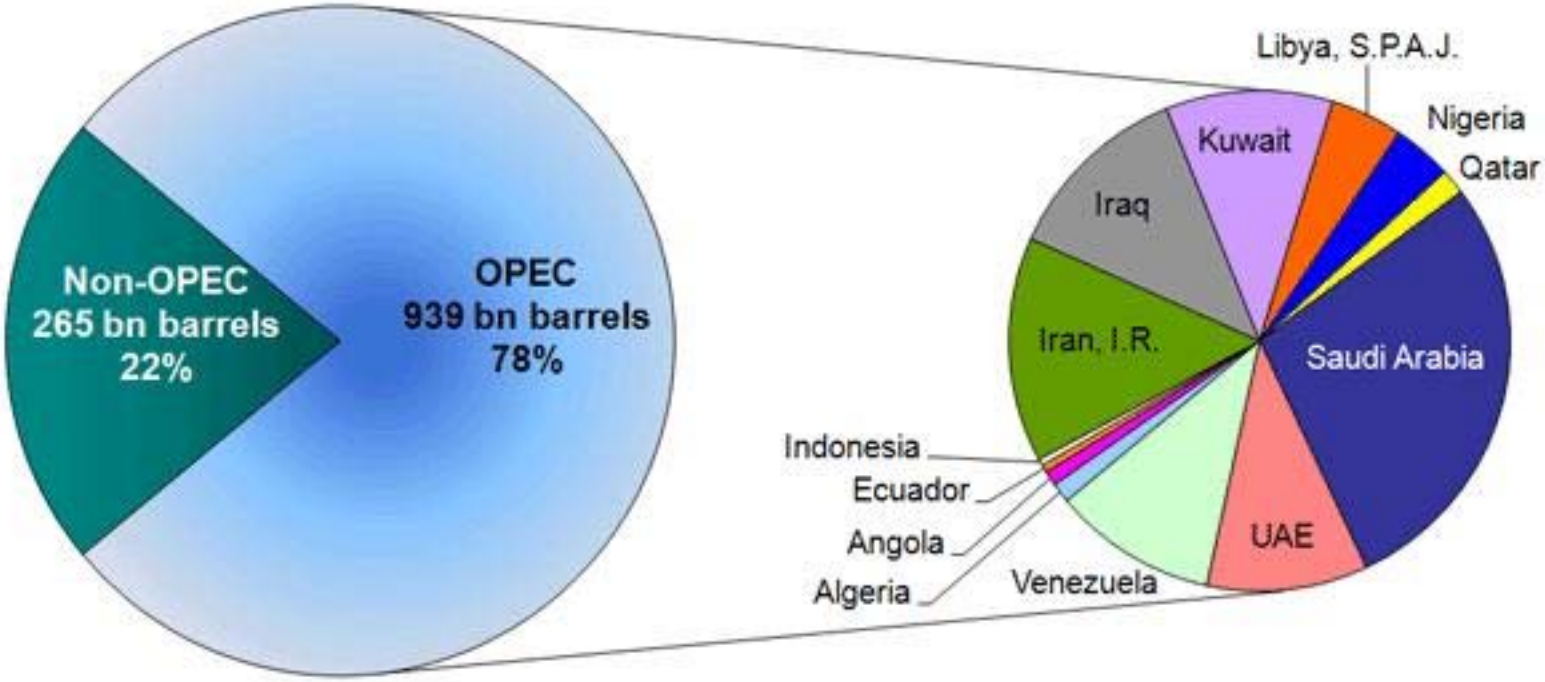
- In 1973, Israel (supported by the US and Western countries) went to war against Arab countries supported by OPEC
- OPEC imposes embargo against US and raised price by 70% for other Western nations.

- Price rose overnight from $0.30 to $1.20 per gallon
- Caused a shortage crisis in America and led to gasoline rationing
- Triggered a severe recession in the West
- Created incentive for Trans-Alaska pipeline
- Embargo lifted in 1974 as negotiation was promised

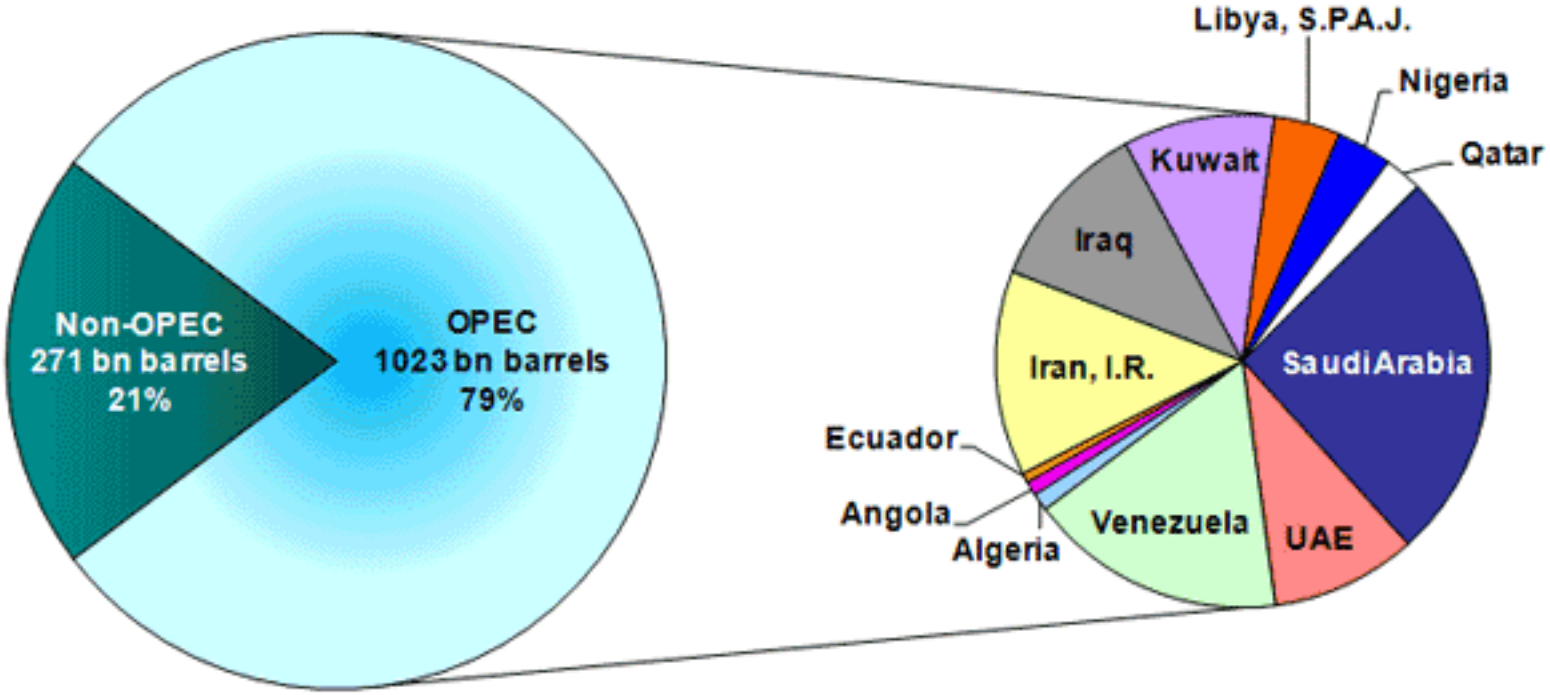
OPEC Share of World Crude Oil Reserves (2006)



OPEC Share of World Crude Oil Reserves (2007)



OPEC Share of World Crude Oil Reserves 2008



OPEC proven crude oil reserves , end 2008
(billion barrels)

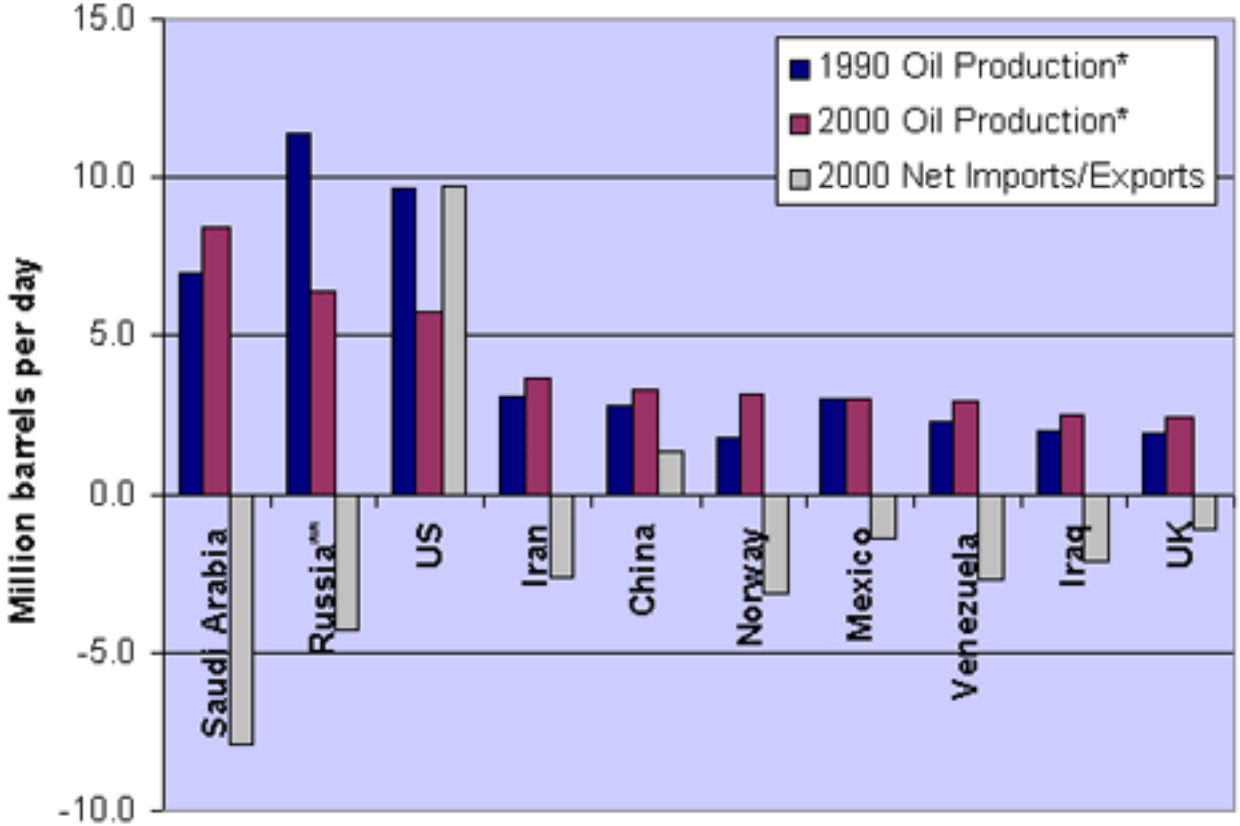
Saudi Arabia	264	25.8%	Iraq	115	11.2%	Libya, S.P.A.J.	44	4.3%	Algeria	12	1.2%
Venezuela	172	16.8%	Kuwait	102	9.9%	Nigeria	37	3.6%	Angola	10	0.9%
Iran, I.R.	138	13.4%	UAE	98	9.6%	Qatar	25	2.5%	Ecuador	7	0.6%

Source: OPEC Annual Statistical Bulletin 2006

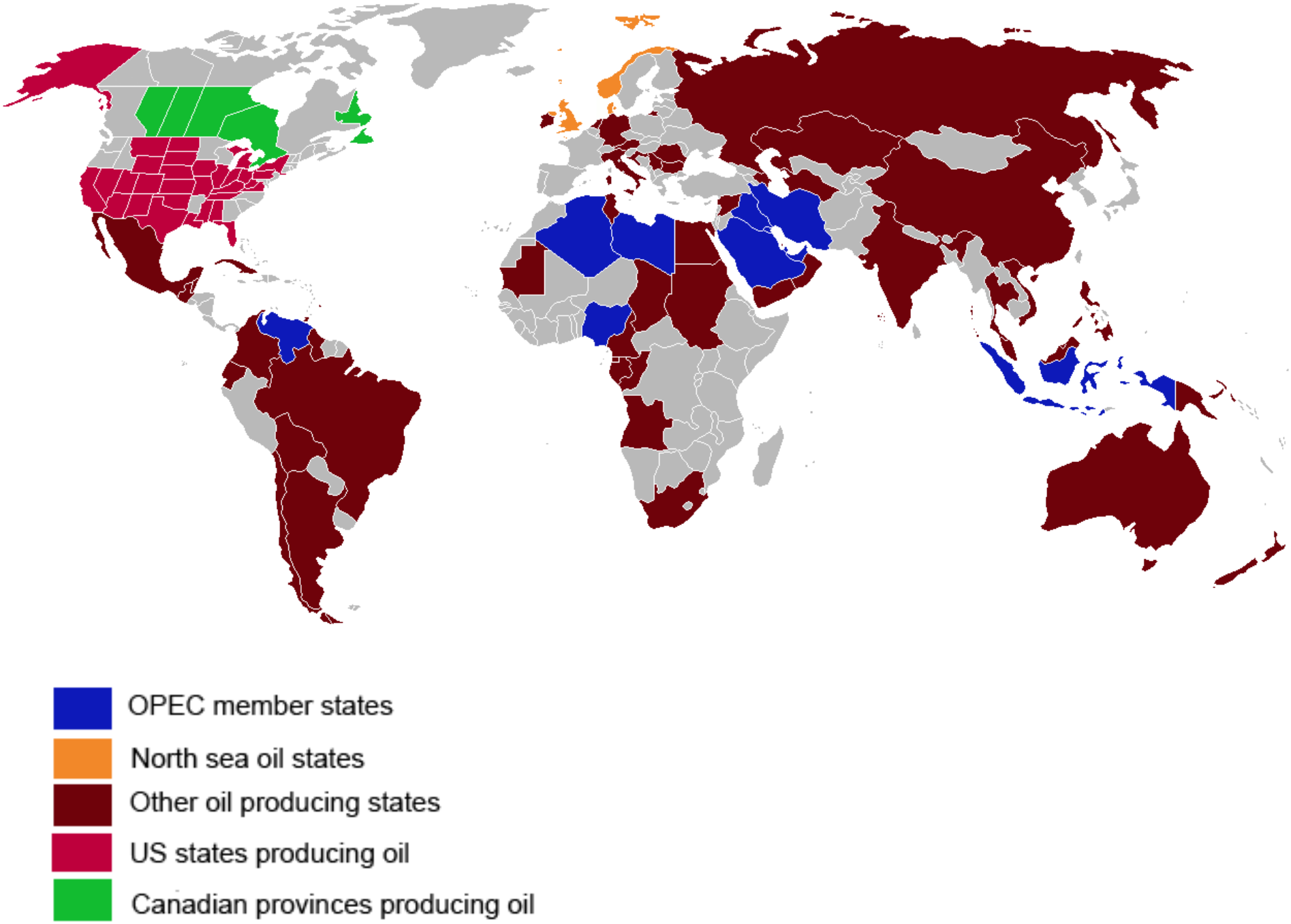
Competition

Other places not in OPEC that produce oil:

- Gulf of Mexico
- North Sea
- Alaska
- Russia
- Canada



*Oil production includes crude oil, lease condensate, natural gas liquids, other hydrocarbons and alcohol, and refinery gain.
** 1990 data are for the former USSR.


OPEC member states
North sea oil states
Other oil producing states
US states producing oil
Canadian provinces producing oil

Short term effects

- Consumers not too responsive
- Change driving behaviors
  - Trip planning (ie. trip chaining)
  - Driving style (ie. idling)
- Alternative transportation
  - Carpool
  - Transit (ie. bus, rail)
  - Nonmotorized (ie. bike, walk, skate)

Long term effects

- Consumers more responsive to price change
- Lifestyle
  - Careers
  - Housing
  - Attitudes and culture
- Public Infrastructure
  - Better street design and transit systems
  - Supportive legislation, policies, and programs
- Technological advances
  - Availability of alternative fuels and energy
  - Greater fuel efficiency

Conclusion

- OPEC is losing the ability to control market prices as there are more substitutes.
- With more substitutes, the demand for oil will be more elastic.
- Alternative energy and changes in lifestyle can change the market power of the cartel.

Sources

http://www.opec.org/aboutus/history/history.htm

http://www.buyandhold.com/bh/en/education/history/2002/arab.html