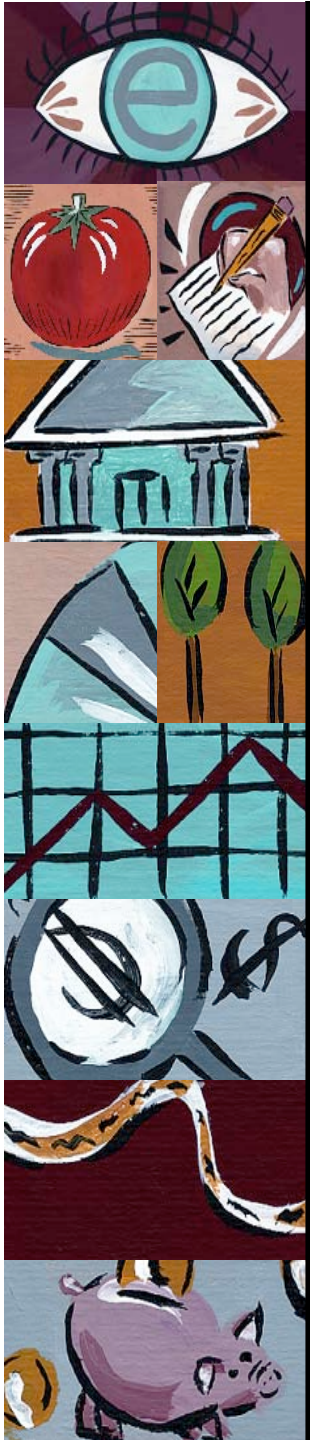




Why are Entry Barriers Sometimes High?



Entry Barriers

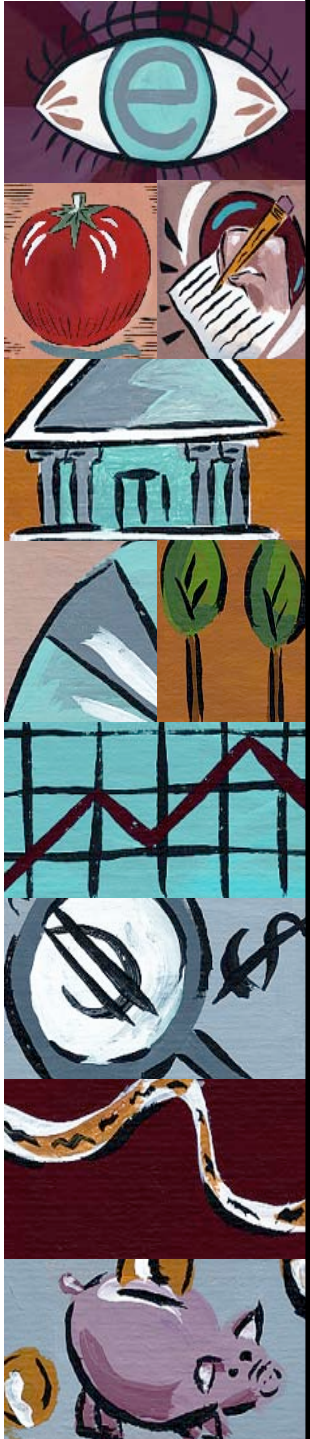
A few examples of factors that may serve as '*barriers*' to free entry into a market:

economies of scale

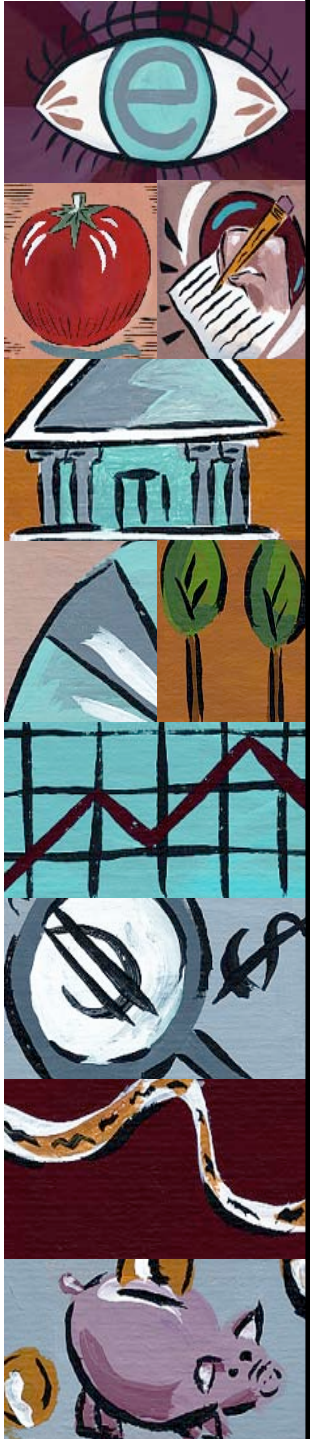
government licensing

patents

control over an essential resource



The Case of Monopoly



Monopoly

Monopoly is a market with:
high entry barriers, and,
a single seller of a well-defined product for which
there are no good substitutes.

Only a few markets exist with a single seller, but
monopolies are worth studying, because understanding
monopoly theory also helps us understand markets with
only a few sellers.



Price and Output Under Monopoly

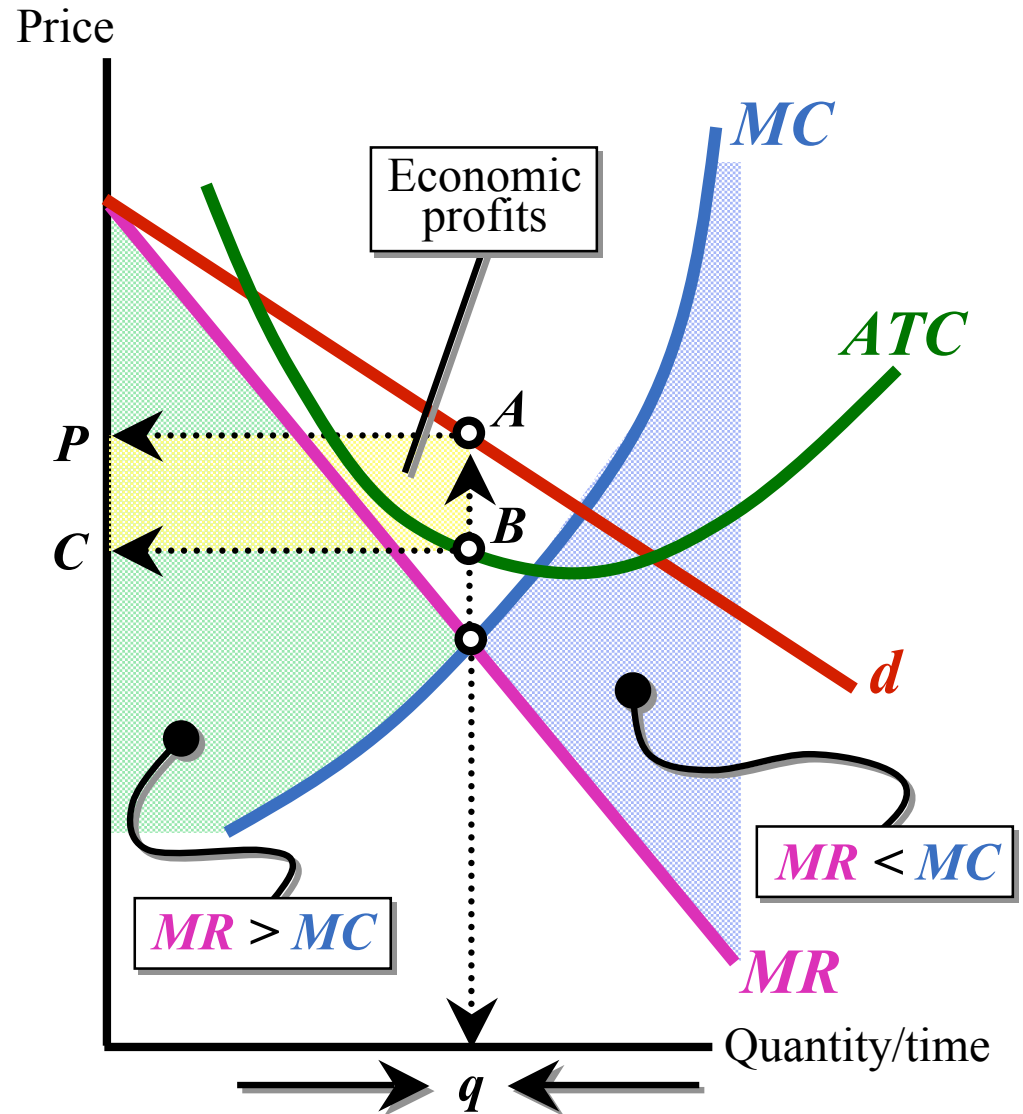
As there is only one producer of a good or service in a market with a monopolist, the market *demand curve* is the monopolist's *residual demand curve*.

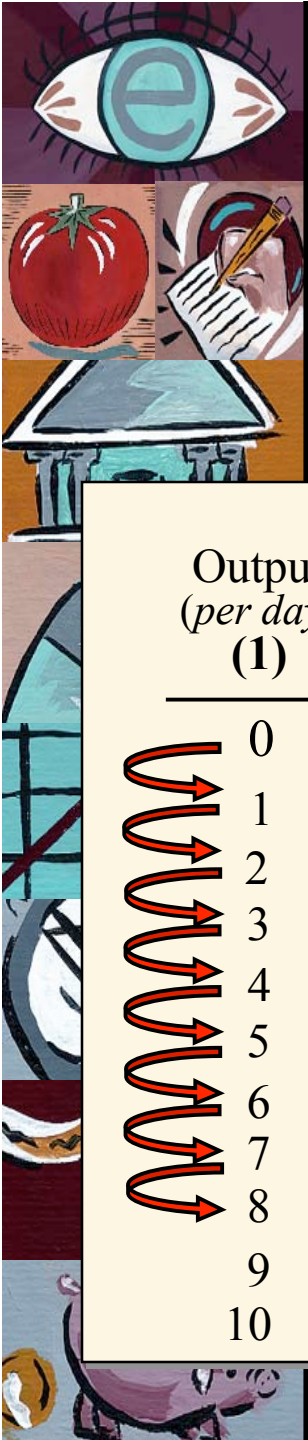
In order to maximize its profits, a monopolist will expand its output until *marginal revenue* just equals *marginal cost*.

The monopolist will charge the price along the *demand curve* consistent with that level of output.

Price and Output Under Monopoly

- The monopolist will reduce price and expand output as long as $MR > MC$.
- The monopolist will raise price and reduce output when ever $MR < MC$.
- Output level q will result ...with price determined by the height of the demand curve at that level of output, P .
- At q the *average total cost* per unit for that scale of output is C .
- As $P > C$ (price $>$ ATC) the organization is making economic profits equal to the area $PABC$.



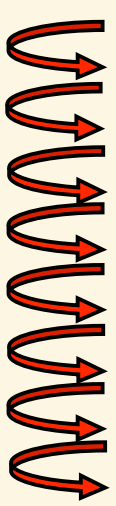


Price and Output Under Monopoly

A monopolist will reduce price and expand output as long as $MR > MC$.
 As the monopolist reduces price and expands output, profits increase ... until the point where $MC > MR$.

Here an output of 8 a day will maximize profits.

Output (per day) (1)	Price (per unit) (2)	Total revenue = (1)*(2) (3)	Total costs (per day) (4)	Profit = (3) - (4) (5)	Marginal cost (6)	Marginal revenue (7)
0	----	-----	\$50.00	-\$50.00	----	----
1	\$25.00	\$25.00	\$60.00	-\$35.00	\$10.00	< \$25.00
2	\$24.00	\$48.00	\$69.00	-\$21.00	\$9.00	< \$23.00
3	\$23.00	\$69.00	\$77.00	-\$8.00	\$8.00	< \$21.00
4	\$22.00	\$88.00	\$84.00	\$4.00	\$7.00	< \$19.00
5	\$21.00	\$105.00	\$90.50	\$14.50	\$6.50	< \$17.00
6	\$19.75	\$118.50	\$96.75	\$21.75	\$6.25	< \$13.50
7	\$18.50	\$129.50	\$102.75	\$26.75	\$6.00	< \$11.00
8	\$17.25	\$138.00	\$108.50	\$29.50	\$5.75	< \$8.50
9	\$16.00	\$144.00	\$114.75	\$29.25	\$6.25	\$6.00
10	\$14.75	\$147.50	\$125.25	\$26.25	\$6.50	\$3.50



Maximum profits



Profits Under Monopoly

High entry barriers protect monopolists from competitive pressures.

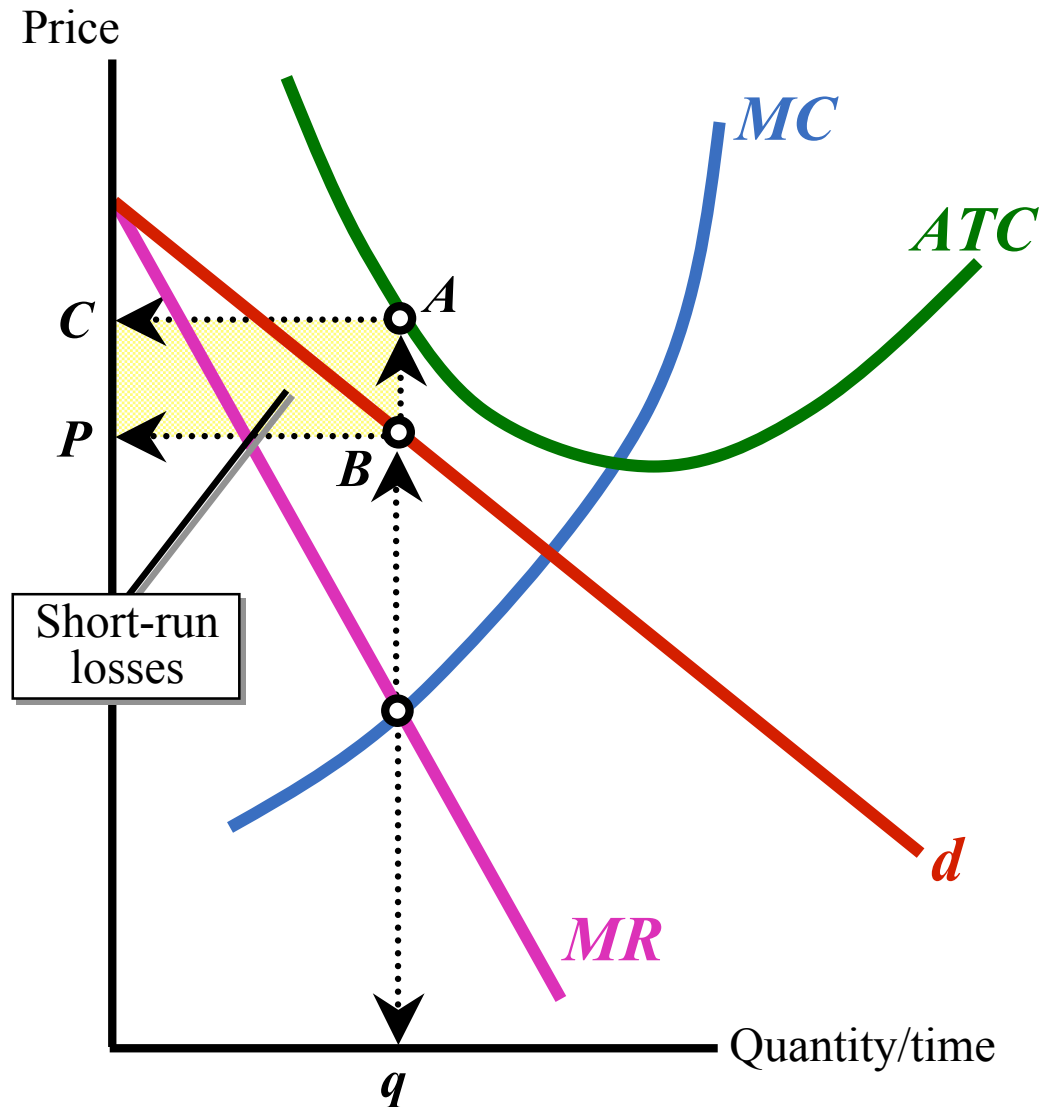
Monopolists can earn long-run profits.

However even a monopolist will not always be able to earn profit.

When ATC is always above the demand curve, the monopolist will be unable to cover costs (unable to earn a profit) by charging a per unit price (it might be able to by practicing first degree price discrimination -- take it or leave it pricing).

When a Monopolist Incurs Losses

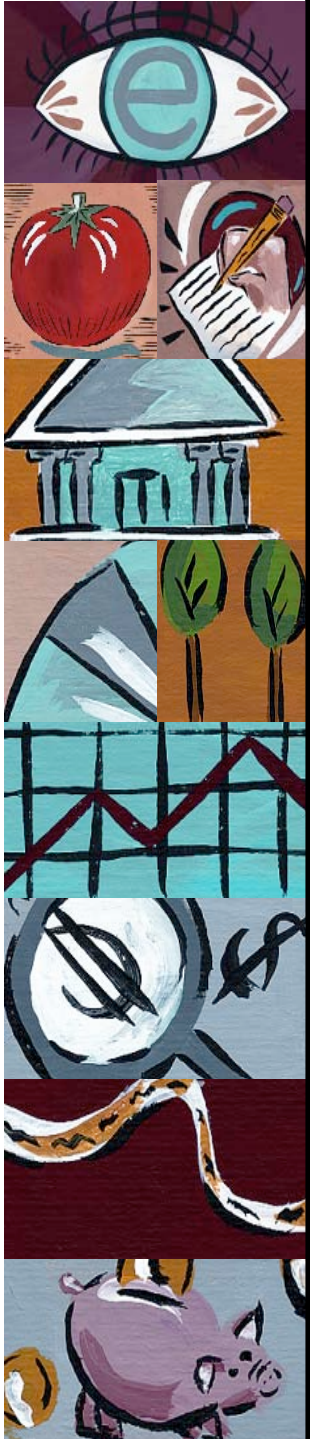
- A monopolist will set output equal to q , where $MR = MC$
- Note that at this level of output, the price that the monopolist charges does not cover the *average total cost* of producing the output ($P < C$).
- Whenever the *ATC* curve lies always above the *demand curve*, the monopolist will incur short-run losses.
- In this case, the organization is making economic losses equal to the shaded area, $CABP$.





Questions for Thought:

1. Do monopolists charge the highest possible price for which they can sell their products? Do they maximize their average profit per sale? Are monopolies always profitable?
2. “Barriers to entry are high under monopoly but low in competitive price searcher markets.” -- Is this statement *true*?
3. Which of the following is true under monopoly?
 - a. If the monopolist is making economic profit, new organizations will be attracted into the market.
 - b. The monopolist will have little or no incentive to produce efficiently (at a low cost).



Characteristics of Oligopolistic Cartels

Characteristics of Oligopolistic Cartels

A few characteristics of *oligopoly*:

- small number of rival organizations
- interdependence among organizations
- substantial economies of scale
- significant barriers to entry
- products may be identical or differentiated





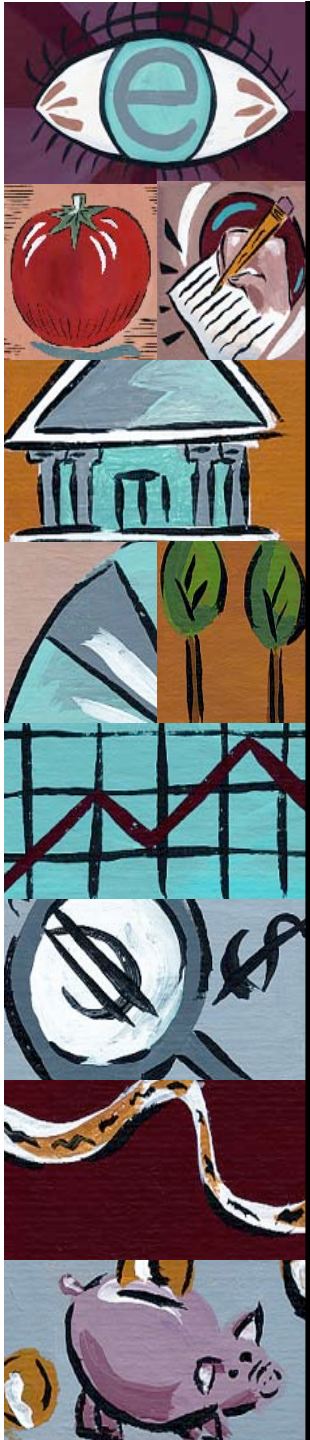
Price and Output in the Case of Oligopolistic Cartel



Price and Output Under Oligopolistic Cartel

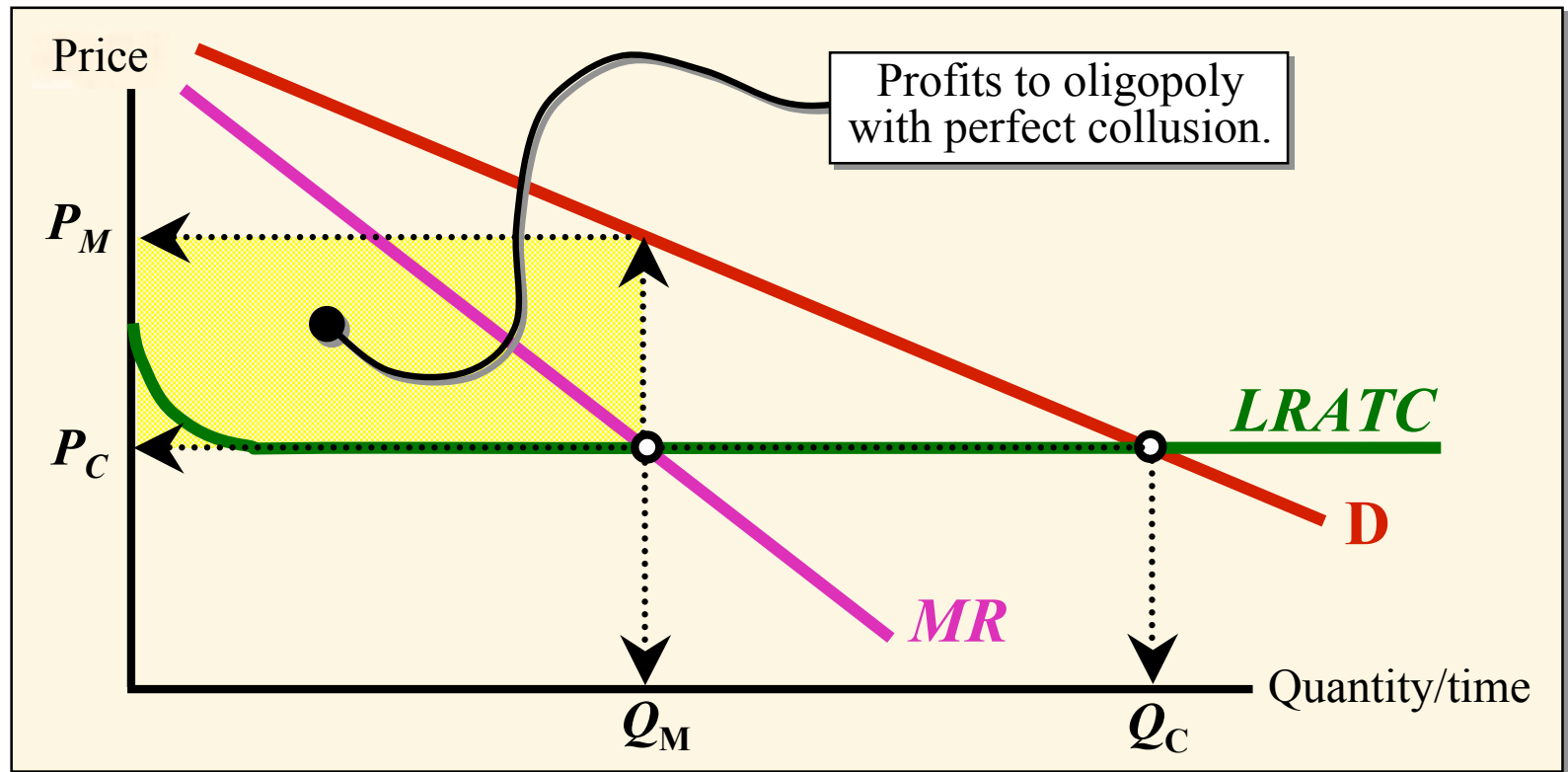
No general theory exists for price and output under oligopoly.

- If the organizations operated independently, they would drive down the price to the per unit cost of production.
- If the organizations colluded perfectly, the price would rise to the monopoly price.
- The outcome is usually between these two extremes.



Price and Output Under Oligopoly

If oligopolists compete with one another, price cutting drives price down to P_C , and expands total output to Q_C .
In contrast, perfect cooperation among organizations leads to a higher price P_M and a smaller market output of Q_M .
Due to the difficulty to perfectly collude, when organizations try to coordinate their activity, price is typically between P_C and P_M and output between Q_M and Q_C .





Incentive to Collude

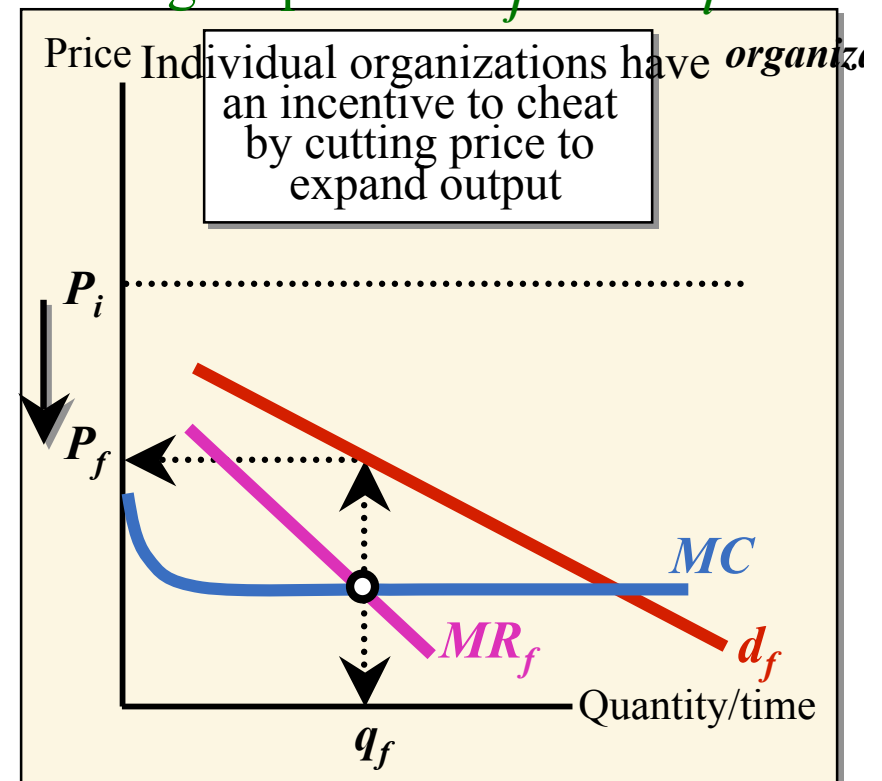
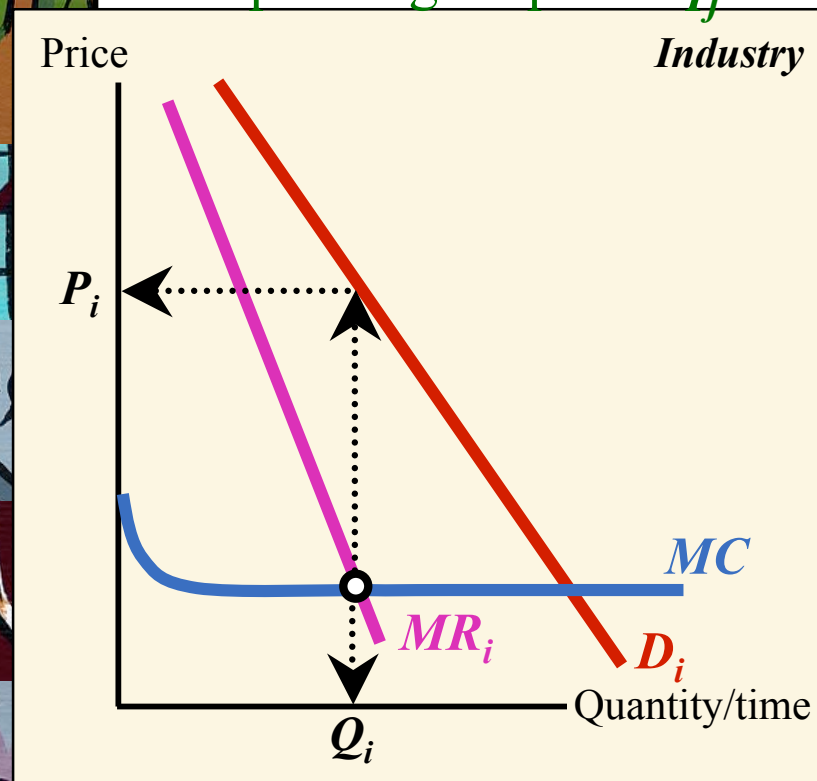
- Oligopolists have a strong incentive to collude and raise their prices.
- However, each organization has an incentive to cheat by lowering price because the demand curve facing each organization is more elastic than the market demand curve.
- This conflict makes collusive agreements difficult to maintain.

Gaining from Cheating

Using industry *demand* D_i and *marginal revenue* MR_i , oligopolists maximize their joint profit where $MR_i = MC$ – at output Q_i and price P_i .

Demand facing each organization d_f (where no other organizations cheat) would be much more elastic than industry *demand* D_i .

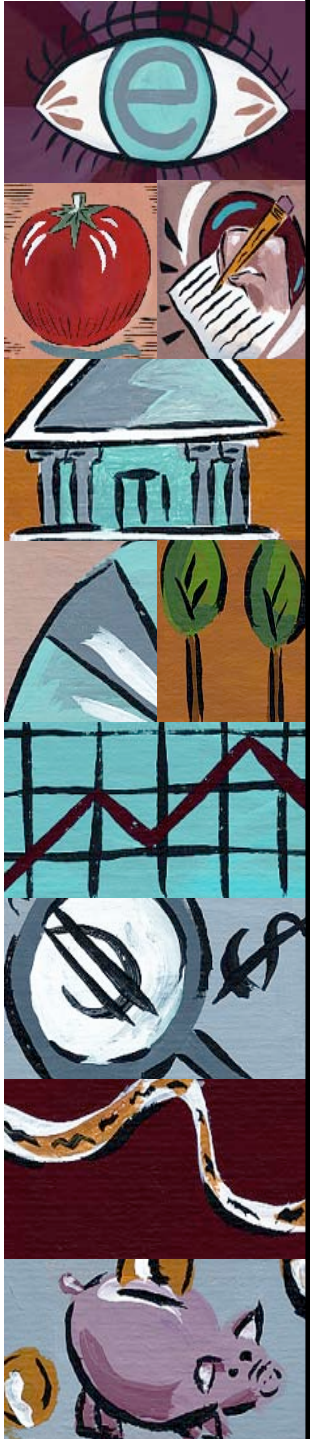
The organization maximizes its profit where $MR_f = MC$ by expanding output to q_f and lowering its price to P_f from P_i .





Obstacles to Collusion

- As the number of organizations in an oligopolistic market increases, the likelihood of effective collusion declines.
- When it is difficult to detect cheating (*secret price cuts*), effective collusion is less likely.
- Low entry barriers also make effective collusion less likely because profit attracts additional rivals.
- Unstable demand conditions lead to honest differences among organizations about the size of shares and price that maximizes total profit.
- Rigorous enforcement of antitrust law makes collusion *potentially* more costly.



Questions for Thought:

1. Which of the following is the best example of an oligopolist?
 - a. McDonald's, a fast food restaurant chain
 - b. Boeing, a large aircraft manufacturer
 - c. Wal-Mart, a large retailing organization.
2. What makes a market oligopolistic?
3. When are oligopolists likely to collude? Why is it impossible to construct a general theory of output and price for an oligopolist?

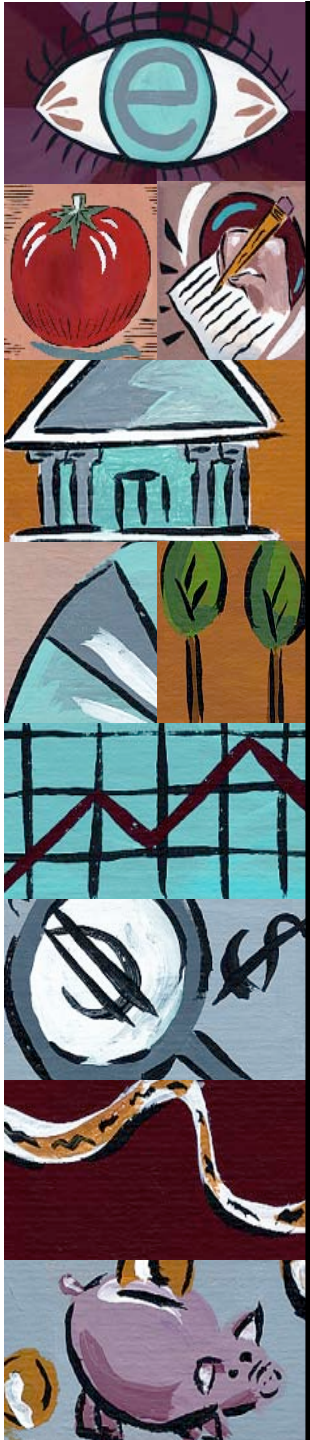


Questions for Thought:

4. Because the residual demand curve of organizations is more elastic than the industry demand curve, an oligopolist (or cartel member) will be able to gain by secretly raising its price above the price that maximizes the joint profits of the organizations in the industry.
– Is this *true or false*?



Defects of Markets with High Entry Barriers



Defects of Markets with High Entry Barriers

When entry barriers are high and there are few, if any, alternative suppliers, the discipline of market forces is weakened.

Allocative inefficiency:

A organization with market-power may reduce output and set a price above both *ATC* and *MC*. The result is additional units that are valued more than they cost to produce, are not.

But, profits induce entry and/or expansion of market output in the long-run.

Government grants of monopoly encourage *rent seeking*.

Resources will be wasted by organizations attempting to secure and maintain market protection.



Policy Alternatives When Entry Barriers are High



Natural Monopoly

A *natural monopoly* exists when *long-run average total costs* continue to decline as organization size increases, over the entire market demand.

A larger organization always has lower costs.

Example: local phone service

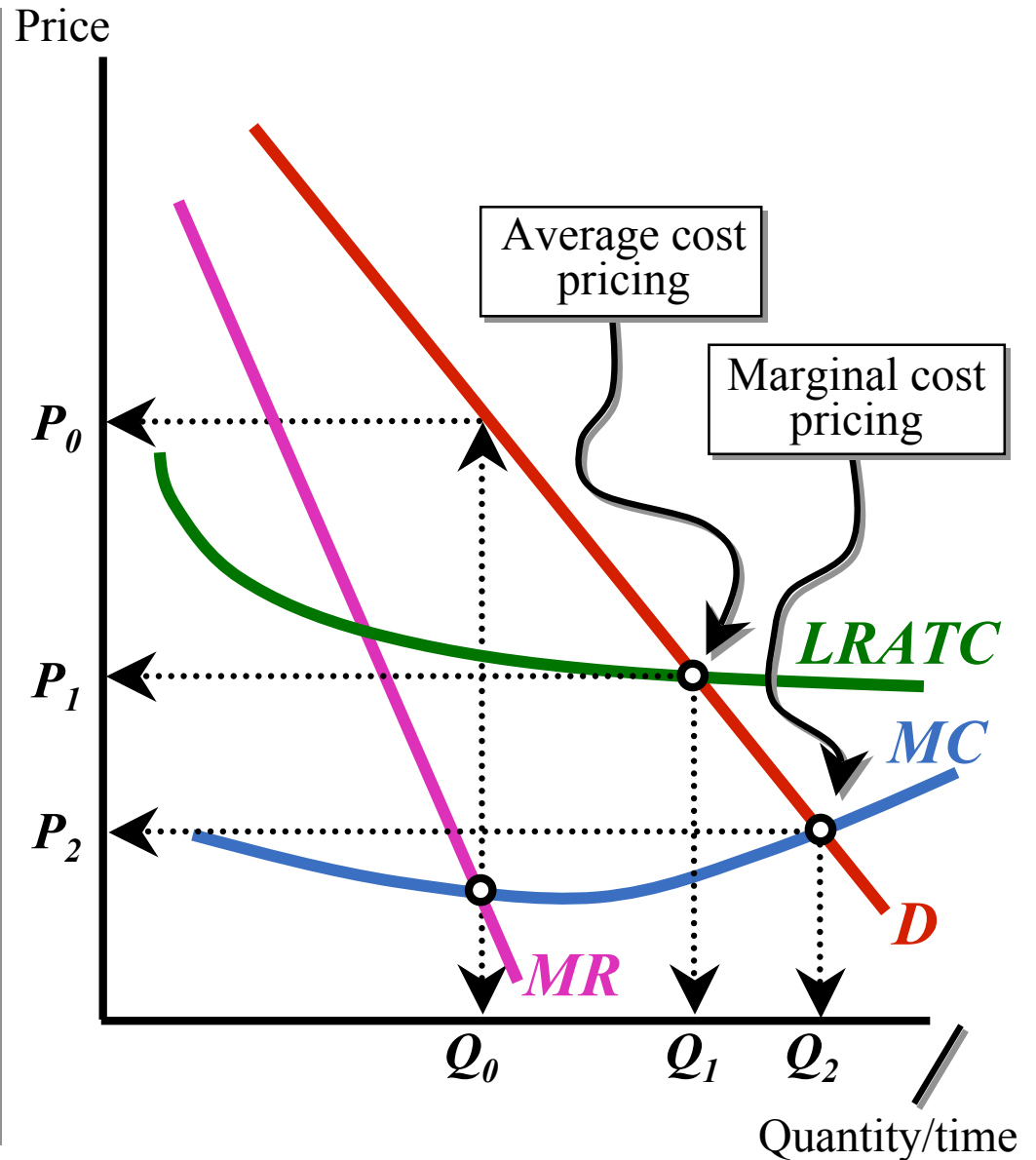


Monopoly: *Policy Alternatives*

1. Design antitrust policy to maintain or increase number of organizations in the industry.
2. Relax regulations that limit entry and reduce competition.
3. Reduce regulations that limit competition from foreign organizations (*e.g. tariffs and quotas*).
4. Regulate prices charged by protected producers.
5. Supply market with government production.

Regulation of a Monopolist

- An unregulated monopolist with the cost structure here produces where $MR = MC$ (Q_0) and charge price P_0 .
- From an efficiency viewpoint, this output is too small and the price is too high. Why is this?
- If a regulatory agency forced the monopolist to reduce its price to P_1 (*average cost pricing*) the monopolist expands output to Q_1 .
- Ideally, we would like output to be expanded to Q_2 where $P = MC$ (*marginal cost pricing*), but regulatory bodies do not usually attempt to keep prices as low as P_2 . Can you explain why?





Problems with Government Intervention

Problems with *price regulation*:

Lack of information – do regulators know the cost structures behind the organization's real *ATC*?

Cost shifting – with $P = ATC$, do monopolists have much incentive to keep costs low?

Special interest influence – will monopolists have an incentive to influence the decisions of regulatory bodies?

Problem with *government production*:

Less incentive to minimize costs and adopt new technologies.

Fewer incentives to satisfy customers, improve quality, and introduce new products.

Political considerations may influence decision making of organization.

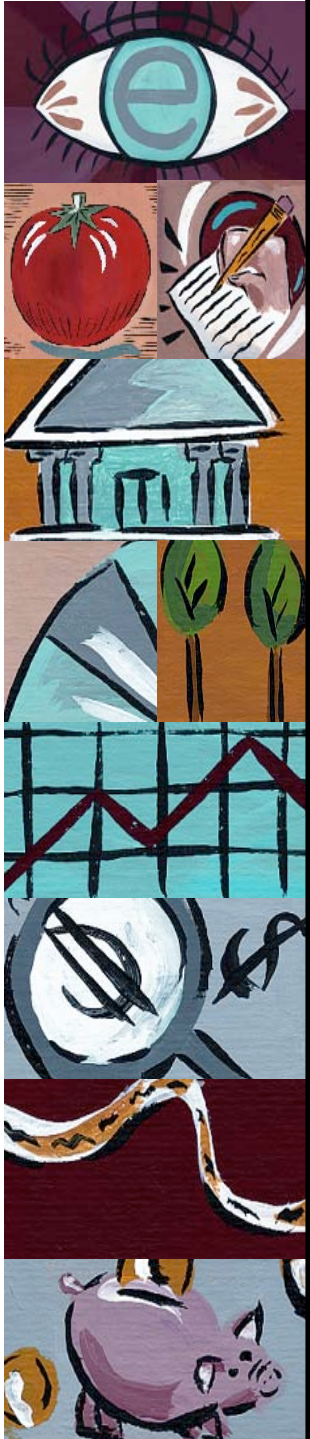


Putting It All Together

- With unregulated monopoly, output is too small and price is too high.
- When economies of scale are important, antitrust policy leads to higher unit costs.
- Ideal outcomes are unlikely to be achieved through either price regulation or government operation of the organization.
- When feasible, reduction of artificial entry barriers is the most attractive alternative.



The Competitive Process in the Real World



Competition

1. Competitive forces are present even in markets with high entry barriers.
2. Quality competition is an important element of the competitive process.
3. Dynamic competition: profitability and high prices encourage technological change and the development of substitute products.



Questions for Thought:

1. How will high market entry barriers influence:
 - (a) the long_run profitability of the organizations,
 - (b) the cost efficiency of the industry's organizations,
 - (c) the likelihood that some inefficient (*high cost*) organizations will survive, and,
 - (d) entrepreneurs incentive to develop substitutes for the organization's product?

Are competitive pressures present in markets with high barriers to entry?