



Understanding Economics

2nd Edition

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Chapter 6 **Monopoly and Imperfect Competition**

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Chapter Objectives

- In this chapter you will:
 - consider the demand conditions faced by monopolists, monopolistic competitors, and oligopolists
 - see how monopolists, monopolistic competitors, and oligopolists maximize profits
 - learn about nonprice competition, and the arguments over industrial concentration

Monopolist's Demand

- A monopolist's demand curve is the same as for the entire market
 - it is downward sloping

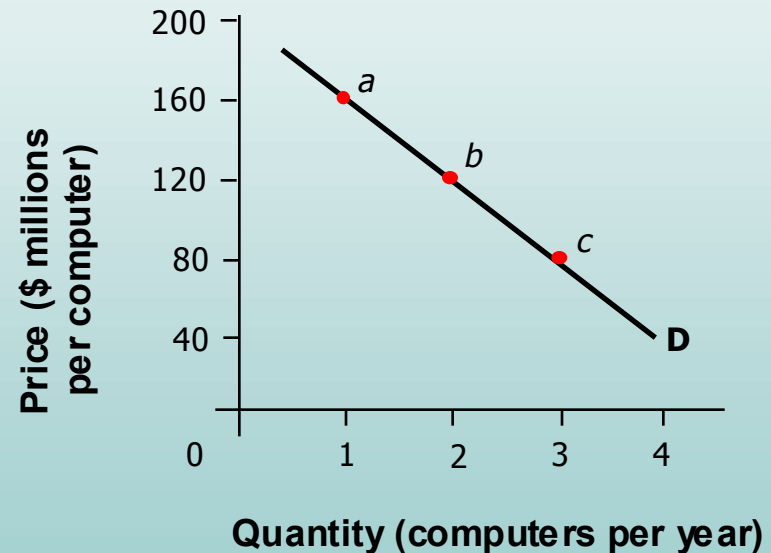
Demand Faced by a Monopolist

Figure 6.1, Page 138

Demand Schedule for Megacomp

Price (\$ millions per computer)	Quantity Demanded (computers per year)
160	1
120	2
80	3

Demand Curve for Megacomp



Monopolistic Competitor's Demand

- A monopolistic competitor's demand curve is elastic because of many substitutes for the business's product

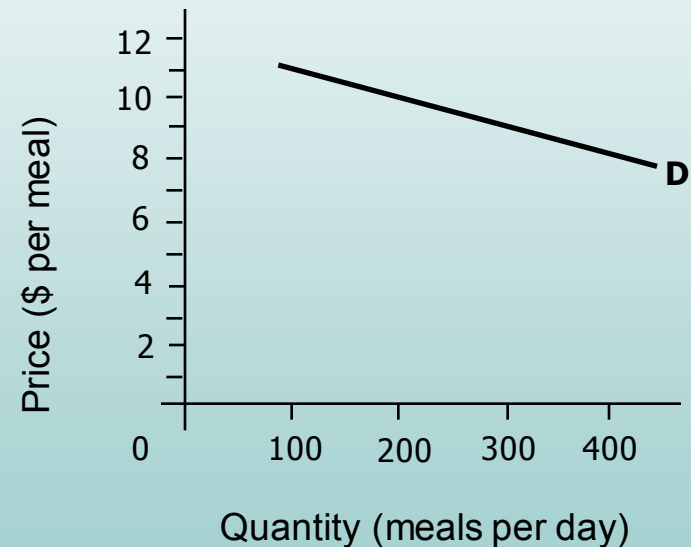
Demand Faced by a Monopolist Competitor

Figure 6.2, Page 139

Demand Schedule for Jaded Palate

Price (\$ per meal)	Quantity Demanded (meals per day)
11	100
10	200
9	300
8	400

Demand Curve for Jaded Palate



Oligopolist's Demand

- All oligopolies are characterized by mutual interdependence.
- Oligopolists in a market characterized by rivalry face a kinked demand curve.
 - A business raising price finds rivals keep theirs constant (so demand is flat).
 - A business reducing price finds rivals raise theirs as well (so demand is steep).

Actions and Reactions among Rivals in an Oligopoly

Figure 6.3, Page 140

Action of Company A	Probable Response of Competitors	Effect on Company A's Market Share	Company A's Quantity Demanded
raise price	keep prices constant	product now high-priced, so market share falls	large increase as market share lost to competitors
lower price	match price drop	since all companies selling at lower price, Company A's market share stays constant	small increase as lower prices for all companies attract new buyers

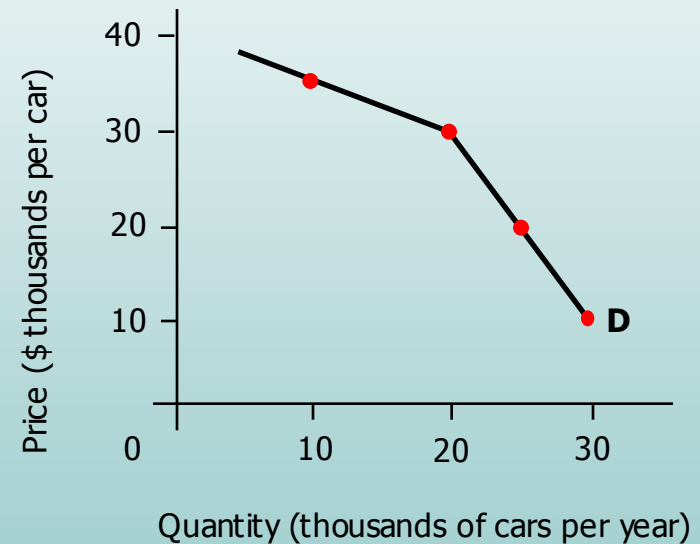
Demand Faced Among Rivals in an Oligopoly

Figure 6.4, Page 140

**Demand Schedule
For Centaur Cars**

Price (\$ thousands per car)	Quantity Demanded (thousands of cars per year)
35	10
30	20
20	25
10	30

Demand Curve for Centaur Cars



Cooperative Oligopolies

- There are various ways that oligopolists can cooperate
 - price leadership
 - collusion
 - cartel

Revenue Conditions for a Monopolist

- A monopolist's average revenue is the same as the downward-sloping market demand curve
- A monopolist's marginal revenue is below its demand curve because demand (average revenue) falls as quantity increases

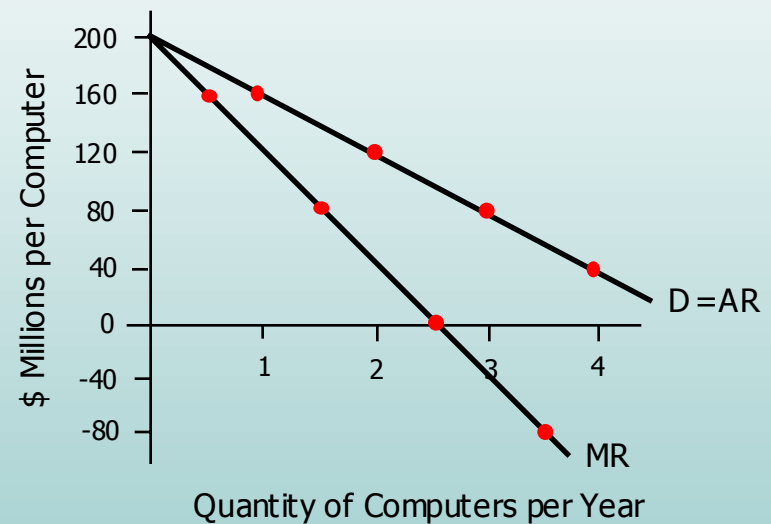
Revenues for a Monopolist

Figure 6.5, Page 142

Revenue Schedules for Megacomp

Price (P) (\$ millions per computer)	Quantity (Q) (computers per year)	Total Revenue (TR) (P x Q) (\$ millions)	Marginal Revenue (MR) ($\Delta TR/\Delta Q$) (\$ millions per computer)	Average Revenue (AR) (TR/Q) (\$ millions per computer)
	0	0		
160	1	160	160	$160/1 = 160$
120	2	240	80	$240/2 = 120$
80	3	240	0	$240/3 = 80$
40	4	160	-80	$160/4 = 40$

Revenue Curves for Megacomp



Profit-Maximization for a Monopolist (a)

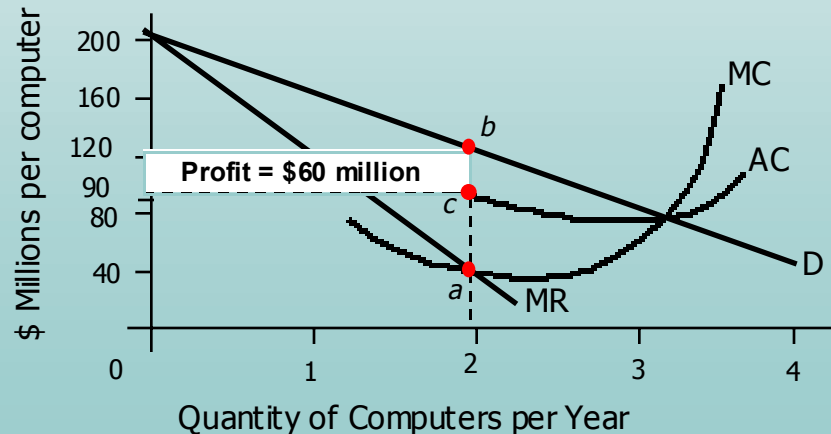
- A monopolist maximizes profit at the quantity where marginal revenue and marginal cost are equal. At this output, they charge the highest possible price, as found using the demand curve.
- A monopolist meets neither the minimum-cost pricing nor the marginal-cost pricing conditions.

Profit Maximization for a Monopolist (b) Figure 6.6, Page 143

Profit Maximization Table for Megacomp

Price (P) (AR) (\$ millions per computer)	Quantity (Q) (computers per year)	Total Revenue (TR) (P x Q) (\$ millions)	Marginal Revenue (MR) ($\Delta TR/\Delta Q$) (\$ millions per computer)	Marginal Cost (MC) (\$ millions per computer)	Average Cost (AC) (\$ millions per computer)
	0	0			
160	1	160	160	60	140
120	2	240	80	40	90
80	3	240	0	70	83
40	4	160	-80	150	100

Profit Maximization Graph for Megacomp

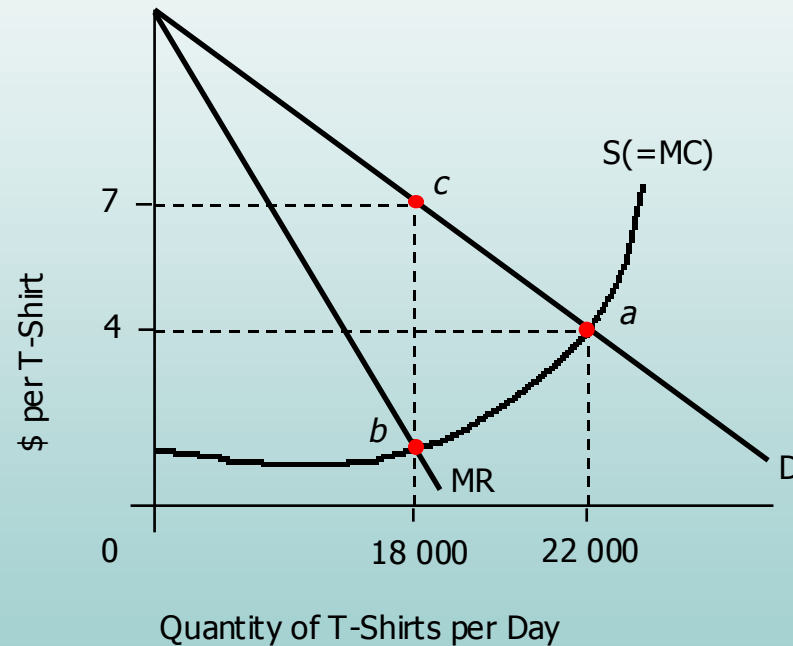


Other Features of Monopolies

- A monopolist charges a higher price and a lower quantity than would occur if the market were perfectly competitive.
- Regulators of monopolies usually adopt average-cost pricing to make regulated monopolies break even.

Monopoly versus Perfect Competition

Figure 6.7, Page 144



Revenue Conditions for a Monopolistic Competitor

- A monopolistic competitor's average revenue is the same as its downward-sloping demand curve.
- A monopolistic competitor's marginal revenue is below its demand curve because demand (average revenue) falls as quantity increases.

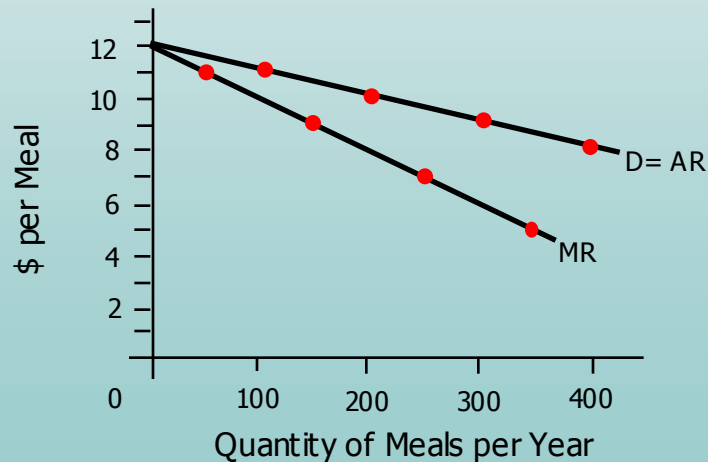
Revenues for a Monopolistic Competitor

Figure 6.8, Page 146

Revenue Schedules for Jaded Palette

Price (P) (\$ meal)	Quantity (Q) (meals per day)	Total Revenue (TR) (P x Q)	Marginal Revenue (MR) ($\Delta TR/\Delta Q$)	Average Revenue (AR) (TR/Q)
--	0	0	$1100/100 = 11$	$1100/100 = 11$
11	100	1100	$900/100 = 9$	$1100/100 = 11$
10	200	2000	$700/100 = 7$	$2000/200 = 10$
9	300	2700	$500/100 = 5$	$2700/300 = 9$
8	400	3200		$3200/400 = 8$

Revenue Curves for Jaded Palette



Profit-Maximization for a Monopolistic Competitor (a)

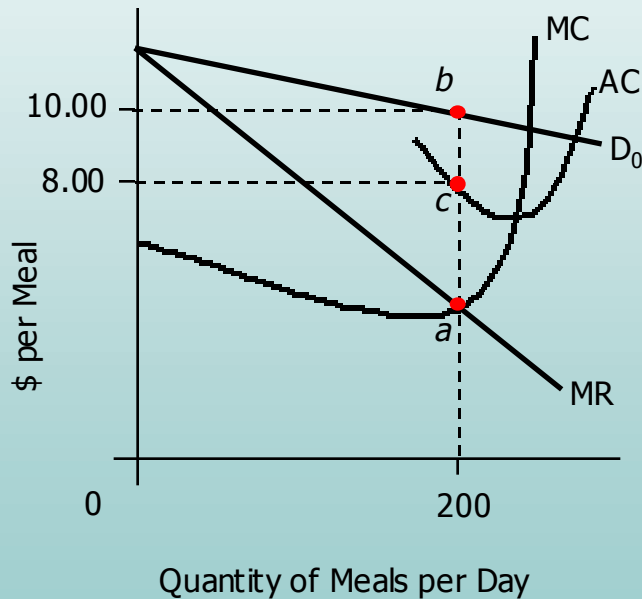
- The profit-maximizing quantity for a monopolistic competitor is found where marginal revenue and marginal cost are equal. Price is found using the business's demand curve.
- In the short run a monopolistic competitor may make a profit or a loss at its profit-maximizing point.

Profit-Maximization for a Monopolistic Competitor (b)

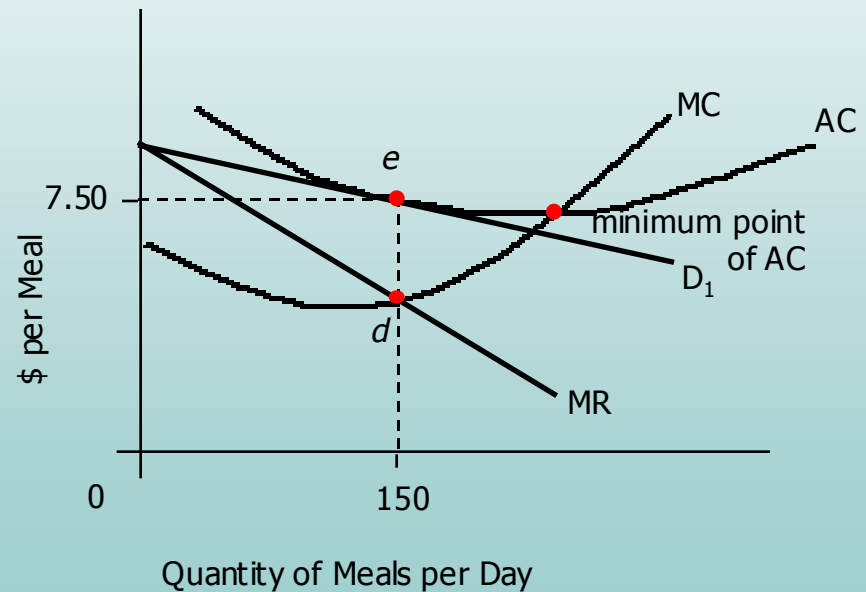
- In the long run, a monopolistic competitor breaks even.
 - If profits (losses) are being made in the short run, new businesses enter (leave) the industry, pushing businesses' demand curves leftward (rightward) and making them more (less) elastic.
- The business meets neither the minimum-cost pricing nor the marginal-cost pricing rules, since too few units of output are produced.

Profit Maximization for a Monopolistic Competitor (c) Figure 6.9, Page 147

Short-Run Profit Maximization For Jaded Palate



Long-Run Profit Maximization For Jaded Palate



Revenue Conditions for an Oligopolist

- An oligopolist in a market characterized by rivalry has average revenue identical with its kinked demand curve
- This business's marginal revenue curve has two linear segments which are below its kinked demand curve

Profit-Maximization for an Oligopolist (a)

- The profit-maximizing quantity for this type of oligopolist is found where marginal revenue and marginal cost are equal. Price is found using the business's kinked demand curve.
- The oligopolist meets neither the minimum-cost pricing nor the marginal-cost pricing rules.

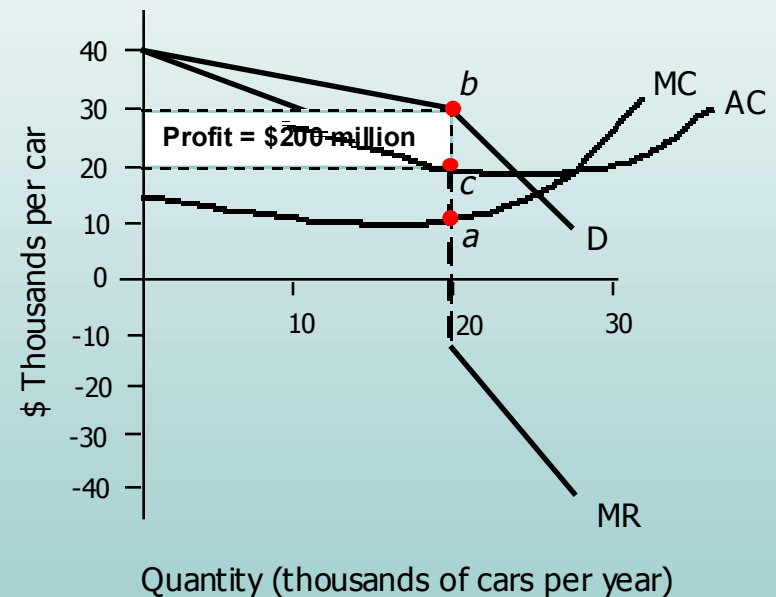
Profit Maximization for an Oligopolist (b)

Figure 6.10, Page 149

Profit Maximization Table for Centaur Cars

Price (P) (=AR)	Quantity (Q)	Total Revenue (TR) (P x Q)	Marginal Revenue (MR) ($\Delta TR/\Delta Q$)	Marginal Cost (MC)	Average Cost (AC)
(\$ thousands Per car)	(thousands of cars per year)	(\$ millions)	(\$ thousands per car)	(\$ thousands per car)	(\$ thousands per car)
--	0	0			
\$35	10	350	35	15	30
30	20	600	25	10	20
20	25	500	-20	15	19
10	30	300	-40	25	20

Profit Maximization Graph for Centaur Cars



Anti-Combines Legislation (a)

- Anti-combines legislation represents laws aimed at preventing industrial concentration and abuses of market power.
- The Competition Act of 1986 was a major reform of Canada's anti-combines legislation.

Anti-Combines Legislation (b)

- Criminal offences under the Competition Act, include:
 - Conspiracy
 - Bid-rigging
 - Predatory Pricing
 - Abuse of Dominant Position

Anti-Combines Legislation (c)

- Civil matters reviewed by the Competition Tribunal include:
 - Abuse of Dominant Position
 - Mergers
 - Horizontal merger
 - Vertical merger
 - Conglomerate merger

Nonprice Competition

- Nonprice competition is used by monopolistic competitors and oligopolists
 - product differentiation
 - advertising
- Nonprice competition raises a business's revenue and costs
- Nonprice competition may or may not be beneficial to businesses and consumers

Industrial Concentration

- Industrial concentration refers to market domination by a few large businesses.
 - It can provide the consumer with benefits due to increasing returns to scale.
 - It can impose costs on the consumer due to market power.
 - It may or may not encourage technical innovation.

Concentration Ratios

- Industrial concentration is measured using concentration ratios.
- The four-firm concentration ratio shows the percentage of total sales revenue in a market earned by the four largest business firms.
- Concentration ratios overestimate competition in localized markets and underestimate it in global markets.

Concentration Ratios in Selected Canadian Industries (1988) Figure 6.11, Page 154

Share of Industry Sales by Four Largest Businesses

Tobacco products	98.9
Petroleum and coal products	74.5
Transportation	68.5
Beverages	59.2
Metal mining	58.9
Paper and allied industries	38.9
Electrical products	32.1
Printing, publishing, and allied industries	25.7
Food	19.6
Finance	16.4
Machinery	11.3
Retail trade	9.7
Clothing industries	6.6
Construction	2.2

Concentration in the Canadian Economy (1997) Figure 6.12, Page 155

In Nonfinancial Industries, Share of Assets and Share of Revenues for 25 Leading Global Enterprises

	Assets	Revenues
Foreign	6.6	7.1
Canadian	18.9	7.5
	<u>25.5%</u>	<u>14.6%</u>

Can Capitalism Survive?

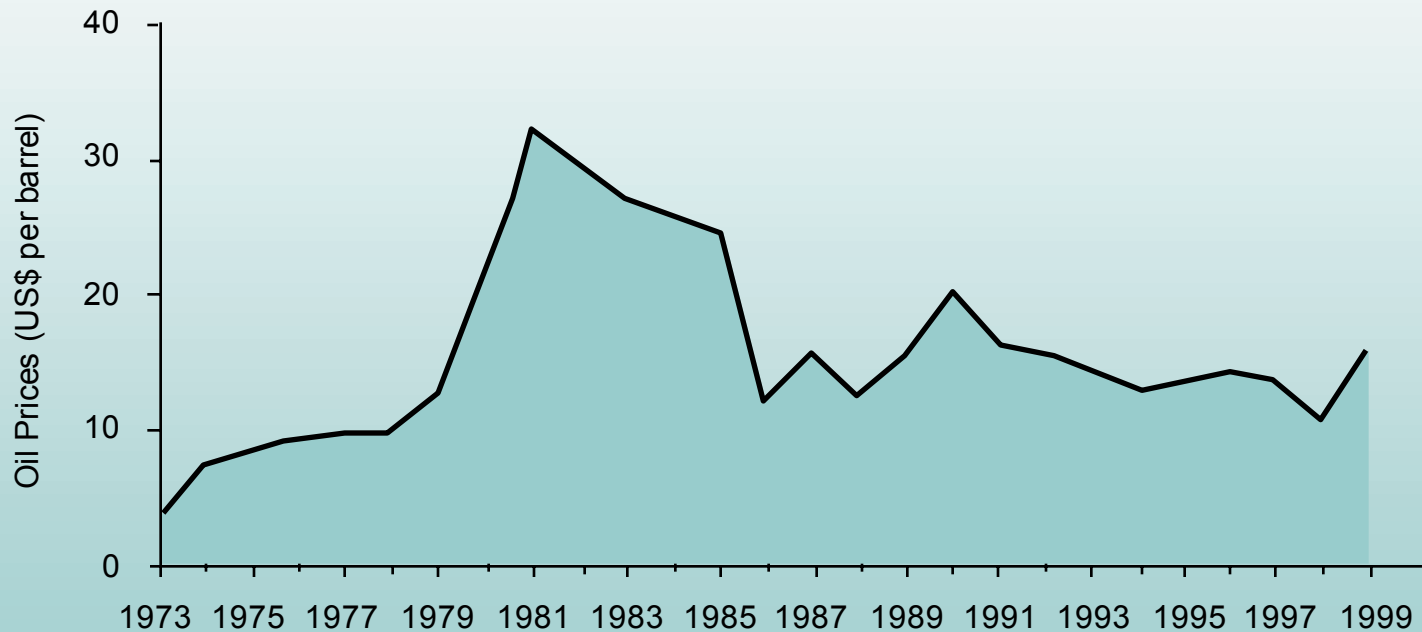
- Joseph Schumpeter
 - believed that entrepreneurs are the driving force of economic progress in capitalism
 - predicted that capitalism was doomed because of the growing dominance of government bureaucracy antagonistic to capitalism

The OPEC Cartel (a)

- The Organization of Petroleum Exporting Countries is an example of a cartel that has had some success in the past in affecting oil prices.
- During the 1970s, OPEC members used market-sharing agreements to significantly raise world oil prices.

The World Price of Oil 1973-1999

Figure A, Page 163



The OPEC Cartel (b)

- During the 1980s, OPEC's influence waned. This was due to
 - reductions in quantity demanded by consumers
 - increases in quantity supplied by non-OPEC producers
 - cheating by some OPEC members, who secretly raised output to counteract reduced prices, and thereby made the price reductions even greater



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Chapter 6 **The End**

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