

SECOND EDITION

# ECONOMICS

COURSE COMPANION

Jocelyn Blink Ian Dorton

OXFORD

### The foundations of economics

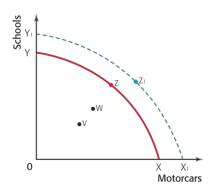


Figure 1.1 A production possibilities curve

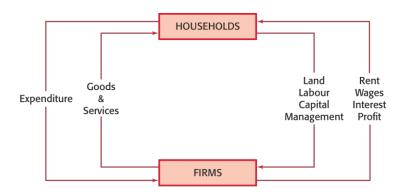


Figure 1.2 The circular flow of income

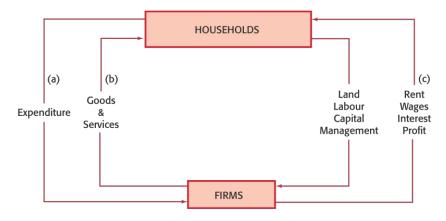
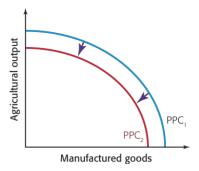


Figure 1.3 The different methods of measuring national income

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#### The foundations of economics



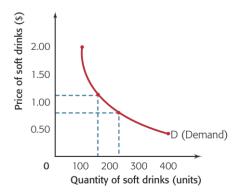


Figure 2.1 A demand curve for soft drinks

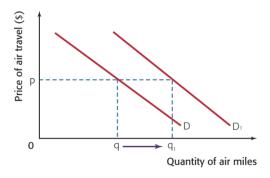
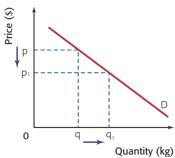


Figure 2.2 The demand for air travel





#### Demand for beef

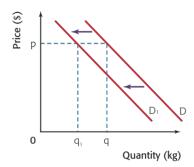
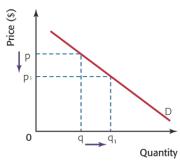


Figure 2.3 The demand for chicken and beef

#### Demand for DVD players



#### Demand for DVDs

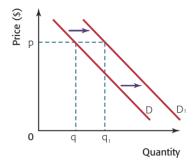


Figure 2.4 The demand for DVD players and DVDs

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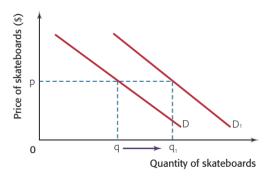


Figure 2.5 The demand for skateboards

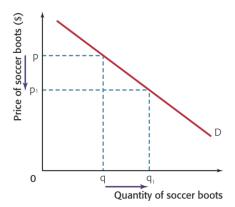


Figure 2.6 The demand for soccer boots

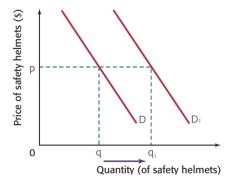


Figure 2.7 The demand for safety helmets

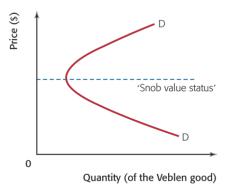


Figure 2.8 The demand for a Veblen good

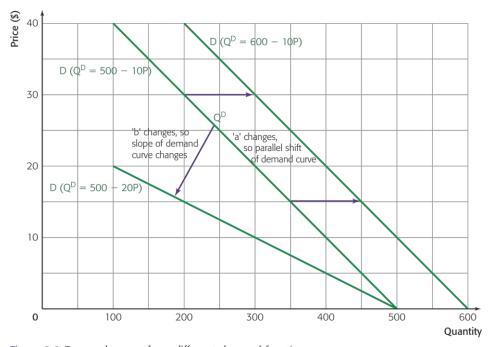


Figure 2.9 Demand curves from different demand functions

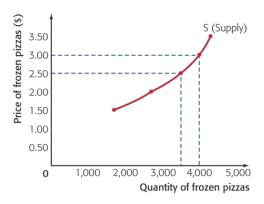


Figure 2.10 A supply curve for frozen pizzas

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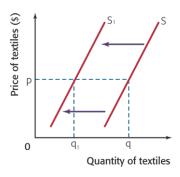
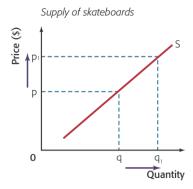


Figure 2.11 The supply of textiles



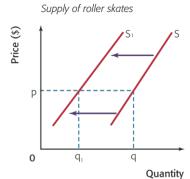


Figure 2.12 The supply of skateboards and roller skates

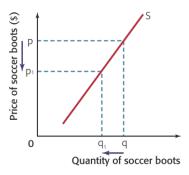


Figure 2.13 The supply of soccer boots

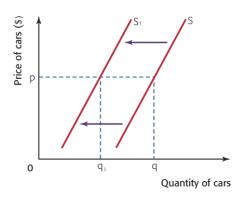


Figure 2.14 The supply of cars

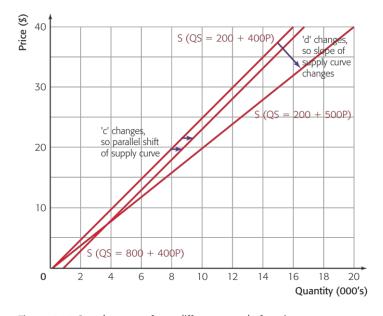


Figure 2.15 Supply curves from different supply functions

# Market equilibrium, the price mechanism, and market efficiency

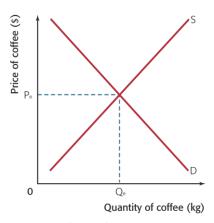
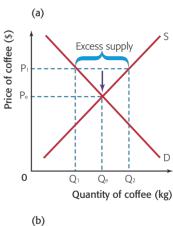


Figure 3.1 The market for coffee



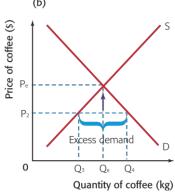


Figure 3.2 The market for coffee

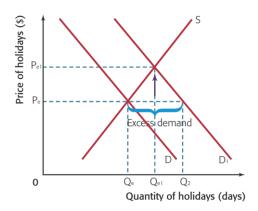


Figure 3.3 The market for foreign holidays

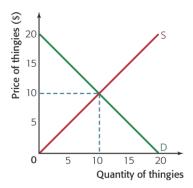


Figure 3.4 The market for thingies

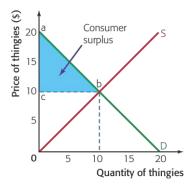


Figure 3.5 Consumer surplus in the market for thingies

#### Market equilibrium, the price mechanism, and market efficiency

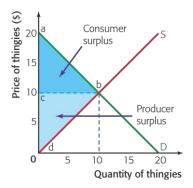


Figure 3.6 Producer surplus in the market for thingies

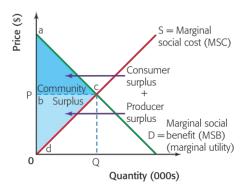


Figure 3.7 Community surplus

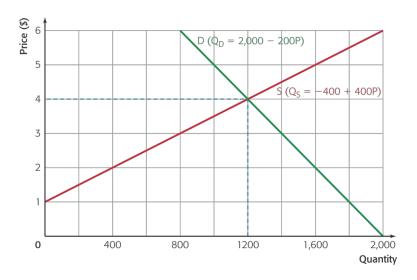


Figure 3.8 Demand and supply curves from different demand and supply functions

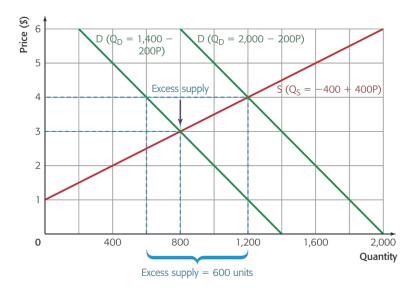


Figure 3.9 The addition of a new demand curve

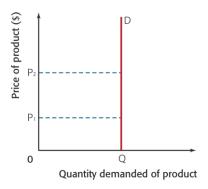


Figure 4.1 A perfectly inelastic demand curve

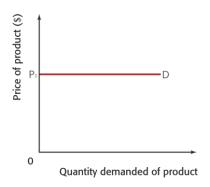


Figure 4.2 A perfectly elastic demand curve

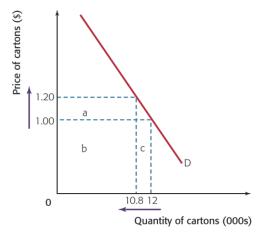


Figure 4.3 The demand for strawberry yoghurt

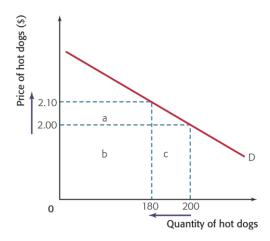


Figure 4.4 The demand for hot dogs

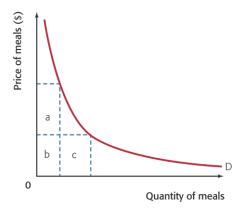


Figure 4.5 A rectangular hyperbola, where PED = 1 at every point

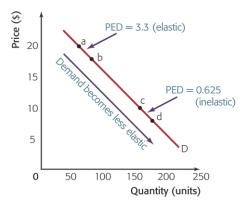


Figure 4.6 PED values for a normal demand curve

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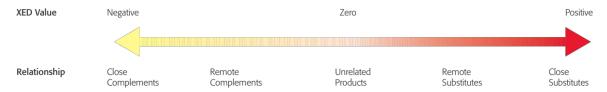


Figure 4.8 XED values and the strength of the relationship between products

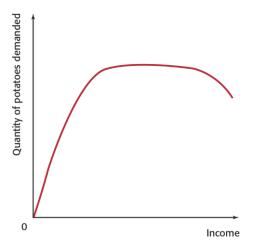


Figure 4.9 An Engel Curve showing the relationship between income and the demand for potatoes

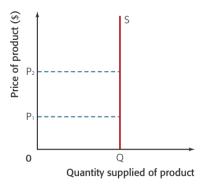


Figure 4.10 A perfectly inelastic supply curve



Figure 4.11 A perfectly elastic supply curve

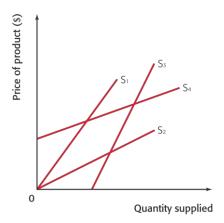


Figure 4.12 Supply curves with different values of PES

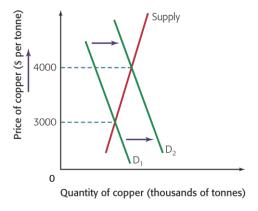
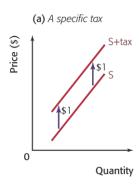


Figure 4.13 The market for copper



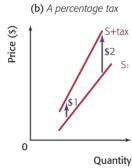
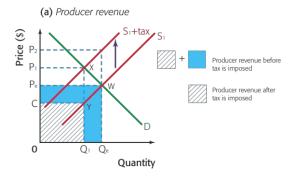
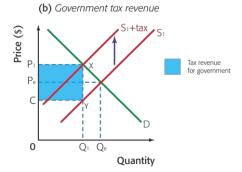
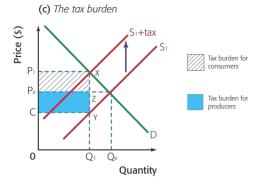


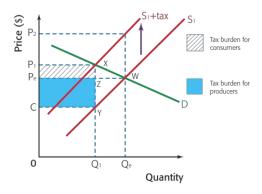
Figure 5.1 The effect on a supply curve of different types of indirect taxes



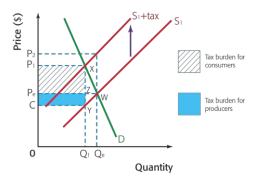




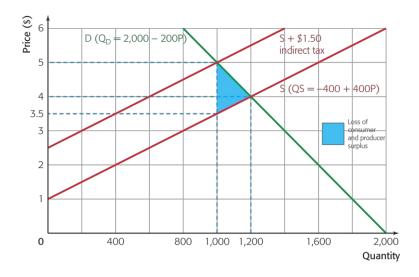
**Figure 5.2** The imposition of a specific tax on a product

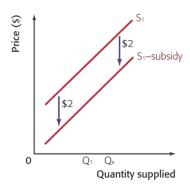


**Figure 5.3** The imposition of a specific tax on a product where PED is greater than PES



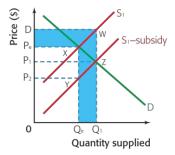
**Figure 5.4** The imposition of a specific tax on a product where PED is less than PES



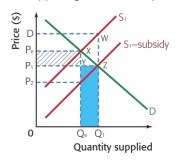


**Figure 5.5** The effect on a supply curve of a specific subsidy

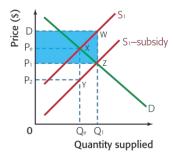
#### (a) Increase in producer revenue



#### (b) Change in consumer expenditure



#### (c) Amount of government subsidy



**Figure 5.6** The granting of a specific subsidy on a product

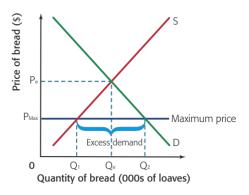


Figure 5.7 The market for bread

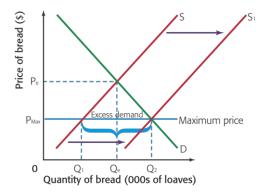
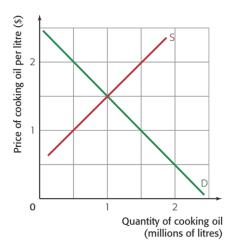
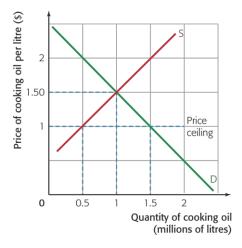


Figure 5.8 Government action to solve the problem of excess demand





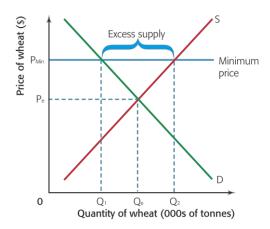


Figure 5.9 A minimum price in the market for wheat

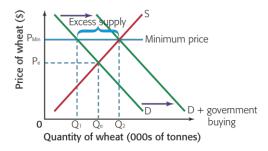


Figure 5.10 Government action to solve the problem of excess supply

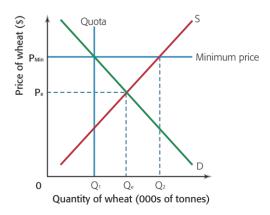
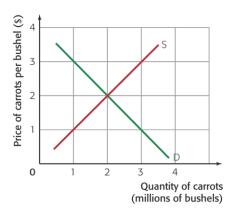


Figure 5.11 A quota to maintain a minimum price



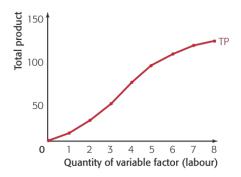


Figure 6.1 The total product curve

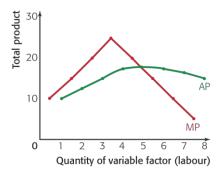


Figure 6.2 Average and marginal product curves

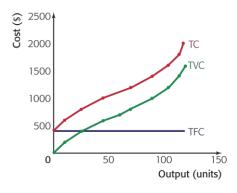


Figure 6.3 Total cost, total variable cost, and total fixed cost

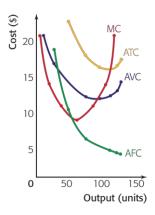


Figure 6.4 Short-run AFC, AVC, ATC, and MC curves

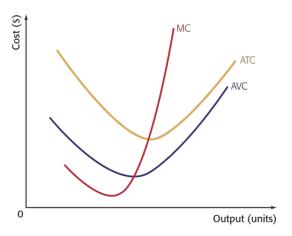


Figure 6.5 A general diagram showing short-run ATC, AVC, and MC

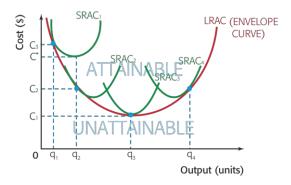


Figure 6.6 The LRAC curve and short run average cost curves

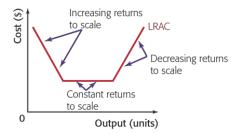


Figure 6.7 Increasing, constant, and decreasing returns to scale

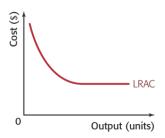
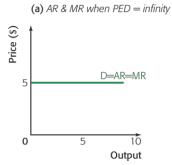


Figure 6.8 A long-run average cost curve in reality



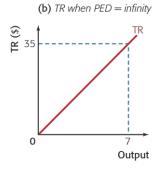


Figure 6.9 Curves for PED 5 infinity

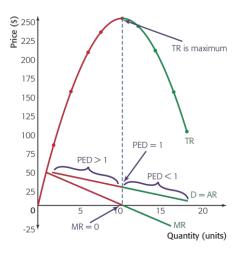


Figure 6.10 The relationship between D, AR, MR, TR, and PED for a normal demand curve

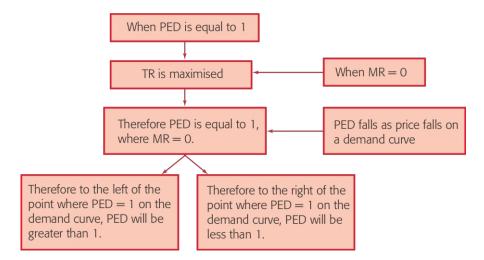


Figure 6.11 A logic tree explaining the varying values of PED on a demand curve

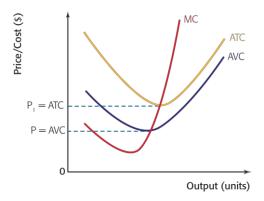
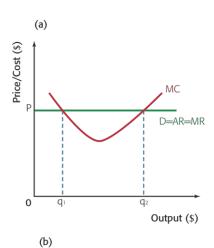


Figure 6.12 A general diagram showing short run ATC, AVC, and MC



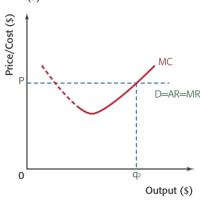


Figure 6.13 Revenue and costs for a firm with a perfectly elastic demand curve

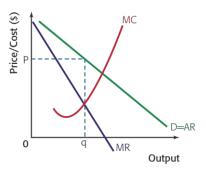


Figure 6.14 The profit-maximising level of output for a normal demand curve

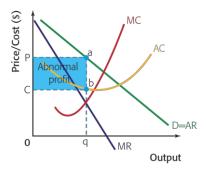


Figure 6.15 Showing an area of profit using the AC curve

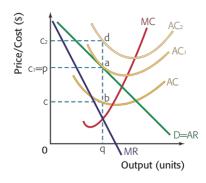
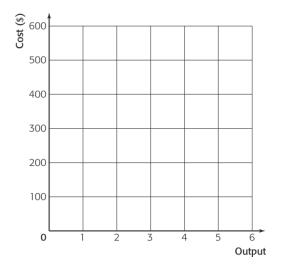
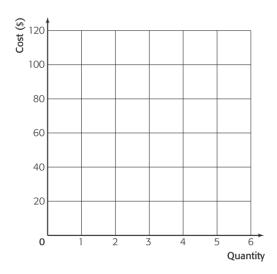


Figure 6.16 Using AC to show different profit and loss situations





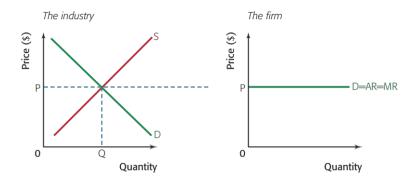


Figure 7.1 The demand curves for the industry and the firm in perfect competition

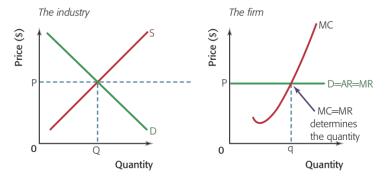


Figure 7.2 The profit-maximizing level of output in perfect competition

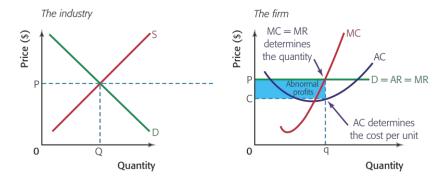


Figure 7.3 Short-run abnormal profits in perfect competition

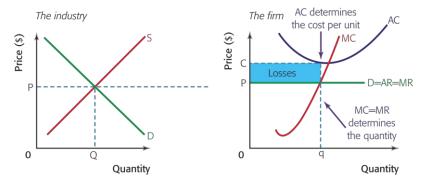


Figure 7.4 Short-run losses in perfect competition

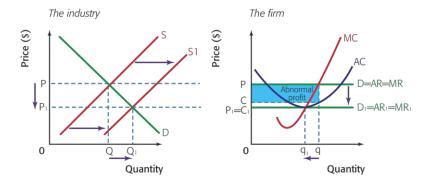


Figure 7.5 The movement from short-run abnormal profit to long-run normal profit

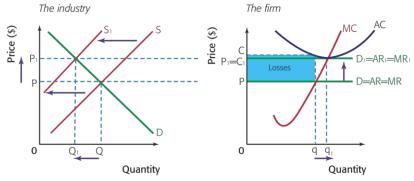


Figure 7.6 The movement from short-run losses to long-run normal profit

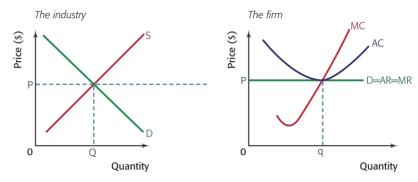


Figure 7.7 Long-run equilibrium in perfect competition

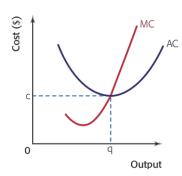


Figure 7.8 Productive efficiency

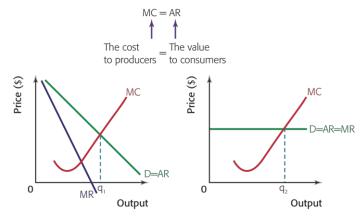


Figure 7.9 Allocative efficiency

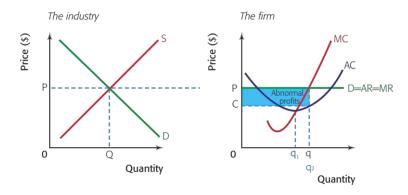


Figure 7.10 Productive and allocative efficiency with short-run profits in perfect competition

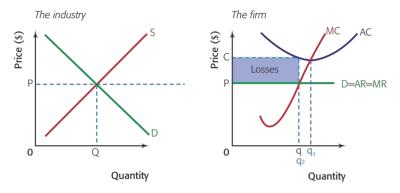


Figure 7.11 Productive and allocative efficiency with short-run losses in perfect competition

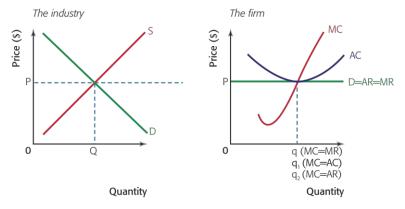


Figure 7.12 Productive and allocative efficiency in the long run in perfect competition

# Monopoly

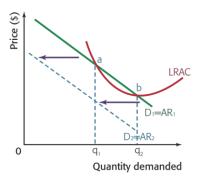


Figure 8.1 A natural monopoly

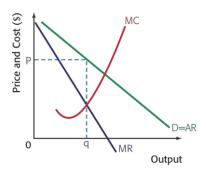


Figure 8.2 The demand curve facing a monopolist

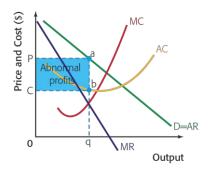


Figure 8.3 Abnormal profits in the long run in monopoly

## Monopoly

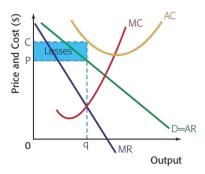


Figure 8.4 A monopolist making losses in the long run

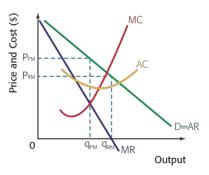


Figure 8.5 Revenue maximizing as opposed to profit maximizing in monopoly

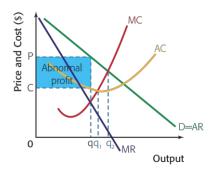


Figure 8.6 Productive and allocative efficiency in monopoly

## Monopoly

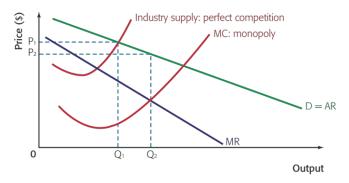


Figure 8.7 Economies of scale in monopoly

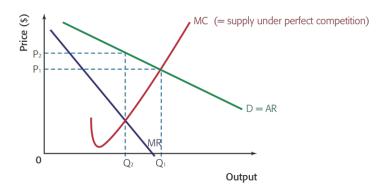


Figure 8.8 Monopoly versus perfect competition without economies of scale

# Monopolistic competition

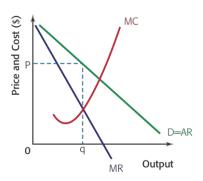


Figure 9.1 The demand curve for a firm in monopolistic competition

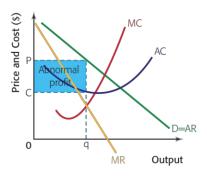


Figure 9.2 Short-run abnormal profits in monopolistic competition

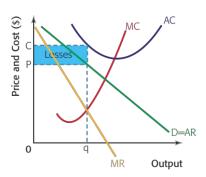


Figure 9.3 Short-run losses in monopolistic competition

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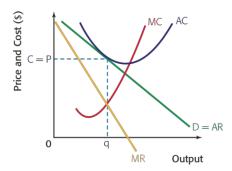
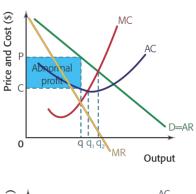


Figure 9.4 Long-run equilibrium in monopolistic competition



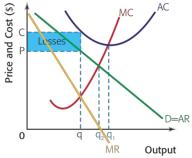


Figure 9.5 Productive and allocative efficiency in the short run in monopolistic competition

## Monopolistic competition

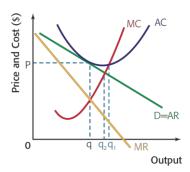


Figure 9.6 Productive and allocative efficiency in the long run in monopolistic competition

# Oligopoly

#### Percentage market share of largest 4 firms (CR<sub>4</sub>)

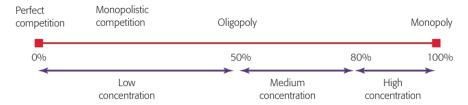


Figure 10.1 CR<sub>4</sub> ratios in different market structures

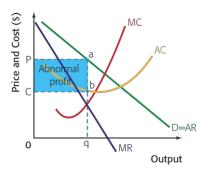


Figure 10.2 Oligopolists acting as a monopolist

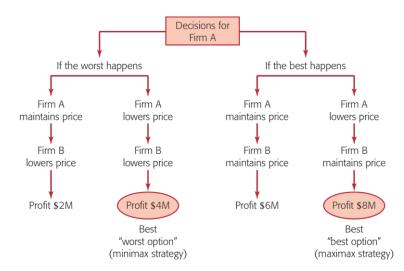


Figure 10.3 Game theory outcomes for Firms A and B

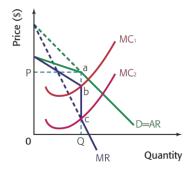


Figure 10.4 The kinked demand curve

# **Price discrimination**

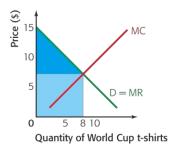


Figure 11.1 First-degree price discrimination

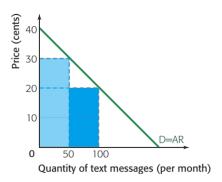


Figure 11.2 Second-degree price discrimination

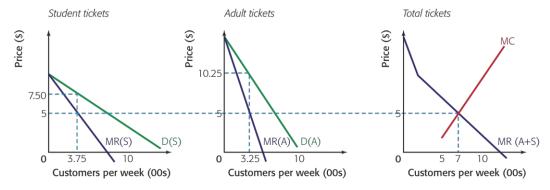


Figure 11.3 Third degree price discrimination

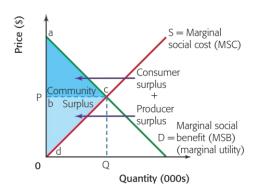


Figure 12.1 Community surplus

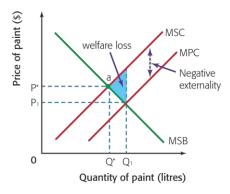


Figure 12.2 A negative externality of production

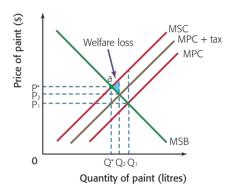


Figure 12.3 Taxing a negative externality of production

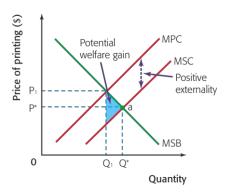


Figure 12.4 A positive externality of production

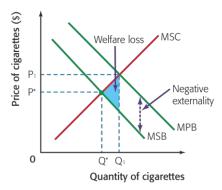


Figure 12.5 A negative externality of consumption

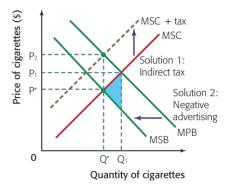


Figure 12.6 Measures to reduce negative externalities of consumption

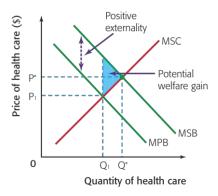


Figure 12.7 A positive externality of consumption

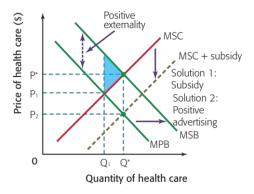


Figure 12.8 Measures to promote positive externalities of consumption

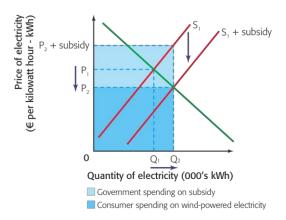


Figure 12.9 Production of electricity using wind power with turbines on a wind farm

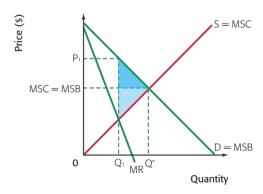


Figure 12.10 Imperfect competition

# The level of overall economic activity

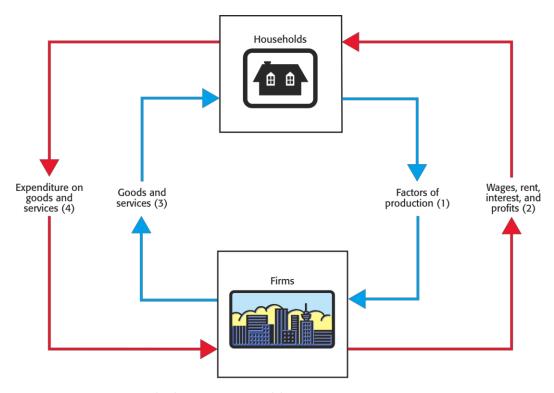


Figure 13.1 Two-sector circular flow of income model

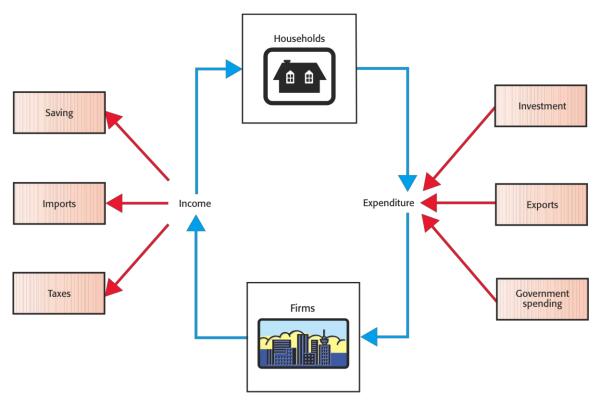


Figure 13.2 Four-sector circular flow with leakages and injections

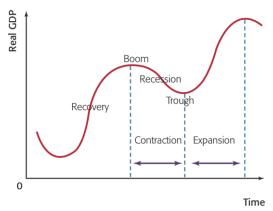


Figure 13.3 The standard business cycle

## The level of overall economic activity

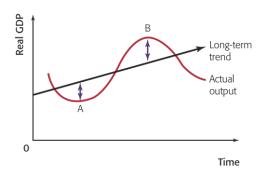
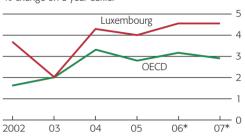


Figure 13.4 Long-term trend and output gaps

#### Luxembourg

GDP

% change on a year earlier



Source: The Economist, 15-21 July 2006

# Aggregate demand

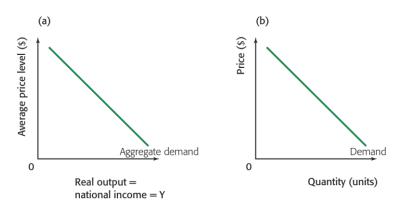


Figure 14.1 (a) Macroeconomic aggregate demand curve; (b) microeconomic demand curve

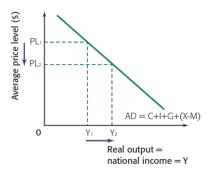


Figure 14.2 The aggregate demand curve

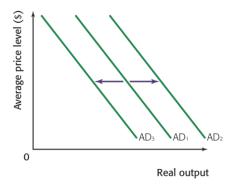


Figure 14.3 Shifts in aggregate demand

## Aggregate demand

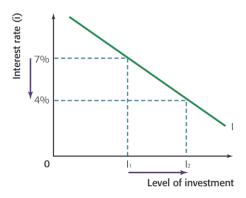
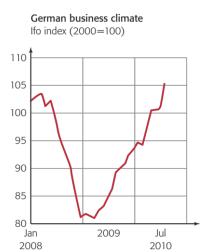


Figure 14.4 The relationship between investment and the interest rate



# Aggregate supply

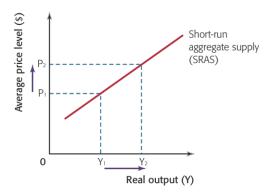


Figure 15.1 The SRAS curve

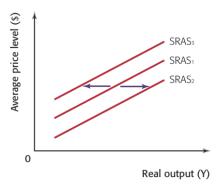


Figure 15.2 Shifts in the SRAS curve

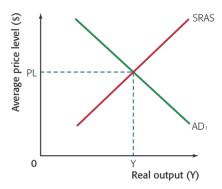


Figure 15.3 Short-run macroeconomic equilibrium

## Aggregate supply

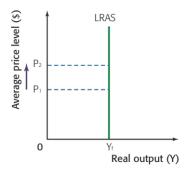


Figure 15.4 New classical LRAS curve

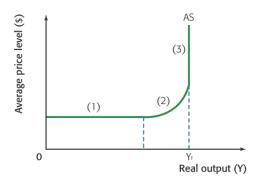


Figure 15.5 Keynesian LRAS curve

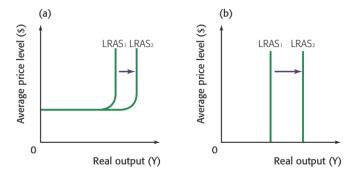


Figure 15.6 A shift in the LRAS curve (a) from the Keynesian perspective and (b) from the new classical perspective

## Aggregate supply

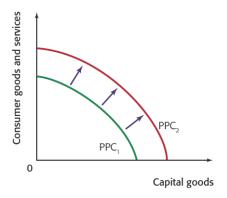


Figure 15.7 An increase in productive potential equivalent to an increase in the LRAS

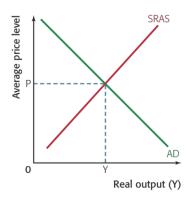


Figure 16.1 Short-run equilibrium output

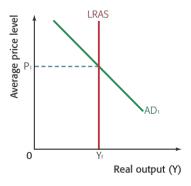


Figure 16.2 The new classical perspective of long-run equilibrium

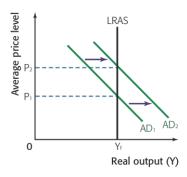


Figure 16.3 The new classical perspective of the impact of an increase in AD in the long run

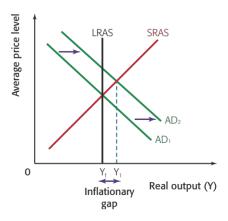


Figure 16.4 An inflationary gap in the new classical model

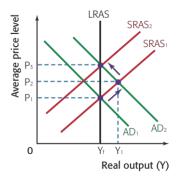


Figure 16.5 The new classical perspective of the impact of an increase in AD in the short run and in the long run

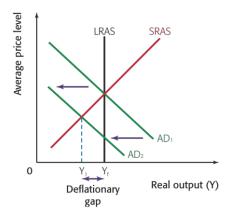


Figure 16.6 A deflationary gap in the new classical model

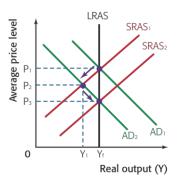


Figure 16.7 The new classical perspective of the impact of a decrease in AD in the short run and in the long run

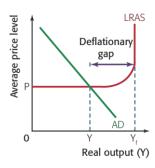


Figure 16.8 The Keynesian perspective of long-run equilibrium output below the full employment level of output

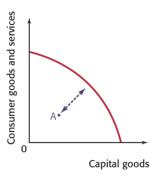


Figure 16.9 Output gap illustrating the difference between an economy's actual output and its potential output

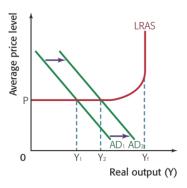


Figure 16.10 The Keynesian perspective of the impact of an increase in AD when the economy is operating below full employment

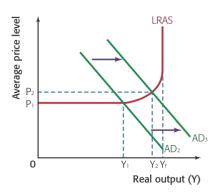


Figure 16.11 The Keynesian perspective of the impact of an increase in AD when the economy is close to full employment

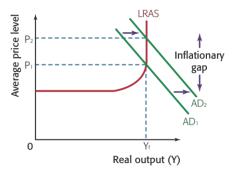


Figure 16.12 The Keynesian perspective of the impact of an increase in AD when the economy is at full employment

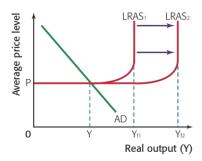


Figure 16.13 The Keynesian perspective of the impact of an increase in the LRAS when the economy is operating below full employment

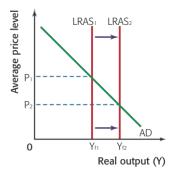


Figure 16.14 The new classical perspective of the impact of an increase in the LRAS

These factors cause the level of unemployment to rise

Inflows (those becoming unemployed)

- People who have lost their jobs
- People who have resigned
- People who have left school, but have not yet found work
- People who are trying to return to work after having left it (e.g. stay-at-home parents returning to the workforce)
- People who have immigrated into the country but have not yet found work



These factors cause the level of unemployment to fall

Outflows (those no longer considered to be unemployed)

- People who find jobs
- People who retire
- People who go (back) into education
- People who choose to stay at home to look after children
- People who emigrate to other countries
- People who give up the search for jobs
- People who pass away

Note that other than the first point, the rest of the people are no longer considered to be unemployed because they have left the labour force—they are no longer "people of working age who are without work, available for work, and actively seeking employment".

Figure 17.1 Inflows and outflows from the "pool" of unemployment

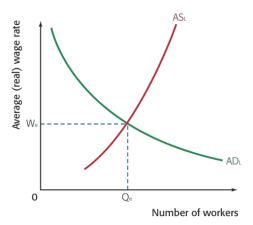


Figure 17.2 Equilibrium in the labour market

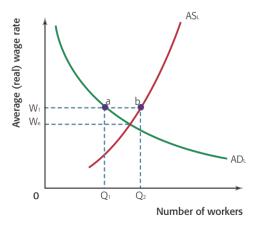


Figure 17.3 Real-wage unemployment

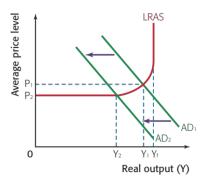


Figure 17.4 (a) A decrease in AD

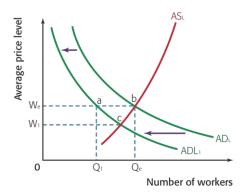


Figure 17.4 (b) Demand-deficient unemployment

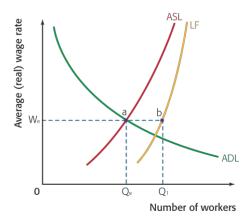


Figure 17.5 Equilibrium unemployment

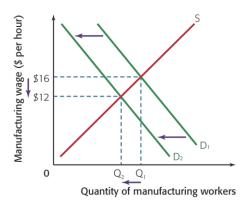


Figure 17.6 A fall in employment (structural unemployment)

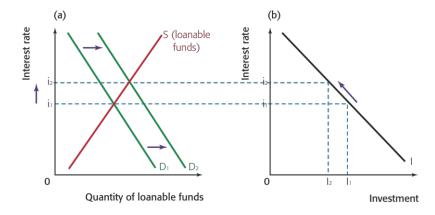
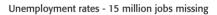


Figure 17.7 Crowding out





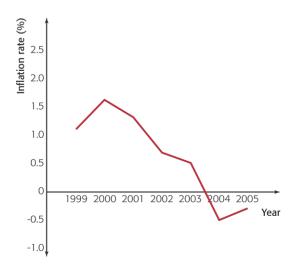
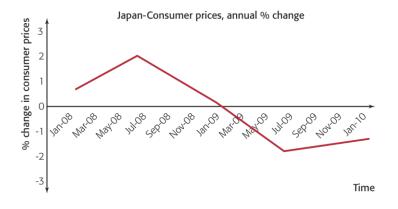


Figure 18.1 Changing rates of inflation and deflation



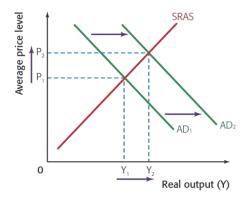


Figure 18.2 Demand-pull inflation

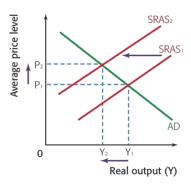


Figure 18.3 Cost-push inflation

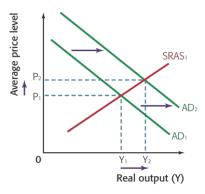


Figure 18.4 Demand-pull inflation

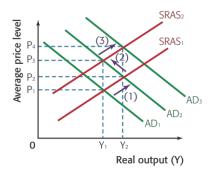


Figure 18.5 An inflationary spiral

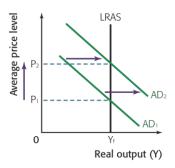


Figure 18.6 Inflation due to excess monetary growth

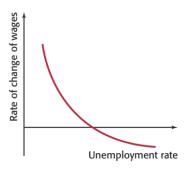


Figure 18.7 The original Phillips curve

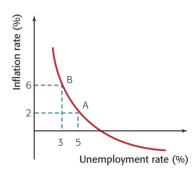


Figure 18.8 The Phillips curve as it is usually drawn

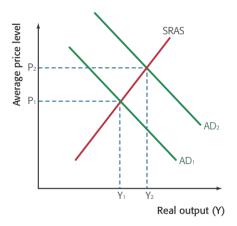


Figure 18.9 Phillips curve relationship through AD/AS analysis

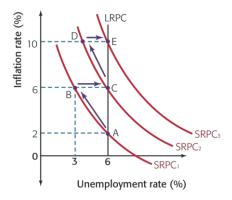


Figure 18.10 The long-run Phillips curve

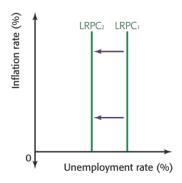


Figure 18.11 Supply-side policies can reduce the NRU

# **Economic growth**

# Growth rates, selected countries 9 20.0 15.0 10.0 5.0 0.0 -5

Figure 19.1 A comparison of different growth rates Source: World Development Indicators, The World Bank

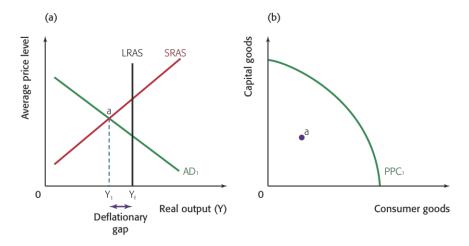


Figure 19.2 A deflationary gap/output gap

## Economic growth

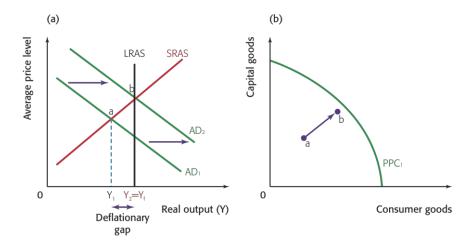


Figure 19.3 Economic growth to remove a deflationary gap/output gap

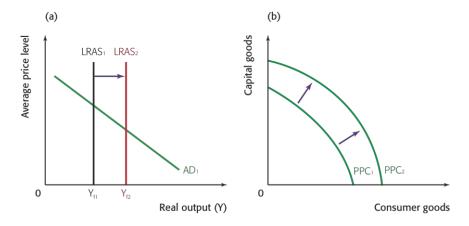


Figure 19.4 Economic growth through an increase in potential output

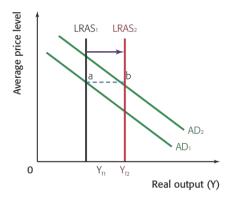
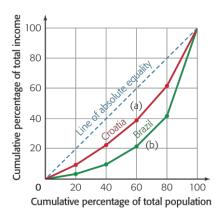


Figure 19.5 Non-inflationary growth

# Equity in the distribution of income



- (a) = area between line of equality and Lorenz curve
- (a) + (b) = total area under line of equality

Figure 20.1 Lorenz curves for Brazil and Croatia

# Why do countries trade?

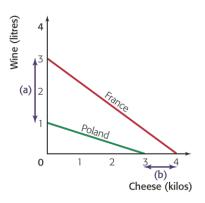


Figure 21.1 Production possibilities curves to show comparative advantage

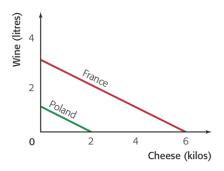


Figure 21.2 Identical opportunity costs

## Free trade and protectionism

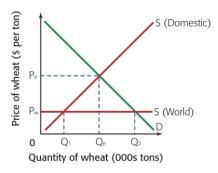


Figure 22.1 Free trade in wheat

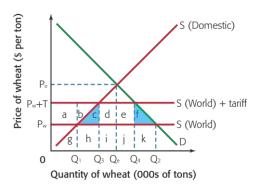


Figure 22.2 A tariff on wheat imports

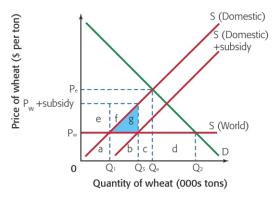


Figure 22.3 A subsidy on domestic wheat production

## Free trade and protectionism

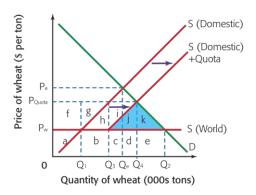
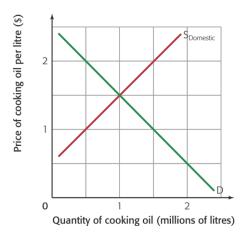
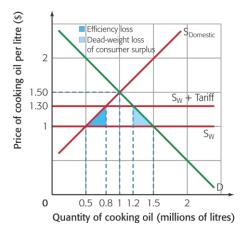
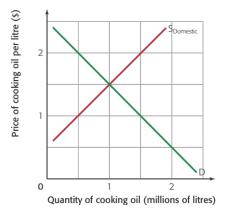


Figure 22.4 A quota on wheat imports





## Free trade and protectionism



## Exchange rates

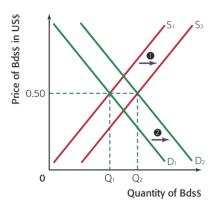


Figure 23.1 An increase in the supply of Bds\$

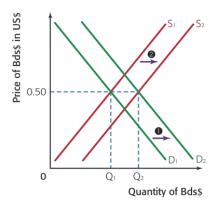


Figure 23.2 An increase in the demand for the Bds\$

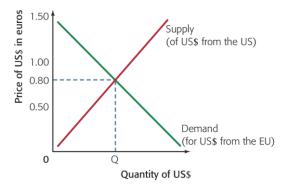
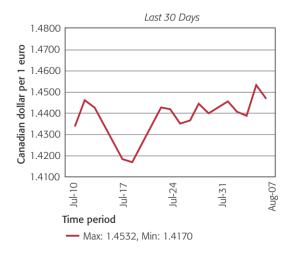


Figure 23.3 A floating currency

### Exchange rates



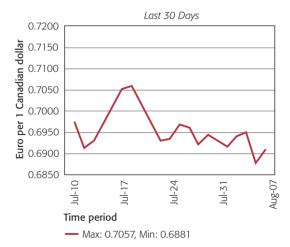


Figure 23.4 Changing values of the Canadian dollar and the euro

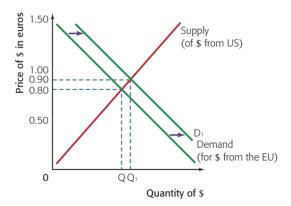


Figure 23.5 An increase in the demand for the US dollar

## Exchange rates

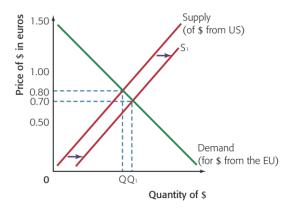


Figure 23.6 An increase in the supply of the US dollar

# Balance of payments

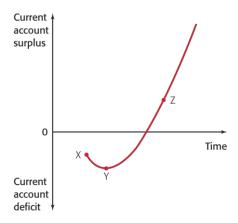


Figure 24.1 The J-curve

# **Economic integration**

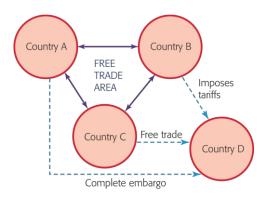


Figure 25.1 A free trade area

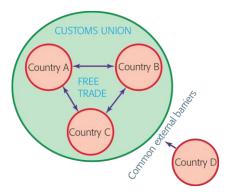


Figure 25.2 A customs union

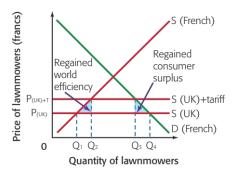


Figure 25.3 Trade creation

## Economic integration

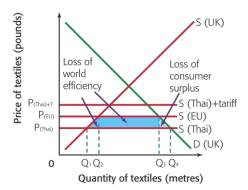


Figure 25.4 Trade diversion

## Terms of trade

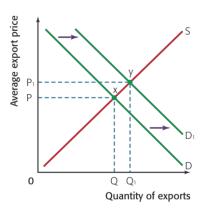


Figure 26.1 An increase in demand for exports

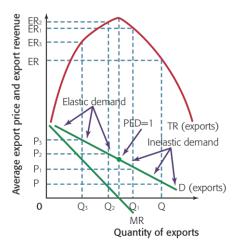


Figure 26.2 The demand for exports and export revenue

#### Terms of trade

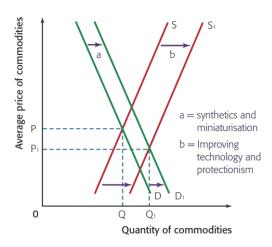
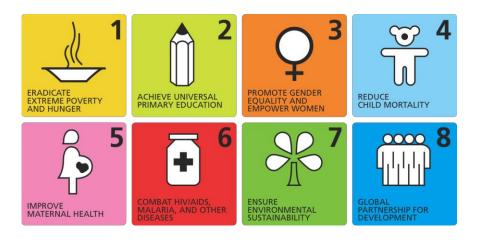


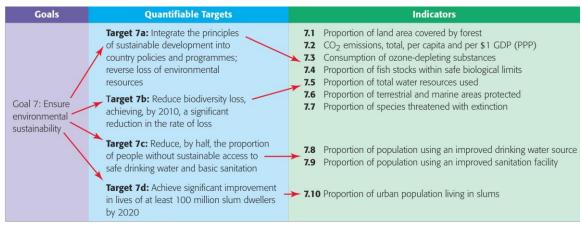
Figure 26.3 Falling world commodity prices



Figure 26.4 Falling commodity prices

## **Economic development**





Source: UNDP

Figure 27.1 Quantifiable targets and indicators for Goal 7

# Measuring development

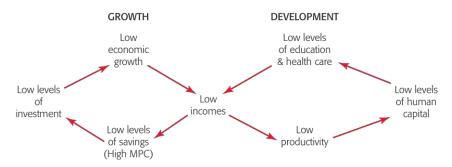
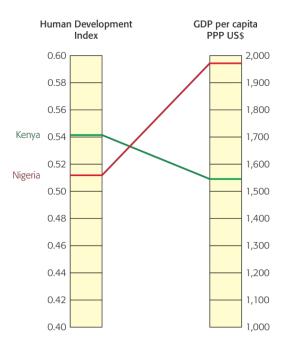


Figure 28.1 Examples of poverty cycles



Source: Indicator table H of the Human Development Report 2009

# International trade and economic development

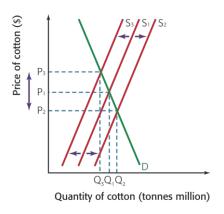
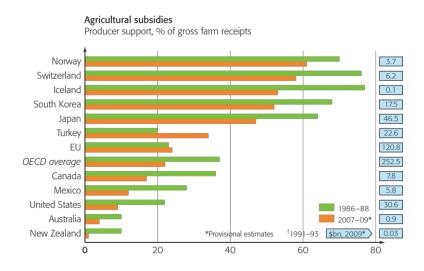
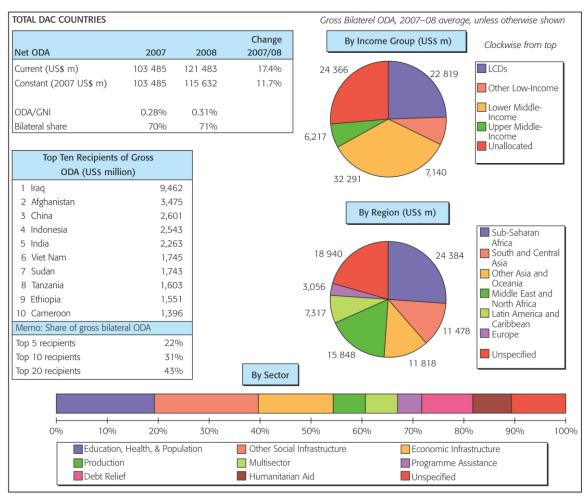


Figure 30.1 The world market for cotton



# Aid, debt, and economic development



Source: OECD - DAC: www.oecd.org/dac/stats

Figure 32.1 ODA statistics for 2007/2008

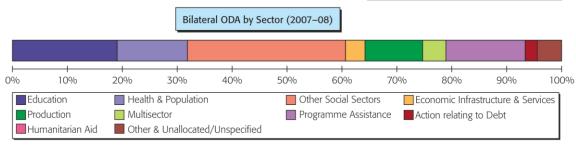
#### Aid, debt, and economic development

#### Benin

Receipts	2006	2007	2008
Net ODA (US\$ million)	374	474	641
Bilateral share (gross ODA)	61%	51%	48%
Net ODA/GNI	8.1%	8.7%	9.6%
Net Private flows (US\$ million)	15	35	4

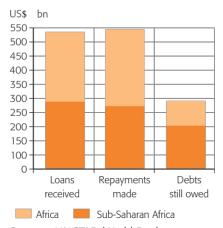
For reference	2006	2007	2008
Population (million)	8.1	8.4	8.7
GNI per capita (Atlas US\$)	570	610	690

Top	Top Ten Donors of gross			
OD	A (2007–08 average)	(US\$ m)		
1	EC	105		
2	IDA	78		
3	France	72		
4	Denmark	46		
5	AfDF	41		
6	Germany	38		
7	Netherlands	35		
8	United States	30		
9	Belgium	19		
10	Arab agencies	17		



Sources: OECD, World Bank www.oecd.org/dac/stats

Total ODA receipts are in the top left table, as is the percentage of bilateral aid. The aid sources are in the top right box. The uses/targets of the aid are given in the bottom boxes.



Source: UNCTAD/World Bank

Figure 32.2 Africa's debts 1970-2002

#### Aid, debt, and economic development

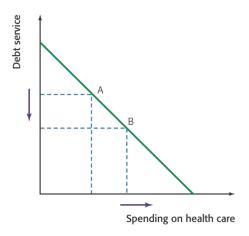


Figure 32.3 A government "Spending Possibilities Line"

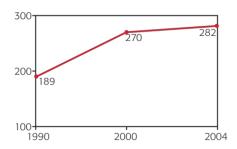


Figure 1 Gross domestic product (US\$ per capita)

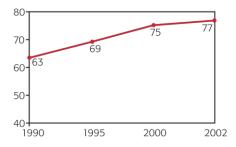


Figure 2 Literacy rate (percentage of adults)

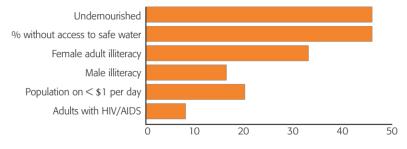


Figure 3 Poverty percentage