

Chapter 5 The interaction of markets

Answers to Knowledge checks

- 5.1** If there is excess demand for a good in a competitive market, we expect the price to be bid upwards until it reaches equilibrium.
- 5.2** The factors that can affect the position of the supply curve are production costs, the technology of production, taxes and subsidies, the price of related goods, firms' expectations about future prices and the number of firms operating in the market.
- 5.3** The one thing we know for sure is that the demand curve has shifted to the right. There may also have been shifts in the supply curve, depending on the extent to the relative movement of the two curves.
- 5.4** The shortage of CO₂ will be likely to lead to a rise in its price. Given that CO₂ is an important input used in the production of fizzy drinks, the likely result will be that the price of fizzy drinks will also increase, especially if the shortage of CO₂ persists.

Answers to Exercises and Case studies

Exercise 5.1

The equilibrium price is P_e at the intersection of Demand and Supply (*see* page 52 of the book).

Exercise 5.2

- a** With the initial supply curve S_0 , consumer surplus is given by the area ACP_0 . A shift in the supply curve to S_1 brings a fall in consumer surplus, to ABP_1 .
- b** With the initial supply curve S_0 , producer surplus is given by the area P_0CF . A shift in the supply curve to S_1 brings a fall in producer surplus, to P_1BE .
- c** Both consumer surplus and producer surplus are lower after the decrease in supply. This makes intuitive sense, given that production costs have risen. Both consumers and producers lose out as a result. Notice that the extent to which the surpluses are affected depends upon the shapes of demand and supply, as you could see by drawing some diagrams.

Exercise 5.3

- a** Before answering this question, you need to make an assumption about whether bus travel is a normal good or an inferior good. Bus travel is often perceived to be an inferior good — in other words, as consumer income rises, it is thought that the demand for bus travel falls. If this is indeed the case, then Figure A5.1 illustrates the effect on equilibrium price and output. The demand curve shifts from D_0 to D_1 , equilibrium price falls from P_0 to P_1 , and quantity also falls, from Q_0 to Q_1 . If you were to assume that bus travel was a normal good, demand would have moved to the right, and equilibrium price and quantity would both have increased.

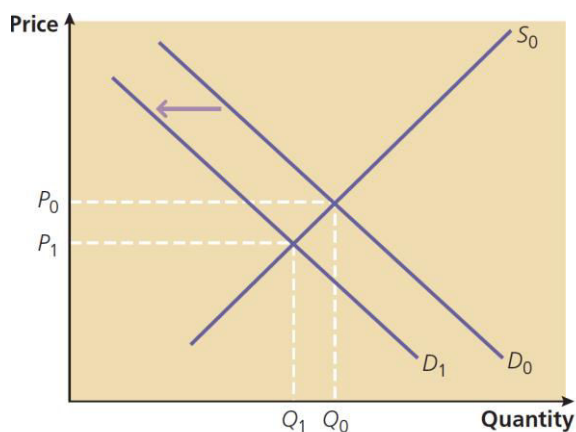


Figure A5.1 A change in the demand for bus travel

- b** The firm here faces an increase in its production costs, and will be prepared to supply less output at any given price. The supply curve shifts to the left in Figure A5.2, equilibrium price rises from P_0 to P_1 and quantity falls from Q_0 to Q_1 .

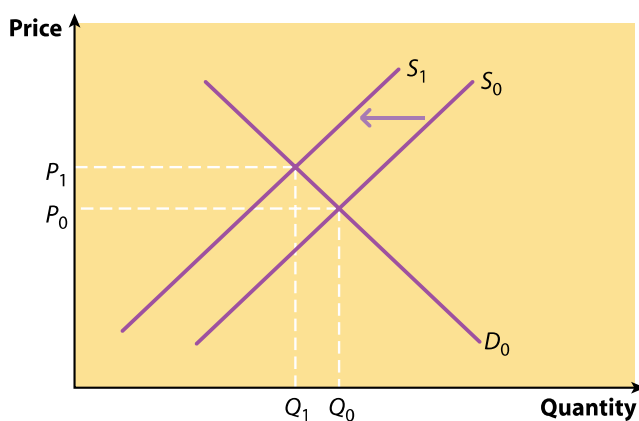


Figure A5.2 A change in the supply of paint

- c** This reverses the effects seen in the previous question. The new computers improve efficiency and result in a reduction in the firm's costs, so it is prepared to supply more at any given price, and the supply curve shifts to the right (see Figure A5.3). The equilibrium price falls from P_0 to P_1 and quantity increases from Q_0 to Q_1 .

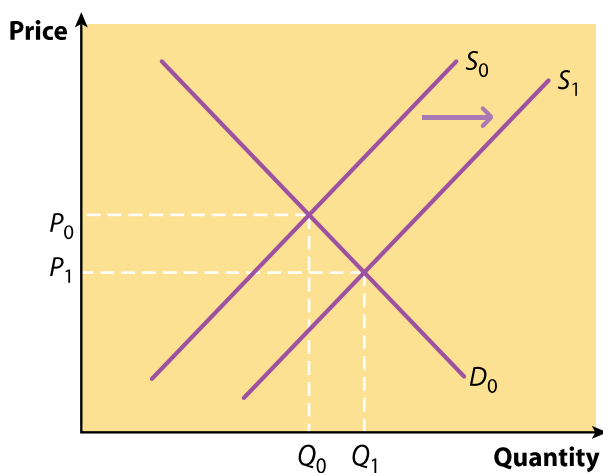


Figure A5.3 A change in the supply of accountant services

- d The switch from chicken to pizza affects demand in the two markets, as shown in Figure A5.4. In the market for chickens demand shifts to the left, from D_{c0} to D_{c1} . The equilibrium price falls from P_{c0} to P_{c1} , and the quantity traded increases from Q_{c0} to Q_{c1} . In the market for pizza the reverse happens: demand increases from D_{b0} to D_{b1} , equilibrium price increases from P_{b0} to P_{b1} , and quantity increases from Q_{b0} to Q_{b1} .

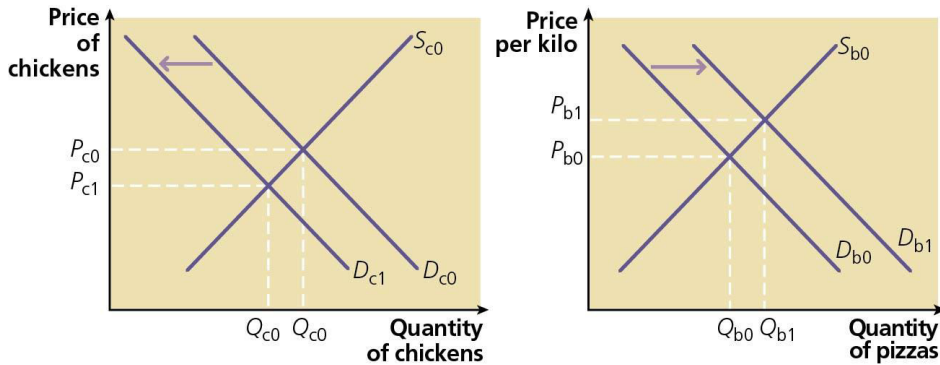


Figure A5.4 An outbreak of chicken flu

Exercise 5.4

The price of oil is notoriously volatile, and can have effects that spread across many markets. You might like to brainstorm this question with your fellow students to see how the effects might spread.

Case study 5.1

A healthy diet?

- a As consumers would be looking to buy more organic foodstuffs, the demand for non-organic products would shift to the left, as shown in Figure A5.5. In the short run, the supply of non-organic foodstuffs is likely to be relatively inelastic, as producers would not be able to react quickly to the change in demand. We would expect to see a movement down along the supply curve (a contraction of supply). The equilibrium price would fall from P_0 to P_1 and the quantity traded would fall from Q_0 to Q_1 .

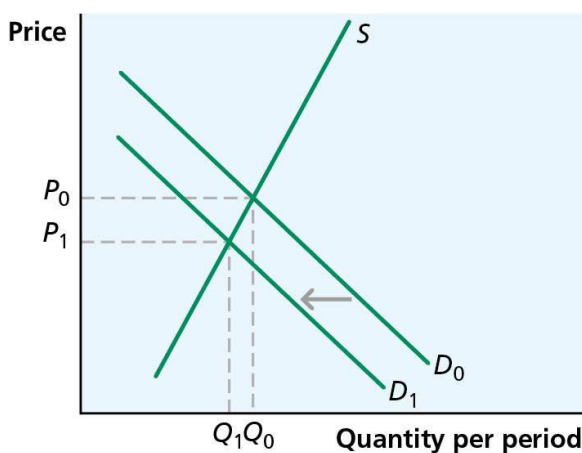


Figure A5.5 The market for non-organic foodstuffs in the short run

- b** In the market for certified organic produce, we would expect to see the reverse effect, with demand shifting to the right, as shown in Figure A5.6. Given the difficulty of attaining certified organic status, supply in the short run is likely to be relatively inelastic, as producers will not be able to expand production quickly. In this situation, we would expect to see a relatively large increase in price from P_0 to P_1 with a relatively small rise in the quantity traded from Q_0 to Q_1 .

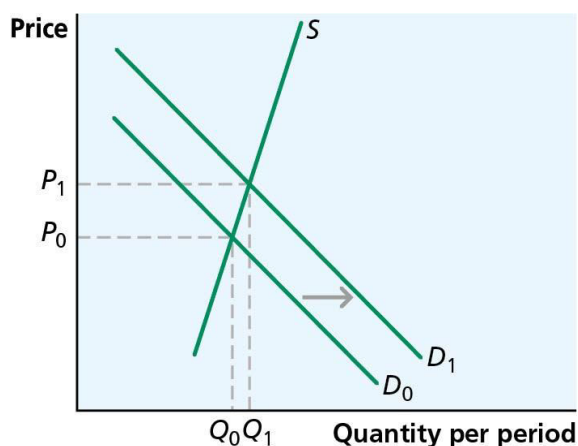


Figure A5.6 The market for certified organic foodstuffs in the short run

- c** If consumer preferences remain strongly in favour of organic produce, non-organic producers are likely to reduce the acreage devoted to production, and some farmers may choose to leave the market altogether. The supply curve will therefore tend to shift to the left. Figure A5.7 illustrates this. Whether the price recovers all the way to the original level is uncertain.

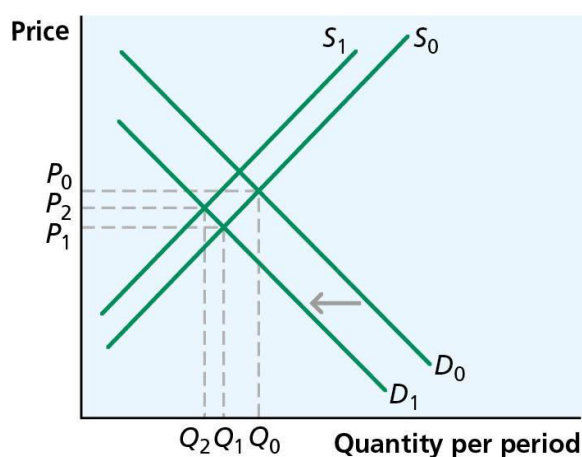


Figure A5.7 The market for non-organic foodstuffs in the long run

Some previously non-organic producers may go through the process of switching to organic production in the longer run, and existing farmers may expand their production. This would mean a rightward shift in supply, as shown in Figure A5.8. Notice that this is tantamount to saying that supply becomes more elastic in the long run, as producers are able to adjust to changing market conditions. I have therefore marked the long-run supply curve on Figure A5.8: this is labelled S_L .

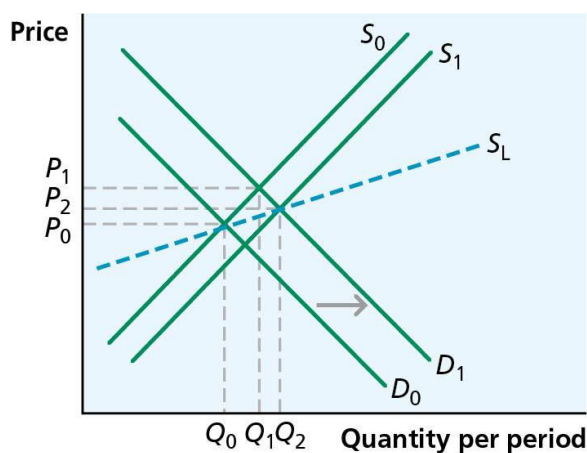


Figure A5.8 The market for certified organic foodstuffs in the long run

Answers to end-of-chapter questions

A Multiple-choice questions

- 1 c. Quantity supplied equalling quantity demanded in the market
- 2 d. A decrease in demand leading to an decrease in the equilibrium quantity and price
- 3 b. An increase in quantity demanded and an increase in quantity supplied

B Knowledge and understanding questions

4

Correctly labelled axis	1 mark
Correctly drawn and labelled demand and supply curves	1 mark
Correctly labelled equilibrium point	1 mark

5

Correctly labelled axis	1 mark
Correctly drawn and labelled demand and supply curves	1 mark
Correctly labelled excess supply price point	1 mark

6

An explanation of how a shift in demand to the right may increase price and the quantity supplied and demanded at equilibrium	up to 2 marks
A diagram showing a shift to the right of demand and a new equilibrium point	up to 2 marks

C Stimulus response question

7 a

An explanation of an excess supply of chicken on Friday of 35 chickens	up to 2 marks
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A diagram showing an excess supply of chicken	up to 2 marks
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b Ways may include:

- Forecasting chicken demand (based on sales figures from previous weeks)
- Cooking chickens at many times of the day to avoid overproduction
- Supplying a lower number of cooked chickens and a greater number of substitute items that do not need to be cooked (or can be cooked quicker)
- Asking customers to pre-order cooked chickens

Two ways explained	4 marks
One way explained AND one way identified	3 marks
One way explained OR two ways identified	2 marks
One way identified	1 mark

D Essay question

8

AO1 Knowledge	3 marks
AO2 Application	4 marks
AO3 Analysis	6 marks
AO4 Evaluation	7 marks

Knowledge (3 marks) is likely to include:

- Demand
- Substitutes
- Effect of an increase/decrease price on demand
- Competitive demand

Application (4 marks) is likely to include:

- Application to the housing market
- Application to the renting market
- Use of figures (65% owners, 25% renters)
- Use of diagrams

Analysis (6 marks) is likely to include:

Analysis of the effects of an increase in house prices on the market for rented accommodation, for example:

- A graph showing an increase in the demand for rented accommodation, leading to an increase in the equilibrium price and an extension of the supply of rented accommodation
- An explanation of the effects on demand for rented accommodation

Evaluation (7 marks) is likely to include:

Evaluation that demand for rented accommodation may not increase, for example:

- Incomes may be rising faster than the price of houses

- The price of rented accommodation may also be increasing — perhaps at a faster rate than house prices
- Rented accommodation and purchasing houses may not be substitutes for one another

Evaluation that the effects may not be as substantial as expected, for example:

- The supply of rented accommodation may be price inelastic, leading to an increase in the price of rented accommodation but little/no increase in quantity

A judgement of the extent to which an increase in house prices will always lead to an increase in the demand for rented accommodation