

Chapter 4 Supply

Answers to Knowledge checks

- 4.1** The assumption made is that firms aim to maximise profits, although we will later discuss other motivations that firms may pursue.
- 4.2** Other things being equal, firms will be prepared to supply more output at a higher price because this will improve profits. Notice that the assumption that firms operate in a competitive market is important in this context.
- 4.3** There will be a movement down along the supply curve (a contraction) in response to a fall in price.
- 4.4** An increase in the market price would lead to an extension of supply (a movement along the supply curve).
- 4.5** If firms earn a surplus that is below the minimum that will keep them in the market, they have no reason to remain in that market, at least in the long run. In other words, producer surplus is closely related to profitability.

Answers to Exercises and Case studies

Exercise 4.1

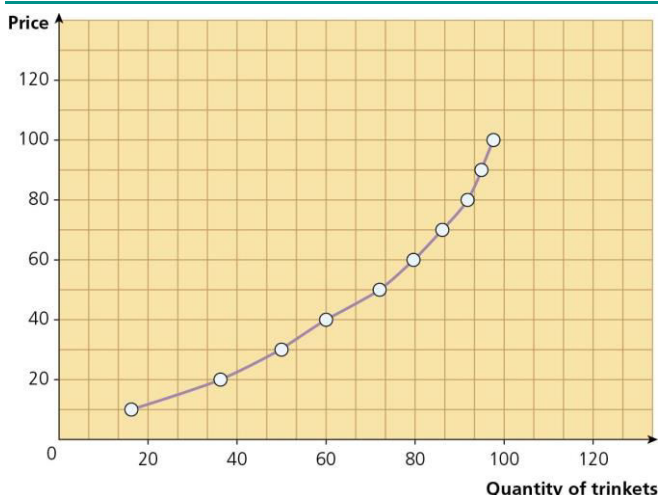


Figure A4.1 The supply of trinkets

- a** See Figure A4.1
- b** If the price is £35, the quantity supplied will be 55.
- c** If the quantity supplied is 65, the price would be £45.

Exercise 4.2

In this exercise, there are three possible responses, represented by Figures A4.2, A4.3 and A4.4.

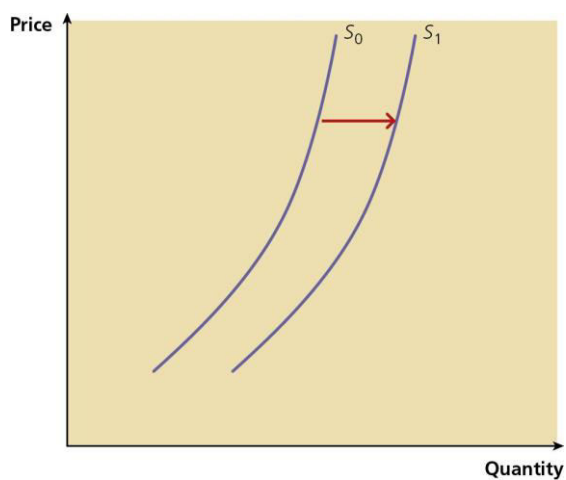


Figure A4.2 A rightward shift of the supply curve

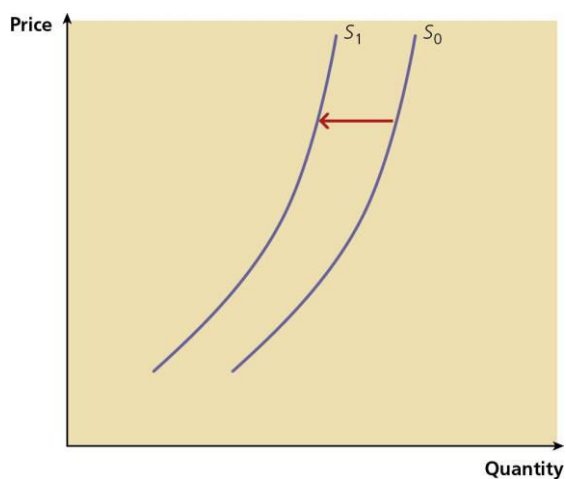


Figure A4.3 A leftward shift of the supply curve

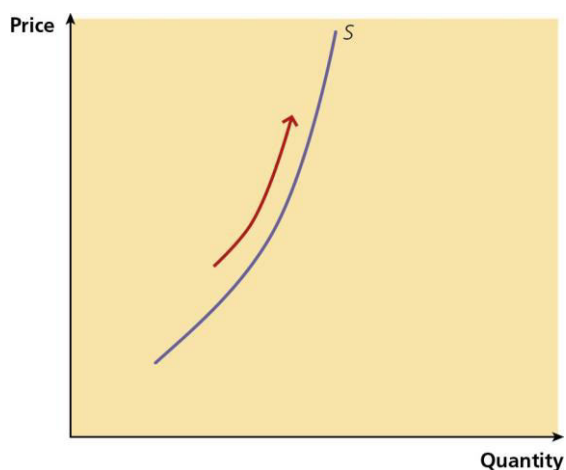


Figure A4.4 A movement along the supply curve

- a** The introduction of more efficient computer software would lead to an increase in supply — that is, the supply curve would shift to the right, as in Figure A4.2.
- b** An increase in the tax paid on sales would result in a decrease in supply, as in Figure A4.3.

- c A rise in the selling price of ice cream would lead to an extension of supply — a movement up along the supply curve, as in Figure A4.4.
- d If firms leave the market, the market supply curve will shift to the left, as in Figure A4.3.

Exercise 4.3

- a If consumers are convinced of the benefits of organic vegetables, the demand curve will shift to the right.
- b If firms can produce bicycles using fewer numbers of inputs (e.g. of labour), the supply curve will shift to the right.
- c A severe frost in Brazil will shift the supply curve of coffee to the left.
- d An increase in the rate of value added tax will shift the supply curve to the left.
- e An increase in the real incomes of consumers will affect demand curves: for **normal goods** the demand curve will shift to the right, whereas for **inferior goods** the shift is to the left.
- f Assuming coffee and tea are substitutes, the demand for coffee will shift to the left and there will be a movement along the demand curve for tea. Whether supply behaviour will also change depends upon how prolonged the change in relative prices is, and whether it is possible for coffee producers to switch their production to tea.
- g Assuming that coffee and sugar are complements, a fall in the price of sugar will tend to lead to an increase in the demand for coffee, so there will be a shift of the demand curve to the right.

Case study 4.1

Champagne

- a The millennium celebrations led to an increase in the demand for champagne, with the demand curve shifting to the right. However, the increased availability of good-quality sparkling wines from other regions would lead to a fall in the demand for champagne, as at least some consumers would see these alternatives as being substitutes for champagne. The rise in real consumer incomes over time would shift the demand curve for champagne to the right.
- b The supply side of the market has also seen change. Mechanisation of some parts of the production process reduces the costs producers face and improves the efficiency of production. This would mean that producers would be prepared to supply more champagne at any given price, and the supply curve would shift to the right. Expanding the area in which champagne could be produced would also shift the supply curve to the right, but this will not happen for some years because of the time needed for vines to come to maturity.

Answers to end-of-chapter questions

A Multiple-choice questions

- 1 b. A decrease in the price of a rival product
- 2 c. An increase in quantity supplied
- 3 a. An increase in price and a decrease in producer surplus

B Knowledge and understanding questions

- 4 As the price of a good increases the quantity supplied rises.

A full explanation of the relationship	2 marks
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A vague or partial explanation of the relationship	1 mark
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5 Factors may include:

- The production costs of bottled water
- The technology of production
- Taxes and subsidies
- The price of related goods, such as plastic bottles
- Firms' expectations about future prices of bottled water

Two factors explained	4 marks
One factor explained AND one factor identified	3 marks
One factor explained OR two factors identified	2 marks
One factor identified	1 mark

6 The bad harvest is likely to reduce the supply of pumpkins because fewer can be produced and sold. This will reduce the supply of pumpkins at every price level.

An explanation of how the supply may reduce at each price level	up to 2 marks
A diagram showing an appropriate shift to the left of the supply curve	up to 2 marks

7 Producer surplus is the difference between the price received by firms for a good or service and the price at which they will have been prepared to supply that good or service.

An explanation of producer surplus	up to 2 marks
A diagram showing producer surplus	up to 2 marks

C Stimulus response question

8 a As the duty on petrol increases the supply of cars is likely to decrease at each price level.

An explanation of how the supply may reduce at each price level	up to 2 marks
A diagram showing an appropriate shift to the left of the supply curve	up to 2 marks

b Factors may include:

- The production costs of cars decreases
- The technology of production improves/get cheaper
- A reduction in indirect tax on cars
- A subsidy to car producers
- The price of goods used in the production of cars decreases
- Firms' expectations that future prices of cars will increase

Two factors explained	4 marks
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One factor explained AND one factor identified	3 marks
One factor explained OR two factors identified	2 marks
One factor identified	1 mark