

Chapter 13 Market structure: perfect competition

Answers to Knowledge checks

- 13.1** Perfect competition would be seen as being the opposite of monopoly.
- 13.2** Barriers to entry (and exit) are significant because they inhibit firms from moving into profitable markets (or from leaving markets that are unprofitable). This has a big influence on the way in which the market will operate. Holding a patent is one example, but not the only possible barrier. A firm may have some cost advantage over potential entrants, perhaps by having experience of operating in the market, or it may have control of a key raw material. Barriers to entry are discussed in Chapter 15.
- 13.3** Perfect knowledge of market conditions is important in perfect competition because without it, some traders would be able to take advantage, as we have seen in the discussion of asymmetric information.
- 13.4** If the firm is a price taker, it will face a horizontal demand curve, as it can sell as much as it wishes at the going price.
- 13.5** The firm's supply curve in the short run is the short-run marginal cost curve above the shutdown price.
- 13.6** A firm under perfect competition will exit the market if the price (AR) is below long-run average cost, in other words if the firm is not making normal profit.
- 13.7** A firm under perfect competition makes just normal profits in long-run equilibrium.

Answers to Exercises and Case studies

Exercise 13.1

- a** Where there is a fairly large number of firms in a market selling differentiated products, the most likely model of market structure is **monopolistic competition**. Fast-food outlets in a city centre offering various styles of cuisine would be one example of this.
- b** An island's only airport is a **monopoly**. An example is on the Scilly Isles.
- c** A large number of farmers producing parsnips at a common price are best described as **perfect competition**.
- d** Where there is a market with just a few sellers (in this case producing commercial vans), there is a state of **oligopoly**.

Exercise 13.2

- a** With the price at 40, the firm would maximise profit at output where $MR = MC$: namely at output 500 (remember that in perfect competition price equals marginal revenue because the firm is a price taker). Supernormal profit per unit would be $AR - AC = 40 - 30 = 10$.
- b** With the price at 25, the firm would maximise profit at output 400. Supernormal profit per unit would be $AR - AC = 25 - 25 = 0$.
- c** With the price at 20, the firm would attempt to maximise profit at output 200. The firm would make a per unit loss of $AR - AC = 20 - 40 = -20$.

Each of these points represents a point on the firm's supply curve, which tracks the marginal cost curve.

Exercise 13.3

Consider Figure A13.1.

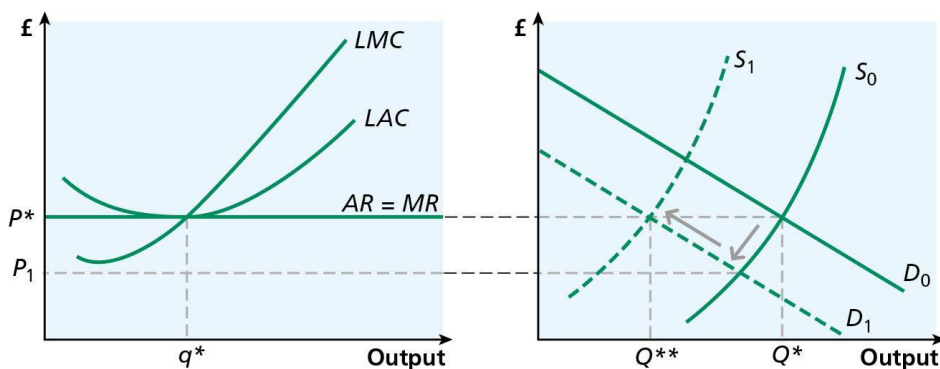


Figure A13.1 Adjustment to long-run equilibrium under perfect competition

Suppose that market demand (in the right-hand panel) is initially at D_0 and price is at P^* . S_0 represents the short-run supply curve, compiled from the sum of the short-run marginal cost curves of all the firms in the industry. The typical firm is shown in the left-hand panel, and at P^* the firm maximises profits by setting marginal cost equal to marginal revenue, producing q^* output and breaking even, i.e. just making normal profits. This is just sufficient to encourage the firm to remain in the market.

Now suppose there is a decrease in market demand, so in the right-hand panel the demand curve shifts to D_1 , leading to a fall in the market price. In the short run firms respond to this by reducing output, sliding along their short-run marginal cost curves. (*I have not marked this on the left-hand panel, as it would get too messy.*) Price in the short run therefore falls to a new equilibrium at P_1 . Firms are now making losses, and some will exit from the market. As firms leave the market the industry supply curve moves to the left, and the process will continue until it has reached S_1 , at which point the price will have risen back to P^* and the market will be back in long-run equilibrium, with the remaining firms just making normal profits.

In other words, the short-run adjustment occurs by existing firms reducing their individual output levels. Adjustment in the long run occurs by firms leaving the market.

Case study 13.1

Competition online

- a** Before internet comparison sites, some dealers were able to charge prices above the minimum at which a good could be bought in the market. A key reason that allowed this was that search was costly for a potential buyer, so not every individual could keep looking until they found the lowest possible price.
- b** If all traders have perfect information, then no trader is able to exert undue pressure to influence the price of a good or service. Firms are price takers, and consumer can buy at the going market price without fear of being exploited.
- c** There are several reasons why prices may vary between suppliers. For some goods where the price is relatively low (such as salt, or onions), it is simply not worth it for buyers to check relative prices — in other words, buyers may choose not to collect information. In addition, some customers may prefer to buy from a particular seller. Some people prefer to do all their shopping at a supermarket because of the convenience, others may prefer to visit their local greengrocer (where these still exist...). Some people may believe that they will get better after-sales service by buying from an actual shop rather than going online. It may be that in practice a good may not be homogeneous between sellers.

Answers to end-of-chapter questions

A Multiple-choice questions

- 1 b. Monopolistic competition
- 2 d. Homogeneous products
- 3 d. The firm will produce at the lowest point of the AC curve
- 4 a. The firm will produce at $AR = AC$

B Knowledge and understanding questions

- 5 Characteristics may include:
- Can make supernormal profits in the SR
 - No supernormal profits in the LR
 - No barriers to entry
 - Homogeneous products
 - The firm is a price taker
 - Many firms in the market

Two characteristics explained	4 marks
One characteristic explained AND one characteristic identified	3 marks
One characteristic explained OR two characteristics identified	2 marks
One characteristic identified	1 mark

- 6 The firm maximises profits by accepting the price as set in the market and producing up to the point where $MR = MC$. The firm's average revenue (which is equal to price) is greater than its average cost. The firm is therefore making supernormal profits at this price.

An explanation of equilibrium price and output in short-run perfect competition	up to 2 marks
A diagram showing equilibrium price and output in short-run perfect competition	up to 2 marks

- 7 Allocative efficiency is achieved where $P = MC$.

An explanation of how allocative efficiency is achieved under perfect competition in the short run	up to 2 marks
A diagram showing how allocative efficiency is achieved under perfect competition in the short run	up to 2 marks

C Stimulus response question

- 8 a Homogeneous means that buyers of the good see all products in the market as being identical, and will not favour one firm's product over another.

A full explanation of homogeneous	2 marks
A vague or partial explanation of homogeneous	1 mark

- b** The industry long-run supply curve is horizontal at the price level, which is the minimum point of the long-run average cost curve.

An explanation of perfect competition in the long run	up to 2 marks
A diagram showing perfect competition in the long run	up to 2 marks

- c** Ways may include:

- Being first to market
- Charging a higher price than average cost

One way explained	2 marks
One way identified	1 mark