

Chapter 5: Perfect competition, imperfectly competitive markets and monopoly

Application of economics in the real world

Application of economics in the real world 5.1: The 'invisible hand' of the market

- 1 Consumers can benefit from an uncompetitive market if the monopoly profits that the dominant firm in the market generates allow it to provide a better overall service. In the UK, the law protects Royal Mail from competition in the delivery of letters. The firm is able to generate supernormal profits in urban areas because it can deliver high volumes of letters at a very low average cost per unit. The excessive profits allow the firm to cross-subsidise the service in rural areas and deliver a first-class next-day postage service to remote communities.
- 2 The pursuit of self-interest has resulted in large parts of the natural environment being destroyed by developers seeking to exploit resources. In South America, farmers have developed farmland by cutting down large areas of rainforest. In Asia, the process of deforestation has been driven by palm oil farmers, who seek to make significant profits by selling a product that can be used in manufacturing a range of goods. Palm oil is used in nearly 50% of the packaged products found in supermarkets. It is included in a range of products from pizza, doughnuts and chocolate, to deodorant, shampoo, toothpaste and lipstick. Palm oil is also used in animal feed and as a biofuel in many parts of the world. Deforestation has resulted in the extinction of species and the loss of ecosystems that cannot easily be recreated. This environmental destruction is undesirable and leads to a lower quality of life.
- 3 In the healthcare industry, it may be preferable for healthcare providers to cooperate so that they offer the best treatments rather than competing to sell a product or service to a patient. A medical practitioner should always offer treatments that are in the best interest of their patient and not because they can receive a commission from a pharmaceutical company by prescribing a drug.
- 4 The invisible hand directs society's scarce resources towards activities where entrepreneurs believe they can make profits by satisfying demand. As the quote from Adam Smith in the case study says, it is the self-interest of the butcher, the brewer and the baker that provides us with our dinner. This means that markets do not always perform in a satisfactory manner. There may be a high demand for alcohol, which the brewer will supply, but it may not be in the best interests of society for this to be allowed unchecked. Alcohol is a demerit good that consumers will over-consume, which often results in anti-social behaviour and long-term health problems. Therefore, government intervention takes place to regulate the consumption of the product and restrict market activity

Application of economics in the real world 5.2: How the use of mobile phones can make markets more competitive

- 1 The market mechanism functions best when price signals alert buyers and sellers to changes in the conditions of demand and supply. Fish are a scarce resource and the price that they are sold for in the market signals the value to both fishermen and consumers. Mobile phones enable fishermen to identify the markets which offer the highest prices for their catch. This creates an incentive for them to incur additional transport costs and take time to sail along the coast. The fishermen use their limited fuel more efficiently and supply fish to consumers who are willing to pay a higher price. There is less wastage because markets are less likely to be over-supplied, which means that resources are more efficiently allocated.

- 2 Retail banking has become more competitive with new entrants entering the market, such as Monzo. Consumers are increasingly using apps on their mobile devices to bank online and this has reduced the need for a physical branch in the high street, which has significantly lowered costs.

Retail shopping has become more competitive as consumers have used their mobile phones to compare prices and shop online. Traditional high street stores have had to cut prices due to the increased competition.

- 3 Mobile phones have enabled criminal gangs to sell illegal drugs more easily and avoid police detection. Pay-as-you-go phones allow criminals to organise transactions and dispose of the sim cards, which are relatively inexpensive compared to the profits that can be made from the illegal enterprise. Crime has increased and negative consumption externalities have been dumped on society, reducing the marginal social benefit.
- 4 In economic theory, the law of one price states that an identical asset or commodity will have the same price in all locations across the globe. In the case study, fish prices varied from village to village due to imperfect information. Mobile phones have provided fishermen with better market information, allowing them to travel to villages that will pay the highest price. As supply increases in villages which have the highest prices for fish, pressure on the price will fall and the markets along the coast will move closer to fulfilling the law of one price.

Application of economics in the real world 5.3: Patents and drug companies

- 1 A patent is protected by law and upheld by the courts. It grants the holder the exclusive right to make, use and sell the patented innovation for a limited period of time, essentially allowing it to be a monopoly.
- 2 Copyright and trademarks.
- 3 Charging different prices to consumers in different countries is price discrimination. There is a strong moral case for pharmaceutical companies offering lower prices to customers in developing countries and higher prices to customers in developed countries. Medicines can improve quality of life by curing illness and in many cases preventing death. Therefore, not to supply drugs to people who cannot afford to pay is condemning them to lower living standards and the worst aspects of poverty. Pharmaceutical companies are profit-seeking business enterprises and will not undertake research and development unless they can recoup their costs and provide a healthy return for their shareholders. Consumers in developed countries can afford to pay higher prices, and the excessive profits made in these markets can be used to cross-subsidise sales in developing markets. This is fair because it will improve overall welfare, but it is a form of income redistribution because high-income countries will be subsidising the medicines of low-income countries.

However, price discrimination is only effective if three conditions exist. First, the pharmaceutical company needs to be able to segment the market. Second, consumers in the different countries need to have different price elasticity of demand. Third, the firm needs to be able to prevent seepage of the medicine from developing countries to developed countries. The first two conditions hold but the third is prone to criminal smugglers buying low-cost medicines in the developing world and reselling them in developed markets at a higher price. If this happens, it will undermine the business model of pharmaceutical companies and will result in them losing millions of dollars of revenue. In the long run, the companies may refuse to sell products in developing markets or may withdraw from the industry altogether.

Ultimately, pharmaceutical companies should sell their medicines in developing markets at a lower cost and cross-subsidise the products by charging higher prices in developed countries. However, they should only do this if their patents are upheld in developed countries and

smugglers are prevented from buying the medicines at a low price and reselling them at a high price. Pharmaceutical companies have to be able to enjoy the benefits of being a monopoly so that they can generate supernormal profits and recover their significant costs of production.

- 4 Traditionally the music industry had an oligopoly market structure. Recording, developing, marketing and distributing the work of a musical artist incurred significant sunk costs that could only be undertaken by a few large multimillion-pound firms. Music was recorded on records, then cassettes and later CDs. The format was sold in high street shops, such as HMV, and the intellectual property of the artist and the record label was relatively easy to protect. Illegal copies of music were made but they did not prevent the businesses in the market from selling products and making excessive profits.

Technological progress has meant that it has become significantly easier to copy and share music without having to pay for it. The internet has been the main driver of this process because it is relatively easy for people to download music illegally. Music firms have attempted to prevent illegal downloading but their market power has been eroded and their profit margins are lower.

Application of economics in the real world 5.4: Natural monopoly in the UK water industry

- 1 A natural monopoly is when an industry has a cost structure dominated by massive economies of scale and falling long-run average costs. In the case of the water industry, it is only realistic for a single firm in a region to collect water in reservoirs, clean it for human consumption, pump it underground through a network of pipes into millions of households and businesses, and treat sewage. Thames Water supplies a region in the south of England. If it had to compete with a rival, such as Yorkshire Water, it would add billions of pounds of unnecessary spending for the two companies to provide the same service in the same region.
- 2 It is only practical for one set of pipes and sewage works to be connected to a household. It would cost billions of pounds of unnecessary spending for a second firm to build a duplicate water distribution network. A second firm in the industry would attract half of the market's customers and this would mean that the two companies would have to charge higher prices to cover their extremely high sunk costs.
- 3 Utility companies were privatised in the 1980s and 1990s in the UK because the nationalised industries provided a poor service in many places. Companies work best when competition forces managers to cut costs and search for new techniques and innovations that improve the value of the product for consumers. A nationalised company, under the management of a government official, lacks competitive pressures and the profit incentive.

The privatisation of BT in 1984 worked well because technological changes in the telecommunications industry meant that new firms, such as Vodafone and Virgin Media, could enter the market. The new entrants provided consumers with choice and BT was forced to improve its service and compete on price.

In the water industry, this has not been possible. Each water company is still a regional monopoly. It costs billions of pounds to build a water distribution network and it only makes sense for one firm to supply a household with water and treat its sewage. Technological progress has not enabled the markets to become more contestable. Privatisation has created powerful private monopolies supplying water across the UK. Regulators have tried to grapple with the market power of the firms but there are limits to what they can achieve. As the case study states, in 2017 Thames Water gave assurances to the regulator Ofwat that it would not load £2 billion of Cayman Islands debt onto the company, but it did so anyway. The water companies are exercising monopoly power and exploiting consumers with high prices so that they can generate supernormal profits.

Taking an industry back into public ownership has many drawbacks. A competitive market is the most desirable market structure. Due to economies of scale, a few large oligopoly firms dominate many markets, but with proactive regulation and government policy that encourages contestability, firms can still behave in a competitive manner. Hence, privatisation of the gas and electricity industry has been made to work in the consumer interest, despite some problems. However, in the case of the water industry, the case for nationalisation is stronger because in the last three decades firms have behaved poorly and exploited consumers. Government officials will lack the incentive to improve the industry but they may act more often in the public interest and will not seek to profit maximise.

- 4 In 2016, Thames Water appointed Steve Robertson as its chief executive officer, on a basic salary of £745,000 per annum, with a company car and a pension worth 25% of base salary. However, with a performance bonus for achieving key targets his pay could have risen to £3.75 million by 2020. In 2017, Thames Water was fined £20.3 million for dumping 1.4 billion litres of raw sewage into the river Thames. A year later, the company was fined again for allowing 180 litres of water a day to leak from every property that it supplies. In May 2019, Steve Robertson resigned from Thames Water due to the company's poor performance.

Water companies in the UK do not face competitive pressures and have considerable market power. As the case study states, the regulator determines prices and 'all the company has to do is to make sure its sewage plants work'. It can be argued that the pay of water company chief executives is excessive.

Application of economics in the real world 5.5: Competition in the UK supermarket industry

- 1 First, quality competition would be a logical form of non-price competition for Tesco to pursue because discounter rivals, such as Aldi, have built their business model to be 15% cheaper. Tesco would be wise to try to win customers back by offering superior quality. Second, Tesco could mount an extensive advertising campaign to persuade customers that it offers a better range of products and service.
- 2 The growth of convenience stores reflects changes in the shopping habits of British consumers. In the 1990s, the average British household typically bought the majority of its groceries in a single weekly shop. In recent years, consumers have increasingly made frequent trips to local convenience stores to purchase a small number of specific products. The trip frequency of the average British household to convenience stores increased from 3.4 trips per week in 2018 to 3.8 trips per week in 2019. The average number of items bought has decreased from 2.5 to 2.3 over the same period. The average time spent in convenience stores also fell by 32 seconds to 3 minutes 46 seconds. To tap into this market and increase sales, the big supermarkets have set up a chain of stores, e.g. Tesco Express, Sainsbury's Local and Little Waitrose.
- 3 Smaller convenience stores, such as Tesco Express, offer customers a narrower range of products, each of which has a high mark-up. The convenience stores stock the premium ranges and make a higher profit margin on each item sold than in the larger out-of-town stores. In 2018, Tesco sold a banana in out-of-town stores for 9p but charged 25p in Tesco Express.
- 4 In 2014, Dave Lewis took over Tesco and began an overhaul of the company. The new chief executive officer made thousands of redundancies, transformed the operational structure of the business, and merged the supermarket group with the wholesaler Booker. The Tesco management team set out six strategic drivers to create long-term value for all of the business's stakeholders:
 - a differentiated product

- reduce operating costs by £1.5 billion
- generate cash from operations
- maximise the mix to achieve a 3.5–4.0% group margin
- maximise the value from property
- innovation

Tesco has achieved its self-imposed targets and cut costs significantly. The case study says that Aldi was 15% cheaper than Tesco in 2014. Dave Lewis' cost-cutting programme had reduced this to 6% in 2019, according to analysts at the bank UBS. However, the share price of the company has not risen but has hovered around 250p per share since 2014, which suggests that the financial markets are not convinced that Tesco can increase profit margins in the future. The business strategy appears to have been successful at repositioning the supermarket to remain competitive in the UK market and fight the discounters Aldi and Lidl, but this has come at the cost of Tesco being unable to expand as a global brand and tap into lucrative overseas markets.

Application of economics in the real world 5.6: Discounting in the books market

- 1 The Austrian school economist Joseph Schumpeter made the term 'creative destruction' famous in the 1940s. Schumpeter believed that the profit incentive drives innovation and dynamic efficiency, which leads to advancements in human society. When new technology disrupts and displaces old production methods, there are significant productivity gains but this comes at a cost. In the case of the book market, high street bookstores have struggled to remain price competitive against the online retailer Amazon. Independent booksellers have gone out of business and large chains, such as Waterstones, have been forced to rationalise their business operations to remain competitive. Stores have closed down and workers have been made redundant so that consumers in Britain can benefit from lower prices. In contrast, French booksellers have been protected from the destructive process by government intervention, and consumers pay a higher price for their books.
- 2 Amazon has been good for consumers in two main ways. First, the online retailer has sold products to consumers at lower prices because its business model has lower average costs than traditional retailers. Unlike bookstores, such as Waterstones, Amazon does not have to pay for high street storefronts or employ retail staff. Consumers benefit from the lower prices and have greater purchasing power. Second, Amazon has increased competition in the product market. Traditionally, consumer choice was limited to the selection of books available in local stores. The Amazon platform enables consumers to purchase books quickly and easily from a wider range of booksellers, both specialists that operate in niche markets and larger stores that compete with Amazon Prime.

The main disadvantage has been the monopoly position that Amazon has established as a large seller of books in the market and by being the provider of the sales platform used by the smaller rivals. The monopoly power of Amazon needs to be regulated by the competition authorities, but in general consumers have benefit from the growth of the company.

- 3 Specialist bookshops have been in steady decline. Between 2007 and 2017, over 500 independent bookstores in the UK closed down. A number of independent bookstores have managed to run at a profit, but they cannot engage their larger rivals, such as Amazon or Waterstones, on price. Instead, they have focused on quality and service.
- 4 Technological progress has led to old production methods being replaced by new and more efficient techniques. In 2018, 16% of retail sales took place online; by 2030 this is predicted to increase to 40%. The rise of online retailing has seen a number of established British high

street stores go out of business or into serious decline. Woolworths, BHS, HMV and House of Fraser are all examples of large firms that have not adapted to transformations in the retail marketplace. The destruction caused by online retailers has led to job losses and empty storefronts in high streets across the country. This has been painful for individuals, but in the longer term, it may create opportunities for entrepreneurs in two ways. First, the competition forces firms to innovate to remain competitive. In recent years, bookstores have set up cafés and reading areas in stores to attract customers through the door. Second, uncompetitive stores close down and the price of unused resources falls, making them attractive for new business ventures. For example, Swingers is a crazy golf and street food experience that has set up venues in central London. Its Oxford Street business is in a building that was once a BHS department store. In both examples, market forces have rewarded firms that have adapted to changes in consumer demand. British consumers are no longer going to the high street to buy products. In the past shoppers bought music from HMV and clothes from BHS. Online retailers sell both significantly cheaper. Increasingly, the British consumer visits the high street to buy an experience, such as a coffee while reading a book, or a game of crazy golf with street food. Ultimately, to halt the decline of the high street, government policy needs to be focused on reducing barriers to market entry and enabling new dynamic firms to meet the demands of consumers.

Application of economics in the real world 5.7: How Apple competes

- 1 Competition is dynamic when it leads to firms developing new products and methods of production, which improve the quality of goods and services available to consumers and reduce prices in the long term. Apple has been one of the main drivers of innovation in the technology industry and, as the case study says, has created ‘new products, and new categories of products, which did not exist before’. For example, the iPhone revolutionised the mobile phone industry and enabled Apple to lead the market for a decade and generate supernormal profits. However, over time rival firms, such as Samsung, have developed their own smartphone devices, which are similar in design and features. The market competition provides choice for consumers and Apple has started to compete with its rivals on price. For example, when Apple launched the iPhone 11 in September 2019, it cut the price of the basic model by \$50 to \$699 in an effort to boost sales.
- 2 Not applicable at present.
- 3 If multinational corporations close down manufacturing and assembly factories in emerging market economies, such as China, and relocate them in developed economies, such as the USA, the global economy will start to fragment. The process of deglobalisation would alter patterns of employment and slow down the growth of the global economy.

Former President Trump advocates an economic nationalist agenda that seeks to put ‘America first’. Trump has argued that Americans have suffered from structural unemployment due to deindustrialisation. American jobs have been lost because MNCs have taken advantage of the abundance of cheap labour in the economies of south-east Asia. The former president’s argument is intuitive and industrial areas of the Midwest ‘rust belt’ have experienced industrial decline and rising poverty due to factory closures. On the back of every Apple device, it reads ‘designed by Apple in California, assembled in China’. It is logical to conclude that if Apple moves its assembly plants to the USA, jobs will be created for American workers.

There are two main problems with Trump’s economic reasoning. First, if multinational corporations relocate factories in the USA, costs of production will increase significantly. The wages paid to American workers are higher than the wages of Chinese workers. Many of the jobs in an assembly plant are low skilled and the higher wage costs do not increase the productivity of the business. Therefore, the price of Apple devices will increase and American

consumers will pay higher prices for products that are made in the USA. Households will experience a reduction in purchasing power and living standards will increase more slowly. Second, the Chinese economy will experience disinvestment as MNCs close down factories and stop investing in the country. Chinese workers will lose their jobs and it is highly likely that the trade war between the two economies will intensify with Chinese companies boycotting American imports. As trade between the two major economies slows down, GDP growth in both countries will slow. Global economic growth will falter as more economies become inward looking, and technological progress and advancements will take longer to develop. In the short term, employment may increase in the USA, but if the economy grows slowly in the long run, growth in employment, incomes and living standards will be slower in the future.

- 4 In the technology industry, Apple is one of the firms that has driven the process of creative destruction. Apple has been at the forefront of developing new technologies that have transformed the industry and challenged the production methods of the dominant firms. In the early 2000s, for example, Nokia and BlackBerry were market-leading firms in the market for mobile phones. The introduction of the iPhone in 2007 transformed the market. Neither Nokia nor BlackBerry could develop a phone that could compete with the iPhone and both firms rapidly lost market share.

It is not inevitable that Apple will decline but it is probable that, in the long run, a rival firm will develop a new technology that will supersede Apple's products. Throughout history, dominant firms have struggled to keep ahead of their rivals in a competitive marketplace. It is therefore likely, in the future, that Apple will be unable to adapt its products to the invention of new technology. However, this may be a long time in the future.

End-of-chapter questions

- 1 $MR = MC$ means that a firm's profits are greatest when the addition to sales revenue received from the last unit sold (marginal revenue) exactly equals the addition to total cost incurred from the production of the last unit of output (marginal cost).

When:

- $MR > MC$, profits rise when output increases
- $MR < MC$, profits rise when output reduces

So only when $MR = MC$ are profits maximised.

This is true for *all* market structures, including firms in perfect competition and monopoly.

- 2 Real-world markets are mostly those with the market structures of monopolistic competition and oligopoly. Firms in these markets may indeed undertake price competition, reducing their selling prices to gain sales at the expense of their rivals. However, this may lead to self-defeating price wars. Consumers may gain, but the firms themselves lose profits.

Such firms generally use other forms of competition as well, including quality competition and after-sales service competition.

- 3 Economists answer this question by applying efficiency and welfare criteria. In terms of efficiency criteria, perfect competition wins over monopoly — provided we assume that economies of scale are not possible. Given this assumption, perfect competition in long-run equilibrium ends up being both productively efficient and allocatively efficient whereas monopoly does not.

However, if we assume that a monopoly can benefit from economies of scale and that a perfectly competitive firm cannot, monopoly wins by gaining the benefits of dynamic efficiency.

Perfect competition also wins in the case of welfare criteria. If a monopoly is formed, output is restricted and price is increased, and consumer surplus is lost, being transferred into producer surplus enjoyed by the monopoly.

- 4 Monopoly means there is one firm only in a market, though the term is often applied more loosely to refer to a market where there is a dominant firm but not a strict monopoly. Monopoly power, by contrast, refers to any situation in which a firm can restrict output and raise the price or in which firms are protected by barriers to market entry. Oligopolists and firms in monopolistic competition possess a degree of monopoly power.
- 5 A cartel is a group of firms within a market that form a price ring in which they agree to sell at the same prices and not to compete against each other. Cartels are a bad form of market structure, combining the disadvantages of monopoly (high prices, productive and allocative inefficiency and lack of choice) with few if any of the benefits of monopoly.
- 6 Creative destruction is a process through which the economy evolves and renews itself over time with new technologies and innovations replacing older technologies. In the past, creative destruction was associated with the growth of large firms and industrial concentration. The growth of Amazon provides a fairly recent example of this, with online retailing replacing traditional high street shops and even department stores. However, creative destruction has also spawned the emergence of completely new small firms in high-tech industries. Internet-ordered food delivered to the home is an example, though firms such as Deliveroo may grow to become the giants of tomorrow.

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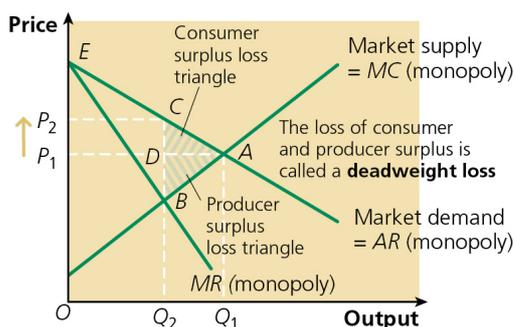


Figure A5.1 Deadweight loss under monopoly

Deadweight loss in monopoly is the loss of welfare that occurs when a monopoly replaces perfect competition. It is shown by the two shaded areas in Figure A5.1, made up by the loss of consumer surplus (the shaded triangle bounded by the points D, C and A) and the loss of producer surplus (the shaded triangle bounded by the points B, D and A).

- 8 Price discrimination involves firms charging different prices to different customers for the same product or service, based on differences in the customers' ability and willingness to pay. Those customers who are prepared to pay more are charged a higher price than those who are only willing to pay a lower price.

Firms benefit from undertaking price discrimination because they can transfer consumer surplus away from consumers to themselves, thereby enjoying more producer surplus and profit.

Test yourself answers

TEST YOURSELF 5.1

Perfect competition is defined by the six conditions of perfect competition, which are:

- Each firm is small relative to the market and has no influence on price.
- Firms and products are substitutable.
- Each consumer is small relative to the market and has no influence on price.
- Perfect information about prices and quantities is available.
- There is easy entry into and exit from the market.
- In pure monopoly there is only one firm in the market and thus no competition between firms.

TEST YOURSELF 5.2

A natural barrier to entry is the existence of established brands in the market with established reputations. A second natural barrier is the need to be able to invest in research and development (R&D) with high costs.

A patent provides an example of an artificial entry barrier. A second example is government regulations which prevent the entry of new firms.

Sunk costs are costs which cannot be recovered if a business decides to leave an industry.

Examples include money spent on advertising, marketing, and research and development projects that cannot be carried forward into another industry.

TEST YOURSELF 5.3

Profit is revenue minus costs. Revenue maximisation occurs when the money received from selling output is at its greatest. Profit maximisation occurs at the level of output at which total revenue minus total cost is maximised.

TEST YOURSELF 5.4

A public limited company, or 'PLC' for short, is a company that is legally allowed to offer its shares for sale to the general public. A PLC is not the most popular choice of company in the UK; in fact over 95% of limited companies in the UK are private limited companies. There are certain differences between the two, and there are specific requirements that a public limited company needs to meet.

- With a PLC, you need a minimum of two shareholders, but a private limited company will only need one.
- There needs to be a minimum of two directors registered within a PLC. Only one is needed for a private company.
- Company accounts are required to be submitted to HMRC within 6 months of the end of the financial year. A private company is allowed 9 months for submission.
- The majority of the shares of many PLCs are owned by so-called institutional shareholders, such as insurance companies and pension funds.

TEST YOURSELF 5.5

The correct answer is given by statement C. Satisficing means that a firm aims to achieve a satisfactory size of profit, subject to achieving the aspirations of as many as possible of the firm's stakeholders, who are likely to have different objectives. Statements A, B, D and E are all possible business objectives, but they don't involve satisficing.

TEST YOURSELF 5.6

The short run is the time period in which at least one factor of production is held fixed. This means that the only way that production can be increased is by adding more units of variable factors of production to the fixed factor. By contrast, in the long run, all factors of production are variable.

TEST YOURSELF 5.7

In perfect competition, the ruling market price is set by market forces in the market as a whole at the intersection of the market demand curve and the market supply curve. Individual firms within the market can sell as much as they want at this price. If they try to sell above the ruling market price, they lose all their sales. This is the case in both the short run and the long run.

TEST YOURSELF 5.8

The main efficiency concepts are productive efficiency, allocative efficiency, static efficiency and dynamic efficiency.

Productive efficiency means that firms minimise their average costs of production. Allocative efficiency occurs when the price that firms charge equals the marginal cost of production ($P = MC$). Static efficiency is when productive and allocative efficiency are measured at a point in time. Dynamic efficiency measures improvements in productive and allocative efficiency occurring over time.

TEST YOURSELF 5.9

The answer to this test yourself question is stated in the answer to the previous question, namely that productive efficiency means that firms minimise their average costs of production, whereas allocative efficiency occurs when the price that firms charge equals the marginal cost of production ($P = MC$).

TEST YOURSELF 5.10

In significant respects, monopolistic competition resembles both perfect competition and monopoly.

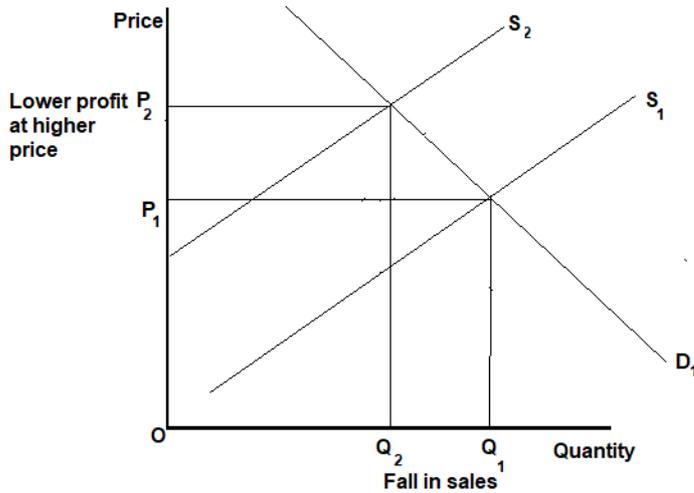
Monopolistic competition resembles perfect competition in the following ways. As in perfect competition, there are a large number of firms in the market; in the long run, there are no barriers to entry or exit. As a result, the entry of new firms, attracted by short-run abnormal profits, brings down the price each firm can charge until only normal profits are made in the long run.

Monopolistic competition also resembles monopoly in the following ways. Each firm faces a downward-sloping demand curve. This results from the fact that each firm produces a slightly different product — differentiated by such features of modern production and marketing as branding and advertising. Consequently, the goods produced by the various firms provide partial but not perfect substitutes for each other. The resulting ‘product differentiation’ in the market means that each firm possesses a degree of monopoly power over its product. Unlike in perfect competition, if a firm raises its price, it does not lose all its customers because there is brand loyalty; each firm’s marginal revenue (MR) curve is below its average revenue (AR) curve, which is the demand curve for the firm’s output.

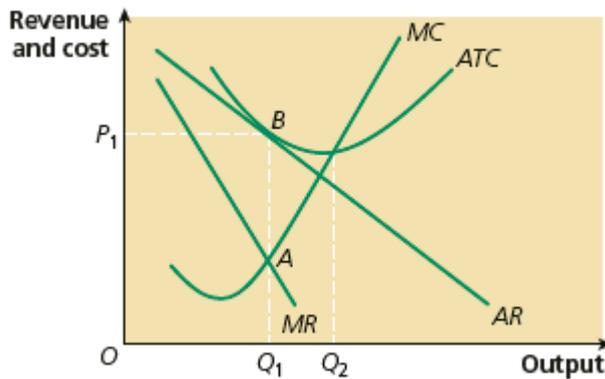
TEST YOURSELF 5.11

The correct answer is in statement E; if Marks & Spencer’s costs of production increase, both its sales of production and its profits are likely to fall. Increased costs shift the company’s supply curve to the left, and if the demand curve for the company’s output slopes downward to the right, its sales of clothing fall.

This is illustrated in the following diagram:



TEST YOURSELF 5.12



The fact that the firm is making normal profit only is indicated by point B , where the AR curve is tangential to the ATC curve. Point B is above the lowest point on the ATC curve, so the firm is productively inefficient. The marginal cost of producing output Q_1 is shown at point A , which is below the price P_1 . Since $P > MC$, the firm is also allocatively inefficient.

TEST YOURSELF 5.13

Both market structures are forms of imperfect competition. Monopolistic competition refers to a market structure in which there are a large number of competitive firms producing slightly differentiated goods. By contrast, an oligopoly is a market or industry containing a few interdependent firms.

TEST YOURSELF 5.14

Market structure refers to the number of firms in a market, whereas market conduct relates to how the firms behave.

TEST YOURSELF 5.15

The main reason why firms in highly concentrated markets form cartels is to reduce competition amongst themselves, so as to reduce uncertainty and to enjoy an easy life.

TEST YOURSELF 5.16

It is an example of a cartel or price ring. A cartel is a group of independent market participants who collude with each other in order to improve their profits and dominate the market. Cartels are

usually associations in the same sphere of business, and thus an alliance of rivals. Forming a cartel is usually regarded as an act of anti-competitive market behaviour.

TEST YOURSELF 5.17

Statement D is correct and the other four statements are wrong. In perfect competition there is free entry into the market in the long run, but not in the short run. The entry of new firms into the market, attracted by the abnormal profits made by established firms, causes the equilibrium price or market-clearing price to fall until abnormal profit has been competed away. All the other statements have no effect on abnormal profit.

TEST YOURSELF 5.18

The correct statement is statement C. A decrease in the cost of producing any good, including LCD (liquid crystal display) television screens, is likely to reduce the good's price which will then increase consumer surplus.

TEST YOURSELF 5.19

Consumer surplus is economic welfare that consumers enjoy over and above what they pay for. This statement is always correct, indicating 'the more, the better'. However, the second statement, that producer surplus is always bad, is sometimes but not always true. Producer surplus, which is economic welfare that firms enjoy after selling their output, is basically abnormal profit that can be put to good use: for example, in financing the long-term growth of firms.