

# Answers to Box Questions

## Part A: Introduction

### Box 1.1 A Perfect Partnership

*Choose a well-known company that trades globally and do a Web search to find out how well it has performed in recent years and how it has been influenced by various aspects of its business environment.*

To find a company, you might try looking at the company information section in site B2 in the [hotlinks section](#) of this book's website. Then you should use this information and information on the economy to conduct a PEST or STEEPLE analysis (see section 1.1 in the text). For data on the economy see site B1.

There are thousands of companies to choose from selling a range of products. Start by looking at the company's website and perhaps examine their accounts. Look for press releases about new strategies or opportunities. Has the company recently merged with another; has it opened offices in another country; has it developed an ethical or environmental strategy? There was a series on the BBC about John Lewis – perhaps if you saw that you could use the information within it to answer this question. There is no right or wrong answer – the key is to find a global company and look at various aspects of the business environment and how the firm has been affected by them.

### Box 1.2 The biotechnology industry

*From the brief outline above, identify the social/cultural, technological, economic, ethical, political, legal and environmental dimensions shaping the biotechnology industry's business environment.*

- ❑ *Social/cultural.* The social/moral debate over biotechnology, or more specifically lines of research within it, is at times probably the most significant influence over the industry's future development and direction. People from different cultures have different attitudes towards developments in biotechnology and whether they ought to be adopted.
- ❑ *Technological.* In order to be a world leader in biotechnology, maintaining a research or technological lead over your rivals is the key to long-term survival. The short-term cost and political risk must be weighed up against the massive potential long-term benefits that might be achieved.
- ❑ *Economic.* Economically the industry is expanding and receives many grants and subsidies both from the UK and European governments. Given the exploratory nature of the industry, much of its private-sector funding comes from venture capital sources, a notoriously volatile source of funds.
- ❑ *Ethical.* There are profound ethical issues surrounding biotechnology. Areas such as genetic modification and cloning are subject to significant moral considerations.
- ❑ *Political.* Given many of the moral debates surrounding biotechnology, and in particular issues concerning genetics, political debates over the ethical nature of the industry and its practices have been extensive. The establishment of research guidelines, especially in the area of genetics, has meant the industry has been subject to strict legal requirements concerning its development. In addition, the political side of the industry has been strongly influenced by pressure groups both for and against the use of biotechnology. The Wellcome Trust might support many biotechnological research initiatives, whereas other groups such as Friends of the Earth are bitterly opposed to initiatives such as those involving the development of genetically modified crops.
- ❑ *Legal.* Different countries have very different laws surrounding biotechnology. Companies in this industry will need to be very careful about the legal ramifications.
- ❑ *Environmental.* An environmental impact may be felt from people travelling all around the world to take advantage of different technologies and treatment available in different countries. Another might be the effects of genetic modification of crops on the natural environment.

### **Box 1.3 The changing nature of business**

*How is the development of the knowledge economy likely to affect the distribution of wage income? Will it become more equal or less equal? (Clue: think about the effects of specialist knowledge on the wage rates of specialists.)*

In a knowledge-based economy, workers' specialist knowledge will form the basis of their reward. Employers will be forced to offer, among other things, higher wages to the best specialists in order to hold on to this key resource. In such instances, the distribution of wage income is likely to become more unequal over time.

## Part B: Markets, demand and supply

### Box 2.1 Stock market prices

*1. If the rate of economic growth in the economy is 3 per cent in a particular year, why are share prices likely to rise by more than 3 per cent that year?*

Because share prices tend to reflect *changes* (or anticipated changes) in the rate of economic growth. Thus if economic growth rose (or was anticipated to rise) from 1 to 3 per cent (a 200% increase in the rate of economic growth), share prices may rise by considerably more than 3 per cent. If, however, economic growth fell (or was anticipated to fall) from 5 to 3 per cent, then share prices would be likely to *fall*. Since 3 per cent economic growth is above the long-term average, economic growth is more likely to have *risen* to 3 per cent than fallen to 3 per cent, with share prices correspondingly rising by more than 3 per cent.

*2. What has happened to the FTSE 100 index over the past 12 months? Can you explain the reasons behind the data?*

Good sources of information for this are [Yahoo Finance](#) and [BBC Business News](#). In providing an explanation you should look at demand- and supply-side factors affecting share prices, such as the state of the economy, the return on alternative forms of investment (such as property), interest rates, business confidence. It would also be a good idea to look back beyond the past 12 months – say to the financial crisis of 2007/8. To what extent has the FTSE 100 recovered? Consider the outcome of the EU referendum. What has happened to share prices since then and have they moved in the direction you would expect? Also consider economic growth in key economies such as China and India. Have they been growing quickly or has growth slowed? These factors may also determine movements in the UK stock market. You might also like to look at other key stock markets, e.g. the New York Stock Exchange to see if share prices are moving in the same direction as the FTSE 100.

### Box 2.2 UK house prices

*1. Draw supply and demand diagrams to illustrate what was happening to house prices (a) in the second half of the 1980s, from 1997 to 2007 and since 2013; (b) in the early 1990s and 2008–13.*

- (a) Demand was rising rapidly in the first two time periods. There was thus a continuing rightward shift in the demand curve for houses and a resulting rise in the equilibrium price. Demand also increased from around 2013/14, especially in London and the South East.
- (b) Demand was falling. The leftward shift in the demand curve for houses led to a fall in the equilibrium price. However, in 2009, there was also a fall in the supply of properties coming on to the market, which did, to some extent, counter the sharp fall in prices due to the low demand. The market remained relatively weak until 2013/14.

*2. Are there any factors on the supply side that contribute to changes in house prices? If so, what are they?*

Yes. Although they are less important than demand-side factors, they are, nevertheless important in determining changes in house prices. The two most important are the expectations of the construction industry. If house building firms are confident that demand will continue to rise, and with it house prices, they are likely to start building more houses. The resulting increase in the supply of houses (after the time taken to build them) will help to dampen the rise in prices.

The other major supply-side factor is speculation by house owners. If people think that prices will rise in the near future and are thinking of selling their house, they are likely to delay selling and wait until prices have risen. This (temporary) reduction in supply will help to push up prices even further.

*3. Find out what has happened to house prices over the past three years. Attempt an explanation of what has happened.*

You will need to look at both demand- and supply-side factors. The demand-side factors are especially important and include things such as interest rates, incomes, the multiple of people's incomes granted as mortgages and people's expectations about future house prices. These were all affected by the banking crisis in the global economy. What demand- and supply-side factors have been affected by the result of the EU referendum?

### Box 2.3 Shall we put up our price?

*1. Why may a restaurant charge very high prices for wine and bottled water and yet quite reasonable prices for food?*

Because the demand for food is relatively elastic: people may well compare restaurant food prices when deciding where to eat. The demand for drinks in restaurants, however, is likely to be relatively inelastic. People's decision where to eat is unlikely to be influenced by drink prices. Then, once people are eating in a restaurant, there is *no* alternative supply of drinks to the restaurant's own. People either have to pay the high prices or go without.

*2. Why are clothes with designer labels so much more expensive than 'own brand' clothes from a chain store, even though they may cost a similar amount to produce?*

Because fashion is an important determinant of demand. The more fashionable a product, the higher will be the demand, and the less elastic will be the demand, at any given price. Thus it is profitable for shops to charge higher prices for fashion products than for own-brand products.

### Box 2.4 Speculation

*1. Under what circumstances are people engaging in speculation likely to (a) gain, (b) lose from doing so?*

They are likely to gain when they are doing the same as most other people and lose when they are doing the opposite of most other people. Thus if most people are buying, the price will rise and individuals will thus gain if they had bought before the price rose. If most people are selling, the price will fall and individuals will thus gain if they had sold before the price fell.

The problem is in knowing what other people are going to do. You might think that other people are going to buy shares in a particular company and so you buy, thinking that the price will rise. Then it turns out that other people did not think as you, and sold. You thus lose as the share price falls.

Often other people have better knowledge than you and will have already acted. By the time you come to act, it is too late – the price has already changed and may not change further in that direction. Generally, then, the better your knowledge of a market and the likely shifts in demand or supply, the more you are likely to gain from speculation.

*2. Find out what has happened to the price of (a) oil and (b) copper over the past 12 months and give an explanation. To what extent have the price changes been influenced by speculation.*

Good sources of information for this are the [\*US Energy Information Administration\*](#) and the [\*London Metal Exchange\*](#). A major factor affecting the price of both oil and copper is the rate of world economic growth. For example, the rise in demand in China and India has been a major contributing factor in both oil and copper price increases, given their high income elasticity of demand. In addition, any supply hold-ups or restrictions, such as OPEC imposing tighter oil quotas on its member countries, can also contribute to price increases. As the box explained, price movements are often exaggerated by speculation. The greater the expected underlying changes in demand or supply, the greater is likely to be the level of speculative buying or selling.

## Box 2.5 Market Intervention

### 1. What methods could be used by the government to deal with:

#### (a) The surpluses that result from minimum price controls?

The government could buy the surplus and store it, destroy it or sell it abroad in other markets. Supply could be artificially lowered by restricting producers to particular quotas. Demand could be raised by advertising, by finding alternative uses for the good, or by reducing consumption of substitute goods, e.g. by imposing taxes or quotas on substitutes, such as imports.

#### (b) The shortages that result from maximum price controls?

The government could aim to reduce the shortage by encouraging supply. This could be done by drawing on stores, by direct government production, or by giving subsidies or tax relief to firms. Alternatively, it may attempt to reduce demand by the production of more alternative goods, e.g. home grown vegetables in times of war or by controlling people's incomes. Rationing mechanisms may be introduced by governments.

### 2. How are price elasticity of demand and supply relevant in the context of minimum/maximum price controls and taxes?

If a minimum price is imposed above the equilibrium price it will create a surplus of supply over demand. The size of the surplus will depend on the price elasticity of demand and supply. The less elastic the demand and supply the less will the quantity demanded fall and the quantity supplied rise as a result of the imposition of the minimum price and hence the smaller will be the surplus.

If a maximum price is imposed below the market prices, this will cause a shortage. The less elastic the demand and supply, the less will the quantity demanded rise and the less will the quantity supplied fall and hence the smaller will be the shortage.

In the case of taxes, the less elastic is demand and the more elastic is supply, the greater will be the impact on the price paid by consumers and the greater the percentage of the tax consumers will have to bear.

### 3. Why are agricultural prices subject to greater fluctuations than those of manufactured products?

They are more volatile because:

- ☐ supply fluctuates with the weather and other natural conditions;
- ☐ demand is relatively price inelastic;
- ☐ short-run supply is relatively price inelastic.
- ☐ there is a time lag between planned supply and actual supply. If there is initially a high price, then more of the product will be grown. Only later will this come to market, and prices will then fall. At that stage, farmers might plan to grow less for the next season. But when this reduced supply comes to the market, the price will rise again.

### Box 3.1 Rogue traders

#### 1. What are the disadvantages of trade associations?

The main disadvantages are

- ❑ They often have limited powers over miscreant members because they depend for their survival on the subscriptions of those they regulate.
- ❑ Often there are several of trade associations within the same industry. This can often act as a confusing signal for consumers.
- ❑ If members of a trade association meet together they may share commercial information relating to the price of the goods they sell or the locations that they are selling in. Any agreements on price and markets may be construed as collusion and such 'cartel-like' behaviour is illegal.

These disadvantages all limit trade associations' ability to ensure that products are of high quality.

#### 2. The communications sector is one area that receives a high number of complaints. Can we use the concepts of moral hazard and adverse selection to explain why this might be the case?

*Adverse selection:* installation, maintenance and repairs, if carried out well by major companies, such as BT or Virgin Media, may be quite expensive. This provides a profitable opportunity for rogue traders, which can undercut the price and yet provide a poorer service. The customer may have insufficient information to judge that the service is likely to be poorer until it is too late.

*Moral hazard:* the rogue traders, because of insufficient consumer knowledge, may thus be tempted to provide a poorer service because they can get away with it.

### Box 3.2 Problems for unwary insurance companies

#### 1. What details does an insurance company require to know before it will insure a person to drive a car?

Age; sex; occupation; accident record; number of years that a licence has been held; motoring convictions; model and value of the car; age of the car; details of other drivers.

#### 2. How will the following reduce moral hazard?

- (a) A no-claims bonus.
- (b) Your having to pay the first so many pounds of any claim.
- (c) Offering lower premiums to those less likely to claim (e.g. lower house contents premiums for those with burglar alarms).

In the case of (a) and (b) people will be more careful as they would incur a financial loss if the event they were insured against occurred (loss of no-claims bonus; paying the first so much of the claim). In the case of (c) it distinguishes people more accurately according to risk. It encourages people to move into the category of those less likely to claim (but it does not make people more careful *within* a category: e.g. those with burglar alarms may be less inclined to turn them on if they are well insured!).

### Box 3.3 Taking account of emotion

*1. Is it ever 'rational' to buy on credit? Explain.*

Yes, provided the benefits to you, including the benefit of having it now rather than having to wait, exceed the costs to you, including the additional cost of interest by buying on credit. Whether people are actually rational in this sense is another matter – as the box explains.

*2. In what other ways might consumer behaviour be regarded as irrational in the traditional sense? How might businesses take advantage of this 'irrationality'?*

When people make 'impulse' purchases, even when paying by cash, they may focus on the perceived benefit at the time and downplay the costs in terms of the sacrifice of alternatives they could have bought with the money. Businesses may thus focus on the appearance of the product (e.g. packaging). Another example is habit purchases. People might buy the same products time and time again without really considering whether they would be better off buying an alternative.

### Box 3.4 Brands and own-brands

*1. How has the improvement in the quality of own-brands affected the price elasticity of demand for branded products? What implications does this have for the pricing strategy of brand manufacturers?*

It has made their demand more price elastic. The reason is that own-brands are now a closer substitute for branded products. This tends to force down the price of branded products, or encourage brand manufacturers to spend more on advertising in their attempt to differentiate their brand from other brands and own-branded products.

*2. Do the brand manufacturers have any actual or potential cost advantages over own-brand manufacturers?*

It depends on the scale of their operations. If branded products are produced on a larger scale, they may be produced at a lower average cost of production (see section 4.2 on economies of scale). Given the size of the market for own-branded products, however, this is unlikely.

### Box 3.5 Advertising and the long run

*1. How are long-run profits and advertising linked?*

Advertising helps to build brand recognition and brand loyalty. This can help lead to a long-term growth in demand and increased long-run profits. In the short run, the cost of advertising, especially in a recession, may not be covered by increased revenue from extra sales. In the long run, however, it is likely to be.

*2. Why does quality 'win out' in the end?*

It may be easy to sell a product to a person once if it is persuasively advertised. When people have consumed it, however, they are only likely to buy it again if they feel that they are getting good value for money. In other words, quality (and price) count.

*3. How would you advise the owner of the PG Tips brand (Unilever) on a pricing strategy?*

With an elasticity of demand of just  $-0.4$  (i.e. a demand that is relatively inelastic), Unilever would be wise to maintain a relatively high price strategy. In fact, raising its price would earn more revenue and profit – at least in the short run. It would have to be careful, however, that demand did not become more elastic over the long run as people were tempted to try other cheaper brands, such as supermarkets' own-brands, and realised that there was little difference in quality.



### Box 4.1 Diminishing returns and business

1. Give some other examples of diminishing returns to inputs other than labour (such as the fertiliser example above).

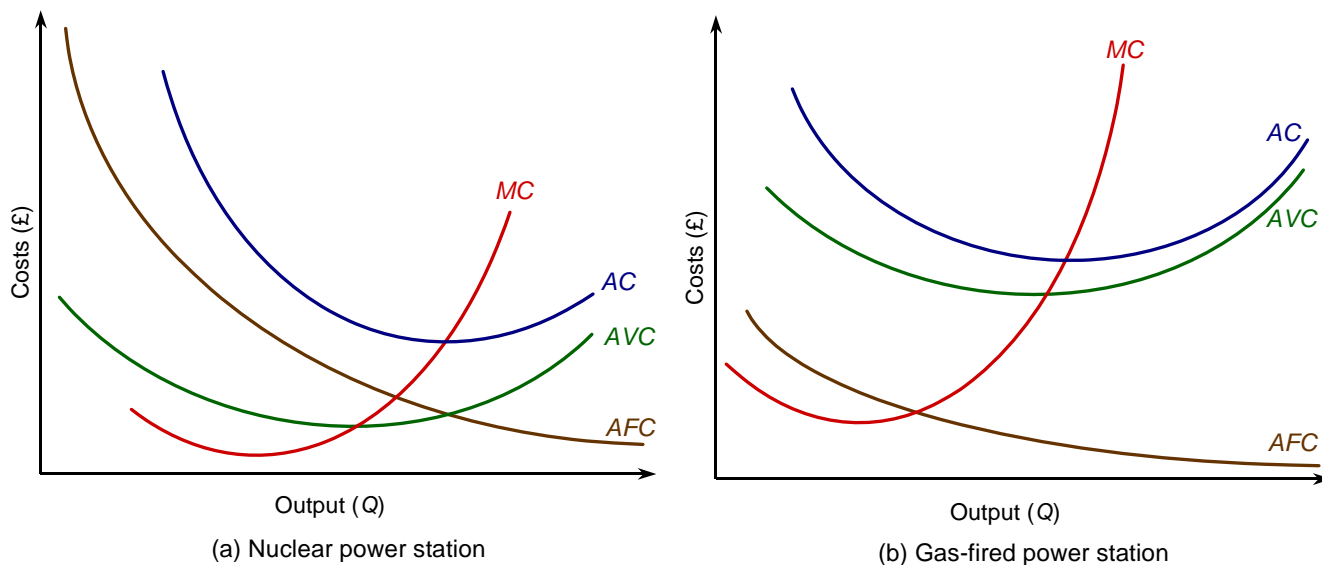
- ❑ Adding more trains to cope with peak-time demand on certain rail routes can lead to congestion, with trains arriving late and journey times extended. The fixed inputs here are the track, signalling and stations.
- ❑ Adding more and more computers and other IT equipment in offices and other businesses will lead to diminishing returns to such equipment as increasingly they are underutilised.
- ❑ Adding more and more fishing boats to fish certain waters will result in diminishing returns as there are limited numbers of fish. Thus catches per boat will fall as the fishing grounds become increasingly over fished.

2. If all inputs were variable (as they are in the long run), would expanding output result in diminishing marginal returns? (We examine this question later when we consider the long run.)

No. Diminishing marginal returns only apply when at least one input is fixed and the variable input(s) is/are increased: in other words, when more variable inputs are used relative to the fixed input(s). If all inputs were variable, then expanding output would probably involve using more of *all* the inputs. What we are referring to here is changing the whole *scale* of production and thus we look at returns to scale (e.g. whether an x% increase in inputs will lead to a more or less than x% increase in output).

### Box 4.2 Understanding your fixed costs

On a diagram similar to Figure 4.1, sketch the AFC, AVC, AC and MC curves for (a) a nuclear power station and (b) a gas-fired power station. For simplicity assume that both stations would produce the same amount of electricity at full capacity.



The nuclear power station is likely to have much higher total fixed costs and lower variable costs than the gas-fired station. Thus at low levels of output, the gas-fired station will have lower average costs and at higher output the nuclear power station will have lower average costs, as the diagrams show.

*Conduct some research on a firm of your choice, looking into its data on costs and decide whether or not you think this firm would be economically vulnerable due to its fixed costs.*

The answer will depend on the company chosen. You should look at the data on the firm's costs, in particular its fixed and variable costs of production. By looking at the percentage of a firm's total costs that are in the form of fixed costs, we can get a good idea as to how vulnerable the firm is. If, for example, a firm had fixed costs of 75% of total costs, then this firm would be very vulnerable and face a steep AC curve.

*Now look at some data on a firm of your choice and decide whether or not you think this firm would be vulnerable from too much reliance on bought-in or external inputs. Is it the same firm as you discussed in the previous question? If your data suggest the firm would be vulnerable in both ways, what might this mean for the firm?*

Again the answer depends on the firm chosen and here you should be looking to see what percentage of its total costs are external or bought in. The higher the percentage, the more reliant the firm is on external markets and hence the more vulnerable it is.

If you have looked at the same company and have answered yes to both questions, then you have a firm that is vulnerable in two ways. This can create huge uncertainty for the firm, as any change in output from the current level would mean a high cost penalty, but also any increase in demand for raw materials which pushes up their price would also impose a cost penalty. This could make the firm susceptible in both recessions and booms.

### **Box 4.3 Industrial clusters and competitiveness**

*What policies or initiatives might a 'programme of cluster development' involve? Distinguish between policies that government and business might initiate.*

Government might contribute to cluster development by providing favourable and targeted grants and subsidies to encourage related businesses to locate in the same location. This might be for example close to a university research department that has strong research interests in a related field. Government might also attempt to disseminate industry information concerning the location of firms, encouraging the creation of industry networks. Business might contribute to cluster development by entering into joint ventures with rivals. This may involve new investment and some element of business relocation. Irrespective of motivation cluster development is likely to be a slow process whether driven by government or market forces.

### **Box 4.4 Minimum efficient scale**

*1. Why might a firm operating with one plant achieve MEPS and yet not be large enough to achieve MES? (Clue: are all economies of scale achieved at plant level?)*

There may be economies of scale to be gained that do not relate to *plant* size but rather to the size of the *organisation*: for instance, marketing economies of scale and research and development economies of scale. Despite operating with a minimum cost plant, the firm may still not be large enough to achieve these other economies.

*2. Why might a firm producing bricks have an MES which is only 0.2 per cent of total EU production and yet face little effective competition from other EU countries?*

Because bricks, being heavy and having relatively low value, are costly to transport. The effective market for bricks, therefore, is a relatively local one.

## Box 4.5 Cost, revenue and profits

*1. How will total revenue be affected by (a) a price rise and (b) a price fall if the product was relatively price elastic?*

- (a) With an elastic demand, any rise in price will cause a fall in quantity that is proportionately larger. Therefore the downward effect on quantity sold will more than offset the upward effect on price, causing total revenue to fall.
- (b) If price is reduced for an elastic product, the proportionate increase in quantity demanded will be larger than the decrease in price and hence total revenue will rise.

*2. Consider a firm that introduced a new policy of only using environmentally friendly inputs and locally sourced products in its production process. Analyse the impact of this strategy on the firm's costs and revenue. How do you think profits will be affected?*

Environmentally friendly inputs tend to be more expensive, so this is likely (though not guaranteed) to push up costs of production. The same may happen with locally sourced products, especially if they are of better quality, though as transport costs will be reduced, this may offset the increase in costs. Overall, both strategies together will probably push up costs of production. This alone would cause profits to fall and it may require the firm to raise prices, which could cause a fall in the quantity demanded.

However, advertising the product as 'environmentally friendly' or 'locally sourced' may be a unique selling point and hence it could allow the firm to maintain or even expand demand. The impact on total revenue would depend on the product's price elasticity of demand (as shown in question 1).

The overall effect on profits would depend on the relative size of the changes in total costs and revenue. If consumers are sufficiently conscious of the environment and supporting local businesses, then total revenue is likely to increase even if prices have to be raised. If this increase offsets the upward effect on costs then profits will rise.

## Box 4.6 E-commerce

*1. Give three examples of products that are particularly suitable for selling over the Internet and three that are not. Explain your answer.*

Particularly suitable: (i) tickets (coach, airline, concert, etc.); (ii) certain financial services, where the consumer understands the product; (iii) rare items that would otherwise require the consumer to travel a long distance to obtain them. In each of these cases, suppliers are likely to be in competition over the Internet, and hence help to drive the price lower. Having the items sent by post, or in the case of various financial services recorded electronically, saves the consumer time.

Not particularly suitable: (i) clothes; (ii) furniture; (iii) perishable foodstuffs. In each of these cases, consumers would probably rather choose their products from a shop, where they can inspect the items. In the case of clothes and perishable foodstuffs, there are clearly benefits of bringing the item home immediately from the shop rather than having to wait for it to be delivered. Nevertheless, the sheer convenience of Internet shopping can outweigh these disadvantages for many people, and hence the success of supermarkets' home delivery service for items bought online.

*2. Before reading ahead, consider your own shopping and buying habits – how much shopping do you do online? What do you think are the limits to e-commerce? Compare your answers with a friend and try to determine the key factors that explain any differences and what, then, are the limits to e-commerce*

The answer here will depend on the individual. It might be expected that females gain more enjoyment from shopping and trying on clothes, whereas males may be happier to shop online. However, this may vary depending on the product. Tastes and preferences are likely to play a role, as is the free time that people

have. Perhaps those with 20 hours of lectures per week may do more online shopping than someone with 10 hours of lectures per week. The same may apply with those who have a full-time job relative to a part-time job, or those who are working while they study. Location might affect buying habits – living in the country may mean online shopping is more feasible, especially if transport is a problem. However, it could be that going shopping is a chance to socialise.

Depending on the factors discussed, various suggestions can be presented for the limits of e-commerce. These are discussed in the rest of the box. They might include the fact that some people do like trying on clothes or actually looking at a product. Some things are needed instantly and this cannot always be guaranteed with online shopping. Do all delivery firms deliver to all places? Perhaps you've had a bad experience with a parcel not arriving, or arriving damaged, and hence would prefer to collect it and so may as well buy it from the shop, perhaps via 'click and collect'.

### *3. Why may the Internet work better for replacement buys than for new purchases?*

With replacement buys, the consumer knows the product and can use the Internet to obtain them more cheaply. With first-time purchases bought over the Internet, there is more risk that the product is not as the consumer expects. It is not possible to see the items and possibly handle them, as would be the case in a shop. Returning goods that turn out not to be as expected may be time consuming. Of course, some people look around in shops and then, having seen the product, buy it more cheaply over the Internet!

### *4. Explain how eBay can both increase competition across the economy and simultaneously acquire very substantial monopoly power.*

By providing a marketplace for small sellers, it has increased competition substantially in both the second-hand and the new market both between individual sellers and for the larger retailers. However, by being the market leader in providing such a marketplace, this gives it considerable power in determining the price and terms of the services it provides to sellers. Competition from other marketplace providers, such as Amazon, may, however, constrain its power and we are seeing smaller auction sites emerge as well.

## Part C: The microeconomic environment of business

### Box 5.1 Concentration ratios

*1. What are the advantages and disadvantages of using a 5-firm concentration ratio rather than a 15-firm, 3-firm or even a 1-firm ratio?*

The fewer the number of firms used in the ratio, the more useful it is for seeing just how powerful the largest firms are. The problem with only including one or two firms in the ratio, however, is that it will not pick up the significance of the medium-to-large firms. For example, if we look at the 3-firm ratio for two industries, and if in both cases the three largest firms have a 50 per cent market share, but in one industry the next largest three firms have 45 per cent of the market (a highly concentrated industry), but in the other industry the next three largest firms have only 5 per cent of the market (an industry with many competing firms), the 3-firm ratio will not pick up this difference. Clearly, this problem is more acute when using a 2-firm or a 1-firm ratio.

The more the firms used in the ratio, the more useful it is for seeing whether the industry is moderately competitive or very competitive. It will not, however, show whether the industry is dominated by just one or two firms. For example, the 10-firm ratio for two industries may be 90 per cent. But if in one case there are 10 firms of roughly equal size, all with a market share of approximately 9 per cent, then this will be a much more competitive industry than the other one, if that other one is dominated by one large firm which has an 85 per cent market share.

A more complete picture would be given of an industry if more than one ratio were used: perhaps a 1-firm, a 2-firm, a 5-firm and a 15-firm ratio.

*2. Why are some industries like bread baking and brewing relatively concentrated, in that a few firms produce a large proportion of total output (see web cases C.4 and C.5), and yet there are also many small producers?*

The large firms may produce a fairly standardised product for a national market, sold through large outlets or large outlet chains. They have the advantage of economies of scale and can probably compete in terms of price.

The small firms, on the other hand, may be able to produce a more specialist product and/or serve a particular local market. They may well compete more in terms of quality and variety than in terms of price.

### Box 5.2 Windows cleaning

*1. In what ways was Microsoft's behaviour (a) against the public interest; (b) in the public interest?*

- (a) Prices are likely to be higher, given the lack of competition; there may be less product development, because potential competitors fear Microsoft's power to block their entry to the market, or drive them from it if they do succeed in entering; less choice for consumers.
- (b) By developing products that are in general use round the world, it is more convenient for businesses and their employees, who do not have to learn different sets of programmes or have problems with incompatibility of programmes; monopoly profits can lead to high levels of investment and product development, which can help to reduce prices over the longer term.

*2. Being locked-in to a product or technology is only a problem if such a product can be clearly shown to be inferior to an alternative. What difficulties might there be in establishing such a case?*

If potential competitors have been prevented from developing superior products or technology, then those products or technology are not available to be compared with the existing products or technology! You are trying to compare an existing situation with a hypothetical one. Even if the competitors do have a product on the market, its inferiority may be a practical one rather than an intrinsic one – namely that it is incompatible with the market leader's products or technology.

### **Box 5.3 Oligopolies: The Good, The Bad and The Ugly**

*1. In what forms of tacit collusion are supermarket chains likely to engage?*

The box describes two forms of tacit collusion. One is shadow pricing; the other is to confine price competition to a few more basic lines. Another form is not to open new stores too close to their rivals (even if planning permission could be gained). Another is to resist certain measures that might be popular with consumers but could add to the supermarket's costs: e.g. detailed ingredients listing on products and 24-hour shopping at all stores.

*2. Explain why manufacturers of food products continue to supply supermarkets, despite concerns that they are not always treated fairly.*

Supermarkets hold almost 75 per cent of the grocery market and thus any food manufacturer wishing to grow substantially is likely to have to deal with them. The volume of orders is so large, that if they were to stop dealing with a company such as Tesco, they would lose out on so many units that it would be hard to replace the quantity with countless other firms. There is also the problem that supplying smaller retailers rather than supermarkets requires dealing with a large number of individuals, with the associated transactions costs. Additionally, although supermarkets may be slow to pay, and may squeeze margins, they are unlikely to go bust, and so the risk of default is low.

*3. Does vertical integration matter if consumers still have a choice of supplier and if generators are still competing with each other?*

Vertical integration is normally less damaging to competition than horizontal integration. Nevertheless, the economies of scale of the integrated companies may allow them to undercut smaller competitors and thereby drive them out of the market. This, in the longer run, could lead to higher prices.

*4. The Big Six have been required to open up their finances to greater scrutiny and publish prices up to two years in advance. How would this help to boost competition?*

By opening up their finances, there will be greater transparency in the energy market and this should make the Big Six more compliant with rules introduced by the regulator Ofgem, which should in turn create a more competitive market. As the large suppliers both supply and generate energy, they can often buy and sell at undisclosed prices, which acts as a barrier to entry for new firms. This creates an unfair market, putting those smaller firms that don't generate at a disadvantage. The new rules mean that the big energy suppliers must now publish the price at which they will sell power from their generator up to two years in advance, which will help to increase certainty to the smaller suppliers about their long-term costs. They are also not allowed to refuse any 'reasonable' request from suppliers to buy electricity. This should make the market more accessible for smaller firms, encouraging them to enter the market and hence create more effective competition.

*5. What is meant by the divorce of ownership from control in the auditing industry and why might it present a problem?*

As we discussed in Chapter 1, this is where the owners and managers of a company are different and hence they may have different objectives. In the auditing industry, the auditors go into companies and produce financial accounts. The companies that are audited by the Big Four have shareholders who are interested in profits and their dividends. But they employ managers who are responsible for the day-to-day running of the business. Due to the long-running relationship between auditors and companies, the auditors have been accused of operating in the interests of the managers and not the shareholders. Laura Carstensen, the chair of the Audit Investigation Group said: 'It is clear that there is significant dissatisfaction amongst some institutional investors with the relevance and extent of reporting in audited financial reports ... management may have incentives to present their accounts in the most favourable light, whereas shareholder interests can be quite different.'

## Box 5.4 The prisoners' dilemma

1. Devise a box diagram for the above case, similar to that in Figure 5.5. Why is this a dominant strategy game?

		Amanda's alternatives	
		Not confess	Confess
Nigel's alternatives	Not confess	Each gets 1 year	Nigel gets 10 years, Amanda gets 3 months
	Confess	Nigel gets 3 months, Amanda gets 10 years	Each gets 3 years

This is a dominant strategy game, because, whatever assumption is made about the other's behaviour, each prisoner is likely to confess.

2. How would Nigel's choice of strategy be affected if he had instead been involved in a joint crime with Nikki, Kim, Paul and Dave, and they had all been caught?

The more people there were involved in the crime, the greater would be the likelihood of one of them confessing and therefore the greater the temptation for Nigel to confess.

3. Try constructing a matrix and determine the Nash equilibrium in this game.

This is not the easiest thing to do, as your answer may well depend on the value you place on sleep and the value you place on making progress in the game, i.e. by killing one or more of your opponents. A typical matrix may look something like this:

The Tributes' sleeping decision

		Other Tributes	
		Sleep	Don't sleep
Katniss	Sleep	<b>A</b> Rested, but no progress Rested, but no progress	<b>B</b> Dead Sleep deprived, but may be closer to victory
	Don't sleep	<b>C</b> Sleep deprived, but may be closer to victory Dead	<b>D</b> Sleep deprived Sleep deprived

In this game, if Katniss believes that the other Tributes will all be sleeping, then if she also chooses to sleep, she will wake up the next morning and she will be rested. (Though of course if it's only a belief that the others are sleeping, her night's sleep may not be particularly good – constantly alert!) However, she will not have made any progress, as the same number of contestants are still competing – she's no closer to winning. On the other hand, if she chooses not to sleep, then by the next morning she may have been able to take-out one or more of her opponents and hence has made good progress on the road to victory, but will be very tired in the



morning and so perhaps more susceptible to an attack. A key point here is how easy it will be to find her opponents – the more difficult it is, the more likely any player may be to decide on sleeping.

In order to win the Games, you will have to eliminate your other competitors and so, if you think that making some progress is worth more than sleep, you will choose ‘Don’t sleep’. However, this does depend on the value you place on progress over sleep and the ease with which you think you can find your opponents.

If Katniss believes that everyone else will choose ‘Don’t Sleep’, then her best response is also to choose ‘Don’t Sleep’. After all, if she chooses ‘Sleep’, she is killed and sleep deprivation from choosing ‘Don’t Sleep’ is certainly better than ‘Dead’.

Therefore, it is possible that we have a dominant strategy emerging, where everyone’s best response is ‘Don’t Sleep’. This is very likely in a one-shot game. However, it does depend on certain things, not least the difficulty of finding other Tributes in a huge arena.

*4. Does the Nash equilibrium in the game change if we are now thinking about the decision of one member of the Coalition, given the possible responses of the other members of the Coalition?*

The problem of finding the other Tributes now disappears, as the members of the Coalition all stay in the same place. Once again, if other members of the Coalition choose ‘Don’t Sleep’, Katniss’ best response is also to choose ‘Don’t Sleep’: if she chooses ‘Sleep’, she will be killed, but choosing ‘Don’t Sleep’ leaves her alive, if a little tired. But, what about if the other members are going to ‘Sleep’? If Katniss also chooses ‘Sleep’, then no-one makes any progress, although they will all be well-rested the next day and perhaps better able to find the Tributes that are not part of the Coalition. (This, of course, assumes that Tributes outside of the Coalition don’t find them before morning!) If, instead, Katniss chooses ‘Don’t Sleep’, then she will be tired the next day, but the other members of the Coalition are dead – she didn’t have to look for them and now she’s much closer to winning. This is illustrated in the matrix below.

The Coalition’s sleeping decision

		Other Members of the Coalition	
		Sleep	Don’t sleep
Katniss	Sleep	<b>A</b> Rested, but no progress Rested, but no progress	<b>B</b> Dead Sleep deprived, but much closer to victory
	Don’t sleep	<b>C</b> Sleep deprived, but much closer to victory Dead	<b>D</b> Sleep deprived Sleep deprived

The same strategic thinking applies to other members of the Coalition. They are likely to choose ‘Don’t Sleep’ irrespective of what they think Katniss will do. Here, it is perhaps more likely that a dominant strategy emerges of ‘Don’t Sleep; Don’t Sleep’. After all, if the aim of the game is to eliminate everyone else, then would you really trust them?

*5. Give some other examples (economic or non-economic) of the prisoner’s dilemma.*

Union membership. The more employees of a business who are members of a trade union, the more powerful will the union be and the bigger the pay rise it is likely to gain. But here is the prisoners’ dilemma. Workers motivated by self-interest will be tempted not to join the union and thus save the membership subscription. But the more workers there are who do this, the smaller the union membership and the less the pay rise is likely to be.



Children in a class previously agreeing not to do homework for a test, but parents keeping them apart so that they can persuade their children to do their homework, telling them, ‘The other children will also be doing theirs and you will not want to be shown up by doing badly compared with them.’

6. Search for the game show ‘Golden Ball’s on you tube and watch a clip of the very last part of the game ‘£66,885 Split or Steal?’. Try constructing a matrix for this game and working out what the Nash equilibrium is.

At the end of the game show Golden Balls, two contestants remain with a jackpot. Simultaneously, these two players have to decide to ‘Split’ or ‘Steal’. If they both choose ‘Split’, then they split the jackpot 50:50. If they both choose ‘Steal’ they both leave with nothing. If one chooses ‘Split’ and the other chooses ‘Steal’, then the one who chose ‘Steal’ walks away with the full jackpot and the one who chose ‘Split’ leaves with nothing. The options in the game would look something like those in the following matrix, assuming we have two players called Eleanor and Florence and a jackpot of £50 000.

Golden Balls: £50 000 jackpot

		Florence	
		Split	Steal
Eleanor	Split	<b>A</b> £25 000 £25 000	<b>B</b> £0 £50 000
	Steal	<b>C</b> £50 000 £0	<b>D</b> £0 £0

We can find the Nash equilibrium of this game by looking at the best response for each player. Let’s take the case of Eleanor. She has to decide whether to ‘Split’ or ‘Steal’ and so, in making that decision, she will think about how Florence will behave. If she thinks that Florence will ‘Split’, then Eleanor could either ‘Split’ and walk away with £25 000 or ‘Steal’ and leave with £50 000. She’d prefer to have £50 000 than £25 000 and so would best respond with ‘Steal’. But, what if she thinks Florence will choose ‘Steal’. If Eleanor chooses ‘Split’, she leaves with nothing and if she chooses ‘Steal’ she leaves with nothing. Perhaps she is indifferent? Or perhaps, she thinks that either way I’m going home with no money – I’d prefer to be going home with no money, also knowing that my opponent is going home with no money (Steal), rather than knowing she’s going home with £50 000 (Split). So, essentially we once again arrive at a Nash equilibrium of ‘Steal; Steal’. Neither player has any incentive to deviate, given how they assume the other player is going to behave.

Prior to the decision, the players are given a chance to talk to each other and discuss what they will do. Each player tries to convince the other that they will ‘Split’ – they’d prefer half to nothing. But of course, the more Eleanor trusts Florence to ‘Split’, the bigger the incentive Eleanor has to ‘Steal’. And the same applies for Florence!

In the clip linked into the text, both players do indeed ‘Steal’ and lose a significant jackpot, but there are many other examples online where all possible outcomes occur.

## Box 5.5 Stakeholder power?

*Are customers' interests best served by profit-maximising firms, answerable primarily to shareholders, or by firms where various stakeholder groups are represented in decision taking?*

The answer depends on (a) the amount of competition faced by firms and (b) the degree to which *customers'* (as opposed to other stakeholders') interests are represented in any decision making. Generally, the more competitive the market, the more will profit-maximising firms be forced to take customers' interests into account, in terms of both quality and price. In other words, competition is a good means of protecting consumers' interests. With monopolists and powerful oligopolists, customers may be in a better position to exert pressure on the firm if they have some formal representation (e.g. consumers' councils for gas and electricity), but their interests may well conflict with the interests of others, such as workers (where higher pay may result in higher prices) or environmentalists (who may want to restrict consumption) or suppliers (who may want to receive higher prices, which again could lead to higher prices).

## Box 5.6 Pricing in practice

*1. Aside from a difference in the price elasticity of demand between those travelling at peak and non-peak times, are there any other factors that may push up the prices of peak travel?*

During peak times, capacity limits are most likely to be reached. This therefore pushes up the marginal cost of travel and thus might justify higher prices at peak times.

*2. In a full-range pricing strategy, why does the loss leader need to have price elastic demand?*

The loss leader needs to have price elastic demand, as it is this product which is used to attract customers into the shop. When the price of this good is reduced, there will be a big response in demand, which will in turn bring people into the store and they will then be more inclined to purchase other products. If it did not have a price elastic demand, then any price reduction would do little to encourage a higher level of purchases.

*3. Are price wars a sensible strategy? Can you find any other cases where price wars have developed?*

Price wars could be seen to be sensible, if you think you can win! If you don't think winning is possible, then it's probably best to avoid them! Search online through the [Sloman News Site](#), [Google News](#) and [BBC News](#) to see if you can find any other examples of price wars.

*4. Given that consumers switched from PoundWorld to the 99p store, what does it suggest about the price elasticity of demand for PoundWorld's products?*

Demand must have been price elastic, as a 1p change in price caused a significant change in demand, which led to the closure of PoundWorld. Some might argue that demand was perfectly price elastic.

## Box 6.1 Business strategy the Samsung way

### *1. What dangers do you see with Samsung's recent business strategy?*

Recent experience would suggest that, carefully managed, the Samsung approach is likely to remain a successful business strategy.

Nevertheless, rapid growth carries risks when it relies on cutting-edge products, economies of scale from supplying other companies as well as itself, and streamlining the organisation. Other companies may prefer to source from competitors or produce components themselves; also, product demand may turn out differently from Samsung's predictions and it would find that heavy up-front investment in R&D and building capacity could lead to over-capacity. For example, Samsung faced problems in the summer of 2015 when it forecast that demand for its new flatscreen Galaxy S6 would exceed that of the more expensive Galaxy S6 Edge by four to one. In reality more customers wanted the S6 Edge, which created supply problems. Some customers were forced to wait for weeks before receiving their S6 Edge handsets.

A growing threat also comes from increased competition from low-price producers in many emerging markets such as Huawei, Lenovo and Xiami in China and Micromax, Lava and Karbonn in India. There is a danger that Samsung might become 'stuck in the middle' between these low-price producers at the bottom of the market and Apple in the premium end of the market. The company announced its seventh consecutive fall in quarterly profits for the period April to June 2015.

Another issue is the ongoing legal dispute with Apple over claims that Samsung illegally copied some of the technology used in the iPhone.

### *2. What makes Samsung's policies that we have examined in this box 'strategic' as opposed to merely 'operational'?*

The policies examined in the box are long-term policies for change: e.g. developing new products, developing and introducing new technologies, positioning itself relative to its rivals, reorganising and restructuring the company. These changes are introduced in accordance with the leaders' long-term vision for the company.

## Box 6.2 The ratios to measure success

### *1. What steps might a firm take to improve (a) gross profit margin (b) net profit margin and (c) ROCE?*

- (a) Gross profit margin can be increased by increasing the gross profit made from a given level of sales. Things might include the promotion of premium or higher margin products, reducing product or delivery costs, through renegotiating with vendors and reducing labour costs. Customers pay for things they value, so identifying cost effective ways to add value will allow you to raise prices more than the cost of the value added. Therefore, differentiating your product to stop you competing on price will also improve gross profit margin.
- (b) Net profit margin can be increased by increasing the net profit made from a given level of sales. A firm should look at ways of reducing costs, without affecting sales. This might include things like making administration more efficient and thus rationalisation to cut labour costs. An increase in sales revenue would boost net profit, so for example an increase price on inelastic products would reduce demand by a proportionately smaller amount and thus increase sales revenue. As fixed costs are deducted to calculate net profit, measures that allow a more efficient use of resources, both fixed and variable, will improve net profit margin.
- (c) ROCE can be improved by increasing operating profit. However, this needs to be done without a corresponding increase in capital employed. Alternatively, the value of capital employed could be reduced, but operating profit needs to be maintained.

*2. What type of figure would you expect a green grocer to have for its stock turnover? How might this compare with a furniture store?*

Sales of fruit and vegetables etc. are low value products, but the quantity sold will be high, whereas a furniture store will sell a lower quantity, but each unit is of a significantly higher value. You would expect a green grocer to take much more frequent deliveries of stock, due to the perishable nature of its products. While holding stock can be very costly, it is vital that green grocers have sufficient stock, due to the quick turnaround of products. It is therefore very important to compare stock turnover between firms in similar industries and not between firms across vastly different industries.

*3. What are the advantages and disadvantages of offering trade credit?*

Offering trade credit to businesses is a useful way to attract and retain customers. With trade credit, businesses can purchase items today and pay for them later – often in 28 days. This helps businesses with their cash flow management and hence companies who offer trade credit will be attractive for businesses to trade with. This will also enable these companies to offer their own trade credit and hence attract other firms. A key advantage is therefore increased sales. Trade credit can also enable new firms to set up and compete, if they have a good idea, but have limited access to capital. The same also applies to firms wishing to grow. However, if firm A takes advantage of the trade credit offered by firm B, it can put firm B in financial jeopardy, as they have suppliers and workers to pay. Thus, offering trade credit can lead to bad debt and thus a poor credit history, meaning firm B is less likely to be offered trade credit in the future. Furthermore, only companies with a good credit history will be offered trade credit and this can be difficult to build up.

*4. Would you expect the current ratio or the Acid Test to have a higher figure for any given firm?*

You would expect the Current ratio to be higher, as the Acid Test subtracts stock from Current assets, as it is an illiquid asset, thus the value of current assets will be lower in the Acid Test ratio than in the current ratio.

*5. If you were looking to invest in a business, how might you interpret a company that has a gearing ratio of 80 per cent?*

The gearing ratio shows the percentage of the company's finance that is in the form debt not equity. This ratio is important because the higher the gearing ratio is, the greater the percentage of finance that is in the form of debt and debt must be repaid. Thus, if a firm has a gearing ratio of 80 per cent, then 80 per cent of its finance is through owing money to banks or other financial institutions. This debt will be repaid with interest. Therefore, this firm would be a much more risky investment for a bank or another financial institution, as before you receive a dividend or the repayment of your loan, there are many other loans that will need repaying with interest. Thus, the higher the gearing ratio, the greater the risks to a business. It can be a sound business strategy, but a gearing ratio of 80 per cent does suggest a high degree of risk.

## **Box 6.3 Recessionary strategies**

*1. Are there any other things a business should focus on to help it get through a recession? What are they and why are they important?*

There will always be other things that are important during a recession and they are likely to be different for different firms. Some firms may find focusing on advertising and marketing the best strategy, whereas for others, this may be a pointless exercise and they should instead focus on training. Other areas could include merging with another firm, if an opportunity were to present itself, such as another company in financial strife. Cash flow is vital during a recession, so firms may change their terms of credit for their customers. They may extend the length of time they offer credit in order to encourage customers, or reduce it to ensure sufficient cash flow.

*2. Select a business. How has it managed to survive the recession? (Hint: use the Internet to help you research its strategy.)*

To find a company, you might try looking at the company information section in site B2 in the [hotlinks](#) section of this book's website. Look at press releases, financial reports to see how their profits and revenue have fared. Have they cut back on staff, implemented training programmes, switched suppliers or changed their approach to marketing and advertising? Have their strategies worked? It might be interesting to compare two businesses and consider how their approaches have differed.

*3. Of the strategies considered in this box, which do you think is the most important?*

There is no correct answer here. The most important strategy will vary from firm to firm and from person to person. The key thing is to be able to justify your answer. As the conclusion to this Box says: "In a recession, there is no one-size-fits-all solution. The strategy that works for one firm will not necessarily be right for another. Unfortunately, there is no optimal solution."

## **Box 6.4 The Dyson Dual Cyclone vacuum cleaner**

*1. What conditions existed to enable James Dyson's small business to do so well in such a short period of time?*

A revolutionary new product and sufficient finance (from the Japanese sales) to invest in the necessary product development and manufacturing plant.

*2. By 2007, a robotic Dyson vacuum cleaner (the DC06) had been over six years in development, involved several prototypes and cost a considerable amount of money. How would you assess whether the venture should have been scrapped?*

There are two elements in the decision. The first is the cost of developing and manufacturing the product. When a revolutionary product is a long time in development, costs can escalate and realistic assessments and reassessments must be made at relatively frequent intervals. These best estimates of costs, which might have to include a 'low' and a 'high' estimate to give a measure of the possible range of costs, then have to be weighed against market demand. Again, there may be a high degree of uncertainty here as the product is new. Market research is essential.

Since both costs and demand are hard to estimate, risks are likely to be high. Thus the decision about whether to continue developing the product or to abandon it, will depend on the entrepreneur's attitudes towards risk. The more risk loving he or she is, the more likely the project will continue.

It is important to make sure that costs are correctly assessed. Once development costs have been incurred, they become sunk costs. Whether or not the project goes ahead, these fixed costs will still have been incurred and cannot be 'cancelled'. Thus at each stage, the assessment has to be made as to whether the future revenues will outweigh the future costs. If they do, then it is still worth going ahead even if the development costs will not be fully recouped: at least the surplus revenues can go some way to paying them off. If the project is scrapped, none of these costs will be recouped.

## Box 7.1 Merger activity

*Are the motives for merger likely to be different in a recession from in a period of rapid economic growth?*

In a period of rapid economic growth the motives for merger include: the desire to expand to take advantage of the growth in demand; to defend market share against other firms similarly trying to expand; to take advantage of the relative ease in financing the merger.

In a recession, firms are more cautious about expanding. The main opportunity for mergers in these circumstances occurs when a company is in financial difficulties and a predator company takes it over. It is more difficult to raise finance to fund mergers in a recession.

## Box 7.2 Attracting foreign investors

*1. Which countries do you think have made the most progress since the financial crisis and which countries have fallen down the rankings? Explain your answer.*

From 2013, more countries raised their composite scores than saw decreases. For many, this reflected improved post-crisis macro-fundamentals, for others pro-investment policy decisions. The Milken Institute gives Burundi as an example. 'It is near the bottom of the index (ranked 135/136) due to general institutional deficiencies related to a prolonged civil war and political instability, poor infrastructure, and extreme poverty. However, in the past few years, the government established an investment promotion plan to ease the entry of capital and created a "one-stop shop" for investment procedures and information.'

The trend from 2009 onwards, was for a general decline in the scores amongst developed nations – hardly surprising with the impact of the financial crisis, as this was felt more keenly in the developed world. With the exception of Malaysia, whose composite score has increased more than 5 percent since 2009, scores for the top 10 countries decreased, albeit slightly. New Zealand dropped 5 percent, followed by Ireland's drop of 4.6 percent. At the same time, there was a generally positive trend in the developing world. We can also see that those countries experiencing the most turmoil during this period experienced the biggest declines. Egypt and Algeria had the largest percentage drops in composite scores. Egypt's troubles were discussed previously. Algeria, decreasing 17.9 percent, saw its largest drop in the Doing Business and Rule of Law subcomponents. Since 2009, a series of restrictions on foreign direct investment have been imposed, including the requirement of at least 51 percent Algerian ownership.

Those countries implementing significant government reforms take the top spots for the biggest increases in composite score. Since 2009, countries in Eastern Europe take the top five spots for score increases, primarily the result of liberal foreign investment regimes, with Albania leading the charge.

*2. What measures might a country adopt to improve its attractiveness to foreign investors?*

Countries may implement tax breaks or offer favourable tax rates and more flexible business regulations as a means of attracting new firms. They may offer attractive rates of interest to encourage investment and saving. Technological assistance may be offered to firms. Governments may invest in infrastructure, such as transport and communications to attract new firms, as these are essential aspects to any successful business.

## Box 7.3 Grocers go global

*What are the advantages and disadvantages to developing countries of the expansion of global supermarket chains?*

The advantages include faster rates of economic growth through the increased inward investment, increased price competition eroding the market power of established retailers and providing cheaper products for

consumers, increased access for consumers to a wide range of products and the convenience of having this range of products under one roof.

The disadvantages include the effects on local retailers and suppliers. Local retailers may be driven from the market resulting in less choice for consumers and ultimately less competition. Local suppliers find their profits are squeezed as the hypermarkets demand lower prices. This can result in unemployment, local hardship and a possible decline in the quality of supplies. A large proportion of the profits of the hypermarkets may be repatriated from the country rather than being reinvested.

## **Box 7.4 Investing in China**

### *1. In what ways might a booming Chinese economy benefit the rest of the world?*

- ☐ It creates good returns for companies investing in China.
- ☐ There is a rapid growth in imports to China and hence exports from the rest of the world. This brings direct benefits to exporting companies
- ☐ There is the general benefit from the boost to the rest-of-the-world economy, with its resulting multiplier effect.
- ☐ The growth of Chinese companies and the development of products result in increased Chinese exports, with the resulting benefits to consumers in the rest of the world from increased competition and choice.

### *2. Should multinational companies be cautious about investing in China?*

China is an emerging market and, as such, is changing rapidly. One of the main concerns has been the increasing regulations and restrictions on inward investment and the rate at which they can change. This can deter foreign investors. Furthermore, with the slowdown in China's growth and the turmoil on its stock market, the future of China is not looking as bright or secure as it was a few years ago. All of this is creating uncertainty amongst investors, but not enough to knock it from its top spot as the largest recipient of FDI.



## Box 8.1 'Telecommuters'

### *1. What effect is telecommuting likely to have on (a) trade union membership; (b) trade union power?*

They are likely to lead to a fall in trade union membership, given that it is difficult to build up a spirit of worker solidarity if workers are dispersed. To the extent that this happens, trade union power is likely to diminish. If a union, however, has a careful recruitment drive which focuses on the benefits of union membership for workers who might feel isolated at home, then this could help to offset any fall in membership.

Then there is the effect of an increasing use of temporary sub-contracted workers, working from home. Unions are less able to cater for such workers, particularly if they are classed as self-employed.

### *2. How are the developments referred to in this box likely to affect relative house prices between capital cities and the regions?*

As with salaries, the differences in house prices will tend to narrow. As there is less need for people to travel into cities to work, so the demand for city houses will tend to fall and the demand for houses out of cities will tend to rise.

## Box 8.2 The Winter of Discontent

### *1. Are strikes the best course of action for workers? In the cases outlined above, would you have advised any other responses by either side?*

The best course of action will depend on the aims of the union and the extent to which previous action and discussions have been successful. In some of the cases discussed in the box, negotiations and other action had been ongoing, but had failed to achieve the aims of the union. Unionised workers, therefore, moved towards further action, which, in many of the cases above, included striking. In some cases, it may have been more beneficial to both sides to come to an agreement before strike action ensued. Striking is costly not only to the workers but also to the firm. BA workers who engaged in strike action saw many of their job perks disappear; so for them, other action may have left them better off. However, it might be that no other action was working and so striking was seen as the only option to ensure their voices were heard. It also cost the firm millions of pounds, as other staff had to be trained, flights cancelled and customers compensated. So the strike action was not in their interests either.

### *2. Which strike do you think was the most costly to (a) consumers, (b) businesses and (c) the economy? Explain.*

Opinions will vary on this question – if you were affected by a strike, as a consumer, you'll probably think this was the most costly. Many would argue that the postal strike was the most costly, as it affected so many aspects of the economy. Post and packages were delayed, affecting everyone and both small and large businesses suffered. The BA strike was also extremely costly to consumers, who were unable to fulfil holiday plans and, given that the strikes continued for several months, it could easily be argued that these were the most costly. The airline industry was massively hit by the recession and by the ash cloud, so the impact of the strikes was another burden on this struggling industry and hence on the economy. Typically national strikes are seen to be the most costly, as they affect everyone, but there is no doubt that strikes of any kind affect someone.

### *3. Why might strains on public finances lead to continued industrial unrest?*

With a huge budget deficit, public-sector cuts are inevitable and in the incoming Coalition government's emergency Budget of June 2010, we began to see the start of it. With public-sector workers earning above £21 000 having their pay frozen and with other areas of public services seeing real budget cuts, it may be

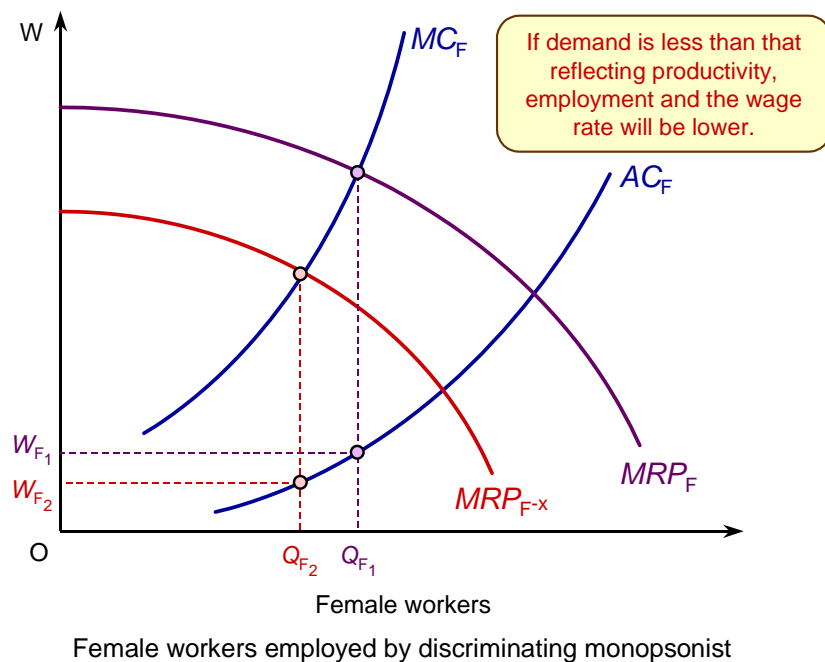


that workers in the affected sectors begin to feel hard done by. A possibility of this will be further union action. If public-sector workers see other industries receiving annual pay rises, but theirs remain frozen, there is likely to be industrial unrest. Jobs may be cut in a bid to reduce costs, which again will lead to unrest. Budget cuts are inevitable and as such, so is some degree of industrial unrest. Industrial unrest arising from cuts in government expenditure and their effects on jobs and wages were seen in Greece, France, Spain and several other countries.

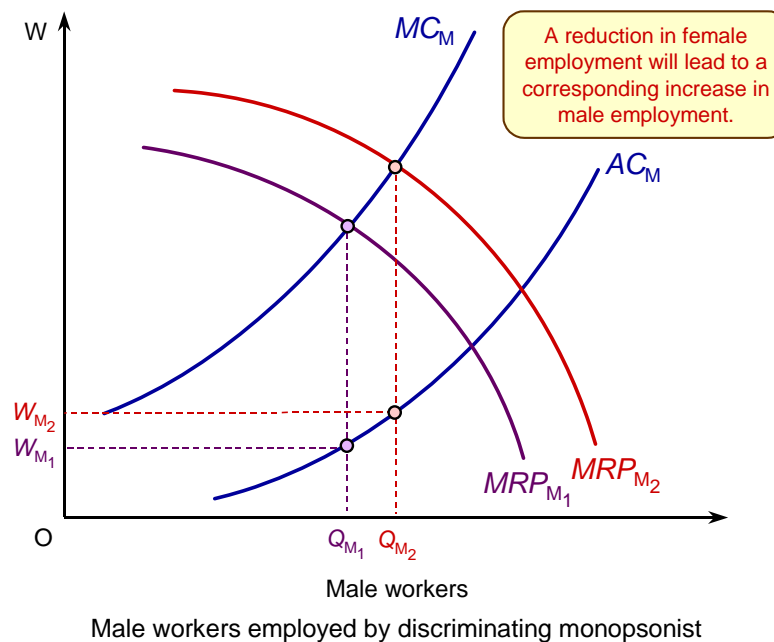
### Box 8.3 Does gender inequality still exist?

1. Drawing a diagram similar to Figure 8.5, illustrate the effect of negative economic discrimination and positive economic discrimination.

The effect of negative economic discrimination would be to shift the marginal revenue product for labour curve to the left. For example, if negative discrimination occurs against female or ethnic minority workers then their *MRP* curve will shift in by the degree of the discrimination. This will reduce the equilibrium number of workers employed and push the wage rate downwards.



Positive economic discrimination will do the opposite. For example male workers will see their *MRP* curve shifted out to the right by the degree of the positive discrimination. This will push up the equilibrium wage and increase the equilibrium number of workers employed.



*2. What measures could governments introduce to increase the number of women getting the highest paid jobs?*

Examples include: improving educational opportunities for girls and women (e.g. by increasing Access provision to higher education for mature students); improving state provision of child care and nurseries; legislation to encourage or enforce the provision of work-based crèche facilities; tougher equal opportunities legislation; operating positive discrimination (or at least insisting on genuine equal opportunities) in government jobs.

## Box 8.4 Education, earnings, productivity and talent

*1. Draw a diagram showing the possible impact of a university education on an individual's earnings.*

We can use a diagram similar to that in Figure 8.3. If a university education does lead to higher productivity, then an individual's *MPP* will rise. This will shift the whole *MRP* curve out to the right. If the supply of labour curve is horizontal, then there would be no impact on the equilibrium wage rate. However, a more realistic scenario would be for the supply of labour curve to slope upwards. In this case, when the *MRP* curve shifts to the right, reflecting an increase in that worker's productivity, the equilibrium wage rate will now rise.

*2. Do you think there is a problem of allocative efficiency with regards to the UK's productivity gap? Could online recruitment agencies help?*

Allocative efficiency in this context refers to the right people choosing to study the right subjects and then moving into the right jobs and careers. If we see lots of graduates moving into non-graduate jobs, we could say that this is allocatively inefficient, as they are effectively wasting their degree and are perhaps not living up to their true potential. We could thus say that this is inefficient for the economy – they would be more productive if they were working in a job that was more suited to their interests and skills.

Online recruitment agencies mean that firms do have access to a much larger stock of potential employees and, by employing a company to find the right person for a job, recruitment agencies are able to spend more time ensuring that the skills, motivations and interests of any applicants are efficiently matched

to what the company is looking for. Having specialised agencies doing this means that they are trained in this matching process and hence efficiency could be enhanced. However, even then information is imperfect, as neither firms nor the recruitment agencies will have perfect knowledge about potential employee's motivations, attitudes and abilities.

*3. How would you attempt to measure the marginal productivity of a person hired for a specific talent?*

It is the extra revenue that the person earns for the company over a specified time period. In practice, it is often difficult to measure this as the person's contribution to the company's revenue may be as part of a team, where each member's productivity depends on the other members of the team. In such cases, it may only be possible to measure the whole team's contribution to revenue. Then there is the question of uncertainty. Ideally a firm would like to know the marginal productivity of a person in advance of hiring them. In practice, it may only be possible to do so in retrospect.

*4. Why might companies be wise to pay talented people more than the value of their marginal product?*

In order to retain them and to act as a motivator. In other words, employers may pay them an efficiency wage (see section 8.5).

## Box 9.1 The problem of free-riders

*1. Construct a pay-off matrix similar to that in table 5.3 showing a Nash equilibrium where neither player contributes. Explain why this situation could be improved?*

Your payoff matrix should have two strategies for each player – contribute and not contribute. You should design the figures such that no matter what player A does, player B's best response is always not to contribute and no matter what player B does, player A's best response is always not to contribute. The situation could be improved if the payoffs to both players from contributing were higher than their payoffs from not contributing. This would then be identical to the prisoner's dilemma game.

*2. If you see your donations to charity as a private good, explain whether there is any externality to giving to charity?*

There would be no externality – it would be the case that individual A only cares about his/her own utility from giving to charity and not about the external effect on individuals B, C, D etc.

*3. How does charitable giving become a public good?*

Charitable giving can be viewed as a public good, as when one individual donates to charity, say to provide water to a village, then other people who have not given will also benefit from knowing that people living in that village have now got more chance of having water provided. Therefore the benefits of one person giving are felt by many others and the benefits are then non-excludable. They are also non-rival, as if one person benefits from knowing that someone else has given to charity, it does not mean that no-one else can benefit.

## Box 9.2 The Body Shop

*1. What assumptions has The Body Shop made about the 'rational consumer'?*

That people are concerned by environmental issues and will have a preference for buying products which are 'environmentally friendly': in other words, that consumer 'rationality' extends beyond narrow selfishness.

*2. How has The Body Shop's economic performance been affected by its attitudes towards ethical issues? (You could do an Internet search to find further evidence about its performance and the effects of its sale to L'Oréal.)*

Economic performance has probably been helped, as customers who are concerned for the environment are attracted to its products and its values. Of course, cynics would argue that such values amount to good business, and help The Body Shop to make more profits.

How the sale to L'Oréal will affect sales and the image of the company over the long term is still rather early to tell. The initial hostile reactions, such as the downgrading by *Ethical Consumer*, seem to have led to some initial loss of custom from 'concerned' consumers? But, with the Body Shop brand remaining unchanged and with efforts by L'Oréal to improve its approach to sustainability, the image of the Body Shop may be little affected over the long term. At the same time, the increased efforts in marketing may allow sales to continue to grow as the world economy expands post recession.

Your Internet search should reveal any recent developments.

## Box 9.3 A Stern warning

*1. Would it be in the interests of a business to reduce its carbon emissions if this involved it in increased costs?*

The answer depends partly on how ‘interests’ are defined. If environmental responsibility is part of the objectives of the company, then reducing carbon emissions could be directly in the company’s interests.

But even if interests are defined more narrowly in terms of profit, the costs of reducing carbon emissions might be less than the extra revenue earned by gaining new customers who were more environmentally aware. Also, with a carbon trading system in place, the reduced carbon emissions could allow the company to sell carbon credits at a value greater than the cost of reducing the emissions. Finally, investing in low carbon technology may allow the company to make more profits in the future.

*2. How is the concept of ‘opportunity cost’ relevant in analysing the impact of business decisions on the environment?*

Opportunity costs focus on the alternatives forgone. Thus the opportunity costs of polluting activities would include not just the private opportunity costs to the firm, such as wage costs and raw material costs, but also the external costs such as the reduction in the quality of environment and its impact on people.

*3. The Stern Report was produced in 2006, but there has been a lack of progress. Why do you think progress has been so slow?*

Governments are usually elected for terms of 4 to 5 years. Asking them to invest in technologies with pay-off timeframes of decades may be unrealistic. This was particularly difficult in the period from 2008 to 2011, when the economy was in a sustained downturn. There is some evidence that scepticism remains, but most governments appear committed to the principle of action. After all, the issue is not symmetric: if action is taken, unnecessarily resources will have been wasted and some potential growth may have been lost. If action is not taken, and it turns out to have been needed, the world may face catastrophe – albeit sometime in the future.

## **Box 9.4 The problem of urban traffic congestion**

*1. Referring to a town or city with which you are familiar, consider what would be the most appropriate mix of policies to deal with its traffic congestion problems.*

The methods you might consider are: tolls on certain roads, congestion charging in a central zone, pedestrian-only areas, speed restrictions, bus and cycle lanes, parking restrictions, increased parking charges, new roads, improved public transport, park-and-ride schemes, cheap or free school buses. In each case, if traffic is to be successfully reduced, there must be sufficiently attractive alternatives to which people can shift. Thus increasing the costs of using cars may not be enough unless more is invested in public transport to make it a reliable, cheap and convenient alternative.

In the town you chose to examine, you would need to consider where congestion is worse and what alternative solutions are feasible for dealing with it in terms of costs, effectiveness and public acceptability.

*2. Explain how, by varying the charge debited from the smart card according to the time of day or level of congestion, a socially optimal level of road use can be achieved.*

The higher the level of congestion, the higher is the marginal external cost of motoring, and thus the higher must be the charge if the charge is to equal the full marginal social cost. What this means is that if the charge increases with the level of congestion, there is an incentive for people to reschedule their journeys to non-peak times.

### **Box 9.5 From paper envelopes to canned mushrooms: the umpire strikes back**

*What factors determine the likelihood that firms will collude to fix prices – despite the prospect of facing fines of up to 10 per cent of their annual global turnover?*

The potential gain in profits from the collusion, attitudes towards law breaking and the chances of being found out.

*Why might global cartels be harder to identify and eradicate than cartels located solely within the domestic economy? What problems does this raise for competition policy?*

Firms operating in several countries tend to have more complex organisations. This tends to make their cost structure harder to ascertain and hence makes it difficult to determine whether they are charging ‘excessive’ prices. Thus one of the ‘tell-tale’ signs of collusion (high prices) may be hard to spot. Also, global cartels have more ways of combining in their mutual interest. For example, they can divide up global markets, agreeing not to compete in each other’s ‘key’ markets. This too is hard to spot by the authorities, since the absence of a particular multinational in a particular market in a particular country could have an ‘innocent’ explanation – such as the company not wanting to over-reach itself. Also, if meetings between representatives of the companies take place in different countries at different times, the meetings may be less apparent to the authorities. Finally, there may be difficulties in achieving global co-operation and co-ordinated action by the competition authorities of different countries.

## Part D: The macroeconomic environment of business

### Box 10.1 Doing the sums

*1. Think of two reasons why a country might have a steep E line, and hence a high value for the multiplier.*

Reasons include the following:

- ❑ The lower a country's national income, the higher will tend to be its  $mpc$  and thus the higher will be its multiplier.
- ❑ In some countries there is much more of a 'savings culture' and thus the  $mps$  is higher. Those with less of a savings culture will tend to have a lower  $mps$  and hence a steeper  $E$  line and a higher multiplier.
- ❑ In some countries, especially large ones, international trade accounts for a relatively small proportion of national income. In such countries only a small proportion of any rise in income will be withdrawn into imports and a correspondingly large proportion will be spent domestically. Hence the  $E$  line will be correspondingly steep.
- ❑ The marginal tax rate differs from one country to another. The lower the marginal tax rate, the higher the proportion of any rise in gross income that will be spent and hence the steeper the  $E$  line.

*2. Assume that 0.1 or any rise in income is saved, 0.2 goes in taxes and 0.1 is spent on imports. What is the  $mpc_d$ ? What is the value of the multiplier?*

The  $mpc_d$  is  $1 - (0.1 + 0.2 + 0.1) = 0.6$

The multiplier is  $1 / (1 - 0.6) = 2.5$

*3. The formula for the multiplier can also be written as  $k = 1/mpw$ . Why is this?*

We know the equation for the 45° degree line is given by  $Y = C_d + W$ , where  $W = S + T + M$ . Just as we can have a marginal propensity to consume domestically produced goods, so can we have a marginal propensity to save or to tax or to import. In each case, it gives the proportion a rise in income going in saving, taxes or expenditure on imports. We can then also have a marginal propensity to withdraw, which gives the proportion of a rise in income that goes in withdrawals.

Given that any increase in income can only go consumption of domestically produced goods and services, or on withdrawals, it must be the case that:

$$mpc_d + mps + mpt + mpm = 1.$$

or  $mpc_d + mpw = 1$

We can rearrange this to give:

$$mpw = 1 - mpc_d$$

Therefore if the normal formula for the multiplier is:

$$k = 1/(1 - mpc_d)$$

then this can be rewritten as:

$$k = 1/mpw.$$

As an example, we could have a marginal propensity to consume domestic products of 0.8. This means that the size of the multiplier is:

$$k = 1/(1 - mpc_d) = 1/(1 - 0.8) = 1/0.2 = 5$$

If we use the other formula, we know that with an  $mpc_d$  of 0.8, the  $mpw$  must be 0.2 ( $1 - 0.8 = 0.2$ ), so we have:

$$k = 1/mpw = 1/0.2 = 5. \text{ The same answer!}$$

## Box 10.2 The Economics of playing host

*1. Give some examples of industries in the rest of the UK which could have benefited from increased expenditure in London.*

Industries supplying products related to the games, either to other companies (e.g. building materials) or to competitors (e.g. sports equipment) or to the public (e.g. memorabilia, transport to the games, etc.). Then there were gains to other industries through multiplier effects. Thus sports equipment manufacturers themselves bought various inputs, thereby creating demand for other firms in their supply chain.

*2. When a nation hosts a big sporting event, there will be a multiplier effect. Why would the magnitude of the full multiplier effect on the whole economy be difficult to estimate?*

Because it is not easy to know in advance what proportion of demand is for the products of firms in the home nation and what proportion is for imports. Also it is not easy to estimate the initial increase in spending that will then generate multiplier effects. We also do not know how much people might save, and hence withdrawals from the circular flow of income are difficult to estimate.

*3. Deciding whether hosting a big sporting event is worthwhile requires a full analysis of costs and benefits, including externalities. Identify some external costs and benefits from hosting the Olympics or the World Cup.*

External costs include the disruption of the building works, the inconvenience from the increased congestion during the games, increased crime (e.g. pick pockets) and increased pollution from the extra travelling involved (e.g. aircraft emissions).

External benefits include the health gains from more people who were encouraged to participate in sports, benefits to people living in the regenerated areas, the 'feel good' factor for local people and people generally within the country from having the games located there, greater community cohesion and encouragement to tourism generally within the country.

## Box 10.3 Business expectations and their effect on investment

*1. How is the existence of surveys of business confidence likely to affect firms' expectations and actions?*

They will amplify changes in expectations. If businesspeople are gloomy and plan to reduce investment, a pessimistic report on business expectations will only confirm their gloom and may cause them to reduce investment even further. The pessimistic expectations following the Brexit vote on the EU referendum served to reduce confidence further about investment in the UK.

Similarly an optimistic report may cause firms to increase investment

*2. Why, if the growth in output slows down (but is still positive), is investment likely to fall (i.e. a negative growth in investment)? If you look at Figure (a) you will see that this happened from 1991, 1993 and in 2002, 2008 and 2012–16. (See the section on the accelerator on page 000.)*

Because firms will require a smaller increase in capital. They will thus buy fewer extra machines and other equipment: i.e. investment will fall.



## Box 10.4 Inflation and unemployment: how costly?

### *1. If you were in government, would you ever advocate zero unemployment?*

It would seem desirable that nobody would be suffering from being unemployed – indeed from a government's point of view, it would go down very well politically! But for an economy to be able to absorb everyone looking for a job, one of three conditions would have to hold, each of which brings serious problems:

- ❑ Either the economy would have to be suffering from such a huge shortage of labour that firms were providing all sorts of inducements to keep labour. The shortage of labour could be a serious constraint on some firms' ability to expand and it would probably lead to considerable inflation, which itself brings problems (see section 10.7 of the text).
- ❑ Or unemployment benefits would have to be so low (or non-existent) that people would be forced to accept work at pittance wages.
- ❑ Or the government would have to provide work for everyone who would otherwise be unemployed. But such schemes, unless carefully devised and managed, could prove an expensive way of reducing unemployment; they might not be seen as 'real work' and they could be demoralising to those involved.

### *2. Who are likely to be the winners and losers from inflation?*

Whether you gain or lose will depend on (a) whether your income tends to go ahead of, or fall behind inflation; (b) whether you are a net borrower or saver, and whether the rate of interest is above or below the rate of inflation (if it is below, then the *real* rate of interest is negative and thus borrowers will gain and savers will lose); (c) just how inconvenient you find it to update your information on prices so that you can decide whether items are good value for money. If you are on a fixed income or in a weak bargaining position then inflation will redistribute income away from you. If you own assets that rise rapidly in value, such as property, then inflation will redistribute towards you.

## Box 10.5 Inflation or deflation

### *1. What long-term economic benefits might deflation generate for business and the economy in general?*

Deflation has the long-term impact of squeezing inefficiency and waste out of business and the economy in general. As firms seek to cut costs and streamline their operations, this will make business and the economy highly competitive in global terms.

### *2. Would an inflationary China price effect be an example of demand-pull or cost-push inflation?*

It is largely demand-pull, certainly at a world level. The surging demand from China drove up the price of raw materials in the 2000s and early 2010s and this was reflected in a higher price of Chinese products. At a *national* level, however, countries faced with higher commodity prices would see this as cost-push inflation since it directly impacts on costs and is not the result of higher demand internally, even though higher commodity prices *are* partly the result of higher demand internationally, especially from China.

## Box 11.1 The fiscal framework in the eurozone

1. What effects will government investment expenditure have on public-sector debt (a) in the short run; (b) in the long run?

- (a) Increase. Unless financed by extra taxation, an increase in government expenditure (for whatever purpose) will lead to an increase in public-sector debt.
- (b) Possibly decrease. If the investment leads to extra output and income, then the extra tax revenue from the extra incomes and expenditure could more than offset the cost of the investment, thereby leading to a fall in public-sector debt.

2. If there is a danger of global recession, should governments loosen the strait-jacket of fiscal policy targets?

A highly contentious question, not least because many economists hold divergent views about the scale and scope of government intervention in economies! One may argue that it depends, in part, on the *design of the targets* or rules themselves. To what extent do the existing targets allow for the operation of the economy's automatic stabilisers arising from government expenditure and taxation? One could also argue that it depends on the *magnitude of the recession*. As the global financial and economic crisis of the late 2000s unfolded, policy-makers around the world took the view that they needed greater discretion over fiscal policy to boost aggregate demand and thereby stimulate economic growth.

In abandoning targets, governments may need to take into account potential costs. Some economists argue that one of the benefits of governments sticking to rules is that the government builds up a *reputation* which may help, amongst other things, to reduce economic volatility or keep inflation low. The cost of not sticking to rules might be that the expectations of economic agents, like workers and employers, are adversely affected. In effect, trust in targets is eroded and this may bring potential economic costs, such as higher inflation-rate expectations. More generally, the argument being made here is that, before relaxing rules, governments take into account the future costs of their relaxation. It may be that even tighter rules are needed in the future. Some economists would argue that fiscal rules were either not adhered to stringently enough before the financial crisis and/or that there was then too much of a relaxation in trying to stimulate economic growth.

Other economists are more generally opposed to the imposition of rules or of constraining discretion in the first place. They argue that governments need discretion because of the inherent volatility of economies. For them, government play an important role in helping to stabilise economies and promote economic growth, not only in the long-term, but in the short-term too.

A compromise is for rules to have the flexibility to cope with abnormal situations. This is the case with the UK Conservative government's Fiscal Mandate. Although the version published in the [Charter for Budget Responsibility](#) in the summer budget of 2015 required governments to target a public-sector surplus in normal times, and to achieve this by 2019/20, it allowed for deviation from this in times when growth was forecast to be below 1 per cent. Thus, following the Brexit vote in June 2016, the Chancellor, George Osborne, announced that the target of a surplus by 2019/10 would be postponed in the light of the forecast slowdown in the economy. This would avoid having to cut government expenditure and/or raise taxes to meet the deficit target. Such further austerity would have dampened the economy even further.

## Box 11.2 The Central Banks of the USA and eurozone

*1. In what ways is the Fed's operation of monetary policy (a) similar to and (b) different from the Bank of England's?*

- (a) The Fed, like the Bank of England, uses open-market operations to influence the money supply and thereby to make the announced discount rate the equilibrium rate. If the discount rate is raised (just as when the Monetary Policy Committee of the bank of England raises the rate of interest) then open-market sales of bonds and Treasury bills are used to back this up.
- (b) Unlike the Bank of England, however, the Fed also from time to time alters the minimum reserve ratio as a means of influencing bank lending (see last paragraph of the box).

*2. How does the ECB's operation of monetary policy differ from that in the UK?*

The ECB's primary target of inflation is similar to that of the UK's. The Bank of England does not normally attempt to control the money supply directly, whereas the ECB does have a reference value for the growth in M3. Open-market operations are used in the ECB, in the same way as the Bank of England, but the ECB set a minimum reserve ratio for eurozone banks of 2 per cent, which has now been reduced to 1 per cent to stimulate bank lending.

*3. Interest rates were cut in the eurozone, matching the rate in the UK, in May 2013 to help stimulate economic growth. Rates were then reduced further. How likely do you think it is that rate cuts over such a sustained period of time will create growth?*

When interest rates were cut by the ECB in May 2013, it was done in a bid to stimulate economic growth. However, many argued that such a small cut would have little if any effect on investment and saving. Given the weak and uncertain economic circumstances that continued in the economy, the suggestion was that both saving and investment would be unresponsive to the change in interest rates. Uncertainty was too severe in the economy and thus no change in interest rate would be sufficient to boost the economy. Despite this, further rate cuts were implemented leading to a 0 per cent rate by March 2016. Yet, the eurozone economy still remains in a precarious position.

## Box 11.2 The Credit Crunch

*1. Does securitisation necessarily involve a moral hazard problem?*

Not if banks are no longer convinced that the risks will be born by other banks, who themselves may get into difficulties. Once such risks are underwritten by the central bank, however, the problem of moral hazard can become serious unless accompanied by tighter regulation to prevent banks taking undue risk.

*2. How significant was the decision by Janet Yellen, the Chair of the Federal Reserve, to raise interest rates and how might this affect the global economy, given that many countries were still in precarious positions?*

Perhaps part of the aim of the Federal Reserve in raising interest rates was the need to begin the return to normality, after almost a decade of record-low interest rates. Although the rate rise was modest, its significance should not be understated. The rate rise was a signal that the US economy was sufficiently strong for the long road back to normal could begin. Growth was fairly good, employment high and although inflation was below target, the rate rise might signal that prospects were good.

There are global implications including higher debt repayments for emerging market governments and businesses, as the amount owed is denominated in dollars. It also means savers begin to see some rewards (if

only marginal ones), while those with debts and variable rate mortgages will see small increases in monthly repayments. Capital will respond to the rate change, being encouraged across the Atlantic in expectation of better returns. The rate rise has also pushed up the dollar, which is good for European and Asian economies, as it improves the competitiveness of their exports.

This rate rise was also seen as a possible signal for other countries to follow suit. Mark Carney, Governor of the Bank of England, commented that rate rises were still being considered by the MPC and that when the first rate rise came (of which we can be certain), it will be in a similar way to the US – modest increases. As it turned out, the uncertainty caused by Brexit vote in June 2016 put any such increases on indefinite hold, with a *reduction* being considered instead.

The way in which the US economy (and indeed the world) responds to US interest rate rises will influence the actions of other central banks. If the US economy begins to slow, many will argue that the rate rise came too early, but if the market reads this as the powerhouse economy of the US returning to normal, then it could trigger further rate rises internationally.

*3. Why may supplying extra liquidity to banks not necessarily be successful in averting a slow-down in borrowing and spending?*

If banks choose to hold a higher liquidity ratio, they may still be reluctant to lend unless the rise in liquidity is substantial. Also if they are concerned about the state of the economy, again they may be reluctant to lend, fearing a rise in defaults as firms fail and individuals lose their jobs. At the same time the *demand* for loans may decrease if people rein in spending, fearing that their future income may fall.

*4. Why is there a potential moral hazard in supporting failing banks? How could the terms of a bailout help to reduce this moral hazard?*

Because it might encourage banks to carry on with risky behaviour, knowing that in the last resort the ‘tax payer’ will bail them out. It might encourage financial institutions to believe that they are too big to fail. Tough terms of the bailout will help to keep the moral hazard to a minimum. The central bank may only be willing to lend to the banks in return for tighter control over the banks’ activities, such as insisting that bonuses for senior management are cut substantially. The bailout may come in the form of full or partial nationalisation, as in the case of the Royal Bank of Scotland and the Lloyds Banking Group – something that bankers and their shareholders would much rather avoid. If the design of the interventions is correct then moral hazard can be reduced or avoided. In the case of the US interventions, for instance, this meant providing help for clearly identified periods of time and, as with the TARP scheme, giving the US authorities potential part-ownership of the financial institutions.

Central bank requirements on banks that they increase their capital reserves has reduced the risk of bank failures in the future.

## **Box 11.4 Japan’s volatile past and present**

*1. If government spending was rising and taxes were falling, why would aggregate demand not increase?*

Holding other things constant, an increase in government spending ( $G$ ) will directly increase aggregate demand, as it is one of the components ( $AD = C + I + G + X - M$ ). Taxes have an impact on various components of aggregate demand, such as consumption and investment, and again, holding other things constant, tax cuts would also be expected to increase it.

However, the main reason why the expansionary fiscal policy in Japan was so ineffective was that, at the same time as these stimulus packages were being implemented, the other components of aggregate demand were changing in the ‘wrong’ direction. The yen had appreciated significantly and this reduced the competitiveness of Japanese exports and hence  $X$  was falling. Both consumers and businesses were

pessimistic. Many firms had high levels of debt following their growth in the 1980s, when the economy was expanding rapidly and with sluggish domestic growth and low export demand, profits were declining. Consumers, uncertain about the future, chose to save much of their 'extra' money from the tax cuts and hence consumer spending increased only marginally. Thus, the increases in government spending and cuts in taxation were not big enough to offset the changes in the other key components of aggregate demand, making the expansionary fiscal policy relatively ineffective.

*2. If tax cuts are largely saved, should an expansionary fiscal policy be confined to increases in government spending?*

Under these conditions, increases in government spending, provided they are direct expenditure on output-generating activities, will be more effective than tax cuts in stimulating a recovery.

*3. What are Japan's three arrows and have they been successful?*

Japan's three arrows refer to the economic policies of Shinzo Abe when he came to power in 2012. These arrows are (a) expansionary monetary policy, (b) expansionary fiscal policy and (c) supply-side reforms.

In terms of monetary policy, the first arrow, Bank of Japan has engaged in extensive quantitative easing through bond purchases in order to drive down the exchange rate, stimulate expenditure and increase the rate of inflation. A target inflation rate of 2 per cent has been set by the Bank of Japan. Part of the problem for the Japanese economy over the years has been stagnant or falling prices. Japanese consumers have got used to waiting to spend in the hope of being able to buy at lower prices. Similarly, Japanese businesses have often delayed stock purchase. By committing to bond purchases of whatever amount is necessary to achieve the 2 per cent inflation target, the central bank hopes to break this cycle and encourage people to buy now rather than later.

The second arrow, fiscal policy, refers to the expansionary government spending on infrastructure projects and other public works that have been undertaken. This is despite having the highest debt to GDP ratio in the developed world. It also refers to the long-term fiscal consolidation (i.e. reducing the deficit) which will occur as economic growth picks up.

In terms of the third arrow, supply-side policy, Shinzo Abe has identified a series of goals his government would like to achieve in order to boost capacity and productivity. These include increasing private-sector investment (both domestic and inward), infrastructure expenditure (both private and public), increasing farmland, encouraging more women to work by improving day-care facilities for children, and deregulation of both goods, capital and labour markets.

At the time of writing, July 2016, the three arrows have not been particularly successful, as the economy was back in recession in late 2015.

## **Box 11.5 Productivity**

*1. Identify some policies a government could pursue to stimulate productivity growth through each of the above means.*

- ❑ Giving firms grants and/or tax relief for investment; reducing delays in hearing planning applications.
- ❑ Putting more public money into education, training, R&D and infrastructure; better auditing to ensure that such money is used efficiently.
- ❑ Reducing barriers to trade (section 12.2) and outlawing various anti-competitive practices (section 9.5).

Many of the supply-side policies that are considered in section 11.3 are designed to increase productivity.

*2. Another way of measuring labour productivity is to use output per worker. Is this a better method of measuring labour productivity than GDP per hour worked? How might we explain differences in productivity between the nations shown in figure (a), especially if we use different means of measurement?*

Generally it is felt that output (GDP) per hour is a better measure of productivity than output per worker. Output per hour has the advantage that it is not influenced by the *number* of hours worked. So for an economy like the UK, with a very high percentage of part-time workers on the one hand, and long average hours worked by full-time employees on the other, such a measure would be more accurate in gauging worker efficiency.

Differences in productivity between countries can be explained by:

- (a) *Differences in the size and quality of the capital stock.* The UK has suffered from years of lower investment than the other three countries. The resulting poorer capital stock explains the UK's lower output per hour.
- (b) *Hours worked.* Workers in the USA work longer hours and have shorter holidays than workers in France and Germany. Thus output per worker is higher in the USA, but output per hour is higher in France and similar to the USA in Germany. GDP per hour worked is only lower than the UK's in Japan.
- (c) *Unemployment.* Unemployment is lower in the UK and the USA than in France and Germany. This helps to explain why output per person of working age is higher in the UK and USA than in France and Germany.

*3. The productivity slowdown in the developed economies began before the financial crisis. What can explain this slowdown?*

Although productivity growth was severely affected by the recession and has failed to increase since the recession, it had been in decline since around 2005, when the USA started to see a slowdown. Much of this is thought to have been driven by the fact that the productivity growth that had been experienced following the information technology boom in the second part of the 1990s was now beginning to fade. Gains in productivity were thus slower and this spread across to Europe and Japan. Here, we have economies who had tended to adopt technology and innovation at a slower pace, especially in the services sector, and so, with the decline in the USA, productivity also began to fall elsewhere.

In the UK, the more flexible labour markets, with many people on zero-hour contracts, have meant that there has been less investment in training and many workers feel more detached from their work. Also it has meant that many people are 'underemployed' – working fewer hours than they would like. Although this keeps the official unemployment rate down, it has meant that productivity has not risen, especially when measured by output per worker.

## Box 12.1 The changing face of comparative advantage

*Why are countries likely to see their comparative advantage change as they develop?*

As countries develop, they will need to move from producing primary products to secondary items, such as a move to manufacturing. The development process also uses up more and more resources, thus countries often have no choice but to move away from their initial comparative advantage to another. As countries develop, labour costs begin to increase and thus there has to be a move away from labour-intensive industries towards more capital intensive industries. More developed countries must now make use of the new abundant resource and this therefore means a change in comparative advantage.

## Box 12.2 Strategic trade theory

*1. In what other industries could the setting up of a consortium, backed by government aid, be justified as a means of exploiting a potential comparative advantage?*

In industries where the market is currently dominated by one or two companies, where capital costs are very high and hence where there are significant economies of scale, and where the existing companies could put up barriers to the entry of new firms. An example might be the computing operating systems industry, or the chemical industry.

*2. Is it only in industries that could be characterised as world oligopolies that strategic trade theory is relevant?*

Yes, since it is in such industries that existing firms can erect barriers to the entry of new firms into the international market.

## Box 12.3 Beyond bananas

*Why does the WTO appear to be so ineffective in resolving the disputes between the EU and USA?*

Because both the USA and the EU have considerable economic and political power and can thus bring considerable pressure on the WTO.

## Box 12.4 Preferential trading

*1. What factors will determine whether a country's joining a customs union will lead to trade creation or trade diversion?*

- ☐ The size of the external tariff. The higher the external tariff, the more likely it is that trade diversion will take place.
- ☐ The difference in costs of production between countries inside and outside the union. The smaller the cost differences, the more likely it is that trade diversion will take place.



2. *Using the Internet, identify some other preferential trading arrangements around the world and their various features.*

Here are the sites for a few:

[NAFTA](#)

[ASEAN](#)

[APEC](#)

[East African Community \(EAC\)](#)

[ECOWAS](#) (West African States)

[Andean Community](#)

[Caribbean Community \(CARICOM\)](#)

[Central American Integration System \(SICA\)](#)

[MERCOSUR](#) (Southern Cone countries of South America)

See also [South American trade agreements](#)

## **Box 12.5 In or out? The EU referendum debate**

1. *Use an aggregate demand and aggregate supply diagram to explain George Osborne's point that the Bank of England will either have to tackle inflation or unemployment.*

Inflation and unemployment typically move in opposite directions, such that when inflation is low, unemployment tends to be high and *vice versa*. If aggregate demand rises, for example, the economy begins to grow and this will reduce unemployment. At the same time, this will also push up prices and cause demand-pull inflation. A fall in aggregate demand will push down prices, but will also increase unemployment, hence we have a short-term trade-off.

2. *Why might house prices fall with a British exit?*

The overall impact of house prices would depend on the impact on the economy as a whole and in particular on the level of cross-border investment. If this rises, house prices could increase, but if it falls with an exit, house prices could also fall. If immigration from the EU falls, then the demand for houses in the UK will fall and this could push down house prices. 'A KPMG poll of 25 global real estate investors with assets under management of over \$400bn has revealed today that two thirds believe a Brexit would result in less inward investment into UK property and property companies.'<sup>1</sup> The prediction is also that the level of uncertainty in the economy will adversely affect the housing market. However, if as expected, interest rates remain lower for longer with a UK exit, first time buyers will have more chance of getting on the property ladder.

3. *Mark Carney suggested that a British exit might cause the pound to fall. Why could this happen?*

With a British exit, many expect that inward investment into the UK will fall. Also the Bank of England might have to cut interest rates, increase quantitative easing and ease capital requirements on banks. These would cause the demand for the pound to fall and the supply of pounds to buy foreign currencies to rise. This would push down the exchange rate. The uncertainty surrounding the future of the UK's membership with the EU had already pushed the pound down prior to the vote and analysts suggested that it could weaken so much that it might reach parity with the euro. A fall in the pound would be good news for people coming to the UK and for UK companies exporting, as it would increase the competitiveness of UK goods.

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<sup>1</sup> Isabelle Fraser and Anna White, 'Billionaire investors sound Brexit alarm for property market: but how does this affect your house price and the supply crisis?', *The Telegraph* (3 April 2016)



### **Box 13.1 The importance of international financial movements**

*Why do high international financial mobility and an absence of exchange controls severely limit a country's ability to choose its interest rate?*

Because barriers sometimes enable them to gain at the expense of other member countries, or because barriers benefit some individual pressure group (like sheep farmers, or the car industry).

### **Box 13.2 Exchange rate fluctuations and the plight of SMEs**

*Are SMEs likely to find it easier or harder than large multinational companies to switch the source of their supplies from countries where the pound has depreciated to ones where it has appreciated?*

To the extent that large multinational companies have (a) greater buying power, (b) a bigger network of alternative suppliers and (c) greater knowledge of where alternative supplies can be sourced, so they will be more able to switch suppliers than SMEs. Where SMEs may have an advantage, however, is when they are highly specialised. Although such SMEs may be small in absolute terms, they may be relatively large in their particular market segment. That may give them the specialist knowledge, contacts and bargaining power to switch suppliers with relative ease. A lot, of course, depends on the extent to which suitable alternative suppliers are available.

### **Box 13.3 The euro/dollar seesaw**

*Find out what has happened to the euro/dollar exchange rate over the past 12 months. (You can find the data from the Bank of England's Statistical Interactive Database at <http://www.bankofengland.co.uk/statistics>). Explain why the exchange rate has moved the way it has.*

Your explanation will need to include what has happened to growth rates and interest rates and what people's expectations are about future growth rates and interest rates.

### **Box 13.4 A Worldwide Epidemic**

*Do you see any problems arising from a strengthening of global economic and financial institutions?*

There is a collective gain to countries from coming together in order to achieve greater global economic and financial stability. Each individual country, nevertheless, would have to agree to take decisions which might be directly against its short-term national interests. Each country may therefore be tempted to break agreements.

Clearly there is a parallel with oligopoly. Collusion is in the collective interests of oligopolists, but each will be tempted to cheat.

The greater the number of countries/oligopolists in an agreement, and the more divergent their individual economic circumstances, the greater the likelihood of one country/oligopoly breaking the agreement, and the less the commitment, therefore, of countries/oligopolists in general to the agreement.

There are also issues surrounding how to fund international institutions. For instance, the global financial crisis posed enormous challenges for the IMF. What rules are used to decide on contributions by member countries?