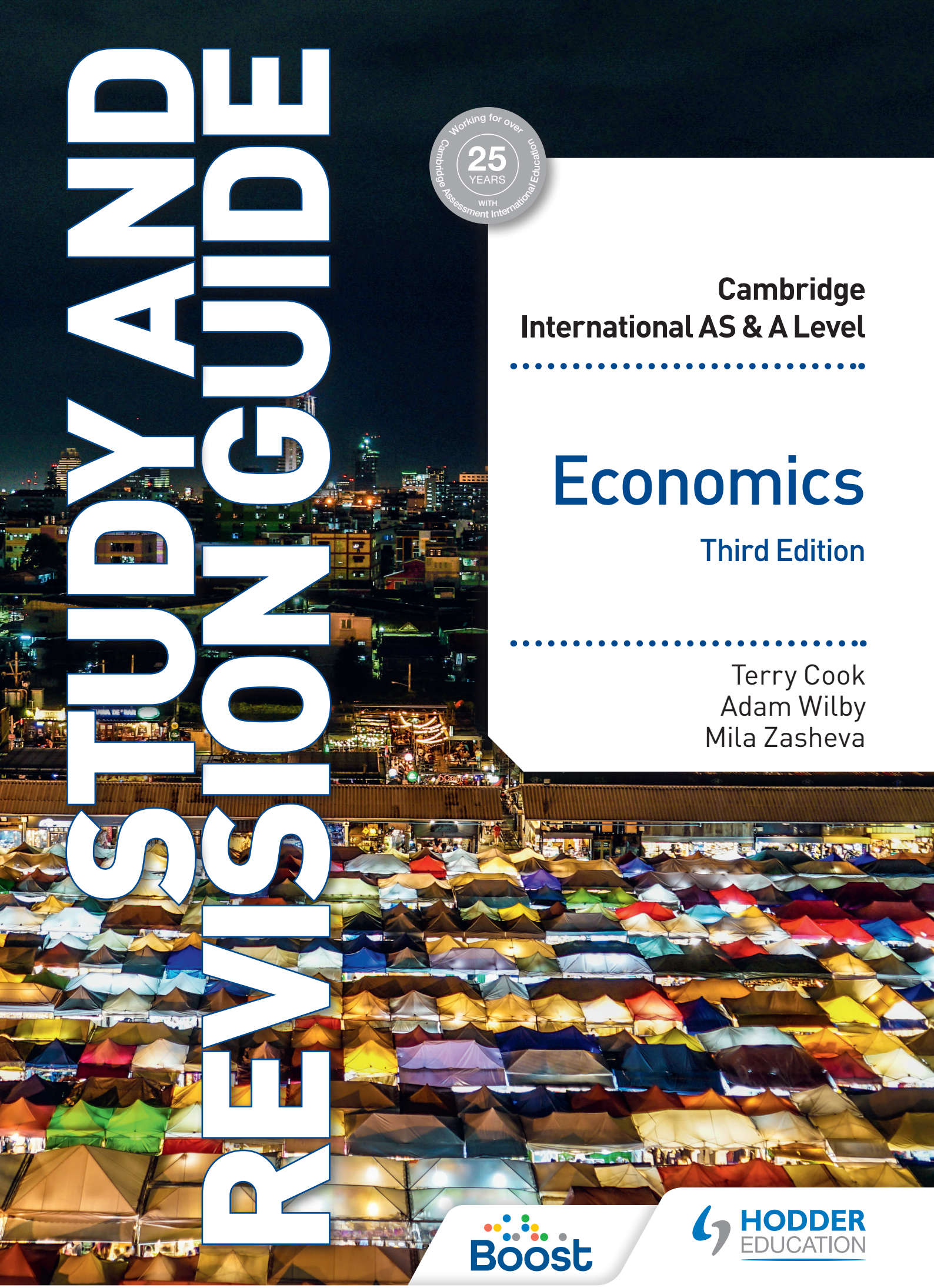
STUDY AND REVISION GUIDE



Working for over 25 YEARS with Cambridge Assessment International Education

Cambridge International AS & A Level

Economics

Third Edition

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Boost

HODDER EDUCATION

My revision planner

AS LEVEL TOPICS

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A LEVEL TOPICS

AS LEVEL

1 Basic economic ideas and resource allocation

1.1 Scarcity, choice and opportunity cost

The fundamental economic problem and scarcity

REVISED

- Scarcity refers to the fact that at any moment in time, the output that an economy is able to produce will be limited by the resources and technology available. People's **wants** and **needs**, however, will always exceed the **resources** available to satisfy them — in other words, these wants and needs are unlimited. This is known as the fundamental **economic problem**.
- As a result of this condition of scarcity, choices must be made.
- In all economies, therefore, there is an inevitability of choice at all levels of decision making — at the level of the individual, the firm and the government.

This focus on choice stresses the need to recognise the implications not only of choosing one thing, but also of *not* choosing something else. **Opportunity cost** is the benefit forgone from not choosing the next best alternative. An example is using a piece of land for farming purposes rather than building a factory on it.

STUDY TIP

It is important that candidates fully understand the difference between a *want* and a *need*, and can clearly demonstrate this understanding to the examiner.

KEY SKILL

Application: an example of a *want* would be a new car or television and an example of a *need* would be food or shelter.

KEY TERMS

wants: items that are not essential for survival (e.g. a new car or television)

needs: items that are essential for survival (e.g. food or shelter)

resources: the inputs available to an economy for use in the production of goods and services

economic problem: a situation where there are not enough resources to satisfy all human needs and wants

opportunity cost: the benefit forgone from not choosing the next best alternative

The need to make choices at all levels

REVISED

As a result of the condition of scarcity, choices must be made. This could be at the level of:

- individuals
- firms
- governments

The nature and definition of opportunity cost, arising from choices

REVISED

The focus on choice stresses the need to recognise the implications not only of choosing one thing, but also of *not* choosing something else. This is known as opportunity cost.

STUDY TIP

Candidates sometimes define opportunity cost as the benefit that is forgone (or sacrificed) as a result of taking a decision. But it is not the result of any random choice; it is the cost of the next best alternative forgone.

KEY CONCEPT

Scarcity and choice: the fundamental problem in economics is that resources are scarce and wants are unlimited, so it is always necessary to make a choice between competing uses for the resources and there is always an opportunity cost in making this choice.

The basic questions of resource allocation

REVISED

The emphasis on choice focuses on three basic economic questions:

- what to produce
- how to produce
- for whom to produce

KEY SKILL

Problem solving: understanding the potential missed opportunities forgone by economic agents when choosing one policy over another allows for better decision making.

STUDY TIP

Candidates should emphasise the importance of needing to make a choice as a result of the condition of scarcity. Although choice can apply to various areas of economic activity, these three economic questions are the most fundamental ones.

The three basic economic questions are solved in different ways in various economies — in other words, resource allocation can be approached through different systems or *mechanisms*, as section 1.4 of this chapter shows.

NOW TEST YOURSELF

TESTED

1 Explain what is meant by the 'economic problem'.
2 Analyse why 'opportunity cost' is such an important concept in economics.

1.2 Economic methodology

Economics as a social science

REVISED

A social science can be defined as the scientific study of human society. Can economics be regarded as a social science?

- Economics is social in the sense that it studies different aspects of human behaviour and, in particular, the choices that humans make.
- Economics is a science in the sense that it uses an organised system of theories and facts capable of making verifiable predictions.
- Economics can therefore be regarded as a social science because it uses scientific methods to establish theories that can help explain the behaviour of individuals, groups and organisations in societies.

NOW TEST YOURSELF

TESTED

3 Discuss to what extent economics should be described as a 'social science'.

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Positive and normative statements

REVISED

It is important in economics to be able to distinguish between two different types of statements — positive statements and normative statements.

- A **positive statement** is one that can be checked against the facts to decide whether it is true.
- A **normative statement**, on the other hand, reflects the norms or values of the person expressing the statement — such a statement will involve a **value judgement** and will reflect someone's personal opinions. Normative statements often include the words 'should' or 'ought to'. The distinction between facts and value judgements is therefore very important in economics.

STUDY TIP

Candidates should understand that economics is one of the social sciences, so positive statements play an important role in the subject, offering an objective approach, whereas, in contrast, normative statements are more subjective and are reflections of value judgements.

KEY TERMS

positive statement: a statement that is factual and objective

normative statement: a statement that is subjective and expresses a value judgement

value judgement: an opinion that reflects a particular point of view

REVISION ACTIVITY

Read an economics article in a newspaper or a magazine and select three positive statements and three normative statements.

The meaning of the term 'ceteris paribus'

REVISED

- Although economics is one of the social sciences, with many aspects of the subject involving scientific analysis, it is not really possible to study human behaviour under laboratory conditions.
- However, economic theory does assume that certain aspects of human behaviour can be held constant.
- This assumption of **ceteris paribus**, that other things are equal, means that economists can analyse one aspect of human behaviour at a time. For example, in this way it has been possible to put forward **economic laws** of demand and supply. These economic theories have been put forward in relation to both **microeconomics** and **macroeconomics**.

STUDY TIP

Candidates should appreciate that it is virtually impossible to keep all variables constant, and this is why economists use the concept of ceteris paribus to indicate the idea of 'everything else being held constant'. This idea can be brought into a number of answers, such as showing the relationship between changes in the price of a product and changes in the demand for that product. If ceteris paribus applies, all other possible influences, such as changes in income, can be assumed to be constant.

KEY TERMS

ceteris paribus: a Latin term that literally means 'other things being equal'

economic law: an economic theory put forward by economists (e.g. the laws of demand and supply)

microeconomics: the study of the behaviour of relatively small economic units (e.g. particular individuals, households or firms)

macroeconomics: the study of economics at the national and international levels

REVISION ACTIVITY

Consider whether, without the concept of ceteris paribus, it would be possible to regard economics as a social science.

The importance of the time period

REVISED

Economists, when analysing economic behaviour, distinguish between three different time periods:

- **Short run:** this refers to that time period in which only certain factors of production (factors of production are covered in section 1.3 of this chapter) can change. These are known as 'variable factors'. In the short run it is not possible to change the 'fixed factors'. For example, in the short run it may be possible to change labour, but the same capital will need to be used.
- **Long run:** this refers to that time period when the inputs of all factors of production can be changed — for example, it will be possible to vary *both* labour and capital in the long run. It is not possible to define exactly how long the short run or the long run is because it will vary depending on the particular circumstances.
- **Very long run:** this refers to that time period when supply conditions can change because of technical progress. In both the short run and the long run, technical progress is assumed to be held constant. In the very long run, however, technical progress can change — for example, as a result of a new invention in a particular industry — and this will have an effect on the supply conditions in that industry.

KEY TERMS

short run: the time period when it is not possible to change all of the factors of production

long run: the time period when it becomes possible to change all of the factors of production

very long run: the time period when technical progress is no longer assumed to be constant, as is the case in the short run and the long run, and the conditions of supply in an industry can be affected, e.g. by the impact of a new invention

KEY CONCEPT

Time: economic conditions change in different time periods, such as the short run, the long run and the very long run. Individuals, firms, markets and governments are able to respond to these changes in different ways depending on the time frame.

1.3 Factors of production

The nature and definition of factors of production

REVISED

Production in an economy can take place in three sectors:

- **Primary sector:** this is the extractive sector, where minerals are taken from the ground, and is concerned with production in areas of an economy such as farming, fishing, forestry, mining and quarrying.
- **Secondary sector:** this is the manufacturing and construction sector, working with the resources that have been extracted in the primary sector, and is concerned with areas of an economy such as car production and the construction of airport runways.
- **Tertiary sector:** this is the services sector and is concerned with wide areas of economic activity such as banking, insurance, tourism, teaching, medicine and the law.

KEY TERMS

primary sector: production that takes place in agriculture, fishing, forestry, mining, quarrying and oil extraction

secondary sector: production that takes place in manufacturing, construction and energy

tertiary sector: production that takes place through the provision of services

NOW TEST YOURSELF

TESTED

4 Explain, with the aid of examples, why production in an economy consists of a primary sector, a secondary sector and a tertiary sector.

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There are four factors of production:

- **Land:** this refers to all the natural resources that can be used in the process of production. It can include farmland, forests, lakes and rivers and all the mineral deposits of a country, such as coal or oil.
- **Labour:** this refers to all the human input into the process of production. It refers not just to the people themselves, but to their skills, training, education and qualifications. It can also be referred to as 'human capital' or 'intellectual capital'.
- Physical **capital:** this refers to the human-made aids that can be used in the process of production. It can refer to equipment, machinery and factories.
- **Enterprise:** this refers to the factor that brings the other factors of production together to produce products. The individual who combines the other factors of production, and takes a risk in doing so, is an **entrepreneur**.

KEY TERMS

land: the factor of production that includes all the gifts of nature, or natural resources, that can be used in the process of production (e.g. minerals, forests and the sea)

labour: the factor of production that includes all the human effort that goes into the process of production, both mental and physical

capital: the factor of production that includes all the human-made aids to production (e.g. tools, equipment and machinery)

enterprise: the factor of production that refers to taking a risk in organising the other three factors of production

entrepreneur: the individual who takes a risk in combining the factors of production

STUDY TIP

Candidates often confuse the use of the term 'capital' as a factor of production with another use of the term to refer to money. It is important that these two meanings of the term are carefully distinguished.

NOW TEST YOURSELF

TESTED

5 Analyse why the factor of production, capital, makes such a vital contribution to the process of production.

REVISION ACTIVITY

Analyse the changes in the primary, secondary and tertiary sectors as a country becomes more economically developed.

REVISION ACTIVITY

Analyse the contribution of the four factors of production to a particular industry, such as car production or agriculture.

The difference between human capital and physical capital

REVISED

- **Human capital** refers to the human component of production — that is, the talent, knowledge, abilities, training, education and skills of the labour force.
- **Physical capital** refers to the non-human resources used in the production of goods and services — for example, the tools, equipment, plant, buildings and machinery.

STUDY TIP

Candidates often confuse the terms 'human capital' and 'physical capital'. It is important that these two terms are clearly distinguished.

KEY TERMS

human capital: the skills, knowledge and experience possessed by a population in terms of their value or cost to a business or an economy

physical capital: the tangible, human-made objects that a business uses to produce goods and services (e.g. tools, machinery and equipment)

The rewards to factors of production

REVISED

The rewards to the factors of production are as follows:

- **Rent:** the reward to land.
- **Wages** or **salaries:** the reward to labour.
- **Interest:** the reward to capital.
- **Profit:** the reward to enterprise; many enterprises aim for *profit maximisation*.

KEY TERMS

rent: the price paid for the use of land

wage: the reward to labour based on the number of hours worked multiplied by an hourly rate of pay

salary: the reward to labour on an annual basis

interest: the reward for parting with liquidity; the reward to capital for the use of the human-made aids to production

profit: the reward to enterprise, defined as the difference between total revenue and total costs

Division of labour and specialisation

REVISED

Specialisation refers to a process of concentration on a particular aspect of production:

- A car assembly line is a good example of the way in which a manufacturing process can be broken down into a sequence of specific tasks. Workers will concentrate on, or *specialise* in, these particular tasks, giving rise to a **division of labour.**
- One of the first studies of this process was by the Scottish economist **Adam Smith**, who described in his book *The Wealth of Nations* (1776) how division of labour in a pin factory enabled a great many more pins to be produced than if each worker tried to do everything him- or herself.

The concept of specialisation is also discussed in the context of international trade in Chapter 6, section 6.1.

KEY TERMS

specialisation: the process whereby individuals, firms and economies concentrate on producing those products in which they have an advantage

division of labour: the way in which production is divided into a sequence of specific tasks which enables workers to specialise in a particular type of job

Adam Smith: one of the founding fathers of economics (1723–90) and author of *The Wealth of Nations*, published in 1776

KEY SKILL

Application: Adam Smith pointed out that the process of producing pins involved 18 specific operations. If one person did all of these, that person would be able to produce 20 pins a day. However, if division of labour was applied, it would be possible for each worker to produce 4,800 pins a day.

REVISION ACTIVITY

Discuss whether the advantages of division of labour always outweigh its disadvantages.

The role of the entrepreneur in contemporary economies

REVISED

Entrepreneurs play a crucial role in contemporary economies, performing two key functions:

- **Organisation:** entrepreneurs are responsible for organising and coordinating the other factors of production — land, labour and capital — to produce goods and services.
- **Risk:** entrepreneurs take a risk in performing this organisation and coordination function; this arises from the uncertainty that will be a feature of any initiative they take. Although there are many famous entrepreneurs in the world, who have had success in a number of different business ventures, there are many others who have failed.

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NOW TEST YOURSELF

TESTED

6 Assess why it is important that there is one factor of production that is responsible for organising the other factors.

7 Analyse the role of the entrepreneur in contributing to the development of contemporary economies.

Contemporary economies have provided many opportunities for the development of an **enterprise culture**. This is where people are imaginative and creative, and are willing to take risks in order to gain profit.

There are a number of ways in which a government could encourage the development of an enterprise culture, including:

- supporting business start-up programmes
- encouraging venture capital financing (this is where private investors provide finance to start-up businesses that are believed to have good long-term growth potential)
- providing grants to support research and development
- policies to promote competition in markets, such as deregulation (this is covered in Chapter 8, section 8.1)
- development of appropriate education and training to improve the quality of human capital
- financial support for the development of technology parks and the fostering of innovation
- favourable tax treatment for start-up businesses in the form of tax incentives
- reducing administrative burdens, such as less 'red tape' in the form of excessive bureaucratic paperwork

KEY TERM

enterprise culture: an economy in which taking a risk in the production of new products is encouraged in the hope of making a profit

1.4 Resource allocation in different economic systems

Decision making and resource allocation in market, planned and mixed economies

REVISED

An **allocative mechanism** is needed for deciding how economic goods (see section 1.6 of this chapter) that are scarce are produced and consumed.

KEY TERM

allocative mechanism: a method of taking decisions about the different uses that can be made of factors of production

STUDY TIP

Although an allocative mechanism is necessary to allocate economic goods, *free goods* (see section 1.6 of this chapter) that are in sufficient supply to satisfy demand do not need an allocative mechanism.

There are three different types of allocative mechanism:

- market economies
- planned economies
- mixed economies

STUDY TIP

Candidates should understand that every country in the world (and there are over 200 countries) will allocate its scarce resources in different ways. This range of allocative mechanisms is so broad that economists have focused on three main types: market economies, planned economies and mixed economies.

Market economies

In a **market economy**, the allocation of resources is left to the **market** forces of demand and supply, operating through the price mechanism. The advantages and disadvantages of the market economy are shown in Table 1.1.

KEY TERMS

market economy (or **market system**): an economy where decisions about the allocation of resources are taken through the price mechanism

market: a way in which buyers and sellers come together to exchange products

▼ Table 1.1 Advantages and disadvantages of the market economy

Advantages of the market economy	Disadvantages of the market economy
• Decisions are made by individual consumers, who act in their own self-interest, i.e. seek to maximise their utility or satisfaction when they consume a product. • Decisions are made by individual producers, who act in their own self-interest, i.e. seek to maximise their profits. • The use of the price mechanism to allocate resources (referred to as 'the invisible hand' by the Scottish economist Adam Smith) means that there is no need for any government intervention in the allocation of resources. • Competition between firms can lead to greater efficiency.	• Some products will be underprovided and underconsumed in a market economy; these are known as merit goods (e.g. education and healthcare). Merit goods are covered in section 1.6 of this chapter. • Some products will be overprovided and overconsumed in a market economy; these are known as demerit goods (e.g. alcohol and tobacco). Demerit goods are covered in section 1.6 of this chapter. • Some products will not be provided or consumed at all in a market economy because it would be impossible to charge a market price for them; these are known as public goods (e.g. defence and lighthouses). Public goods are covered in section 1.6 of this chapter. • Income and wealth disparities can be very significant.

Planned economies

Planned economies, also known as **command economies**, involve the allocation of scarce resources through government intervention with no (or very little) scope for market forces to operate. The advantages and disadvantages of planned economies are shown in Table 1.2.

KEY TERM

planned (or **command**) **economy**: an economy where decisions about the allocation of resources are taken by the state

▼ Table 1.2 Advantages and disadvantages of the planned economy

Advantages of the planned economy	Disadvantages of the planned economy
• Government intervention in the allocation of resources means it can take decisions in the national interest (e.g. it can prevent the production of socially undesirable products such as drugs). • The government can intervene to bring about a more equitable distribution of income and wealth.	• A system with such a large amount of government influence and control will tend to be bureaucratic and, as a result, may be inefficient. • The lack of competition and the lack of the profit motive mean that products are often of poor quality with consumers having little choice.

Mixed economies

A **mixed economy** combines elements of both market economies and planned economies — in other words, there is some degree of state ownership and state intervention, but in many areas of the economy market forces will be allowed to operate.

It could be argued that all economies today are, to some extent, mixed economies. However, there are large differences between, say, China, where the government still plays an important role in the allocation of resources, and the USA, where the government has only a limited role in the allocation of resources.

KEY TERM

mixed economy: an economy where the allocation of resources is decided both by market forces and by the state

KEY SKILL

Evaluation: you need to be able to evaluate the strengths and weaknesses of the different types of allocative mechanism, coming to a judgement as to which is preferable and why. For example, a strength of a market economy is that there is no, or very little, government intervention, but a weakness is that without government intervention, there are likely to be many examples of market failure. Therefore, if a market is uncompetitive, or there is a high level of market failure, government intervention may be necessary to increase the degree of competition and reduce the level of market failure in the economy. (For more on market failure, see Chapter 3, section 3.1, and Chapter 7, section 7.3.)

STUDY TIP

Candidates need to demonstrate they understand that the degree of mixture in any economy is not static. For example, since the credit crunch began in 2007, a number of banks in many countries have either been brought under complete state ownership or been given financial assistance by government to remain in business. One bank in the UK, NatWest, became 84% state owned in 2008 and this bank was still 51% state owned in 2022.

NOW TEST YOURSELF

TESTED ☐

8 Discuss whether a market economy is always preferable to a planned economy.

REVISION ACTIVITY

Evaluate the various advantages and disadvantages of the three types of economic system. Consider which is of most benefit to a consumer. Justify your choice.

Transitional economic systems

A number of economies are going through a period of change where the extent of central planning is being reduced and market forces are being allowed to have a greater degree of influence. China and Cuba are examples of such a **transitional economy.**

There are, however, possible problems associated with transition, as Table 1.3 shows.

KEY TERM

transitional economy: an economy that was previously a command or planned economy and which is now allowing a greater degree of scope for market forces to operate

▼ Table 1.3 Problems of transitional economies

Unemployment	A planned economy is generally better able to keep down the rate of unemployment in an economy; when there is a move towards greater reliance on market forces, the rate of unemployment in an economy is likely to increase because, in a market economy, firms aim to maximise profits and this may lead them to reduce costs of production, possibly by laying off some workers.
Inflation	In a planned economy, the state controls prices so it is easier to keep down the rate of inflation; when prices are determined by the free-market forces of demand and supply, it is more difficult to control prices and so inflation is more likely.
Output	In a planned economy, it is possible for the state to support inefficient firms and industries; when state support is ended, such firms and industries may not be able to compete and so output could fall.
Welfare	A planned economy is able to provide housing and healthcare to everyone; with the introduction of market forces, there may be a fall in welfare provision and this may have a detrimental effect on levels of productivity in the economy.

STUDY TIP

Candidates should recognise that transitional economies can vary a great deal, depending on the degree of change or transition that has taken place. Some of these economies will still be similar to a planned economy, with only a small degree of private sector involvement. On the other hand, other economies will have moved away from a planned economy towards more of a market economy. It should also be understood that such economies are changing rapidly, and a great deal of change can have taken place in a short period of time.

NOW TEST YOURSELF

TESTED ☐

9 Discuss why a country may move from a planned economy towards a market economy, despite the potential problems involved in this transition.

1.5 Production possibility curves

The nature and meaning of a production possibility curve (*PPC*)

REVISED ☐

A **production possibility curve** (or **production possibility frontier**, as it is sometimes called) shows the different combinations of products that can be produced if an economy is working at full capacity.

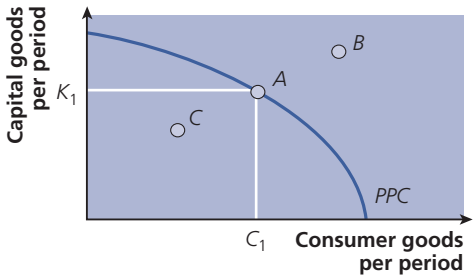
KEY TERM

production possibility curve (or **frontier**): a graphic representation showing the maximum combination of goods or services which can be produced from given resources and with a constant state of technology

The shape of the curve: constant and increasing opportunity costs

REVISED ☐

The shape of the curve shows that there are a number of different combinations of products that can be produced. It is drawn as a curve rather than as a straight line because not all factors of production are equally efficient. This can be seen in Figure 1.1.



▲ Figure 1.1 A production possibility curve

- The production possibility curve (*PPC*) in Figure 1.1 shows the combination of capital goods (shown on the vertical axis) and consumer goods (shown on the horizontal axis) that an economy can produce in a particular period of time with the existing economic resources available.
- Point *A* shows one possible combination of outputs, where the economy produces K_1 capital goods and C_1 consumer goods.
- Any movement along the curve from point *A* shows that the production of more of one type of good leads to the production of less of the other (thus illustrating the concept of *opportunity cost*).
- Point *C*, which is inside the *PPC*, shows that the economy is not using its resources efficiently and there is some unemployment of resources. Output of both capital and consumer goods is lower than it could be.

KEY CONCEPT

Scarcity and choice: the fundamental problem in economics is that resources are scarce and wants are unlimited, so a choice is always required between competing uses for the resources and an opportunity cost in making this choice.

Constant and increasing opportunity costs

- It has already been stated that a production possibility frontier is drawn as a curve, rather than as a straight line, because not all factors of production are equally efficient.
- It is therefore necessary to distinguish between constant and increasing opportunity costs. If it were possible to move from one point on the production possibility curve to another, with an equal sacrifice of resources, then this would indicate a situation of constant opportunity costs.
- However, there will come a time when this is not the case. Increasing opportunity costs mean that an ever-increasing amount of one product will need to be sacrificed to produce more of the other product.
- The reason is that different factors of production have different qualities. As a result of this, the production possibility frontier changes shape slightly as it approaches each axis.
- For example, in Figure 1.1, this is most clearly seen as the *PPC* gets closer to the horizontal axis, showing the consumer goods produced per period of time.

KEY SKILL

Analysis: a production possibility frontier is drawn as a curve because of the existence of the law of diminishing marginal returns (see Chapter 7, section 7.5). This states that employing an additional factor of production will eventually cause a relatively smaller increase in output.

KEY CONCEPT

The margin and decision making: the shape of the production possibility frontier as a curve illustrates the importance of decisions taken at the margin, given that resources are not equal substitutes for each other.

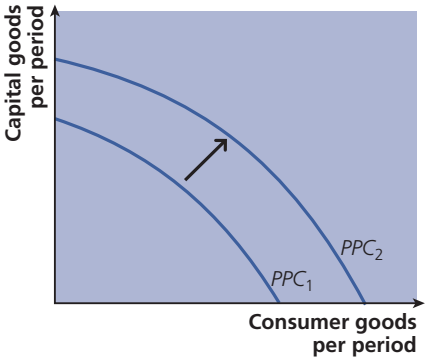
The causes and consequences of shifts in a *PPC*

REVISED

- Point *B* in Figure 1.1, which is outside the *PPC*, is unreachable at the present time given the resources that the economy currently has.
- However, over a period of time it is possible for there to be **economic growth** resulting from the availability of more resources and/or the more productive use of resources, and this would enable point *B* to be reached. This can be seen in Figure 1.2.

KEY TERM

economic growth: an increase in the national output of an economy over a period of time, usually measured through changes in gross domestic product



▲ Figure 1.2 Economic growth

Economic growth (see Chapter 9, section 9.2, on the distinction between actual economic growth and potential economic growth) enables an economy to produce more of both capital and consumer goods. It refers to a situation where there is an expansion in the productive capacity or potential output of an economy. This is shown in Figure 1.2 by a rightward shift of the *PPC* from PPC_1 to PPC_2.

Of course, if there were a decrease in the quantity and/or quality of resources in an economy, this would lead to a leftward shift of a *PPC* from PPC_2 to PPC_1.

STUDY TIP

It is important that candidates understand the difference between *a movement along*, and *a shift of*, a production possibility curve:

- A movement along a curve indicates the different combinations of two goods that could be produced from the given resources in an economy.
- A shift of a curve to the right would indicate an expansion in the productive potential or capacity of an economy, allowing more of both goods to be produced.

NOW TEST YOURSELF

TESTED

10 Explain why a production possibility curve is drawn as a curve rather than as a straight line.

KEY SKILL

Diagrams: it is important that candidates understand the correct labelling of the two axes of a production possibility curve, especially when compared with the labelling of demand and supply diagrams in Chapter 2. The two axes of a *PPC* are labelled as particular goods or types of goods (e.g. capital goods and consumer goods in Figures 1.1 and 1.2). This is different from labelling the two axes *P* and *Q* in demand and supply diagrams.

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KEY SKILL

Diagrams: it is important that a *PPC* is drawn so that it touches both axes. This is because it is assumed that all of an economy's resources will be used to produce one or other of the two products shown in the *PPC* diagram.

The significance of a position within a *PPC*

REVISED

- It is important to understand the significance of a position within a *PPC*.
- As can be seen in Figure 1.1, point *A* is where an economy is using its resources efficiently, but point *C*, within a *PPC*, is where an economy is using its resources inefficiently.
- At this point, not all resources are being utilised and the output of both products is lower than it could be if all resources were being used.

1.6 Classification of goods and services

The nature and definition of free goods and private goods (economic goods)

REVISED

Free goods

A **free good** is one which is consumed by people without a situation of scarcity arising — in other words, there is enough of the good to satisfy everybody. As the good is not scarce, it does not require a market. The supply of the good equals the demand for it at zero price. It takes no factors of production to produce a free good and so there is no opportunity cost involved.

Private goods

A **private good** (or economic good) is one which is consumed by an individual for their own private benefit. This applies to most products in an economy. Private goods have two important characteristics:

- **Excludability:** one key feature of a private good is that people can be excluded from consuming it.
- **Rivalry:** another key feature of a private good is that the consumption of it by one person reduces its availability for other people; there is rivalry in such a situation because consumers are in competition with other consumers to consume a particular product.

KEY SKILLS

Analysis: the situation of scarcity does not apply in the case of a free good because there is enough of a good to satisfy everybody.

Application: examples of free goods include air and sunshine.

Application: examples of private or economic goods include food, clothing, cars and smartphones.

KEY TERMS

free good: a good that is not scarce and so does not require a market price to be attached to it

private good: a good that is bought and consumed by individuals for their own benefit

rivalry: a feature of private goods whereby when a product is consumed by one person, it cannot be consumed by another

excludability: a feature of private goods whereby people can be excluded from consuming a good

STUDY TIP

It is important that candidates can clearly distinguish between *private goods* and *public goods* in their examination answers on this topic. The key characteristics of a private good are rivalry and excludability.

The nature and definition of public goods

REVISED

In contrast to private goods, **public goods** are provided by society as a whole so that everyone can benefit from them.

Public goods have two important characteristics:

- **Non-excludability:** once a public good has been provided for one person, it is not possible to stop other people from benefiting from such a good (i.e. no one is excluded).
- **Non-rivalry:** as more people consume the public good, the benefit to those already consuming it is not reduced (i.e. consumption by one person does not prevent others from consuming it).

These products need to be provided by the state or the public sector because if they were provided by the private sector, it would be impossible to exclude someone who had not paid. This gives rise to the **free rider** problem.

For example, it would not be possible to provide street lighting through the private sector because it would be impossible to prevent someone who had not paid from benefiting from the service. When such products are provided by the public sector, they are part of **government expenditure** and are financed out of taxation.

In addition to being non-rival and non-excludable, public goods are also **non-rejectable.** This means that, even if a person does not want to be protected by their country's defence and police system, they are not actually able to reject it.

KEY SKILL

Application: examples of public goods include street lighting, defence and police.

KEY TERMS

public good: a good that is non-rival, non-excludable and non-rejectable

non-excludability: where the consumption of a product by one person does not exclude others from consuming the same product

non-rivalry: where the consumption of a product does not prevent its consumption by someone else

free rider: the idea that it would be impossible to charge people for using a good or service because it would be impossible to prevent someone who had not paid from benefiting

government expenditure: the total of all spending by a government

non-rejectability: where individuals cannot actually avoid the consumption of a public good, even if they want to

STUDY TIP

Whereas key features of a private good are that it involves rivalry and excludability, candidates need to emphasise in their answers that key features of a public good are that it is both non-rival and non-excludable.

NOW TEST YOURSELF

TESTED

11 Explain why a private good, but not a public good, can be provided through a market.

REVISION ACTIVITY

Analyse what gives rise to the problem of a free rider.

Check your answers at www.hoddereducation.com/cambridgeextras

The nature and definition of merit goods

REVISED

- A **merit good** is a particular type of private good. Examples include education and healthcare.
- Like other private goods, merit goods are both rival and excludable, but what distinguishes a merit good is that there is **information failure** which means that the good is likely to be underprovided and underconsumed if provided through the private sector.
- For example, people don't fully appreciate the value of a good education or good health. This could be regarded as a **market imperfection**.
- Without government intervention, it is likely that there would be **market failure** because the allocation of resources would be sub-optimal.
- Governments therefore intervene by providing such goods through the public sector, alongside private sector provision, so that those who would not or could not afford to consume them in the private sector will do so in the public sector.

KEY TERMS

merit good: a product that is rivalrous and excludable but, if left to a free market, would be likely to be underproduced and underconsumed

information failure: where people lack the full information that would allow them to make the best decisions about consumption

market imperfection: a feature of a market which does not perform perfectly because of a failure to make an optimal use of resources, necessitating government intervention

market failure: a market imperfection which gives rise to an allocation of scarce resources which is not as efficient as it might otherwise have been

STUDY TIP

Candidates sometimes get confused and describe merit goods as examples of public goods. They are not examples of public goods, but of private goods. Like all private goods, they are rivalrous and excludable.

Candidates also sometimes confuse a merit good with a free good, especially given that some merit goods are free at the point of consumption, such as entry to a particular lesson. A free good, however, is something completely different: it is where there is so much of a product that demand can be satisfied without the need for an allocative mechanism, and supply will equal demand at zero price (e.g. air).

The nature and definition of demerit goods

REVISED

- **Demerit goods** are the opposite of merit goods. Whereas merit goods would be underprovided and underconsumed in a free market, demerit goods would be overproduced and overconsumed in a free market.
- A demerit good is socially undesirable in some way: for example, alcohol and tobacco.
- The overproduction and overconsumption of demerit gods is a result of imperfect information by consumers. For example, they may not realise that alcohol and tobacco are bad for their health.
- Without government intervention, it is likely that there would be market failure because the allocation of resources would be sub-optimal.

KEY TERM

demerit good: a product that is rivalrous and excludable but, if left to a free market, would be likely to be overproduced and overconsumed

STUDY TIP

It is important that candidates indicate clearly how a demerit good is fundamentally different from a merit good. Whereas a merit good is likely to be underproduced and underconsumed, a demerit good is likely to be overproduced and overconsumed in a free market.

NOW TEST YOURSELF

TESTED ☐

12 Explain why a merit good will be underconsumed and a demerit good overconsumed in a market.

REVISION ACTIVITY

Assess how a government could encourage the consumption of merit goods and discourage the consumption of demerit goods.

KEY SKILL

Application: examples of merit goods include education and healthcare. Examples of demerit goods include alcohol and tobacco. Examples of public goods include street lighting and defence.

SUMMARY

In this chapter you have learned:

- the fundamental economic problem of scarcity
- the need to make choices at all levels, including individuals, firms and governments
- the nature and definition of opportunity cost
- the three basic questions of resource allocation
- the idea of economics as a social science
- to distinguish between positive and normative statements
- the meaning of the term 'ceteris paribus'
- the importance of the time period in relation to the short run, long run and very long run
- the nature and definition of the factors of production: land, labour, capital and enterprise
- the rewards to the factors of production
- the meaning of division of labour and specialisation
- the role of the entrepreneur in contemporary economies
- how decisions are made in market, planned and mixed economies
- how resources are allocated in these three economic systems
- the nature and meaning of a production possibility curve (*PPC*)
- the shape of the *PPC* in relation to constant and increasing opportunity costs
- the causes and consequences of shifts in a *PPC*
- the significance of a position within a *PPC*
- the nature and definition of free goods and private (economic) goods
- the nature and definition of public goods
- the nature and definition of merit goods
- the nature and definition of demerit goods

Check your answers at **www.hoddereducation.com/cambridgeextras**

AS LEVEL

2 The price system and the microeconomy

2.1 Demand and supply curves

Effective demand

REVISED

Effective demand refers to that demand which can be supported by having the means to pay. In this situation, consumers must not just want a particular product, but also be willing and able to pay for it.

KEY TERM

effective demand: demand for a product that is backed by the ability and willingness to pay for it

KEY SKILL

Analysis: the characteristics of effective demand need to be made very clear when the theory of demand is being explained (i.e. the fact that people must be willing and able to buy something at a particular price).

STUDY TIP

It is important that candidates demonstrate in their answers an understanding that demand needs to be *effective demand*. It is not enough that consumers want something; they have to be in a position to pay for it.

Individual and market demand and supply

REVISED

Individual and market demand

- **Demand** is the quantity of a product that consumers are willing and able to buy at a given price in a given time period.
- An individual demand curve shows the quantity of a product that a particular consumer is willing and able to buy at each and every price, ceteris paribus (i.e. with all other things unchanged).
- The individual demand curve will slope downwards from left to right, indicating that a consumer is more likely to buy a product at a lower price than at a higher price. This is known as the **law of demand**.

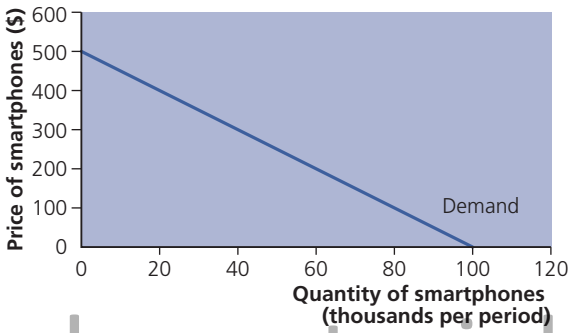
KEY TERMS

demand: the quantity of a product that consumers are willing and able to buy at a given price in a given period of time

law of demand: a law (or theory) which states that there is an inverse relationship between the quantity demanded of a product and the price of the product, ceteris paribus

Aggregation of individual demand curves to give market demand

- A **demand curve** can be drawn for every consumer in a society for every product, but in economics it is more usual to focus on market demand curves.
- Market demand for a product is derived from bringing together (or aggregating) all the potential buyers of a product. It is the total quantity of a product that all potential buyers would choose to buy at a given price in a given period of time.
- A **demand schedule** can be produced for a particular product, such as smartphones.
- This schedule can then be plotted to give a market demand curve, as shown in Figure 2.1. The price of smartphones is shown on the vertical axis and the quantity of smartphones bought is shown on the horizontal axis.



▲ Figure 2.1 A demand curve for smartphones

The demand curve shows the relationship between price and the quantity demanded. It is downward sloping, indicating an inverse relationship between the price of a product and the quantity demanded of a product: that is, as the price falls, the demand rises.

Derived demand is where the demand for a component depends upon the final demand for a product that uses that component. For example, the demand for rubber is derived from the demand for car tyres. Derived demand can also be used in relation to the demand for workers — for example, the demand for bus drivers derives from people's demand for bus transport.

NOW TEST YOURSELF

TESTED ☐

1 Explain the nature of the relationship between a change in the price of a product and a change in the quantity demanded of a product.

KEY TERMS

demand curve: a curve that shows how much of a good or service will be demanded by consumers at a given price in a given period of time

demand schedule: a table giving the quantities sold of a product at different prices, enabling a demand curve to be drawn from this information

derived demand: where demand for the components of a product or for workers arises from demand for the final product

Individual and market supply

Individual and market supply curves

Supply is the quantity of a particular product that firms are willing and able to sell at each and every price in a given time period, ceteris paribus (all other things unchanged). A firm's supply curve will slope upwards from left to right, indicating that a producer will be more likely to sell a product at a higher price than at a lower price. This is known as the **law of supply**.

KEY TERMS

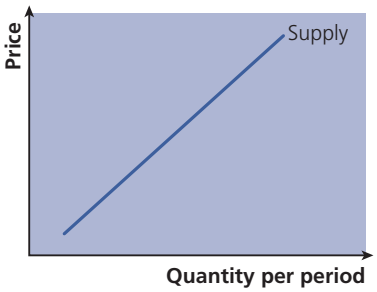
supply: the quantity of a product that producers are willing to sell at a given price in a given period of time

law of supply: a law (or theory) which states that there is a direct relationship between the quantity supplied of a product and the price of the product, ceteris paribus

Aggregation of individual firms' supply curves

A **supply curve** can be drawn for every producer in an economy for every product, but in economics it is more usual to focus on market supply curves. Market supply of a product is derived from bringing together (or aggregating) all the potential suppliers of a product. It is the total quantity of a product that all potential sellers would choose to sell at a given price in a given period of time.

A supply schedule can be produced for a particular product, such as smartphones. This schedule can then be plotted to give a market supply curve, as shown in Figure 2.2.



▲ Figure 2.2 A supply curve

The price of smartphones is shown on the vertical axis and the quantity of smartphones sold is shown on the horizontal axis. The supply curve shows the relationship between price and the quantity supplied. It is upward sloping, indicating a direct relationship between the price of a product and the quantity supplied of a product: that is, as the price rises, the supply rises.

KEY TERMS

supply curve: a curve that shows how much of a good or service will be supplied by producers at a given price in a given period of time

supply schedule: a table giving the quantities sold of a product at different prices, enabling a supply curve to be drawn from this information

NOW TEST YOURSELF

TESTED ☐

2 Explain the nature of the relationship between a change in the price of a product and a change in the quantity supplied of a product.

Check your answers at www.hoddereducation.com/cambridgeextras

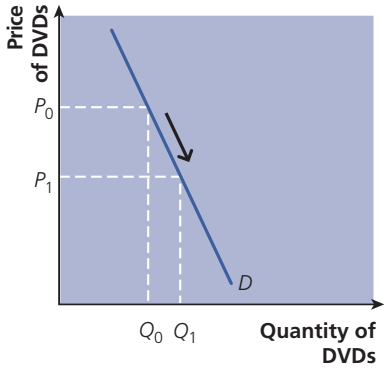
The determinants of demand

REVISED

Price

A major influence on the demand for a product is its price. Figure 2.3 shows that there is an inverse relationship between a change in the price of a product and the quantity demanded of a product, all other things unchanged (ceteris paribus).

When it is only the price of a product that changes, the resulting **change in quantity demanded** can be shown on a demand curve by a movement *along* the curve. This can be seen in Figure 2.3.



▲ Figure 2.3 A movement along the demand curve

- When the price of a product is reduced, for example, from P_0 to P_1, the quantity demanded goes up from Q_0 to Q_1. This is represented by a downward movement along the demand curve, indicated in the diagram by the downwards arrow. This is known as an **extension in demand**.
- If, on the other hand, the price of a product is increased, the quantity demanded falls and this would be shown as an upward movement along the demand curve. This is known as a **contraction in demand**.

KEY TERMS

change in quantity demanded: where demand for a product changes as a result of a change in the price of the product; change in quantity demanded is shown by a movement along a demand curve

extension in demand: when the quantity demanded of a product increases as a result of a fall in the price of the product, shown by a movement down the demand curve

contraction in demand: when the quantity demanded of a product decreases as a result of a rise in the price of the product, shown by a movement up the demand curve

The determinants of supply

REVISED

Movements along a supply curve are determined by changes in the price of a product. Figure 2.4 shows the direct relationship between the price of a product and the quantity supplied of that product. This is why the supply curve is upward sloping. A movement up a supply curve is known as an **extension in supply** and a movement down a supply curve is known as a **contraction in supply**.

KEY TERMS

change in quantity supplied: where the supply of a product changes as a result of a change in the price of the product; change in quantity supplied is shown by a movement along a supply curve

extension in supply: when the quantity supplied of a product increases as a result of a rise in the price of the product, shown by a movement up the supply curve

contraction in supply: when the quantity supplied of a product decreases as a result of a fall in the price of the product, shown by a movement down the supply curve

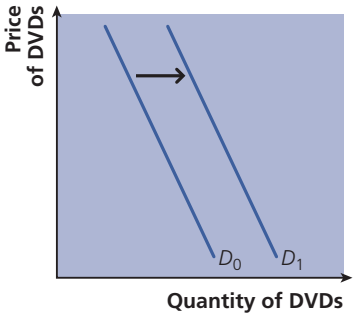
Causes of a shift in the demand curve

REVISED

Price is not the only factor that influences demand. If the ceteris paribus assumption is removed, it is possible to consider all the other factors that were previously being held constant. These other factors could include:

- a change in the incomes of consumers
- a change in the price of a substitute product (a substitute product is one that could be used for the same purpose by consumers)
- a change in the price of a complementary product (a complementary product is one that is directly related to, and used with, another product)
- an advertising campaign
- a change in population
- a change in the tastes and preferences of consumers
- a lowering of interest rates, making borrowing more affordable
- a change in the weather, possibly associated with different seasons

When one of these other factors affects demand, the result is described as a **change in demand** and is shown by a *shift* of the demand curve. This can be seen in Figure 2.4.



▲ Figure 2.4 A shift in the demand curve

In this diagram, there might have been an increase in incomes and/or an effective advertising campaign. The demand curve shifts to the right, from D_0 to D_1, as shown by the rightward arrow.

Composite demand refers to the demand for a product that can be used for more than one purpose. Stone, for example, could be used for building purposes and could also be used in the construction of roads; a particular piece of land could be demanded to build both shops and houses.

KEY TERMS

change in demand: where there is a change in the conditions of demand, i.e. something other than a change in the price of a product; this is shown by a shift of a demand curve

composite demand: the demand for a product that can be used for more than one purpose

STUDY TIP

Candidates sometimes confuse movements *along* a demand curve and a *shift* of a demand curve. It is important that you understand what will cause a movement along a demand curve and what will cause a shift of a demand curve. A movement along a demand curve can only be caused by a change in the price of a product, whereas a shift of a demand curve can be caused by anything other than a change in the price of a product.

KEY SKILL

Diagrams: it is important to show clearly the direction of a shift in a demand curve: for example, by labelling the two demand curves D_0 and D_1 and by including an arrow to show the direction of the shift.

NOW TEST YOURSELF

TESTED

3 Analyse why there is sometimes a movement along a demand curve and sometimes a shift of a demand curve.

REVISION ACTIVITY

Consider all the possible factors that could influence the demand for a motor vehicle. Explain which of these will cause a movement along the demand curve for the product and which will cause a shift of the demand curve for the product.

Check your answers at **www.hoddereducation.com/cambridgeextras**