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### Additional resources are available online at:

www.oxfordsecondary.com/9780198424895
The basic economic problem: economic goods, choice and the allocation of resources

Unit 1 introduces the basic economic problem: insufficient resources to meet all our needs and the choices that have to be made as a result. It is explained that while the earth is a very rich source of raw materials that support human life, most of these resources are limited – in particular, oil, gas and fertile agricultural land. Goods that are scarce relative to the demand for them are termed economic goods.

The unit looks at how the resources of land, labour, capital and enterprise are used to become factors of production. The example of a successful entrepreneur illustrates how factors can be combined to generate wealth and opportunity for growth in an economy.

The unit develops the idea of choice with the introduction of the concept of opportunity cost. Explanations are given of how every economic decision involves a choice, and that when choices are made, the sacrificed alternative become the opportunity cost.

The unit shows how the production boundaries of an economy can be illustrated by means of a production possibility curve.

TOPIC COVERAGE
Students will cover the following topics:
- The nature of the economic problem (finite resources and unlimited wants)
- Economic and free goods
- Factors of production and their rewards, mobility of factors
- Opportunity cost and how it influences decision making
- Production possibility curves
- Movements along and shifts in production possibility curves

1 The basic economic problem: economic goods, choice and the allocation of resources

The questions at the end of each unit in the book are to help you practise your examination technique after completing all the work in the unit. You should answer them without referring to the information in the book or your notes.

The short-answer questions test your knowledge and understanding of what you have learnt. Generally, these will ask you to state, identify, define and/or explain one or a number of factors, differences or meanings. Your answers will be fairly brief, perhaps bullet points, but avoid single-word ‘lists’, especially where an explanation is required. Do not spend too long or write too much – 2–4 lines is sufficient for these answers. Where an example is required, give one from your own experience, either as a consumer or as an observer of your local business environment.

The longer-answer questions introduce you to the ‘case study’ approach, in which questions are based on a specific business scenario. Read the material carefully, because this will help you to give an answer that is appropriate to the business concerned. So, for example, do not recommend TV advertising for a small business; do not suggest ‘access to raw materials’ as a location factor for a retail business, as this is only really applicable to a production business. Read the case study carefully and try to put yourself in the role of the business person in the text.

Make sure you can answer the following:
- Is this business large or small?
- Who owns this business?
- What are they selling – a product or a service?
- Is the business objective profit or another, such as public service?
- Who are the customers?
- What challenges does the business face (e.g. competition)?

Make sure you refer to the circumstances of the business, rather than just mentioning the company or owner by name. If you are asked to make a decision about the future way forward for the business, consider a range of options and come to a supported conclusion.

The instruction in the question is given by the command word: as the term suggests, this tells you what is required. The following is a list of the command words you are likely to see in your examination.

Calculate, e.g. ‘Calculate the gross profit margin of a business.’ You need to do some mathematics to produce an answer. Always show your workings.

Consider, e.g. ‘Consider the two options given in the case study.’ You need to weigh up the merits of a situation or decision and give the opposing view as well.

Define, e.g. ‘Define market research.’ State the exact meaning of the term; this will be a short answer, sometimes including an example to illustrate it.

Explain, e.g. ‘Explain what is meant by a price elastic demand.’ This term enables you to show your understanding of a term or topic. You can do this by including an example or a descriptive development.

Identify, e.g. ‘Identify two factors a company should consider before deciding to issue more shares.’ ‘Identify’ (or ‘State’) requires you to select from a number of possibilities. Only a brief answer is necessary, so a list may be fine, but if you are unsure, include a sentence of clarification or an example.

Justify, e.g. ‘Should company X buy more machinery? Justify your answer.’ This is a longer answer in which you should support your answer with reasons. Outline, e.g. ‘Outline the main features of a business partnership.’ You should give a short description (in this example, of the main features of the partnership).

Recommend, e.g. ‘Recommend which option the company should take.’ You should make a positive suggestion, with reasons that support, or justify your decision.

Command words explained
1 The basic economic problem: economic goods, choice and the allocation of resources
The nature of the economic problem

1.1.1 The economic problem

The economic problem

The economic problem arises because the people that make up society have unlimited wants, while society only has access to a finite resource base. As a result, we cannot have everything we want, and so we have to make choices.

Wants are infinite because once some of our wants have been met, we often want something better. Our resources are finite because:

- many resources are limited in quantity, e.g. land
- when resources are in use, they often cannot be used for something else at the same time.

There are a number of types of resource (Figure 1.1.1).

- Natural resources: Soil, climate, water, minerals, forests and fisheries
- Human-made resources: Machinery, buildings and equipment
- Human resources: People and their skills

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If society had all the land, labour, raw materials and other resources it needed, we could produce all the goods we wanted without making sacrifices. In reality resources are scarce. When we use resources to produce an item, we are taking away these resources from producing something else. All societies face this problem. An important distinction is made between needs (those things we have to have for survival, such as basic food items and shelter) and wants (those things we desire that may include needs, but may also include things such as luxury foods).

Decision-making over the use of resources involves:

- making a choice (we can do one thing or the other)
- making a sacrifice (if we choose to do this with a resource, we cannot also do the other).

CASE STUDY Deforestation in Haiti

Haiti is a large Caribbean island economy that was once covered in forest but has been almost stripped bare to make way for agriculture, house-building materials and charcoal burning. Wood fetches very high prices, so trees have been cut down with terrible consequences including mudslides during heavy rains, as there are no tree roots to hold the soil together. The Haitian government is now seeking to address this problem by setting large tracts of land aside for tree planting.

A challenge for Haiti is to replant its forests in a sustainable way, so that future generations have more resources to meet their wants and needs.

Questions

1. Why is forest land so scarce in Haiti today?
2. How does scarcity of forest and wood resources illustrate the economic problem of unlimited wants and limited resources?
3. What difficulties do you think the Haitian government may face in tackling this issue?

Making choices

Gathering scarce fuelwood is a very important activity in Haiti, particularly for poor people. Collecting driftwood that has been washed ashore on beaches takes a lot of time. People have to choose whether to allocate time to this activity or to something else. Alternatively, they can buy wood for building, and charcoal made from wood for cooking. However, this is expensive because of the scarce nature of the resource.

The economic problem is a constant issue for Haitians and for citizens of all countries. Our daily lives involve thousands of choices that involve how we spend our time and money.

- Time is a scarce resource – there are only 24 hours in a day.
- Money is a scarce resource – we only have a limited amount.

Daily life involves solving economic problems in which choices have to be made. Imagine you have to decide whether to buy a book or borrow it from a library. If you buy the book, you ‘sacrifice’ the opportunity to buy something else. If you borrow it, you sacrifice the opportunity to own the book. Unit 1.3 explores this further in terms of the cost of the sacrifice – the opportunity cost.

DID YOU KNOW?

Sustainable use of resources means using them in such a way that future supplies of these resources are not reduced.

STUDY TIP

Another way of thinking about choice and sacrifice is in terms of time. For example, what are you going to do this evening: stay in and do your homework or go out with friends? You cannot do both at the same time. You need to fully understand the implications of making a choice in terms of what has to be given up.

KEY POINTS

1. The economic problem is one of finite resources and unlimited wants.
2. Resources are scarce; this requires individuals and societies to make choices.
3. Making a choice involves a sacrifice.

SUMMARY QUESTIONS

1. What resources do you think are particularly scarce in your country?
2. Give an example of a situation in which your own finite resources have forced you to make a choice.
3. In what situations does your school make choices because the wants it has are greater than the finite resources available to it?
Economic and free goods

Most of the resources we use are scarce. As a result we have access to very few free goods. A free good is one which is so abundantly available that no sacrifice has to be made to supply or use it. Examples of free goods include air and seawater. In an island economy people have as much access to clean air and fresh seawater as they want. The fact that one person can enjoy these resources doesn’t stop someone else from enjoying them too. Similarly, everyone who lives near to a park can enjoy it.

However, in the modern world there are limits to these free goods. For example, some factories cause pollution when they use air and seawater resources. By creating pollution then they spoil some of the air and water for other people. In some cities people wear masks over their faces so that they are protected from polluted air. Seawater may be polluted and parks can be spoiled by overuse.

Economic goods

An economic good is a good or resource that is scarce in comparison to the demand for that good or resource. Therefore, to acquire an economic good, a sacrifice must be made – often in the form of an outlay of effort or money. Nearly all goods, services and resources are scarce relative to demand, and therefore should be classified as economic goods. The existence of economic goods gives rise to the economic problem (see section 1.1.1).

As resources and goods are scarce relative to the demand for them, they will be able to command a price – people will be willing to pay to use them.

CASE STUDY  ‘The tragedy of the commons’

‘The tragedy of the commons’ written by the American biologist Garrett Hardin in 1968 provides a powerful example of man’s increasing use of economic goods. In this story, shepherds graze their sheep on a common piece of land. When there are a small number of them, this is not a problem. However, there comes a point at which one too many flocks of sheep is grazed on the land, and the pasture is destroyed, meaning everyone loses out. What appeared to be a free good (the pasture) is in fact an economic good – a finite resource with multiple demands.

Questions
1. Why is farmland that is shared by multiple owners an economic good?
2. Can you think of other examples where overuse leads to losses for all users of that resource?

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ACTIVITY

Choose an example of a good that is sold for a very low price at your local supermarket. Explain why this should be regarded as an economic good rather than a free good.

DID YOU KNOW?

Just because a good is given away for free does not make it a ‘free good’. For example, a supermarket may offer goods that it wants people to try out for free. However, these are not free goods in the economic sense, because resources have been used to produce these goods and these resources could have been used for something else.

STUDY TIP

Most resources, goods and services are ‘economic goods’. You should be able to explain why specific examples can be classed as economic goods. Remember that free goods are ones that are abundant; there is no sacrifice incurred when a free good is used.

CASE STUDY  Ticket prices to watch Real Madrid versus Barcelona

Spectators travel to stadiums such as the Estadio Santiago Bernabeu in Madrid from all over the world. You might think there would be plenty of room for everyone who wanted to watch a match to be able to do so. However, this is far from the case. When Real Madrid play their rivals Barcelona there are as many people who cannot get tickets as those who are successful – even though the price of tickets can be very expensive.

Watching top teams play football is another example of an economic good. Clubs such as Real Madrid know that they can charge high prices because people’s wants and needs to watch top-class football are greater than the availability of the good.

Questions
1. Why is watching Real Madrid play football at the Bernabeu an example of an economic good?
The factors of production

1.2

1.2.1 Factors of production and their rewards

Imagine that you are visiting a modern food-processing plant. It is processing vegetables to put into cans. What do you see?

The most obvious sight will be large areas of land and factory buildings. Inside, you will see machinery, equipment and employees. Some workers will be looking after the equipment. In the production area you will see people preparing the vegetables. Other workers will be loading and unloading supplies and finished goods.

The factors of production are what make the business work: land, labour, capital and enterprise.

- In the plant, the land includes the site on which the factory is built.
- The labour is the factory employees.
- The capital is the buildings and machinery that are used to make the canned vegetables.
- Finally, enterprise is the factor that takes the risk in bringing the factors together to produce goods in order to make profits.

Definitions

Over the years the four factors of production have come to mean more than the examples used above.

- **Land** is now used to refer to all natural resources, e.g. farmland, water, coal.
- **Labour** is used to refer to all the physical and mental contributions of an employee – so it is more than just the physical effort of digging coal or making car parts. It also includes the mental effort of an accountant or the services provided by a bank clerk.
- **Capital** includes all those items that go into producing other things, e.g. a machine manufactures products, tools contribute to this process, and so on.
- **Enterprise** is the factor that brings the other factors together to produce goods in order to make profits.

ACTIVITY

Talk to the owner of a small local business. Find out how the business uses its land and capital, the type of labour employed and the enterprise skills needed to ensure that the enterprise is successful.

CASE STUDY

Combining the factors of production

Lakshmi Mittal is a well-known entrepreneur. He founded the Mittal Steel company in India (now part of ArcelorMittal). The company has expanded to take over a network of steel producers from across the world. Today the company headquarters are in Luxembourg. Mittal brings together factors of production in effective combinations to create the only truly global steel company. To run his enterprise Lakshmi Mittal rewards certain features.

- **Labour with wages**: attractive salaries and wages have to be paid to workers in each of the countries while production takes place.
- **Land with rent**: ArcelorMittal has to pay rent on some of the sites on which its factories are located.
- **Capital with interest**: like most other businesses, ArcelorMittal borrows money from banks to fund its activities. Interest must be paid at regular intervals on the loans.
- **Enterprise with profits**: profits are a reward for enterprise. The profits of ArcelorMittal are shared out among shareholders (or reinvested in the business).

Questions

1. Which factor is responsible for bringing together the other factors of production?
2. Why is labour so important to a giant steel company?

KEY POINTS

1. Factors of production are combined to produce goods.
2. Enterprise is responsible for bringing together land, labour and capital.
3. Factors are rewarded in the form of incomes, e.g. wages for employees.

SUMMARY QUESTIONS

1. Choose a familiar product and describe how factors of production are brought together to produce it.
2. What are entrepreneurs? What do they do?
3. What type of capital do the following work with?
   a. farm workers
   b. factory workers
   c. teachers.
Mobility, quantity and quality of factors of production

Some factors of production can be moved from one area to another quite easily. This is referred to as the geographical mobility of a factor. Some factors of production can be moved from one use to another. This is referred to as occupational mobility. Other factors are less mobile.

Land
Some types of land are geographically immobile. For example, it is difficult – but not impossible – to move an area of farmland from one location to another.

You might need to move an area of land to a new location if it is in greater demand there. For example, as new cities develop, farmland is required to provide the population with fresh food. In the Netherlands, sea walls (dikes) were created in low-lying areas (polders) to create new areas of farmland. As a result, 2,700 square miles of land was reclaimed from the sea. China has created double this amount.

Many types of land can have their use changed (occupational mobility). Land use can change from farming to urban construction, or from forest resources to agriculture (as in the Amazon rainforest in Brazil).

Labour
Workers sometimes need to move from one area to another, but may be reluctant to do so for a variety of personal reasons. To persuade workers to move from one area to another, businesses and governments need to offer incentives, both to encourage workers to move and to cover higher costs of living (as is the case in cities such as London, New York and Mumbai).

Capital
Some units of capital, e.g. small machines, are easily moved from one place to another. Even larger items can be shipped to other countries. However, much bigger items of capital, e.g. steel rolling mills, are immobile.

Many items of capital are occupationally mobile – a generator can be used to provide electricity to many types of industry. However, capital becomes obsolete (replaced by more modern versions) over time.

Enterprise
Enterprise can be one of the most mobile factors. Entrepreneurs can be flexible, moving from one location (geographical mobility) and industry (occupational mobility) to another. However, this may be restricted internationally by citizenship and passport restrictions, or by specific knowledge required by specialist industries.

CASE STUDY
Shipping diesel trains from New Zealand to Mozambique

In 2017 the Auckland (New Zealand) Transport Authority shipped 17 diesel trains to Mozambique. Auckland bought these passenger trains in 1993 from Australia, where they were then going out of service. In 2017 Auckland is converting from diesel to electrical and battery-powered trains which are faster, cleaner and less costly to maintain. However, for Mozambique the diesel trains are a step up from the present stock of steam locomotives.

Questions
1. What factor of production are diesel trains?
2. What type of mobility of factors is illustrated in this case study?
3. How might diesel trains improve the capital stock of Mozambique?

Quantity and quality of factors of production

The quantity of a factor of production is the amount of that factor available in a specific economy. For example, in Caribbean island economies such as Saint Lucia or Saint Kitts and Nevis, the quantity of physical land is severely restricted, although there is greater access to sea resources in the form of fish stocks in the Caribbean Sea. China has huge areas of land available for various land uses, e.g. forestry, agriculture and mining. The amount of capital depends on the accumulation of capital over time, so economies that industrialised relatively early (such as the UK and France) have been able to accumulate extensive capital stocks.

However, perhaps more important to an economy is the quality of factors of production available to it. High quality factors of production can be enhanced by increased mobility of factors. Geographical mobility refers to change in the use of factors. Occupational mobility refers to change in the use of a factor. Some factors are relatively mobile, whereas others take time to change their use or location.

1. Occupational mobility relates to change in the use of factors. Geographical mobility refers to change in geographical location of factors of production.
2. Some factors are relatively mobile, whereas others take time to change their use or location.
3. The quantity of factors of production can be enhanced by increased mobility of factors and the quality can be improved by investment, e.g. in training and education.

SUMMARY QUESTIONS
1. How can the mobility of factors of production be increased?
2. Identify key obstacles holding back the mobility of each of the factors of production.
3. How can the quantity of factors and the quality of factors of production be increased?
Opportunity cost

Opportunity cost

The opportunity cost of choosing to buy a particular product or to carry out a particular economic action is the next best alternative that is given up. The opportunity cost is the sacrifice that is made. In simple terms, opportunity cost can be defined as the cost of a missed opportunity.

Opportunity cost is relevant to each of the participants that we focus on in this book – that is, consumers, workers, firms and governments (see section 1.3.2).

CASE STUDY Sava and the supermarket

Sava has recently made some important purchasing decisions. She wanted to buy a new dress for an important event. After looking at all the options, the choice came down to a full-length blue evening gown or a mid-length green one. She chose the green one.

She also needed to purchase some new sports trainers and found it difficult to choose between an excellent lightweight pair costing $49.99 and a more conventional pair costing the same price. She chose the lightweight pair. Sava works part-time in the local supermarket. Her supervisor has recently offered to increase her working hours from 15 per week to 20, but this will clash with the time she spends practising basketball. Sava decides against working the extra hours because she loves playing basketball.

The supermarket that Sava works for is called LowCost. The company has recently decided to replace the fresh products it sells on one of its aisles with ‘ready meals’. It believes this will increase profitability. For the same reason, it has stopped selling toothpaste manufactured by a company called Brighter Smiles and replaced this with toothpaste produced by the Shinier Teeth company.

The government imposes a tax on business profits. It uses the money from this tax to pay for a range of government spending, e.g. on health services and education. It has decided to reduce this tax on small businesses in order to create more jobs, but this will mean it has less money to spend on education and health.

<table>
<thead>
<tr>
<th>Who is making the choice</th>
<th>What they chose</th>
<th>Opportunity cost (what they could have had, i.e. the next best alternative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sava (consumer)</td>
<td>green evening gown</td>
<td>blue evening gown</td>
</tr>
<tr>
<td></td>
<td>lightweight trainers</td>
<td>conventional trainers</td>
</tr>
</tbody>
</table>

Opportunity cost in education

Opportunity cost is particularly important in education. For example, in Bangladesh successive governments have had the target of universal education (that is, for all children to go to school). To achieve this aim, the government initially provided food subsidies to poorer families to encourage school participation. More recently these subsidies have been replaced by payments to families to encourage schooling. For poor families, the opportunity cost of schooling is the loss of income from children going to work, e.g. in seasonal agriculture, textiles or construction. Government payments to families are designed to compensate for the opportunity cost of lost wages.

In the UK a number of studies have shown that going to university increases the lifetime average earnings of graduates. However, many young people make the economic decision not to go to university, choosing to earn a full-time wage from the age of 18.

SUMMARY QUESTIONS

1 Dalvinder has saved $10 to spend on clothes. She has written a list of what she would like and ranked the items from 1 to 3, with 1 being the most desirable.

<table>
<thead>
<tr>
<th>What I want to buy</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 two T-shirts</td>
<td>US$9.95</td>
</tr>
<tr>
<td>2 bracelet</td>
<td>US$10.00</td>
</tr>
<tr>
<td>3 skirt US$10.00</td>
<td></td>
</tr>
</tbody>
</table>

What is the opportunity cost if she buys the T-shirts?

2 Why should opportunity cost be considered when making economic choices?

3 In what way is time significant in making economic decisions?
Opportunity cost and economic decision-making

Volkswagen switches production plant from Europe to Brazil

Government increases spending on education – defence cuts likely

Workers in South Korea choose to work fewer hours as incomes rise

More shoppers buying luxury brands

**Economic actions**

Economic choices are made every day: an employer may choose to hire a young apprentice or a more experienced worker; consumers may choose to spend part of their income on rice rather than on potatoes.

The main groups that make up the economy are:

- consumers (people who buy goods and services)
- workers (people who supply labour in exchange for a wage)
- producers (people who make and sell goods and services)
- the government (which acts both as a producer and consumer, and as lawmaker).

You need to understand how the actions of each of these groups involve an opportunity cost. You also need to evaluate the implications of the choice – in other words, understand any effects of the choice of one alternative over another.

**Consumers**

Everyone is a consumer, whether they are individuals or part of a household that uses goods or services produced in the economy.

The opportunity cost of making any decision about consumption is the next best alternative that is sacrificed. When you buy a cup of coffee, the opportunity that you are giving up is the next best alternative that you could have spent your money on. This might be a cup of coffee from an alternative supplier, or it might be another item that you could have bought.

**Workers**

Workers provide labour to enable production to take place.

A key decision is how much labour time to provide in exchange for a wage. There are two contrasting effects that a worker will consider. As wages increase, the opportunity cost of leisure will increase, and so we would expect workers to work longer hours. However, in most countries in the world labourers are choosing to work shorter hours, and this is because as wages increase, people will consume more of the things they enjoy, including leisure.

**Producers**

Decisions made by a producer include:

- what to produce
- where to produce, e.g. whether to set up a bottling plant in Germany or Brazil.

For example, when a farmer decides to grow maize in a particular field, the opportunity cost is the next best crop that could be grown, e.g. onions.

Business activity is often criticised for failing to consider some elements of the opportunity cost of its activities that affect others. For example, the opportunity cost of creating pollution and waste is the cleaner environment that would otherwise exist.

**Government**

Governments receive income in the form of taxes and other revenues. Led by the finance minister, a government must then decide how to spend the money. The finance minister works with the various government ministries, e.g. health, education, defence and transport, to allocate government funds. There will be a minister in charge of each key area, and each will make a case for more spending for his or her department.

In each case it is necessary to identify the opportunity cost: if US$100 million extra is spent on education, that money cannot also be spent on health or road building. You can see how detailed discussion is necessary to make choices about how best to spend government money.

**TOPIC GUIDANCE**

Students should be able to:
- show how decisions made by consumers, workers, producers and the government are influenced by opportunity cost.

**STUDY TIP**

The concept of opportunity cost is important. In terms of pollution and its effect on the environment, you should understand that cleaning up the effects of pollution costs money, and could possibly lead to an increase in prices charged by a firm.

**STUDY TIP**

Government spending decisions involve opportunity cost, e.g. the implication of spending less on defence and more on education. You should be able to apply the concept of opportunity cost to such decisions.

**Key Points**

1. The main groups in the economy consist of consumers, workers, producers, government and financial institutions.
2. Decisions made by these groups involve an opportunity cost.
3. Taking into account the opportunity cost of decisions means that the real cost of economic activity can be assessed.

**Summary Questions**

1. Describe a choice made by a:
   a. consumer
   b. worker
   c. producer
   d. government.

   Explain the opportunity cost.

2. Why is it important to consider opportunity costs in economic decision-making?

3. Outline the implications to a government in terms of the opportunity cost of deciding to build more schools.
Production possibility curves

1.4.1 The production possibility frontier

Production possibility curves

A production possibility curve (or frontier) shows combinations of goods that can be produced in an economy at a particular time, utilising all resources. In an economy, it is only possible to produce a given number of goods at a particular moment in time. The number that can be produced is shown on the production possibility curve.

For example, a territory could use its land to grow two main types of crop – bananas or sugar. If it used all the land to grow bananas it could grow 100,000 kg per year. Alternatively it could use all of its land to produce sugar and produce 50,000 kg per year. A third choice would be to use some of the land for growing bananas and some for growing sugar. For every extra kilogram of bananas grown the economy would have to give up half a kilogram of sugar. If each area of land was identical, the production possibility curve would be a straight line (Figure 1.4.1).

However, land is not identical. Some land is more suitable for growing bananas and some for sugar. If farmers want to produce more bananas they will first use the land that is best for growing bananas and least good for growing sugar. In this case the production possibility frontier is a curve rather than a straight line (Figure 1.4.2). The nearer we are to the end of the curve the steeper it is, because to grow more of one crop will involve a greater sacrifice of the other. The more bananas we grow, the larger the reduction in sugar output required to produce a few more bananas.

Illustrating choice and resource allocation

A production possibility curve can be used to illustrate choices made in an economy and the resultant impact on resource allocation. For example, many island economies such as Mauritius, Sri Lanka, Jamaica, Barbados and Trinidad have had to weigh up how much land should be committed to agricultural purposes and how much to tourism. Figure 1.4.3 shows three alternatives. A is a situation where most of the land is allocated to agriculture. B is a situation with a fairly even distribution of land between agriculture and tourism, and C is where most of the land is allocated to agriculture. If we start from position B and choose to allocate more land to tourism, we will have to sacrifice some agricultural land. Conversely, if we were to choose to allocate more land to agriculture we would have to reduce the area of land available for tourism.

Illustrating opportunity cost

The concept of opportunity cost can be illustrated in the form of production possibility curves. In the production possibility curve shown in Figure 1.4.4 we can consider what happens when agricultural land is converted to hotels and leisure activities. The distance shown by the arrow (A1–A2) on the horizontal axis shows the value of agricultural production sacrificed to increase the value of tourism income by the value illustrated with an arrow on the vertical axis (T1–T2). The greater the proportion of resources already allocated to tourism, the greater the quantity of agricultural output that will have to be sacrificed to use more land for tourism. In other words, the greater the proportion of resources used for tourism, the higher the opportunity cost (measured in agricultural output) required to increase resource use for tourism.
1.4.2 Movement along and shifts in a production possibility curve

Points under a production possibility curve

The production possibility curve illustrates how much of two goods can be produced, assuming all resources are being fully employed. We can illustrate this by taking the example of an economy that can use its land for tourism or agricultural production.

On the production possibility curve shown (Figure 1.4.2.1) points A, B and C show combinations of agricultural and tourism output that could be produced. However, points D, E and F illustrate points where some resources are not being used. They represent inefficient situations, which is why the points lie under the curve.

Movements along a production possibility curve

A production possibility curve illustrates the choices that can be made about production. Figure 1.4.2.2 illustrates an example of an island economy that can use its land for either agricultural or tourist use.

To convert agricultural land to hotels and leisure activities will involve giving up some agricultural output. This distance shown by the arrow (A1–A2) on the horizontal axis shows the value of agricultural production sacrificed to increase the value of tourism output by the value illustrated by the arrow on the vertical axis (T1–T2). The greater the proportion of resources already allocated to tourism, the greater the quantity of agricultural output that will have to be sacrificed. Economists use the term ‘movement’ along a production possibility curve to describe the impact (in terms of output) of the substitution of one form of land use for another. For example, when tourism production is increased (from T1 to T2) at the expense of a reduction in agricultural output (from A2 to A1), we would move along the curve (from point X to point Y).

Shifts in the production possibility curve

The production possibility curve will shift to the right as a result of economies becoming more efficient, leading to economic growth. An example of this would be an island economy producing increased quantities of agricultural and tourism output with its resources.

Over time, economies become more efficient. This generally results from investing resources, e.g. by building new hotels or investing in new agricultural equipment. Increased efficiency is represented by a shift to the right in the production possibility curve. Assuming the original frontier is the curve PP, increased efficiency is represented by P1P1. To illustrate that P1P1 is more efficient, look at a point where ‘X’ of agricultural goods is produced (Figure 1.4.2.3). On PP, only ‘Y’ of tourism output can be produced. However, on P1P1, ‘Y1’ of tourism output can be produced.

The production possibility curve could also move from P1P1 to PP (a downward movement). For example, the economy could become more inefficient as a result of a hurricane. Two main factors affect the possibility curve: a change in the amount of resources and a change in the productivity of existing resources.
Country B is a developing nation whose economy has been growing at an average of 7 per cent a year for the last four years. The older industries are in the manufacturing sector, mainly based on cotton textiles and related products. Newer industries include computer games software development and customer call centre facilities for multinational banks. These organisations are owned and run by a growing group of ‘new entrepreneurs’. There is a big demand for wood and other building materials throughout Country B, and this is leading to the loss of many square kilometres of forest. Generally the forest is not replanted, but used for farmland.

- The population is growing at approximately 4 per cent a year, although this is hard to measure as there is no formal census.
- The unemployment rate is very low, with jobs available for anyone who wants one. Wages are increasing as employers try to attract workers to their businesses.
- The average price level is increasing at a rate of 2 per cent per annum as firms raise prices in order to pay higher wages which have been increasing at a rate of 3 per cent per annum. People on a fixed income are having to think very carefully about how they spend their limited money as prices rise.
- The government of Country B has recently raised the age of compulsory schooling to 14 and is investing in new school buildings in rural areas.

1. a Explain what is meant by human resources and give an example from the text. (2)
2. b Explain what is meant by human-made resources and give an example from the text. (2)
3. c Explain ONE likely reason for the increased demand for resources in Country B. (2)
4. d Discuss whether the use of labour in the new call centre industry in Country B may benefit the economy more than the established textiles factory jobs. (6)
5. e Calculate the increase in real wages. (2)
6. f Discuss the possible opportunity cost of the use of wood from forests in Country B for building materials. (6)
7. g Using the example of a new call centre business, explain how the four factors of production may be used. (4)
8. h Using the concept of opportunity cost and information in the text, discuss whether the government of Country B is wise to spend money on increasing education provision for the population. (6)

Total: 30 marks
1 Country A is a small island nation in Asia, whose native population is growing at 5 per cent a year. The main town is situated in the south of the island and is growing fast, as many jobs are based there. The country is a popular tourist destination and beach resorts are located in the coastal areas. Several big hotel chains have built hotels and there are others that would like to buy land to build all-inclusive leisure resorts, with numerous facilities for guests. Apart from tourism, the main industry is fish canning, and a large factory is situated in the west of the island. The fishing boats bring their catch into the small port and much of the canned produce is exported to Europe and the US.

a. Explain why the resources of the island need to support more people than just the native population. (4)

b. Identify and explain TWO examples of scarce resources mentioned above. (4)

c. Using the information given, identify and explain TWO examples of natural resources that are being used by the people of Country A. (4)

d. Discuss what sacrifices, in terms of resource use, may need to be made if the government of Country A wants to increase tourism. (8)

2 Fishing and tourism are the main industries in Country A. The government would like to welcome more tourists to the island.

a. Identify the four factors of production as used in the fishing industry in Country A. (4)

b. Choose THREE of the factors you have identified in A and explain the likely rewards to the owners of these. (6)

c. Identify the four factors of production as used in the hotel industry in Country A. (4)

d. Discuss how the proposed increase in tourism may affect the fishing industry and those employed within it. (6)

3 The main town on the island is becoming very busy and congested with traffic, which is also causing air pollution. For business, it is virtually impossible to find a shop or office to rent and many local residents are moving to quieter areas outside town, where new apartments are being built. They then need to spend time and money to travel into town by bus or car to work.

a. According to the extract, what has been the opportunity cost of using more buildings in the town for offices and shops? (4)

b. Describe TWO opportunity costs to local residents who choose to move out of town. (4)

c. Describe TWO possible opportunity costs to the owners of the land where the new apartments are being built of the choice to provide homes for local residents. (4)

d. Discuss how the government of Country A might use its resources to reduce congestion and pollution in the town. (8)

4 Two large international holiday companies have been planning to build hotel and leisure facilities for tourists on one of the island’s beaches, which is also a popular day-trip destination for local families. The government tourism minister is keen to encourage these new developments in order to ‘make the best use of our resources’. He also believes that if the hotel companies take their money elsewhere, this could lead to a loss of tourists coming to Country A.

a. Explain what is meant by ‘our resources’ in this instance. (4)

b. Explain the minister’s view that more hotels will ‘make the best use of our resources’. (4)

c. State TWO possible opportunity costs to the island of a decision in favour of the hotel developments. (2)

d. Using the concepts of scarce resources and opportunity cost, discuss whether increased tourism may be the best use of the island’s resources in the long term. (10)

Total: 80 marks

2 The allocation of resources: how the market works and market failure

Unit 2 looks at how markets work. The market brings together buyers (who demand goods and services) and producers and sellers (who supply goods and services). It explains how the market helps to decide how scarce resources, such as ‘land’ and ‘labour’, will be used. Demand is the quantity that buyers are willing to buy at different prices and supply is the quantity that suppliers are prepared to sell at these prices.

Unit 2 also shows how price elasticity affects market prices. Elasticity is a measure of how quantities demanded and supplied in the market respond to changes in price.

The notion of market failure is also introduced. This shows how markets may not necessarily allocate resources in the most efficient way and may fail to meet the needs of members of a society. The alternative of a mixed economy is introduced, blending together market forces with some government intervention. Throughout unit 2, graphs and diagrams illustrate the points under discussion.

TOPIC COVERAGE

Students will cover the following topics:

- Micro- and macro-economics
- The market system and resource allocation decisions
- Introduction to the price mechanism
- The nature of demand, individual and market demand
- The nature of supply, individual and market supply
- How prices are determined, market equilibrium and disequilibrium
- Causes and consequences of price changes
- Price elasticity of demand (PED) and determinants of PED
- Price elasticity of supply (PES) and determinants of PES
- The market system, its advantages and disadvantages
- The nature of market failure
- Causes and consequences of market failure
- The mixed economic system
- Government intervention to address market failure