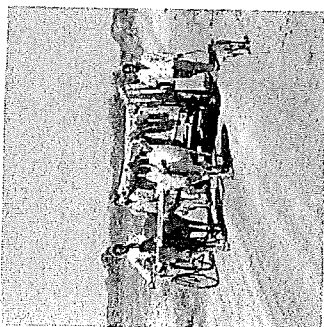


The economic problem

LEARNING OUTCOMES

- Candidates should be able to:
- define the nature of the economic problem.



Gathering fuelwood in Tanzania – fuelwood provides 90 per cent of domestic energy supplies in Tanzania, but is becoming increasingly scarce

EXAM TIP

Every country faces the economic problem. You will come across this in various places throughout this book and you should be able to write it into many examination answers.

DID YOU KNOW?

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

The economic problem

We cannot have everything that we want because there are not enough resources to produce it all. Everything produced comes from a resource. There are a number of types of resource (Figure 1.1.1).


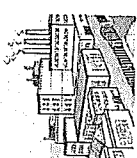

Natural resources	Man-made resources	Human resources
		
soil, climate, water, minerals, forests and fisheries	machinery, buildings and equipment	people and their skills

Figure 1.1.1 Types of resource

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. This is a major problem for all societies.

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 Fuelwood scarcity in Tanzania

In Tanzania fuelwood is gathered for household use from nearby forests. Some of it is gathered in a sustainable way: branches are cut and the trees regrow them. However, some wood is used for village industries, including tobacco curing, burning bricks, fish smoking, baking and tea drying. Some of the fuel for these purposes comes from charcoal and often involves cutting down whole trees and the destruction of forest areas.

Various studies have shown that annual firewood consumption in Tanzania is higher than the supply of new trees, resulting in deforestation. Fuelwood provides about 90 per cent of the energy supply and many people in Tanzania spend over 30 per cent of their income on it. As it becomes more scarce, the price goes up, and people also have to travel further to collect it.

Questions

- What is meant by scarcity?
- Why is fuelwood becoming more scarce in Tanzania?
- How might this scarcity affect future choices that people make?

Making choices

Gathering fuelwood is an important activity in Tanzania, particularly for people in rural areas. People have to decide whether to buy the wood or collect it themselves, in which case they need to decide how long to spend gathering it and then how to cut it. Having to make choices like this is a result of the **economic problem**. Domestic energy is not provided freely to households – people have to gather fuel themselves or pay for it.

Our daily lives involve thousands of choices that we have to make that involve how we spend our time and our 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.

So daily life involves solving many economic problems where choices have to be made. Imagine that 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 with the money you would have saved by borrowing it. If you borrow it, you sacrifice the opportunity to own the book. In Units 1.3 and 1.4 we will explore this further in terms of the cost of the sacrifice – the **opportunity cost**.

ACTIVITY

Use your local and national papers or the internet to find a story about scarcity in your region or country. What is it that is scarce? Who is affected by the scarcity? What sorts of choices are people having to make as a result of this scarcity? Share your findings with your group.

EXAM 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. You will need to show that you fully understand the implications of making a choice in terms of what has to be given up.

KEY POINTS

- The economic problem is one of scarcity and choice.
- Resources are scarce; this requires societies and individuals to make choices.
- Making a choice involves a sacrifice.

SUMMARY QUESTIONS

- What resources can you think of that are particularly scarce in your country?
- Give an example of a situation in which you have had to make a choice because you have not had access to enough resources.
- In what situations do your school and community make choices because of a scarcity of available resources? Give reasons for each in your answers.

Factors of production

LEARNING OUTCOMES

Candidates should be able to:

- define the factors of production (land, labour, capital and enterprise)



A canning factory brings together land, labour, capital (machinery and buildings) and enterprise to create the finished product

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 vegetable-processing 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.

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.

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.
- Machines, tools and buildings are all examples of physical capital.
- Enterprise** is the factor that brings the other factors together to produce goods in order to make profits.

EXAM TIP

The concept of capital in economics can sometimes appear confusing. In some senses, it can mean money, but in relation to the factors of production, it means any man-made aid to production.

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 Arcelor Mittal). The company has expanded to take over a network of steel producers from across the world. Today it has steel works in 14 countries. 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.



Lakshmi Mittal

- Labour with wages:** attractive salaries and wages have to be paid to workers in each of the 14 countries.
- Land with rent:** Arcelor Mittal has to pay rent on some of the sites on which its factories are located.
- Capital with interest:** like most other businesses, Arcelor Mittal 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 Arcelor Mittal are shared out among shareholders (or reinvested in the business).

Questions

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

KEY POINTS

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

SUMMARY QUESTIONS

- Choose a familiar product and describe how factors of production are brought together to produce it.
- What are entrepreneurs? What do they do?
- What type of capital do the following work with?
 - farm workers
 - factory workers
 - teachers.

EXAM TIP

Textbooks used to leave out 'enterprise' and refer to only three factors of production. Don't make that mistake; if a question asks about the factors of production, make sure that you refer to all four!

DO YOU KNOW?

Arcelor Mittal was created in 2006 by the merger (joining together) of Luxembourg-based Arcelor with Lakshmi Mittal's global steel business. The company employs about 300,000 people.

ACTIVITY

Think of an entrepreneur in your own country who brings together the factors of production in a particular company. Research and write a short report about your chosen person.

Opportunity cost

Opportunity cost

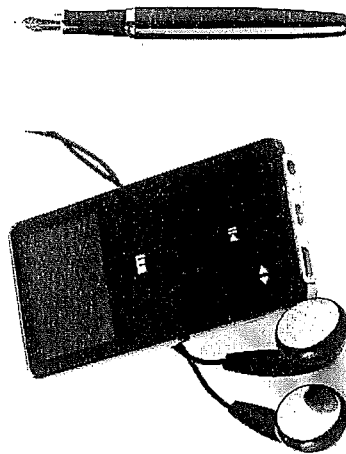
We may often ask someone with a new purchase, 'How much did it cost?' In this sense we are asking how much was paid. However, in economics we employ a slightly different meaning of 'cost', which we refer to as the 'opportunity cost'. Economists believe that 'opportunity cost' reveals the 'real cost' of making a choice.

Opportunity cost refers to the next best alternative that we give up when we make a particular choice. For example, when you choose to buy a new pen, the sacrifice that you are making is the next best thing that you could have spent the money on. The real cost of any choice is therefore the alternative that is sacrificed.

Two examples of opportunity cost

You may have thought about buying an expensive pen to help you with your studies. However, there are alternatives that you could also consider. You could spend the money on a new top and maybe a trip to the cinema as well. Or you could buy the MP3 player that you have been planning to buy for a long time. When you think carefully about the alternatives, the choice may come down to the player or the pen. So when you go into the shop and pay for the pen, the real sacrifice that you are making is the MP3 player that you have given up. This is the 'real' cost.

People will often spend a lot of time making choices, particularly when they buy items like clothes. What they are often doing is weighing up the opportunity cost: if I buy this top, how am I going to feel about not being able to buy another one that I like almost as much? Here they are thinking about the sacrifice made – that is, the next best alternative that they are giving up.



The opportunity cost to you of buying an expensive pen may be the MP3 player that you were also thinking of buying

LEARNING OUTCOMES

Candidates should be able to:

- define opportunity cost and analyse particular circumstances to illustrate the concept.

Another decision that we make frequently is how to make use of our time. Sometimes it is difficult to decide whether to stay in to study or go round to a friend's house. When you choose to carry out a leisure activity and the next best alternative is time spent studying, the study time that you sacrifice is the opportunity cost.

Opportunity cost is a particularly important economic concept. Economists argue that many decisions taken do not take account of alternatives that are sacrificed when using resources in a particular way. This can lead to undervaluing and, consequently, overuse of important resources.

ACTIVITY

Identify two situations where you have recently had to make a decision about how to use your time. Explain how opportunity cost was involved in the choice you made.

Then think of another situation in which you had a choice about how to spend your money. Explain how opportunity cost was involved in the choice.

KEY POINTS

- 1 Opportunity cost is the next best alternative that is sacrificed in making an economic choice.
- 2 The opportunity cost is the real cost of any economic decision.
- 3 Purchasing decisions and decisions about how to make use of time involve an opportunity cost.

EXAM TIP

Decisions in economics involve opportunity costs – in other words choosing a particular course of action always involves making a sacrifice. Try to identify the next best course of action that could have been taken – this is the opportunity cost.

SUMMARY QUESTIONS

- 1 Dalvinder has saved up US\$10 to spend on clothes. She has set out a wish list of what she would like and ranked the items from 1 to 3, with 1 being the most desirable.

	What I want to buy this week	Shop price
1	Two T-shirts	US\$9.50
2	Bracelet	US\$10.00
3	Skirt	US\$10.00

If she purchases the T-shirts, what is the opportunity cost of making this decision?

- 2 Why should opportunity cost be considered when making economic choices?
- 3 In what way is time significant in making economic decisions?

Opportunity cost in action

LEARNING OUTCOMES

Candidates should be able to:

- evaluate the implications of a particular course of action in terms of opportunity cost.



Opportunity cost – the next best alternative to the Chinese government spending on hospitals could be spending more on primary schools

ACTIVITY

Think of some of your most recent purchases. Did all of them involve thinking about the sacrifices involved in making your choice? Were there some purchases in which you gave greater consideration to opportunity cost than others?

Volkswagen switches production plant from Europe to Brazil

Government increases spending on education – defence cuts likely

More shoppers buying luxury brands

Newspaper headlines illustrating choices involving an opportunity cost

Economic actions

Economic choices are made every day: an employer may choose to hire a young apprentice or a more experienced worker; a consumer 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)
- 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 an individual 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 drink that you could have bought.

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.

Each of the following decisions involves an opportunity cost.

- 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.
- One of the most important decisions is where to locate production. Key considerations are wage costs and whether there is a suitable pool of labour with the right skills. The opportunity cost of setting up in one location is the advantage sacrificed from setting up elsewhere.

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 – for example, 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 their 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.

EXAM TIP

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

EXAM TIP

Government spending decisions involve opportunity cost – for example, the implication of spending less on defence and more on education. You need to be able to apply the concept of opportunity cost to such decisions.

SUMMARY QUESTIONS

1 Describe a choice made by:

- a consumer
- a producer
- a 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 opportunity cost of deciding to build more schools.

KEY POINTS

1 The main groups in the economy consist of consumers, producers, government and financial institutions.

2 Decisions made by these organisations involve an opportunity cost.

3 Taking into account the opportunity cost of decisions means that the real cost of economic activity can be assessed.

Allocating resources in an economy

LEARNING OUTCOMES

- Candidates should be able to:
- describe the allocation of resources in market and mixed economic systems.

Allocation of resources

Resources can be used to make goods. Some – for example, timber or water – are provided by nature. Others, such as tools and equipment, are man-made.

The table indicates some of the decisions that have to be made in an economy about allocating resources – that is, deciding how they will be used to produce goods and services.

Decisions involving allocation of resources	Examples
What resources will be used to produce goods and services	Type of energy (nuclear, coal, wind, solar) to use to power industry and homes
How the resources will be used	For example, whether energy supplies will be available for industrial production (e.g. in factories) or for private use (in homes)
Who decides how the resources will be used	Whether government-owned or private businesses will generate energy
Who benefits from the use of the resources	Whether the energy resources are available for just a few people or for all

Government influence on economic decision-making

In some countries the government plays a major role in decision-making. In North Korea, for example, industries are government-owned and officials working for the government decide what will be produced, the methods of producing goods and the prices charged. In contrast, the government in most other countries plays a smaller part in this type of decision-making. Figure 2.1.1 gives some examples of countries and the different levels of government interference in their markets.

Mixed economy with little government interference	Mixed economy with a lot of government interference
USA United Kingdom Japan France	China North Korea South Africa Venezuela

Figure 2.1.1 Levels of government involvement

The market and economic decision-making

In a market economy goods and services are freely exchanged and prices are decided by individual suppliers. Buying and selling decisions are made by buyers and sellers. Prices act as a guide:

- If prices are high enough, suppliers will be willing to supply to the market. High prices create profit and increased supply.
- If buyers think that prices give good value for money, they will buy goods. The lower the price, the more customers will buy.

EXAM TIP

You need to be able to show that you understand how government intervention in an economy can change according to economic conditions; in recent years intervention has increased as a result of the 'credit crunch'.

Supporters of the market system argue that it is decentralised and automatic. The allocation of resources is determined by the wishes of individual consumers and suppliers.

A mixed economy

In most countries, decisions are made by a combination of government decision-making and the market. This is a mixed economy.

CASE STUDY: Mauritius

Mauritius is an island economy in the south-west Indian Ocean. The market is an important part of economic life in Mauritius. Mauritius is a trading economy that imports and exports large quantities of textiles. Companies on the island produce T-shirts and designer clothes for famous brand names such as Lacoste and Nike. Other industries include sugar cane and tea plantations owned by private companies. There are also thousands of small businesses producing household goods. Most economic decisions are made by businesses and consumers. However, the government does play a part. One example is the payment of subsidies (sums of money) to encourage 'derocking': rocks are taken from the land to increase the quantity of fertile soil for growing sugar cane. Another example is management of the island's water shortage in the form of a government limit on water use at certain times of the year.

Questions

- 1 What economic decisions will be made by private businesses?
- 2 Why do you think that the government gets involved in the economy of Mauritius?
- 3 Does Mauritius have a mixed economy? Give a reason for your answer.

KEY POINTS

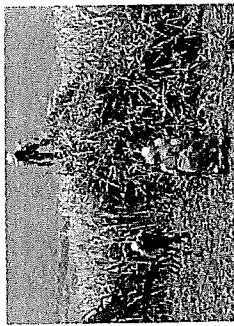
- 1 In a market economy buyers and sellers interact and this decides how resources are allocated.
- 2 Prices act as signals to buyers and sellers.
- 3 In a mixed economy the government makes some of the decisions about how resources will be used.

SUMMARY QUESTIONS

- 1 Who are the main participants in a mixed economy?
- 2 What are economic resources?
- 3 Who decides on the use and allocation of resources in a market economy?

EXAM TIP

Adam Smith was one of the earliest economists, and he described the price system as an 'invisible hand'. His theory was that if consumers and producers are allowed to choose what to buy and sell, prices will settle at a level that benefits individuals and their community. You might get the opportunity to refer to this in an examination question.



In a mixed economy like that of Mauritius, most decisions are made by the market. However, the government does intervene by subsidising 'derocking' to help farmers increase sugar cane production.

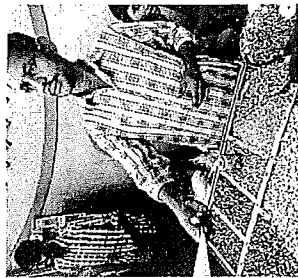
ACTIVITY

What types of goods and services are provided by government businesses in your country? Which ones are provided by private businesses?

Demand

LEARNING OUTCOMES

- Candidates should be able to:
- define and explain the term demand.



The lower the price of roasted nuts sold from a stall, the higher demand for them will be.

DID YOU KNOW?

When price falls and demand increases, this is referred to as an extension in demand. When price rises and demand falls, this is referred to as a contraction in demand.

EXAM TIP

It is important to understand that a movement along a demand curve (either an extension or contraction in demand) is caused by changes in the price of a product with everything else held constant.

Demand for goods and services

The effective demand for a good or service is a want, supported by the money to purchase it. If a good is in great demand, there will be a lot of people wanting to buy it at the current price.

Business organisations try to predict how much the demand for their products will be at different prices. They can then decide how much to make in order to meet demand.

Recording demand

The demand for a product can be recorded in a table which shows how many items would be demanded at given prices. It is also useful to record the demand for a product on a graph. A demand graph shows that larger quantities of any good will be bought at lower prices, and lower quantities at higher prices. Common sense and personal experience help to explain this: when goods are sold at a lower price, more people can afford to buy them. Existing purchasers will be tempted to buy more because they have to give up less of their income to make the purchase.

The table below shows the demand for bananas at different prices per kilo. Figure 2.2.1 shows the same figures transferred onto a demand curve.

Price per kg	Quantity demanded
45 cents	1,000 kg
35 cents	3,000 kg
25 cents	4,500 kg
15 cents	6,500 kg

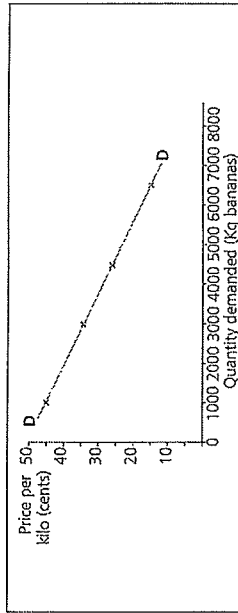


Figure 2.2.1 Demand for bananas at different prices per kilo

The demand curve is constructed by showing prices on the vertical axis and quantities demanded along the horizontal axis. You can see that:

- higher prices lead to lower quantities being bought
- lower prices lead to higher quantities being bought.

CASE STUDY

Market demand

Demand for a product can be found by adding together the demand of all the consumers in the marketplace.

Rajesh sells small packets of roasted nuts from a stall in his village. It costs him 10 cents to grow the nuts that go into each packet. He sells the nuts to the other villagers, who come from five families. He has calculated the demand by asking the families how many packets they would buy from him per week at different prices.

Price per packet	Demand from the families					TOTAL
	Family Panwar	Family Singh	Family Patel	Family Rai	Family Jain	
10 cents	15	15	20	20	15	85
15 cents	12	12	20	15	11	70
20 cents	8	8	15	10	9	50
25 cents	7	7	12	9	5	40
30 cents	6	6	9	7	2	30
35 cents	5	4	6	5	—	20
40 cents	—	2	3	—	—	5
45 cents	—	—	—	—	—	—

Questions

- 1 Illustrate the information provided in the table in the form of a graph.
- 2 What is the relationship between price and quantity illustrated in the table and the graph?
- 3 How would you explain this relationship?
- 4 Why might it be more sensible for Rajesh to charge 25 cents per packet of nuts rather than 10 cents or 40 cents? Work out how much revenue (price \times quantity sold) Rajesh will make at each price level.

Straight-line demand curves

Although in reality demand curves have a curved or irregular shape, economists find it convenient to draw them as a straight line (Figure 2.2.2) – it is quick and easy to draw. They are still referred to, however, as demand 'curves'. Price is shown on the vertical (y-axis) and quantity demanded on the horizontal (x-axis).

KEY POINTS

- 1 Effective demand is a want or need backed up by the ability to make a purchase.
- 2 At lower prices greater quantities will be demanded than at higher prices.
- 3 A demand curve usually slopes down from left to right.

EXAM TIP

Make sure that any diagrams you use in the examination are clearly drawn and labelled. Marks will be awarded for correct labelling of the horizontal and vertical axes.

ACTIVITY

Identify one good that you or your family have recently bought more of because its price has fallen. Identify another good that you have bought less of because its price has risen. Compare your findings with others in your group.

DID YOU KNOW?

Demand for products in a mixed economy is made up of demand from individuals, businesses and the government.

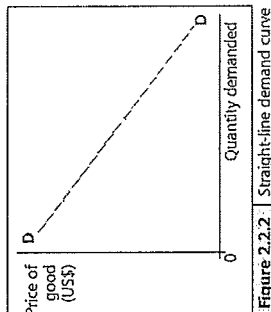


Figure 2.2.2 Straight-line demand curve

SUMMARY QUESTIONS

- 1 What is the difference between want and demand?
- 2 How would you illustrate a demand curve for pencils?
- 3 How does knowledge of demand help businesses?

Supply

LEARNING OUTCOMES

Candidates should be able to:

- define and explain the term supply.



The higher the price an airline can charge people wishing to fly, the greater the number of flights it will be willing to supply

EXAM TIP

Make sure that when you are drawing a demand and supply diagram, you clearly label these. The demand curve will usually slope downwards from left to right and the supply curve will usually slope upwards from left to right.

The supply of a product is the quantity that a supplier is willing to provide at different prices. Typically suppliers will supply more at higher prices than at lower prices. Higher prices enable producers to cover costs and make increasing profits.

For example, every year large numbers of pilgrims fly from Delhi to Mecca for the annual pilgrimage, the Hajj, an important festival in the Islamic calendar. Groups from the various mosques in India charter flights – that is, they hire airlines to provide special flights.

A charter airline might run six flights a day between Delhi and Mecca when pilgrims are prepared to pay US\$200 for the return journey. However, if pilgrims are willing to pay US\$300 each, the airline might buy more planes and run nine planes a day. At US\$400 they might run 12 planes.

Supply of flights by the airline can then be illustrated on a supply curve, as shown in Figure 2.3.1.

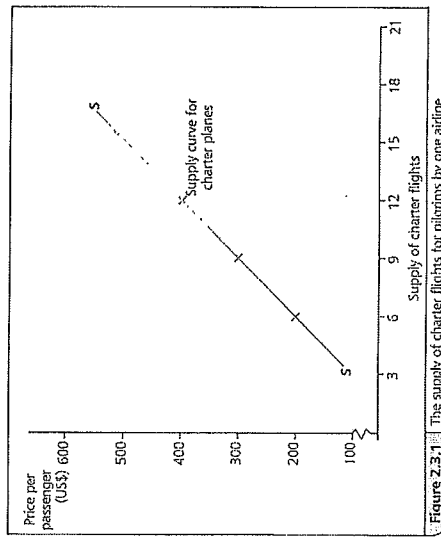


Figure 2.3.1 The supply of charter flights for pilgrims by one airline

Individual and market supply

Figure 2.3.1 illustrates the supply curve in an individual airline. To find out the market supply curve we need to add the individual supply curves of all the airlines supplying flights to Mecca. The same principle applies to the supply of any product to its market. If there are three airlines supplying charter flights, the individual and market supply curves might look like those in Figure 2.3.2.

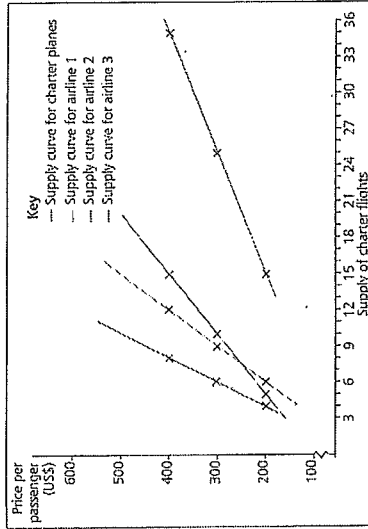


Figure 2.3.2 Individual and market supply curves

Price per seat (US\$)	Supply by airline 1 (flights/day)	Supply by airline 2 (flights/day)	Supply by airline 3 (flights/day)	Market supply (flights/day)
200	6	5	4	15
300	9	10	6	25
400	12	15	8	35

Extensions and contractions in supply

In the example above we looked at how the supply of a product changes as a result of an increase in its price. This is referred to as an **extension in supply**. Should the price that pilgrims are prepared to pay rise from US\$200 to US\$400, this would lead to an increase in flights from 15 to 35 per day. In Figure 2.3.3 this is illustrated by the movement from Q to Q1. Supply extends from Q to Q1. In contrast, a fall in the price of charter flights would lead to a **contraction in supply**.

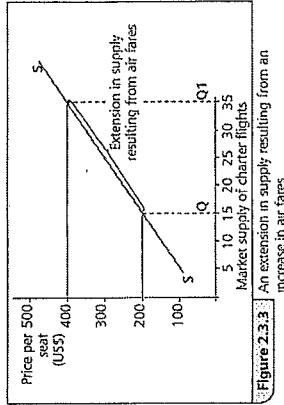


Figure 2.3.3 An extension in supply resulting from an increase in air fares

KEY POINTS

- 1 Supply is the quantity that producers provide to the market at different prices.
- 2 Producers supply more at higher prices than at lower ones.
- 3 The supply curve slopes up from left to right on a supply diagram.
- 4 Extensions and contractions in supply result from changes in the price of a product.

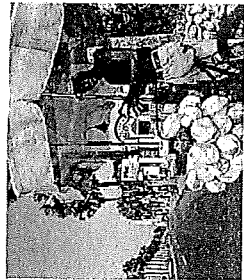
SUMMARY QUESTIONS

- 1 Describe the relationship between quantity supplied and price.
- 2 How does a rise in price lead to an extension in supply?
- 3 How does a fall in price lead to a contraction in supply?

Equilibrium price

LEARNING OUTCOMES

- Candidates should be able to:
 - demonstrate the principle of equilibrium price.



The price that the coconut seller charges is determined by demand and supply. The higher the price, the more the supplier will bring to market. The lower the price, the more consumers will want to buy.

EXAM TIP

The equilibrium position in a market will be where demand and supply intersect. When you draw this in a diagram, you will need to make sure that you clearly show the equilibrium price as the vertical axis and the equilibrium quantity on the horizontal.

Equilibrium price

Equilibrium means a state of balance. Equilibrium price occurs when there is a balance between demand and supply: the quantity demanded by consumers is equal to the amount that suppliers are willing to provide. For example, Ramesh and his family collect fresh coconuts in a plantation that they own. They sell them at a local holiday beach. The higher the price they can get, the more they will supply. The lower the price that Ramesh charges, the more customers will buy his coconuts (they can always buy from rival sellers).

The table of demand and supply schedules shows the weekly demand and supply for Ramesh's coconuts:

Price of Ramesh's coconuts (US\$)	Supply per week	Demand per week
2.50	500	200
2.00	400	400
1.50	300	600
1.00	200	800

These demand and supply curves can be illustrated on a single drawing, as in Figure 2.4.1.

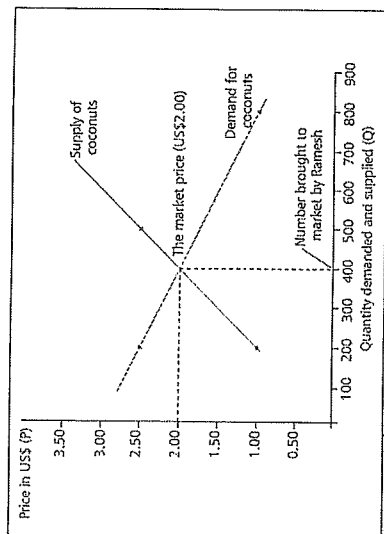


Figure 2.4.1 How the price of Ramesh's coconuts is determined

You can now see that, at a price of US\$2.00 per coconut, 400 would be bought each week. At this price Ramesh's customers would be happy to buy all 400 and Ramesh would be happy to supply this

quantity. This is the equilibrium price, as both seller and buyer are happy with the price.

You can see why this point is an equilibrium one by considering non-equilibrium points. For example, at US\$2.50 Ramesh would be prepared to supply 500 coconuts, but buyers would only be prepared to purchase 200 (leaving 300 unsold). Alternatively, if we examine a price below the market one (US\$1.00), customers would be willing to buy 800 coconuts, but Ramesh would only be prepared to bring 200 to sell. Customers would soon bid the price back up to the equilibrium price.

The market price is often referred to as the **market clearing price**, because demand matches the quantity supplied. Therefore the market would be 'cleared', with no coconuts remaining and no dissatisfied customers.

CASE STUDY: Demand and supply for Sweet Pastilles

Sweet Pastilles is a popular type of sweet sold from a variety of shops and small kiosks. The following table sets out the demand and supply schedules for different prices of Sweet Pastilles.

Price per packet (cents)	Demand (million packets per year)	Supply (million packets per year)
10	320	0
20	240	80
30	160	160
40	80	240

Questions

- Set out the figures in the form of a graph.
- What is the equilibrium price?
 - Why is this the equilibrium price?
- What volume of sweets will be supplied at the equilibrium price?
- Explain why neither 10 cents nor 40 cents is the equilibrium price.

EXAM TIP

The idea of a market clearing price is very important. You need to show that you understand that this will bring demand and supply together at a particular price without any need for government intervention.

KEY POINTS

- At the equilibrium price demand and supply are in balance.
- The equilibrium price is also known as the market clearing price.
- The market clearing price can be illustrated by demand and supply curves.

SUMMARY QUESTIONS

- Why is the equilibrium price the best price for suppliers to charge?
- What would happen if the price were higher than the equilibrium price?
- What would happen if the price were lower than the equilibrium price?

Causes of change in demand and the effect on the market

Movement along the demand curve

A demand curve shows the relationship between demand and price, all other factors remaining the same. When the price of a good rises or falls there is a movement **along** the curve. The movement is **down** the curve (contraction) for a rise in price, and **up** the curve (expansion) for a fall in price.

Changes in the conditions of demand

In addition to price, there are a number of factors that influence the demand for a product. If one of these factors alters, the conditions of demand are said to have changed. These factors include:

- popularity or fashion
- income
- the age distribution of the population
- the price of substitute and complementary goods (**complements**).

Changes in one (or a combination) of these factors will cause a **shift in the demand curve**. The demand curve will shift to the left if smaller quantities are wanted than before at given prices. A shift to the right indicates that larger quantities are wanted than before at given prices.

Popularity

Figure 2.5.1 shows that originally a quantity of 600 highlighter pens would be bought per month at 80 cents. However, if the pens become more popular with students, more will be demanded at all prices, so that, for example, at 80 cents perhaps 800 will be bought each month.

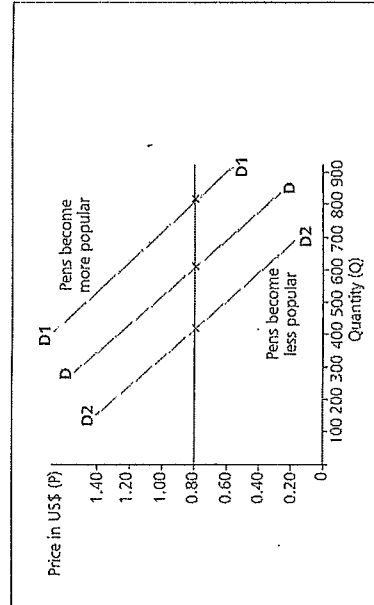
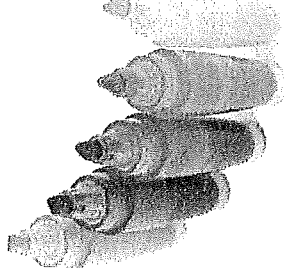


Figure 2.5.1 Changing the demand for highlighter pens

LEARNING OUTCOMES

Candidates should be able to:

- describe the causes of changes in demand conditions
- analyse changes in demand to show effects in the market



If the use of highlighter pens becomes more popular among students, the demand curve for them will shift upwards to the right – this will lead to a rise in price

EXAM TIP

You need to make sure that you clearly show in a diagram which direction a demand or supply curve is shifting. This can be done through arrows and through clear labelling, such as: a shift from DD to DD1.

ACTIVITY
Identify two goods that you use that are complements. How does this affect your demand for both goods when the price of one of them falls?

EXAM TIP

You need to show that you understand that a shift of a demand curve takes place when something happens in a market other than a change in the price of a product. A common error in examinations is confusion between movements along a demand curve and a shift of a demand curve to the right or left.

SUMMARY QUESTIONS

- 1 Give three examples of situations in which the demand curve for mobile phones would shift to the right.
- 2 What is an inferior good? Give an example. What would happen to demand for this good if incomes rise?
- 3 Give three examples of competing substitute products. What would happen to the demand for one of these as a result of a fall in the price of a substitute?

Alternatively, if the highlighters become less popular, fewer will be bought at all prices so that at 80 cents 400 highlighters will now be demanded.

Income

It is obviously easier to buy goods if you have money to spend. The amount of income people have to spend on goods is known as their **disposable income**. Average incomes tend to rise over time, which leads to a general increase in demand for most goods, noticeably expensive branded goods. An increase in incomes leads to a shift in the demand curve to the right.

However, some products may become less popular as income rises; they may be regarded as inferior as spending power increases. So a bicycle may be replaced by a motor scooter or car. In the case of inferior goods, demand shifts to the left when incomes rise.

Age distribution

The age distribution of the population can affect demand. Many products appeal to certain age groups. For example, trainers or sneakers are particularly popular among young people across the world. The rising number of young people in many countries such as Brazil, China and Saudi Arabia has led to an increase in demand for trainers.

Price of other products

The demand for products that have close substitutes will often be strongly influenced by the price of the substitutes. This would be the case, for example, with different brands of tinned fruit or different brands of petrol, because there are many different brand names from which consumers can choose.

The demand curve for a product is likely to shift to the right if a substitute product rises in price. The demand curve for a product is likely to shift to the left if a substitute product falls in price.

Some products are used together (**complementary goods**) so that the demand for one is linked to the price of another. An example of this might be cars and car radios: if the price of cars falls, this is likely to lead to an increase in demand for car radios.

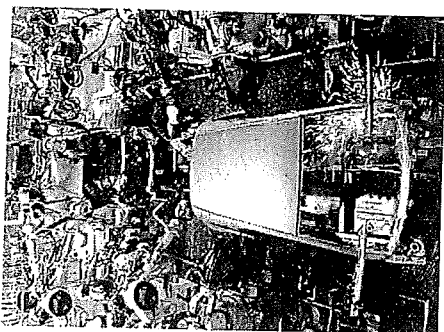
KEY POINTS

- 1 Movements along a demand curve result from changes in price.
- 2 Shifts in demand result from changes in factors other than price.
- 3 Shifts in demand result from changes in the popularity of goods, in disposable incomes, changes in age distribution of the population, and changes in the prices of complements and substitutes.

Causes of changes in supply and the effect on the market

LEARNING OUTCOMES

- Candidates should be able to:
- describe the causes of changes in supply conditions
 - analyse changes in supply to identify effects in the market.



Factory robots in the Czech Republic: improvements in technology reduce costs of production, leading to a shift to the right in the supply curve

EXAM TIP

Oil is a vitally important resource in most countries. It would be useful to know whether the general price of oil is going up or down, and to demonstrate that you are up to date with current events.

Shifts in the supply curve

The cost of producing an item is determined by the price of the various inputs, including the raw materials and machinery used to make it. Rises in the prices of some of these resource inputs will increase production costs, which in turn results in a reduction in supply at each price rise (see Figure 2.6.1).

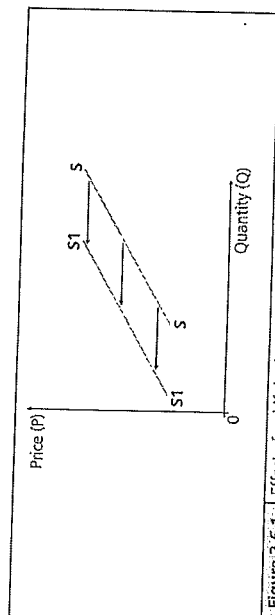


Figure 2.6.1 Effect of a shift in the supply curve

The supply curve shifts to the left when, at any given price, fewer items are produced and offered for sale.

Causes of changes in supply conditions

There are several factors that can cause changes in supply:

- rising or falling production costs
- changes in physical conditions
- taxation and subsidies
- joint supply.

Rising or falling production costs

A rise in production costs pushes the supply curve to the left (it will cost more to produce each level of output), and a fall in production costs pushes the supply curve to the right.

Production costs fall when the price of resources falls. So when the price of oil falls, for example, energy costs for all industries are reduced. Rising resource prices lead to rising production costs. Wars and conflicts can restrict the supply of important resources such as oil, and can lead to rapid increases in production costs. In recent years economic growth in China has led to price rises on global markets of many important industrial metals.

The development of new technology in the form of computer-based processing systems and computer-controlled machinery has reduced production costs in many industries.

Physical conditions

Changes in the weather, the quality of soil and natural disasters such as flooding and drought can have a major impact, particularly on agricultural products. Global warming (the rise in temperature) means that it is increasingly difficult to grow crops in drier areas of the planet.

Taxation and subsidies

Rises in taxation and **subsidies** pull in opposite directions on the supply curve. A production tax of 10 cents per unit on a good would increase the cost of its production by 10 cents per unit. In contrast, a subsidy would reduce the costs of production. Supply will therefore shift to the left as a result of rising taxes on a product, and to the right as a result of a subsidy (see Figure 2.6.2).

Joint supply

Some production processes create more than one product (**joint supply**): when oil is refined the process creates by-products that can be used to manufacture goods such as synthetic carpets and soap. Increases in oil supply will therefore drive down the price of these by-products as more of them are supplied to the market.

ACTIVITY

The following headlines have appeared in newspapers. State in each case the likely impact on supply in the relevant industries or areas.

Wages fall in printing industry

South Africa – good wine-growing conditions reported

High-tech start-up businesses – new subsidies announced

Brazil – poor coffee harvest

South East Asia earthquake – latest news

Wages fall in printing industry

Effect of changes in supply on the market

An increase in supply results in a fall in the price of a product. This leads to a movement along the demand curve (more is bought in response to the lower price).

A decrease in supply results in a rise in the price of a product. This leads to a movement along the demand curve (less is bought in response to the higher price).

KEY POINTS

- The supply curve shifts to the right as a result of increases in supply at each price.
- The supply curve shifts to the left as a result of a fall in supply at each price.
- Shifts in supply result from changes in costs of production, physical conditions and changes in joint supply.

DID YOU KNOW?

In the Middle East and North Africa (MENA) area, an increasingly scarce resource is water (Yemen is the country most affected). There are 300 million people here with a desperate need for water. In many areas water is delivered in tankers or sold in bottles. Increasing scarcity for businesses drives up this important cost of production.

DID YOU KNOW?

A subsidy is a sum of money given by the government to support a particular purpose or activity. For example, a subsidy might be 10 cents per unit produced.

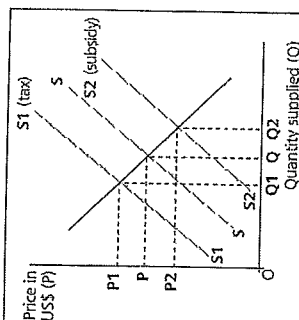


Figure 2.6.2 The impact of taxes and subsidies on the supply of a product

SUMMARY QUESTIONS

- Explain and illustrate the effect of the use of improved manufacturing technology in the car industry.
- How might a fall in the supply of oil have a multiple effect in many markets?
- Explain joint supply by giving an example of a locally produced product.