

Susan Grant

Cambridge IGCSE® and O Level Economics

Coursebook

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Susan Grant

Cambridge IGCSE® and O Level

Economics

Coursebook

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Introduction

This book is designed to introduce you to the study of economics and to help you progress through your IGCSE or O Level course. The book follows the structure of the IGCSE and O Level course closely.

The Coursebook is divided into 39 chapters. Each of these chapters explores a key economic topic and is based on a section of the syllabus. Each one has activities, multiple choice questions and four-part questions to assess your understanding of the topic. In the first six chapters, the four-part questions actually contain fewer than four parts. This is because economics is a subject where concepts build on each other. As more concepts are covered and depth is built up, the four-part questions in the remaining chapters do have the full four parts.

Each chapter contains one or more tips. This may remind you of a key point, warn you about a common confusion, give you advice on how to approach a question or recommend an activity which will enhance your understanding. At the end, there is a summary of the main points covered in the chapter. Throughout the book, there are links to parts of other chapters where concepts can help you understand the topic.

The chapters have been arranged into six sections. At the end of each section, there are ten multiple choice questions, data questions and four-part questions covering the whole section.

Introduction to Economics

Economics is an important, well-respected and exciting subject. Economists play a key role in the world. They give advice to firms and governments to improve their performance and also comment on their success or failure. The work of economists can make a significant difference to people's lives. For instance, the policies they recommend to governments may reduce poverty and improve the quality of the environment.

Whilst some of the people who study economics go on to become economists, others enter a range of professions including accountancy, banking, education, journalism and the law. Economists enjoy a lot of respect in universities and professional organisations. They regard it as a rigorous subject that develops logical thinking and analytical and mathematical ability.

There are certain concepts – such as opportunity cost and price elasticity of demand – and certain topics – including price determination, unemployment and inflation – that are central to economics. The subject, however, is ever changing as new theories develop, new institutions are created and new problems are encountered. This makes it an interesting and challenging subject.

The skills of an economist

To be a good economist, you need to be informed of the developments in your economy and other economies. You need to be able to think and write clearly and apply relevant economic terms and concepts. You need to be confident in handling figures. This involves being able to add, divide, subtract, multiply, calculate percentage changes and understand index

numbers. You also need to be able to draw relevant, well-labelled and accurate diagrams. This Coursebook is designed to help you develop these skills.

Preparing for your examination

Revision is a continuous process. After every lesson, check your work and if necessary, add extra notes. As an examination approaches, you will need to do intensive revision. Try to engage in active revision. This involves, not just reading notes, but also using the information. There are a number of ways in which you can do this. They include testing other members of your group, and getting them to test you, drawing spider diagrams and producing tables and revision cards.

Examination technique

It is not sufficient to have a sound knowledge and good skills in the subject. You also have to demonstrate these under examination conditions. So, it is essential to develop examination techniques.

Before an examination, check out the duration of the examination and the number of questions you have to answer. Read the instructions on the examination paper carefully. Do not rush into writing your answers.

In answering multiple choice papers, consider every option in a question carefully. If you are uncertain of an answer to a particular question, move on to the next one and return to the question you were unsure of when you have answered the other questions. At the end, check that you have answered all the questions. Never leave a question unanswered, even if you have to guess.

In answering four-part questions read the questions very carefully, paying particular attention to the command (instruction) words. A question which asks you to identify or state something will only require a brief answer, consisting of a few words. In contrast, a question which asks you to explain, analyse or discuss something will require a longer answer, written in sentences and paragraphs. Unless specifically asked for, you should avoid writing a list.

The marks allocated to a question or part of a question should give you a clear indication of the extent of detail required. It is often useful to include a diagram (or diagrams) in your answers. These should be clear, accurate, well-labelled and backed up by an explanation in the text.

Stretch content

As well as covering all of the topics on your course, in places, the book goes beyond the syllabus to include concepts that stretch your understanding and provide you with possible new ways to approach particular topics and strengthen the depth of your answers. These are marked in the book with a blue line next to them in the margin, and also listed in the table below for your reference.

Topic	Where found in Coursebook
Allocative, productive and dynamic efficiency	Chapter 13.4 Allocative efficiency, Chapter 13.5 Productive efficiency and Chapter 13.6 Dynamic efficiency
Cost benefit analysis	Chapter 15.3 Government measures to address market failure (Effectiveness of government intervention)
Average propensity to consume	Chapter 17.1 Spending (Income and consumption)
Average propensity to save	Chapter 17.2 Saving (Income and saving)
Aggregate demand and aggregate supply analysis	Chapter 25.1 Government's macroeconomic aims (Economic growth)
Purchasing power parity	Chapter 32.1 Indicators of living standards (Comparing living standards between countries)
Genuine Progress Indicator, Gender Inequality Index, Happy Life Index and Gross National Happiness	Chapter 32.1 Indicators of living standards
Multidimensional Poverty Index	Chapter 33 The Multidimensional Poverty Index
Foreign aid	Chapter 35.3 The impacts of differences in economic development between countries (Measures to promote economic development)
Absolute and comparative advantage	Chapter 36.2 Advantages and disadvantages of specialisation at a national level (The advantages and disadvantages for the economy)

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Susan Grant

How to use this book

This book is designed as a practical guide to help build your knowledge and understanding of economic terms, principles and processes and assumes no prior knowledge of the subject. Carefully aligned to the syllabus, it will help you to obtain the key skills required of an economist so that you can become confident in applying these to reach reasoned conclusions about economic issues.

Each chapter focuses on a particular topic, and you will find a range of easy-to-follow pedagogical features to guide you through it. Key terms are highlighted and there are regular opportunities for you to reflect on your progress, check your understanding and practice the economic skills you have developed.

Learning objectives

By the end of this chapter you will be able to:

- define and give examples of land, labour, capital and enterprise
- explain the nature of each factor of production
- analyse the *influences* on the mobility of factors of production
- discuss the causes of changes in the quantity and quality of the factors of production
- identify the payments to the factors of production

Learning objectives

Each chapter begins by outlining the key economic concepts that you will learn. This will help you to navigate your way through the book and remind you what is important about each topic.

Introducing the topic

These concise sections at the beginning of chapters open up an accessible entry point into the topic you are about to learn. This could be a question that gets you thinking about an issue relevant to that topic, or additional context which helps you to understand how the topic fits within real life scenarios.

Introducing the topic

Market traders of fresh fish are sometimes left with unsold fish at the end of the day which they have to throw away. The next day they are likely to lower the price they charge. On other occasions, they may find that they are selling out of fish very quickly. In this circumstance, they may decide to raise their price. In practice, it can be difficult for producers to know what is the appropriate price to charge and there may have to be adjustments to eliminate shortages and surpluses.

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KEY TERMS

Changes in demand:
shifts in the demand curve.

Increase in demand:
a rise in demand at any given price, causing the demand curve to shift to the right.

Key terms

These definitions will help you to identify and understand important terminology and concepts within economics.



TIP

Find out what has happened to the size of your country's labour force in the last ten years and why it has changed.

Tip

Tip boxes provide reminders about key economic concepts, help on avoiding common errors and tips to help you tackle trickier topics.

INDIVIDUAL ACTIVITY 1

Decide, in each case, whether the following are likely to be an aim of a government, households or firms:

- a A shorter working week
- b Many different sellers of consumer goods
- c Many different sources of raw materials
- d Higher tax revenue

Individual Activity

A series of questions and exercises designed to help you check your progress and put your knowledge of a particular topic into practice.



LINK

Chapter 4.3 Movements along a PPC

Link

Links show you where you can find additional information elsewhere in the book about related topics.

Group Activity

Group activities encourage you to engage with your peers, working in pairs or groups to share ideas and exchange viewpoints on a particular economic issue.

GROUP ACTIVITY 1

- Decide whether each of the following is a substitute or a complement to a Volkswagen car:
- a public transport
 - b petrol
 - c a Ford car.

Summary

You should know:

- Price is determined by the interaction of demand and supply.
- At the equilibrium price, demand is equal to supply.
- If a market is in disequilibrium initially, market forces will move it towards equilibrium.
- If price is below the equilibrium price, there will be excess demand.
- If price is above the equilibrium price, there will be excess supply.

Summary

Short sections at the end of each chapter provide a useful summary of the key learning points covered in that chapter.

Multiple Choice Questions

At the end of each chapter you will find a series of multiple choice questions which relate to the topic you have just covered in the chapter. Practising these will help you to check your progress at regular intervals through the book.

Multiple choice questions

- 1 In which case is market failure occurring?
 - A Consumers determining what is produced
 - B Firms producing above the lowest possible cost
 - C Price falling as a result of a decrease in demand
 - D Price rising as a result of an increase in costs of production
- 2 A merit good is one which:
 - A has an absence of external benefits
 - B has higher private benefits than consumers realise
 - C imposes costs on those who are not involved in its production directly
 - D is both non-excludable and non-rival
- 3 Which type of goods would be over-produced if left to market forces?
 - A Basic necessities
 - B Capital goods
 - C Demerit goods
 - D Public goods

Four-Part Questions

At the end of each chapter, there will be an opportunity for you to practice answering 'four-part questions'. At the start of the book, you will learn how to answer the first two parts, and gradually, as you progress through the book you will be faced with full, four-part-questions to complete.

Four-part question

- a Identify two differences between the private sector and the public sector. (2)
- b Explain why consumers are said to be sovereign in a market economic system. (4)
- c Analyse the role of profit in a market economic system. (6)
- d Discuss whether or not prices will be low in a market economic system. (8)

Exam-style questions

Multiple Choice Questions

- 1 'Money enables people to borrow and lend'. Which function of money does this describe?
 - A measure of value
 - B medium of exchange
 - C standard for deferred payment
 - D store of value
- 2 What is a function of a commercial bank?
 - A to control the money supply
 - B to decide on the amount spent by the government
 - C to lend to individuals and firms
 - D to manage the national debt
- 3 Which statement about different income groups is true?
 - A Low income groups save more, in percentage terms, than high income groups
 - B Low income groups find it easier to borrow than high income groups
 - C High income groups spend less, in percentage terms, than low income groups
 - D High income groups do not borrow money
- 4 More people throughout the world visit the cinema. What impact is this likely to have on the demand for actors and their wages?

Demand for actors	Wages of actors
A decreases	decrease
B decreases	increase
C increases	increase
D increases	decrease
- 5 Which combination of events would increase a trade union's ability to negotiate a wage rise for its members?

Labour productivity	Unemployment
A decreases	decreases
B decreases	increases
C increases	increases
D increases	decreases

Exam-Style Questions

Exam-style questions, can be found at the end of each section within the book. These are designed to help you to practise answering the sort of questions you are likely to see in an exam.

Stretch content

A blue line in the margin has been added to identify areas of content that go beyond the syllabus. You will not be expected to know and learn these for your course, but you may want to use them to challenge yourself further, and in some cases they may help you better understand a concept you are learning.

There are, nevertheless, risks attached even to a mixed economic system and there is no guarantee that it will perform better than the other two types of systems. Market failure can occur and government intervention may make the situation worse.

SECTION 1

The basic economic problem

Chapter 1

The nature of the economic problem

2

Learning objectives

By the end of this chapter you will be able to:

- define and give examples of the economic problem
- explain the difference between economic goods and free goods

Introducing the topic

Do you have everything you would like to have? Some unfortunate people clearly need more goods and services. These are the people who lack the goods and services needed for survival. If our needs for sufficient food, clothing and housing are met, we will still want other products. Indeed, our **wants** are unlimited. The richer we get, the more, and the better, quality products we would like. Many of us would like, for instance, more foreign holidays and a new laptop. This chapter will look at why we cannot have everything we would like.



KEY TERM

Wants: desires for goods and services.

1.1 Finite resources and unlimited wants

What stops people enjoying all the products they would like to have is a lack of **resources** to produce them. Resources, including workers and machinery, are scarce. This means that they are limited in supply. **The economic problem** of not being able to satisfy everyone's wants arises because of this **scarcity**.

There is no limit to people's wants – they are infinite. For instance, people want more and better clothing, healthcare and improved transport infrastructure. The number of workers, machines, offices, factories, raw materials and land used to produce these goods and services, however, is finite. At any given time, for example, there are only a limited number of workers and they can produce only a specified amount. This mismatch, between what people want and the maximum that can be produced, gives rise to the economic problem. Choices have to be made about how resources are to be used.

The continuing nature of the economic problem

Scarcity continues to exist. More goods and services are being produced today than ever before, but the growth in wants is exceeding the growth of economic resources. People still want more products than the resources available can produce. Over a period of time, wants continue to grow and change.

The economic problem in different contexts

The fact that people have to choose which products to buy, which subjects to study, what jobs to do and which products to produce shows that there are insufficient resources. As consumers, we cannot have everything we want. We have limited incomes. Students have to select which courses to study. It is not possible to study economics and chemistry at the same time. Workers have to make choices about what jobs they do. Some teachers may carry out other work in the evening, but when they are teaching they are not working as writers! Time is in limited supply. Producers have to decide what to make. Farmers cannot grow rice and wheat on the same land. They have to select one crop as land is scarce. The government has to decide how to spend tax revenue. Deciding to build a new hospital may mean that it cannot build a new school.

TIP

It is very important to learn definitions. The more you apply a term such as scarcity in your work, the more you will become familiar with it. You may also want to compile your own economics dictionary by writing down terms in alphabetical order, as you come across them.

GROUP ACTIVITY 1

In your group, discuss and decide which of the following are scarce:

- a vacancies for university degree courses
- b foreign holidays
- c healthcare.



KEY TERMS

Resources: factors used to produce goods and services.

The economic problem: unlimited wants exceeding finite resources.

Scarcity: a situation where there is not enough to satisfy everyone's wants.

1.2 Economic goods and free goods

The vast majority of goods and services are economic goods. This means that it takes resources to produce them and so they are limited in supply. For example, a carpet is an **economic good**. The material and labour used to produce it could have been used to make



LINK

Chapter 3.2 Influence of opportunity cost on decision making (Economic goods and free goods)



TIP

Remember that in economics what determines whether a product is a free good is not whether people have to pay for it, but whether it takes resources to produce it.



KEY TERMS

Economic good:

a product which requires resources to produce it and therefore has an opportunity cost.

Free good: a product which does not require any resources to make it and so does not have an opportunity cost.

another good (or goods). It is easy to find examples of economic goods. Almost every good and service you can think of is an economic good. Your education is an economic good, since your teachers and the other resources used to provide it could have been employed for making other products.

Free goods are much rarer. When most people talk about free goods, they mean products they do not have to pay for. These are not usually free goods in the economic sense since resources have been used to produce them. Economists define a free good as one that takes no resources to make it. It is hard to think of examples of free goods. Sunshine is one such example, so is water in a river. However, as soon as this water is processed for drinking, or used for irrigation of fields, it becomes an economic good.



Water in a river is a free good

GROUP ACTIVITY 2

In your group, discuss and decide whether each of the following is an economic or a free good:

- a** air
- b** education
- c** newspapers
- d** public libraries
- e** state education.

Summary***You should know:***

- People's wants continue to grow.
- Resources such as workers, machines and land are limited in supply.
- The economic problem is that unlimited wants exceed finite resources.
- Economic goods take resources to produce them.
- Free goods exist without the use of resources.

Multiple choice questions

- 1** Why does scarcity exist?
 - A** Each year workers tend to produce less than previously
 - B** Machines wear out with time
 - C** There are not sufficient resources to produce all the products people want
 - D** There is a limit to people's wants

- 2** Why will scarcity continue to be a problem in the future?
 - A** Prices will rise
 - B** The quantity of resources will decline
 - C** Wants will continue to increase
 - D** World population will fall

- 3** Which of the following is a free good?
 - A** Inoculation provided without charge by the state
 - B** Products given away by a supermarket to attract customers
 - C** Recycled paper
 - D** Wind coming in from the sea

Four-part question

- a** What is meant by the economic problem? **(2)**
- b** Explain why a car is an economic good. **(4)**



Chapter 2

Factors of production

6

Learning objectives

By the end of this chapter you will be able to:

- define and give examples of land, labour, capital and enterprise
- explain the nature of each factor of production
- analyse the *influences* on the mobility of factors of production
- discuss the causes of changes in the quantity and quality of the factors of production
- identify the payments to the factors of production

Introducing the topic

We are living longer. In 1960 the average life expectancy in Bangladesh was 46 years. By 2015 it had risen to 72 years. The increase in Malaysia was even more dramatic – from 37 years to 77 years and the Japanese could expect to live until 83 in 2015. Figure 2.1 shows how the global average life expectancy has increased over the same period.

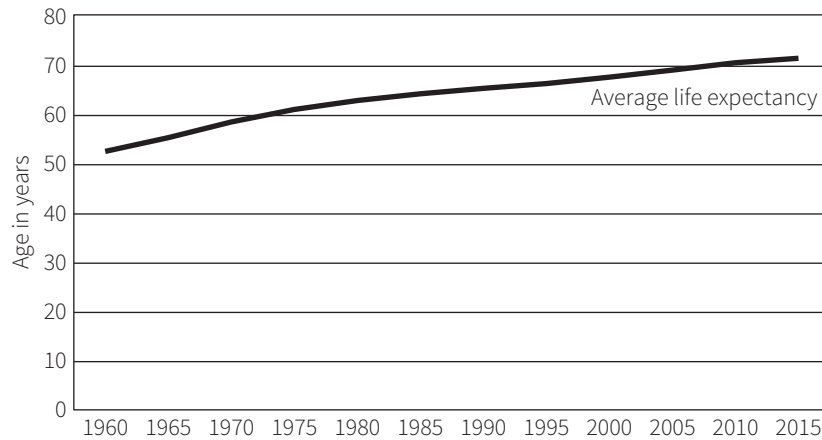


Fig. 2.1: Global average life expectancy, 1960–2015. Why can we expect to enjoy a longer lifespan?

2.1 The importance of factors of production

People are living longer because healthcare, education, housing, sanitation and nutrition have improved. This, in turn, is because of increases in the quantity and quality of **factors of production**. Factors of production is another term for economic resources. Chapter 1 explained that economic resources are used to produce goods and services, and that they are in limited supply.

Most economists identify four factors of production:

- land
- labour
- capital
- enterprise.

Some economists, however, claim that there are really only three factors of production and that enterprise is a special form of labour.

Land

Land in general terms includes the earth in which crops are grown, and on which offices and factories are built, but in economics it has a wider meaning. It covers any natural resource which is used in production. So besides the land itself, it also includes what is beneath the land, such as coal, what occurs naturally on the land, for example rainforests, and the sea, oceans and rivers and what is found in them, for example fish.

To attract foreign tourists, for example, a travel company will make use of water in its swimming pools, good climate and beaches in the holidays it provides. Similarly, the land used by a safari park includes not only the grass on which some of the animals graze, but also the animals themselves.



KEY TERMS

Factors of production: the economic resources of land, labour, capital and enterprise.

Land: gifts of nature available for production.

Labour

Labour covers all human effort. This includes both the mental and the physical effort, involved in producing goods and services. A road sweeper, a steel worker and a bank manager all contribute their labour.

Confusingly, we sometimes also refer to human capital. This means the education, training and experience that workers have gained. The more human capital workers have, the more they should be capable of producing.

Capital

Capital would have to be used in the diversion of the course of a river. Capital is any human-made (manufactured) good used to produce other goods and services. It includes, for example, offices, factories, machinery, railways and tools.

Capital is also referred to as **capital goods** and producer goods. Economists distinguish between capital and consumer goods. Capital goods are not wanted for their own sake, but for what they can produce. In contrast **consumer goods**, such as food, clothing and entertainment, are wanted for the satisfaction they provide to their owners.

In deciding whether a good is a capital or a consumer good, it is necessary to consider who the user is and the purpose of its use. A computer, for example, will be a capital good if it is used by an insurance company to process insurance claims – it is producing a service. If, however, it is used by a person to play games, it is a consumer good.



KEY TERMS

Labour: human effort used in producing goods and services.

Capital/capital goods: human-made goods used in production.

Consumer goods: goods and services purchased by households for their own satisfaction.

Enterprise: risk bearing and key decision making in business.

GROUP ACTIVITY 1

In your group, discuss and decide which of the following are capital goods and which are consumer goods:

- a** a chocolate bar
- b** a car
- c** a child's toy
- d** a farm tractor
- e** a dentist's drill
- f** a courtroom.

Enterprise

Enterprise is the willingness and ability to bear uncertain risks and to make decisions in a business. Entrepreneurs are the people who organise the other factors of production and who crucially bear the risk of losing their money if their business fails. Entrepreneurs decide what to produce by taking into account consumer demand and how to produce it. Some of the risks faced by any business can be insured against, for example fire, flood and theft. Other risks, however, have to be borne by entrepreneurs. This is because some events are not anticipated, based on past events, and so cannot be insured against. These include the uninsurable risks of other firms bringing out rival products and the rising costs of production.

The two key tasks of an entrepreneur can be carried out by different people. In large companies, it is the shareholders who run the risk of losing their money if the companies go out of business, whilst the managing director takes production decisions and organises the factors of production.

2.2 Mobility of the factors of production

The mobility of land

Most land is **occupationally mobile**. This means that it can be used for a number of purposes. Land which is currently being used for farming may be used instead to build houses. Trees can be used to make tables or sleepers for railway lines.

Land, in its traditional sense, is **geographically immobile**. It is not possible to move a section of land from Sri Lanka to India, for example. Some forms of land, in its wider meaning, can be moved to a certain extent. For example, the course of rivers can be diverted and wildlife can be moved.



LINK

Chapter 14.8 Immobility of resources

INDIVIDUAL ACTIVITY 1

Identify two forms of land that are used by a paper mill.

The mobility of labour

The **mobility of labour** varies. Some workers may find it difficult to move from one area of the country to another, or from one country to another (geographical immobility), and some may find it difficult to switch from one type of job to another type (occupational immobility). The causes of geographical immobility include:

- **Differences in the price and availability of housing in different areas and countries.** Workers who lose their jobs in poor areas may not be able to take up jobs in rich areas because they cannot afford or find housing there.
- **Family ties.** People may be reluctant to leave the country they are currently living in because they do not want to move away from friends and relatives.
- **Differences in educational systems in different areas and countries.** People may not be willing to move to a job elsewhere if it disrupts their children's education.
- **Lack of information.** People without jobs, or those in poorly paid jobs, may stay where they are because they are unaware of job opportunities elsewhere.
- **Restrictions on the movement of workers.** It is often necessary to obtain a work visa to work in another country and these can be limited in supply.

There are also a number of causes of occupational immobility. Again there may be a lack of information about vacancies in other types of jobs. The main cause, however, is a lack of appropriate skills and qualifications. A shortage of doctors cannot be solved by hiring bus drivers!

The mobility of capital

The geographical and occupational **mobility of capital** varies according to the type of capital goods. Some types of capital goods can be transferred from one part of the country to another. A photocopier used by a bank in one area of a country can be sold to, and then used by, a bank in another area. A coal mine and a dock, however, are fixed in position and



KEY TERMS

Occupationally mobile: capable of changing use.

Geographically immobile: incapable of moving from one location to another location.

Mobility of labour: the ability of labour to change where it works or in which occupation.

Mobility of capital: the ability to change where capital is used or in which occupation.

so are geographically immobile. They are also occupationally immobile since their use cannot be changed, as they have been made for a specific purpose. In contrast, a delivery van used originally by a book publisher may be bought and employed by a toy manufacturer to distribute its products. Similarly, an office block may be used for a variety of purposes. It may house a call centre or an accountancy firm.

GROUP ACTIVITY 2

In your group, identify three capital goods used in your school that are geographically mobile.



KEY TERMS

Mobility of enterprise: the ability to change where enterprise is used or in which occupation.

Entrepreneur: a person who bears the risks and makes the key decisions in a business.

The mobility of enterprise

Enterprise moves when the people who carry out the functions move. These people are called entrepreneurs. The **mobility of enterprise** depends on the mobility of **entrepreneurs**.

Enterprise is the most mobile factor of production. The skills involved in being an entrepreneur can be applied in every industry. Someone who has borne uncertain risks and organised factors of production in the car industry should be able to do this in, for example, the textile industry too. Apart from being occupationally mobile, enterprise is also geographically mobile. Someone who has been successful in starting up and running a business in one country is likely to be successful in another country also.



TIP

Immobility is the opposite of mobility, so if you know the causes of an increase in immobility of a factor of production, it is easy to work out the causes of an increase in mobility of that factor. For example, if a reduction in training will cause an increase in occupational immobility of labour, an increase in training will increase the mobility of labour.

INDIVIDUAL ACTIVITY 2

The following is a list of economic resources. In each case, decide whether the resource is an example of land, labour, capital or enterprise:

- a chemical fertiliser
- b a school
- c a lake
- d the work of a nurse
- e the initiative needed to set up and run a bicycle repair shop.

2.3 Quantity and quality of the factors of production

The quantity of land

The amount of physical land in existence does not change much with time. There is a certain degree of soil erosion which reduces the supply of agricultural land, but also a certain amount of land reclamation which increases its supply. Other natural resources, however, can change quite significantly. Rainforests are currently declining at a rapid rate.

Some natural resources are renewable whilst others are non-renewable. Renewable resources, for example wind power, are replaced by nature and can be used again and again. In contrast, non-renewable resources, for example gold and oil, are reduced by use. There is a risk that renewable resources can be turned into non-renewable resources if they are over-exploited, that is used at a faster rate than they are replenished. Over-fishing and the hunting of wildlife can diminish numbers to a point where they cannot be restored.

The quality of land

There are a number of reasons why the quality of natural resources may increase. Fertilisers can be applied to fields to increase the fertility of the land. The purity of rivers, and so the health of fish in the rivers, can be improved by stopping firms polluting the rivers. Providing good drainage can increase the yield from fruit trees.

The quantity of labour

The quantity of labour is influenced by two key factors. One is the number of workers available and the second is the number of hours for which they work.

The number of available workers is determined by:

- **The size of the population.** The larger the population, the more workers there are likely to be.
- **The age structure of the population.** A country with a high proportion of people of working age will have more workers than a country with the same population size, but a higher proportion of people who would be too young or too elderly to work.
- **The retirement age.** The higher the retirement age, the more potential workers there will be.
- **The school leaving age.** Raising the school leaving age would reduce the number of workers.
- **Attitude to working women.** Countries where it is acceptable for women to work have more workers to draw on.

Those people who are working and those seeking work form the **labour force**. This is also known as the workforce or working population. Those of working age are people between the school leaving age and the retirement age. In Singapore, this covers people aged between 16 and 62. In the UK, this covers people aged between 16 and 66. Not all of these people, however, are in the labour force. Some may be in full-time education, some may have retired and some may be sick or disabled.

The number of hours which people work is influenced by (among other factors):

- the length of the average working day, for example full-time workers in the USA tend to work for longer hours than those in European Union countries
- whether they work full or part-time, for example more people in the UK work part-time than those in France
- the duration of overtime
- the length of holidays taken by workers
- the amount of time lost through sickness and illness.

As with all the factors of production, it is not just the quantity of labour which is important, but also the quality. More can be produced with the same number of workers if the workers become more skilled. An increase in **productivity**, including **labour productivity**, is a major cause of an increase in a country's **output**.



KEY TERMS

Labour force: people in work and those actively seeking work.

Productivity: the output per factor of production in an hour.

Labour productivity: output per worker hour.

Output: goods and services produced by the factors of production.

**TIP**

Find out what has happened to the size of your country's labour force in the last ten years and why it has changed.

The quality of labour

The quality of labour can be improved as a result of better education, better training, more experience and better healthcare. A better educated, better trained and more experienced labour force will be able to carry out more difficult tasks, work with more complex machinery and equipment, and produce more and better quality products. A healthier labour force will be able to concentrate more, be stronger for any manual tasks and will have fewer days off sick.

INDIVIDUAL ACTIVITY 3

Decide which of the following would raise labour productivity:

- a improved education and training
- b better equipment
- c worse working conditions.

**KEY TERMS****Investment:**

spending on capital goods.

Gross investment:

total spending on capital goods.

Depreciation**(capital**

consumption): the value of capital goods that have worn out or become obsolete.

Net investment:

gross investment minus depreciation.

Negative net**investment:**

a reduction in the number of capital goods caused by some obsolete and worn out capital goods not being replaced.

The quantity of capital

The quantity of capital is influenced by **investment** and tends to increase with time. Every year some capital goods physically wear out and some become outdated, for example a farm barn may fall down and some machinery may be replaced by newer, more efficient machinery.

New capital goods, however, usually take the place of those goods, which firms are unable (or choose not) to use any more. The total value of the output of capital goods produced is referred to as **gross investment**. Some of the capital goods being produced will be replacing those which have worn out or become obsolete. The value of replacement capital is called **depreciation** or capital consumption.

Net investment is the value of the extra capital goods made. It is equal to gross investment minus depreciation. For example, if a country produces \$200 million capital goods one year and there is depreciation of \$70 million, net investment is \$130 million. The country will have more capital goods. These additional capital goods will allow it to produce more goods and services.

Occasionally, gross investment may be lower than depreciation. This means that some of the capital goods taken out of use, are not replaced. This is said to be **negative net investment**.

**TIP**

Be careful not to confuse money and capital. Remember: when economists refer to capital, they mean human-made goods, such as machinery and office buildings, that are used to produce other products.

The quality of capital

Advances in technology enable capital goods to produce a higher output and a better quality output. The development of robotics in car production, for example, has increased significantly the number of cars that a car factory can produce.



Automation in car manufacturing

INDIVIDUAL ACTIVITY 4

A firm is currently using 12 machines. Each machine is capable of producing 100 units of output. It anticipates that by the end of the year, 3 of its machines will wear out.

- a If it expects to sell 1600 units next year, how many machines will it buy?
- b Why in the future may fewer machines be needed to produce the same output?

GROUP ACTIVITY 3

In your group, discuss how advances in technology have changed:

- a students' learning experience
- b people's medical care
- c food production.

The quantity of enterprise

The quantity of enterprise will increase if there are more entrepreneurs. A good education system, including university degree courses in economics and business studies, may help to develop entrepreneurs in an economy. Lower taxes on firms' profits (corporate taxes) and a reduction in government regulations may encourage more people to set up their own businesses. Sometimes, a disproportionate number of immigrants become entrepreneurs. These are people who have had the drive to leave their home country in search of a better life and this drive often leads them to become entrepreneurs in the new country.

The quality of enterprise

The quality of enterprise can be improved if entrepreneurs receive better education, better training, better healthcare and gain more experience. More experience can be particularly significant in the case of entrepreneurs. Very successful entrepreneurs have often set up businesses in the past, some of which may have failed. The knowledge and understanding they have gained of, for example, the products people like to buy and the best sources of raw materials, can help them make a success of a new business.

GROUP ACTIVITY 4

In your group:

- a** Research, in each case, which entrepreneur founded the following firm and whether s/he has a university degree:
 - i** LimeRoad, an online women's fashion firm
 - ii** Lenovo, a computer firm
 - iii** The Silverbird Group, a property, media and entertainment firm
 - iv** Sofizar, an internet marketing firm.
- b** Find an example of a successful entrepreneur who does not have a degree.

2.4 Payments for factors of production

Payments are made for the use of factors of production. Firms pay wages for the services of the workers. For bearing uncertain risks and organising the other factors of production, entrepreneurs earn profit. Land receives rent and interest is a payment for capital.

Summary

You should know:

- The four factors of production are land, labour, capital and enterprise.
- Land is a term covering all natural resources.
- Some natural resources are renewable whereas others are non-renewable.
- Whilst most land is occupationally mobile, land in its traditional meaning is geographically immobile.
- Labour involves the mental and physical effort workers put into producing goods and services.
- The quantity of labour is influenced by the number of workers and the number of hours for which they work.
- The size of the labour force is influenced by the size and age structure of the population, the school leaving age, the retirement age and attitudes to women working.
- The quality and occupational mobility of labour can be increased by better education and training.
- The geographical immobility of labour may be caused by lack of housing and information about job vacancies, family ties and the need to gain a visa to work in a different area.
- Capital goods are used to make other goods and services.
- Net investment increases a country's stock of capital goods.
- Enterprise involves taking risks and making production decisions.
- Improved education, lower taxes and less regulation can encourage enterprise.
- Successful entrepreneurs tend to be occupationally and geographically mobile.

Multiple choice questions

- 1 Which factor of production's function is to make decisions and take risks?
 - A Capital
 - B Enterprise
 - C Labour
 - D Land

- 2 Which type of factor of production is a road?
 - A Capital
 - B Enterprise
 - C Labour
 - D Land

- 3 A country produces 3000 new capital goods in a week. 500 of these replace worn out capital goods. What is the net investment made?
 - A 500
 - B 2500
 - C 3000
 - D 3500

- 4 Which factor of production is the most mobile?
 - A Capital
 - B Enterprise
 - C Labour
 - D Land

Four-part question

- a Identify **two** non-human factors of production. **(2)**
- b Explain **two** causes of an increase in the quantity of labour. **(4)**
- c Analyse why the mobility of labour may increase over time. **(6)**



Chapter 3

Opportunity cost

16

Learning objectives

By the end of this chapter you will be able to:

- define opportunity cost
- give examples of opportunity cost in different contexts
- explain the influence of opportunity cost on the decision making of consumers, workers, producers and governments

Introducing the topic

There are many subjects that schools could teach. For example, Cambridge International Examinations offers more than 70 subjects at IGCSE. Each school offers only a proportion of the subjects on offer. Why is this? It is because schools do not have enough classrooms, teachers and equipment to teach all subjects, for example a classroom can be used to teach English or economics in the same room, but not at the same time.

There are not enough economic resources to produce all the goods and services we would desire, as we saw in Chapter 1. Land, labour, capital and enterprise are scarce and so decisions have to be made about the method and purpose of their use. In deciding what to use the classroom for, and in making other decisions, the concept of opportunity cost is important.

3.1 The meaning of opportunity cost

When we decide to do one thing, we are deciding not to do something else. To ensure that we make the right decisions, it is important that we consider the alternatives, particularly the best alternative. **Opportunity cost** is the cost of a decision in terms of the best alternative given up to achieve it, for example there are a variety of things you could do tomorrow between 5 pm and 6 pm. These may be to go shopping, to read a chapter of an economics book, to do some paid work or to visit a friend. You may narrow those choices down to reading the chapter or visiting a friend. You will have to consider very carefully which one will give you the best return. If you choose to read the chapter, you will not be able to visit your friend and vice versa.



KEY TERM

Opportunity cost: the best alternative forgone.



LINK

Chapter 4.3 Movements along a PPC



TIP

In explaining opportunity cost, it is always useful to give an example.



Reading has an opportunity cost

3.2 Influence of opportunity cost on decision making

Opportunity cost and consumers

Consumers are buyers and users of goods and services. We are all consumers. The vast majority of us cannot buy everything we like. You may, for example, have to choose which economics dictionary to buy. You will probably consider a number of different ones, taking into account their prices. The choice will then tend to settle on two of them. You are likely to select the one with the widest and the most accurate informative coverage. The closer the two dictionaries are in quality and price, the harder the choice will be.

Opportunity cost and workers

Undertaking one job involves an opportunity cost. People employed as teachers might also be able to work as civil servants. They need to carefully consider their preference for the jobs available. This would be influenced by a number of factors, including the wage paid, chances of promotion and the job satisfaction to be gained from each job. If the pay of civil servants or their working conditions improve, the opportunity cost of being a teacher will increase. It may even increase to the point where some teachers resign and become civil servants instead.

GROUP ACTIVITY 1

In your group, discuss why the opportunity cost of working as an accountant is likely to be higher than that of working as a window cleaner.

Opportunity cost and producers

Producers have to decide what to make. If a farmer uses a field to grow sugar beet, he cannot keep cattle on that field. If a car producer uses some of his factory space and workers to produce one model of a car, he cannot use the same space and workers to make another model of the car at the same time.

In deciding what to produce, private sector firms will tend to choose the option which will give them the maximum profit. They will also take into account the demand for different products and the cost of producing those products.

Opportunity cost and the government

Government has to carefully consider its expenditure of tax revenue on various things. If it decides to spend more on education, the opportunity cost involved may be a reduced expenditure on healthcare. It could, of course, raise tax revenue in order to spend more on education. In this case, the opportunity cost would be put on the taxpayers. To pay higher taxes, people may have to give up the opportunity to buy certain products or to save.



LINK

Chapter 4.3 Movements along a PPC

**TIP**

Opportunity cost is one of the most important concepts in economics. You will find that you can use it in answers to a relatively wide range of structured questions.

INDIVIDUAL ACTIVITY 1

In each of the following cases, consider what might be the opportunity cost.

- a** A person wanting to buy fruit, decides to buy apples.
- b** A person decides to study economics at a university.
- c** A factory is built on farm land.
- d** A woman has a television set which cost her \$800 two years ago. A new set would cost her \$1000 and she could sell her television set for \$450. What is the opportunity cost of keeping the old television?



LINK

Chapter 1.2 Economic goods and free goods

Economic goods and free goods

As resources are used to produce economic goods, their production involves an opportunity cost. In contrast, no resources are used to produce free goods and so they do not involve an opportunity cost.

Summary

You should know:

- Opportunity cost is an important concept as it emphasises that people have to consider what they are sacrificing when they decide what to buy, what job to do and what to produce, and when governments are deciding what to spend their tax revenue on.
- Economic goods have an opportunity cost whereas free goods do not.

Multiple choice questions

- 1 What is meant by 'opportunity cost'?
 - A The best alternative forgone
 - B The cost of the item selected
 - C The cost of exploring business opportunities
 - D The labour used in producing the product

- 2 A person decides to go to the university for three years, to study economics. If he had not gone, he could have taken up a job which would have paid him \$15 000 a year. After he graduates he expects to find a job paying him \$40 000 a year. What is the opportunity cost of going to the university for him?
 - A \$15 000 B \$40 000
 - C \$45 000 D \$120 000

- 3 What are the characteristics of a free good?

A	Has an opportunity cost	Takes resources to produce it
B	Has an opportunity cost	Takes no resources to produce it
C	Has no opportunity cost	Takes no resources to produce it
D	Has no opportunity cost	Takes resources to produce it

- 4 On his birthday, Kamran receives \$200 from his aunt, \$50 of which he decides to save. He is taken out by his father for lunch. His father pays the bill. Kamran spends the afternoon playing football. Which of these activities involves an opportunity cost?

	Eating the free lunch	Playing football	Saving
A	No	No	No
B	No	No	Yes
C	No	Yes	Yes
D	Yes	Yes	Yes

Four-part question

- a Define *opportunity cost*. (2)
- b Explain why opportunity cost is an important concept for producers. (4)
- c Analyse what effect the building of an airport may have on the decision of how to use an area of land nearby. (6)



Chapter 4

Production possibility curves

Learning objectives

By the end of this chapter you will be able to:

- define a production possibility curve
- draw a production possibility curve
- interpret points under, on and beyond a production possibility curve
- analyse movements along a production possibility curve
- analyse the causes and consequences of shifts in a production possibility curve

Introducing the topic

The USA produces many more goods and services than Mauritius. In 2015, the output of the USA was valued at \$18 trillion whereas it was only \$25 billion in Mauritius. You should not be surprised at this difference. The USA has a much larger economy with a much larger labour force, more capital equipment, more entrepreneurs and more natural resources.

The productive potential of an individual, firm or a country can be shown on a production possibility curve (PPC) diagram. Such a diagram can also illustrate opportunity cost and efficiency.

4.1 A production possibility curve

A **production possibility curve** is also known as a production possibility frontier or a production possibility boundary. It shows the maximum output of two types of products, and combinations of those products that can be produced with the existing quantity and quality of resources and technology.

Figure 4.1 shows that a country can produce either 200 capital goods or 300 consumer goods or a range of combinations of these two types of goods.

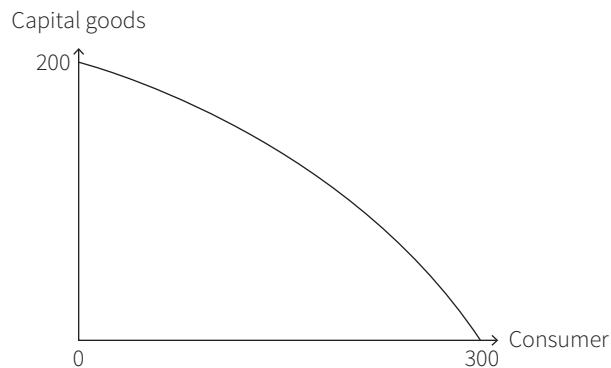


Fig. 4.1: A production possibility curve



KEY TERM

Production possibility curve: a curve that shows the maximum output of two types of products and combination of those products that can be produced with existing resources and technology.



TIP

Make sure you draw a PPC to each axis – do not leave a gap.

4.2 Production points

While a PPC shows what is the maximum amount that can currently be produced, a production point shows what is being produced or what may be produced in the future.

Any point inside the curve means there is not full use of resources. Point X on Figure 4.2 shows output is being produced where there are unemployed resources.

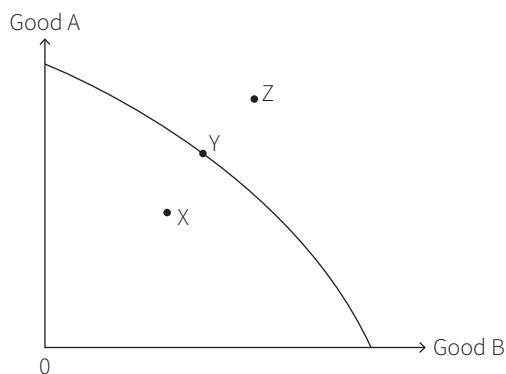


Fig. 4.2: A production possibility curve and production points



Chapter 29.2
Recession (causes and consequences)



TIP
Be careful with labelling a PPC. The labels should show two types of products.

A point anywhere on the curve, such as point Y, means that maximum use is being made of resources. This is an efficient output. There are not enough resources to produce outside the limit set by the PPC. So a point such as Z is not currently attainable.

INDIVIDUAL ACTIVITY 1

Look at the graph and answer the questions.

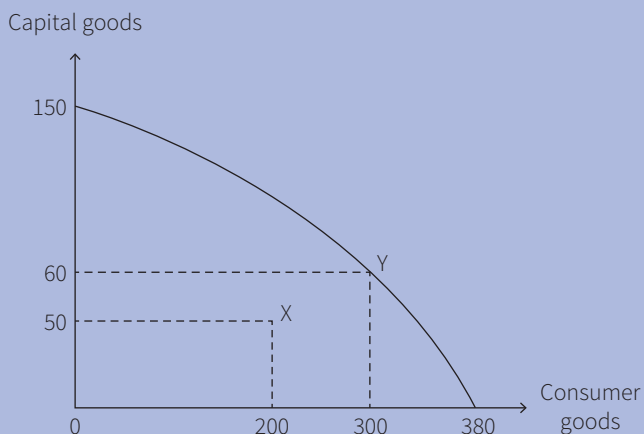


Fig. 4.3: A country's PPC

- 1 If a country is producing at point X, what is its output of capital goods and consumer goods?
- 2 If a country's output moves from point X to point Y, how many more capital goods and how many more consumer goods will it produce?
- 3 What is the maximum number of capital goods that can be produced if all resources are devoted to capital goods?

4.3 Movements along a PPC

A movement along a PPC shows that resources are being reallocated. It also shows the opportunity cost of that decision. Figure 4.4 shows a country initially deciding to produce 80 units of manufactured goods and 75 units of agricultural goods. If it then decides to produce 100 units of agricultural goods, it will have to switch resources away from producing manufactured goods. The diagram shows the reduction of output of manufactured goods to 60 units. In this case, the opportunity cost of producing 25 extra units of agricultural goods is 20 units of manufactured goods.



Fig. 4.4: A movement along the PPC



Chapter 3.2 Influence of opportunity cost on decision making

INDIVIDUAL ACTIVITY 2

Using Figure 4.5.

- 1 State the maximum number of capital goods the country can produce if it devotes all of its resources to making capital goods.
- 2 Calculate the opportunity cost of increasing the output of consumer goods from 80 to 90 units.

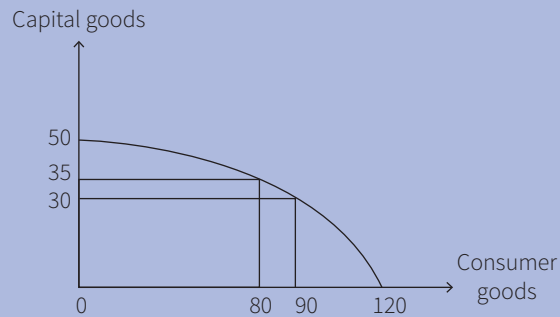


Fig. 4.5: A country's PPC

The shape of the PPC

PPCs are usually bowed outwards as shown in Figures 4.1–4.5. This is because the best resources are used first to produce a particular type of product. It was noted that in Figure 4.4 the opportunity cost of increasing the output of manufactured goods from 60 to 80 was 25 agricultural goods. To increase the output of manufactured goods by a further 20 to 100 would involve a higher opportunity cost of 75. The last resources switched from producing agricultural goods would have been the least suited to producing manufactured goods.

In the less common situation where resources are equally suited to producing both types of products, the opportunity cost remains constant. In this case, the PPC is shown as a straight line as shown in Figure 4.6.

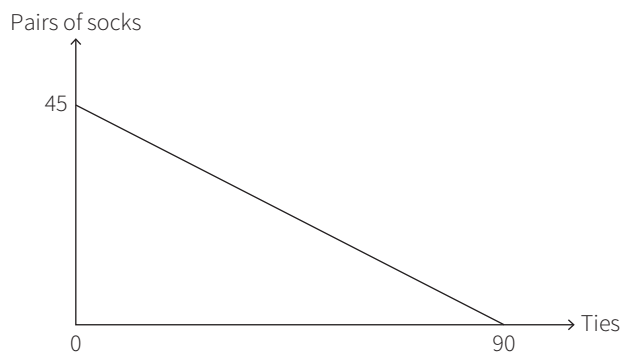


Fig. 4.6: A straight line PPC

The opportunity cost of producing 1 more pair of socks remains at 2 ties as the output of socks changes.

4.4 Shifts in a PPC

Causes of shifts in the PPC

The PPC will shift to the right, as shown in Figure 4.7, if there is an increase in the quantity or quality of resources. For example, if there is an increase in the size of the labour force, the maximum output that a country can produce will increase.

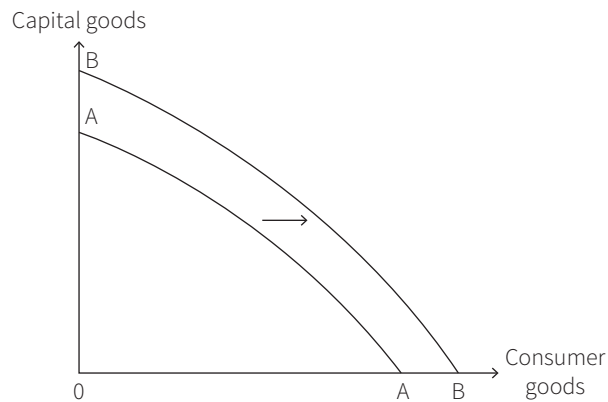


Fig. 4.7: A shift in a PPC

A shift to the left of the PPC will be caused by a reduction in the quantity or quality of resources.

GROUP ACTIVITY 1

In your group, discuss and decide whether the following will cause a shift of a country's PPC to the left or the right:

- a** advances in technology
- b** a rise in the retirement age
- c** improved education
- d** widespread floods
- e** worn out capital goods not being replaced.



Consequences of a shift in the PPC

A shift to the right of the PPC increases a country's productive potential. It will be capable of producing more. This is referred to as potential economic growth. To take advantage of this increased capacity, the extra or better quality resources have to be employed. Figure 4.8 shows both the PPC and the production point moving to the right. Output increases. A rise in a country's output is actual economic growth.

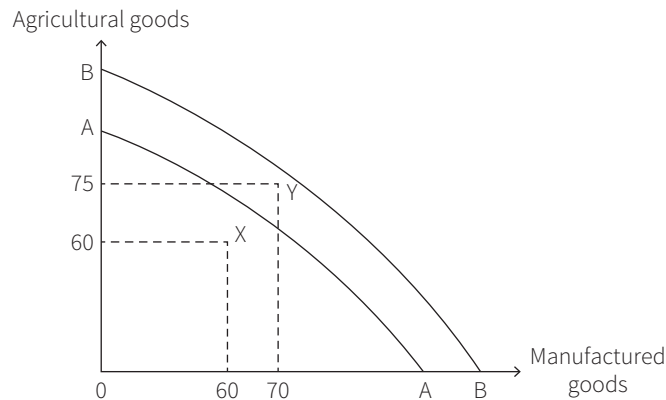


Fig. 4.8: Economic growth



Chapter 29.3 Economic growth (causes)

Summary

You should know:

- A PPC can be used to illustrate opportunity cost. It shows what can be produced with existing resources and current technology.
- A point inside a curve indicates unemployed resources, a point on the curve shows full use of resources and a point to the right of the curve is currently unattainable.
- A movement along a PPC shows a reallocation of resources and the opportunity cost involved.
- A bowed outwards PPC shows an increasing opportunity cost whereas a straight line PPC shows a constant opportunity cost.
- An increase in the quantity or quality of resources will cause a shift of the PPC to the right and an increase in productive potential.

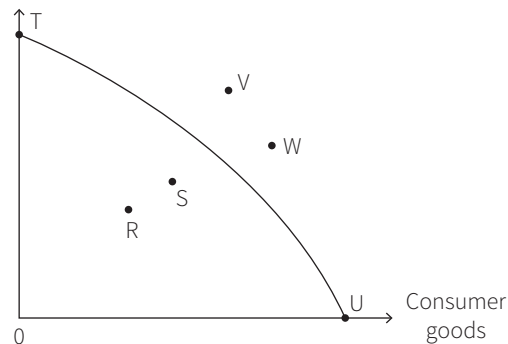
Multiple choice questions

1 A country experiences a fall in unemployment. How would this be shown on a PPC diagram?

- A A movement of the production point away from the curve
- B A movement of the production point towards the curve
- C A shift of the PPC to the left
- D A shift of the PPC to the right

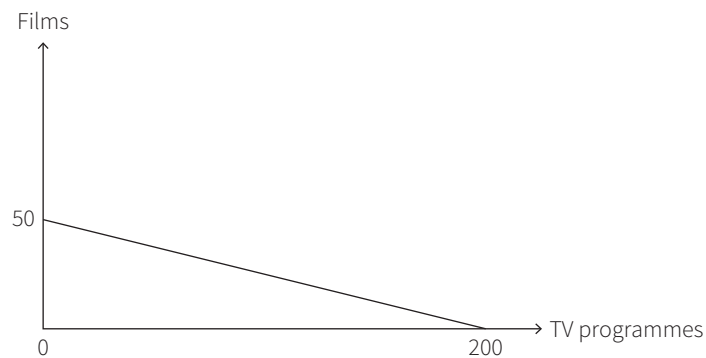
2 Which points in the diagram are attainable?

Capital goods



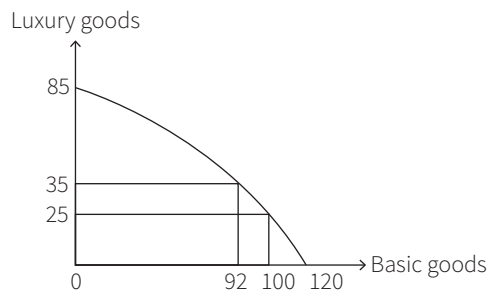
- A R and S
- B V and W
- C R, S, T and U
- D T, U, V and W

3 The diagram shows a country's PPC. What can be concluded from the shape of the PPC?



- A All resources are equally good at producing films and TV programmes
- B Resources cannot be switched between producing films and TV programmes
- C The country is able to produce 50 films and 200 TV programmes
- D TV programmes take more resources to produce them than films

- 4 Using the diagram, determine the opportunity cost of increasing the output of luxury goods from 25 to 35.



- A 8 basic goods
- B 10 luxury goods
- C 25 luxury goods
- D 92 basic goods

Four-part question

- a What is the difference between a point inside and a point on a PPC? (2)
- b Explain **two** causes of a shift in a PPC. (4)
- c Analyse how a PPC illustrates scarcity, opportunity cost and efficiency. (6)

Exam-style questions

Multiple choice questions

- 1 What gives rise to the problem of scarcity?
 - A a lack of money
 - B an uneven distribution of income
 - C capital equipment being greater than labour
 - D wants exceeding resources

- 2 As an economy becomes richer, what happens to resources and wants?

Resources	Wants
A decrease	decrease
B decrease	increase
C increase	decrease
D increase	increase

- 3 Which of the following is an example of the factor of production 'capital'?
 - A the money a farmer has borrowed to buy livestock
 - B the money a farmer has saved in the bank
 - C a farm worker
 - D a tractor

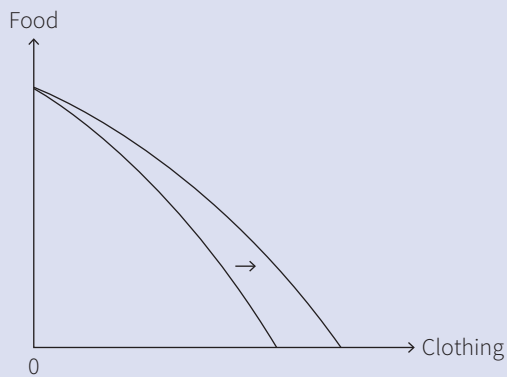
- 4 Which type of factor of production can be described as a 'natural resource'?
 - A capital
 - B entrepreneur
 - C labour
 - D land

- 5 A woman owns a TV which she bought for \$300. She is considering buying a better model for \$450. Her neighbour offers her \$200 for her TV. What is the opportunity cost of her rejecting this offer?
 - A \$100
 - B \$200
 - C \$300
 - D \$450

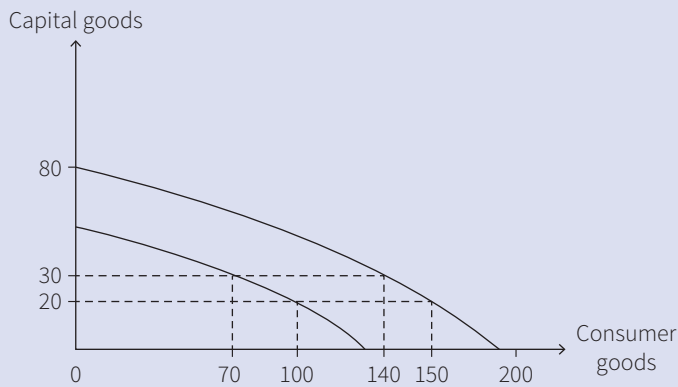
- 6 A man presently works as a builder. His previous jobs included working as a farm labourer and a street trader. His next best-paid job is that of a carpenter, but he would rather choose to work as a gardener, if he was not a builder. What will be the opportunity cost of him working as a builder? Working as:
 - A a carpenter
 - B a farm labourer

- C a gardener
- D a street trader

- 7 What does a production possibility curve show?
- A the amount of capital and labour in a country
 - B the output of two products that can be produced with given resources
 - C the popularity of the two products
 - D the price of the two products that are produced with given resources
- 8 What could have caused the change in the shape of the production possibility curve (PPC) shown below?

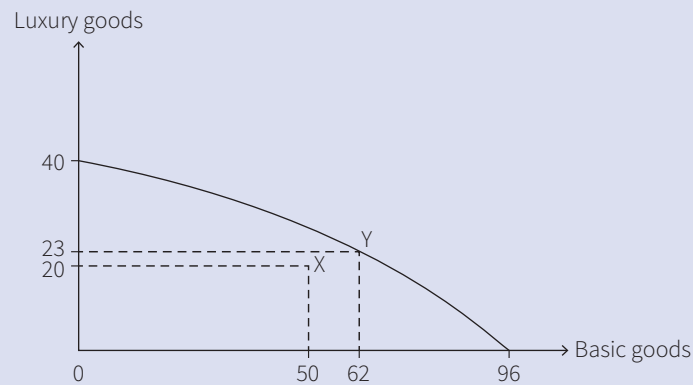


- A advances in technology in the clothing industry
 - B an increase in the size of a country's labour force
 - C a change in consumer preferences towards clothing
 - D more resources being devoted to producing clothing
- 9 What is the change in the opportunity cost of increasing the output of capital goods from 20 to 30 when the PPC shifts to the right the diagram below?



- A a reduction of 10 consumer goods
- B a reduction of 20 consumer goods
- C a reduction of 30 consumer goods
- D a reduction of 40 consumer goods

- 10** The diagram below shows a country producing at point X. What is the opportunity cost of moving production to point Y?



- A** 34 basic goods
- B** 17 luxury goods
- C** 12 basic goods and 3 luxury goods
- D** zero goods

Data response question

Study the source material carefully and then answer Question 1.

Source material: Agricultural output in Africa

The output of more fertilisers and better irrigation have contributed to higher agricultural output for each unit of land in Africa in recent years. More significant, however, has been the increase in the quantity of land used to grow crops. For example, in 1975 12% of land was used for agriculture. By 2015 this had increased to 25%. In Mauritania, agricultural expansion is particularly high at 7% per year.

Despite the rise in agricultural output, the quantity of high quality food that people would like to consume is not keeping pace with the rise in population in all African countries. Africa's population is set to double by 2050, which will increase even further the demand for food. As incomes increase in Africa, the desire for a range of products is increasing. People in Africa are, for example, wanting more and better housing. Indeed, the desire for housing usually outstrips the growth in resources devoted to housing. People constantly strive for better living standards. The expansion of the house building industry is encouraging some farm workers to switch to working in the building industry. Changes in the pattern of demand are causing not only agricultural workers, but also other workers to change their occupation and where they work.

Agricultural output can fluctuate quite significantly as it can be influenced by, for example, floods, droughts and heatwaves. The contribution of agricultural output varies between countries. For example, in 2015 agriculture accounted for only 2% of South Africa's output, but 21% of Nigeria's output.

The total output that a country produces is influenced by the size of the labour force. The table shows the size of the labour force and total output for a group of selected African countries.

Country	Labour force (millions)	Total output (US\$ billions)
Ethiopia	49	62
Ghana	12	38
Mali	6	13
Nigeria	58	481
South Africa	21	315

The labour force and total output of five African countries

- 1 Referring to the source material in your responses, complete all parts of Question 1.
 - a Calculate the value of agricultural output in South Africa in 2015. **(1)**
 - b Identify **two** reasons why the productivity of land has increased in Africa. **(2)**
 - c Explain the opportunity cost of working on a farm. **(2)**
 - d Analyse, using a PPC, the effect on an economy of a flood. **(4)**
 - e Explain **two** examples of the economic problem. **(4)**
 - f Analyse the relationship between the size of a country's labour force and its output shown in the table. **(5)**
 - g Discuss whether or not skilled workers are likely to be more occupationally and geographically mobile than unskilled workers. **(6)**
 - h Discuss whether or not an increase in the output of food will reduce the output of other products. **(6)**

Four-part question

- 1 In late 2016 an Australian firm announced that it would be starting a project to use the power of waves off the coast in Cornwall in the UK to generate electricity. More entrepreneurs are becoming interested in making use of wave power which is a free good. More labour is likely to be employed in the industry. The quantity of labour has increased in recent years.
 - a Define an *entrepreneur*. **(2)**
 - b Explain the difference between a free good and an economic good. **(4)**
 - c Analyse, using a PPC, the effect on an economy of an increase in the supply of labour. **(6)**
 - d Discuss whether or not the quantity of labour in the UK is likely to increase in the future. **(8)**

SECTION 2

The allocation of resources



Chapter 5

Microeconomics and macroeconomics

34

Learning objectives

By the end of this chapter you will be able to:

- explain the difference between microeconomics and macroeconomics
- identify the decision makers involved in microeconomics and macroeconomics

Introducing the topic

We all contribute to economic activity. For example, if you buy an ice cream you will increase the sales of ice cream. This is likely to result in more ice cream being produced. As economists, we look at the behaviour and performance of individual markets. We also look at how an economy as a whole, consisting of all markets, operates. This may be on a national or a global scale.

5.1 The difference between microeconomics and macroeconomics

Economics is divided into **microeconomics** and **macroeconomics**. As their names suggest, microeconomics is concerned with the small scale and macroeconomics with the large scale.

Microeconomics

Microeconomics is the study of the behaviour and decisions of households and firms, and the performance of individual **markets**.

Microeconomic topics include changes in the earnings in a particular occupation and changes in the output in the car industry.

Macroeconomics

Macroeconomics is the study of the whole economy. Macroeconomic topics include changes in the number of people employed in the economy and changes in the country's output.

The connection between macroeconomics and microeconomics

Many of the concepts used in microeconomics are also used in macroeconomics, but on a different scale. For example, you will later examine the demand for an individual product, and the total demand for all goods and services in an economy. You will also look at why the price of a particular product may change and why the price level in an economy may change.

Microeconomic decisions and interactions add up to the macroeconomic picture. This means that changes in the microeconomy affect changes in the macroeconomy and vice versa. For example, a reduction in the output of the car industry may result in a rise in the country's unemployment rate. Similarly, a decision by the government to cut income tax rates may result in households buying more cars.



KEY TERMS

Microeconomics: the study of the behaviour and decisions of households and firms, and the performance of individual markets.

Macroeconomics: the study of the whole economy.

Market: an arrangement which brings buyers into contact with sellers.



TIP

It is useful to give an example when defining either microeconomics and macroeconomics.



The output of cars influences a country's total output

GROUP ACTIVITY 1

In your group, discuss and decide whether the following are microeconomic or macroeconomic questions:

- a** Why are pilots paid more than cabin crew?
- b** Why is the diamond industry expanding in China?
- c** Why is the output of India greater than the output of Sri Lanka?
- d** Why does Pakistan import more than it exports?
- e** What can be done to reduce road congestion in Paris?

5.2 Decision makers in microeconomics and macroeconomics

The decision makers in microeconomics and macroeconomics are sometimes referred to as **economic agents**. They are households, firms and government. Households are buyers, also known as consumers, savers and workers. Firms are business concerns that produce goods and services, and employ workers and other factors of production. Government is the system which rules a country or region. A government produces and provides some products, provides financial benefits, and taxes and regulates the **private sector**.

The aims of decision makers

Households, as consumers, seek low prices and good quality products. As workers, they want good working conditions and high pay. As savers they want their money to be safe and to give a good return. Firms in the private sector usually try to make as much profit as possible. A government wants a strong economy. It may have objectives for the macroeconomy, including full employment of labour. It may also seek to improve the performance of individual markets by, for example, taxing the sale of cigarettes.

INDIVIDUAL ACTIVITY 1

Decide, in each case, whether the following are likely to be an aim of a government, households or firms:

- a** A shorter working week
- b** Many different sellers of consumer goods
- c** Many different sources of raw materials
- d** Higher tax revenue

**KEY TERMS****Economic agents:**

those who undertake economic activities and make economic decisions.

Private sector:

firms owned by shareholders and individuals.

Summary

You should know:

- Microeconomics is concerned with what is happening in individual markets, whereas macroeconomics is concerned with what is happening in the whole economy.
- Decision makers are also known as economic agents. They are households, firms and government.

Multiple choice questions

- 1 Households' decision to buy less rice reduced the profit of rice farmers. Which branch of economics covers these two changes?

	Households' decision	Rice farmers' profits
A	Microeconomics	Microeconomics
B	Microeconomics	Macroeconomics
C	Macroeconomics	Macroeconomics
D	Macroeconomics	Microeconomics

- 2 Who influences the total output of the Egyptian economy?

	Egyptian households	Egyptian firms	The Egyptian government
A	No	No	Yes
B	No	Yes	Yes
C	Yes	Yes	No
D	Yes	Yes	Yes

Four-part question

- a** Define *microeconomics*. (2)
- b** Explain whether decisions in microeconomics involve an opportunity cost. (4)



Chapter 6

The role of markets in allocating resources

38

Learning objectives

By the end of this chapter you will be able to:

- explain the key allocation decisions
- describe the nature of the market system
- analyse how the price mechanism provides answers to the key allocation decisions

Introducing the topic

The US economy is changing. For example, shale oil production and high-technology industries are expanding, while the production of the glass manufacturing and postal service industries are declining. There are also changes in how products are being made. For instance, more and more capital goods are being used in the US car industry. In addition, the richest Americans are consuming more goods and services, while some of the poorest Americans are consuming less. Why are these changes occurring? Who makes the decisions and how are they put into effect?

6.1 The three key allocation decisions

All economies are changing and they all have to answer three fundamental economic questions:

- What to produce?
- How to produce it?
- Who is to receive the products produced?

These questions arise because of the basic economic problem of unlimited wants exceeding finite resources. A decision has to be made as to how the economy's resources are to be allocated. For example, how many resources should be devoted to healthcare, how many to leisure goods and services and how many to defence?

Once this decision has been taken, an economy has to decide on how the products are to be produced, for example whether a large number of workers should be used in agriculture or more reliance be placed on capital equipment. Finally, because as many goods and services cannot be produced as are required to satisfy the needs of everyone, a decision has to be reached as to how the products should be distributed. Should products be distributed to people according to their needs or their ability to earn a high income?

The answers to the above questions differ in different economic systems. An **economic system** covers the institutions, organisations and mechanisms in a country that influence economic behaviour and determine how resources are allocated.

6.2 Different economic systems

There are three main economic systems. One is a **planned economic system**. An economy which operates a planned economic system is called a planned, centrally planned, command or collectivist economy. It is an economy in which the state (government) makes the decisions about what to produce, how to produce it and who receives it. The state owns all, or at least most, of the land and capital, and employs workers. The state gives instructions, sometimes called **directives**, to state-owned enterprises (SOEs) on what to produce and how to produce it. The state determines who gets the products made, both by deciding on the remuneration paid to the workers and by controlling prices. It will usually provide basic necessities and important products such as housing, transport and education free of cost or at a low price.

The other two types of economic system are a market economic system and a **mixed economic system**. This chapter focuses on the **market economic system**. (Chapter 15 looks at the mixed economic system.)

6.3 A market economic system

An economy which operates a market economic system is known as a market economy or a free enterprise economy. It is one in which buyers, also known as consumers, determine what is produced. They signal their preferences to sellers through the **price mechanism**.

In a market economic system, government intervention is minimal. Land and capital are privately owned. Private sector firms decide how to produce the products consumers want to buy. Some firms, for instance steel firms, may employ large amounts of capital relative to labour. They are said to be **capital-intensive**. Others, for example hotels, may use a relatively high number of workers in comparison with the amount of capital used. They rely mainly on labour and so are described as **labour-intensive**. In making their decision on



KEY TERMS

Economic system:

the institutions, organisations and mechanisms that influence economic behaviour and determine how resources are allocated.

Planned economic system:

an economic system where the government makes the crucial decisions, land and capital are state-owned and resources are allocated by directives.

Directives: state instructions given to state-owned enterprises.

Mixed economic system:

an economy in which both the private and public sectors play an important role.

Market economic system:

an economic system where consumers determine what is produced, resources are allocated by the price mechanism and land and capital are privately owned.

Price mechanism:

the way the decisions made by households and firms interact to decide the allocation of resources.

Capital-intensive:

the use of a high proportion of capital relative to labour.

Labour-intensive:

the use of a high proportion of labour relative to capital.

which factors of production to employ, firms will seek to achieve the lowest cost method of production, while producing the highest quality of products. This may also involve the use of new, more productive capital equipment, to replace older equipment.

In a market economic system, those who earn the highest incomes exercise the maximum influence on what is produced. Those workers whose skills are in highest demand and are the most successful entrepreneurs will be able to buy more products than those whose skills are in low demand and are unsuccessful entrepreneurs.

INDIVIDUAL ACTIVITY 1

Discuss how the following questions are answered in a market economic system:

- What is produced?
- How is output produced?
- Who gets the products produced?

6.4 The role of the price mechanism

In a market economic system, resources move automatically as a result of changes in price. In turn, price changes are determined by the interaction of the market forces of **demand** and **supply**. Resources switch from products that are becoming less popular to those which are becoming more popular. Consumers signal to producers their changes in demand through the prices they are prepared to pay for different products. Figure 6.1 shows the effect of demand for bananas increasing whilst demand for apples decreases.

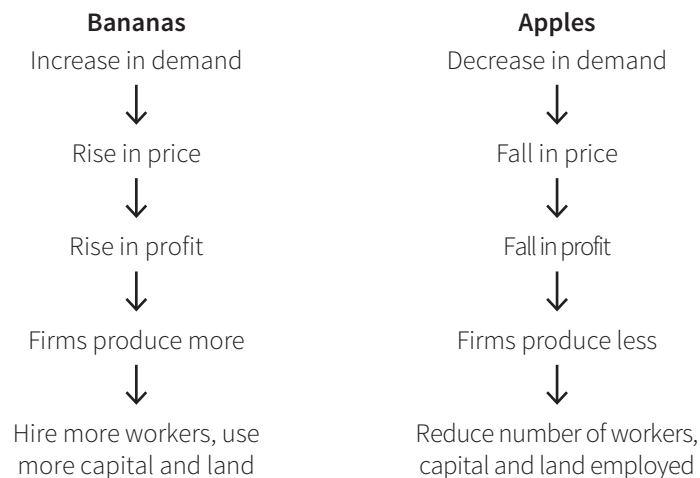


Fig. 6.1: Changes in resource allocation in a market economy

The price mechanism provides an incentive for producers to respond to changes in market conditions. If consumers want more of a product, they will be willing to pay more for it. The higher price offered will encourage firms to produce the product in larger quantities as then the firms make more profit. Indeed, the use of resources is changing all the time in response to changes in consumer demand and costs of production. **Market equilibrium** moves to **market disequilibrium** and back to market equilibrium again.

The price mechanism also rations out products when their supply falls short of demand. If, for example, a disease attacks a potato crop, supply will decrease. Initially this may result in a shortage with demand exceeding supply. This shortage, however, will drive up prices until



KEY TERMS

Demand: the willingness and ability to buy a product.

Supply: the willingness and ability to sell a product.

Market equilibrium: a situation where demand and supply are equal at the current price.

Market disequilibrium: a situation where demand and supply are not equal at the current price.

the market again clears with demand equalling supply. The price mechanism sorts out who will receive the products by raising the price. The people who will be able to consume the product will be those who are able to pay the higher price.

**TIP**

Remember the key role of the price mechanism and demand and supply in the market economy.



An auction, at which the product goes to the highest bidder

GROUP ACTIVITY 1

In your group, decide in each case which product would be likely to have the higher price and why:

- a** the price of a ticket at the football World Cup and a ticket at a local non-league game
- b** gold and rice
- c** the services of a dentist and the services of a cleaner.

Summary

You should know:

- The three key allocation decisions are what to produce, how to produce it and for whom to produce.
- The main factors that determine the type of economic system are: who decides what is produced, how resources are allocated, and who owns the capital and land.
- The market system relies on the price mechanism to allocate resources.
- Price will rise if demand increases or supply decreases.

Multiple choice questions

- 1 What are the three questions faced by all economies?
 - A What to produce, when to produce it and who receives it
 - B What to produce, how to produce it and who receives it
 - C Where to produce, how to produce and when to produce
 - D Where to produce, when to produce and why to produce

- 2 What encourages firms to produce what consumers demand?
 - A The chance to earn a high profit
 - B The chance to experience high unit costs of production
 - C The desire to attract new firms into the industry
 - D The desire to keep revenue as low as possible

- 3 How are resources allocated in a market economy?
 - A By directives
 - B By the price mechanism
 - C By directives or the price mechanism
 - D By directives and the price mechanism

- 4 What is meant by market forces?
 - A The interaction of demand and supply
 - B The interaction of firms and the government
 - C The power of producers
 - D The power of the state

Four-part question

- a Identify **two** key resource allocation decisions. **(2)**
- b Explain the difference between market equilibrium and market disequilibrium. **(4)**
- c Analyse the functions of the price mechanism. **(6)**



Chapter 7

Demand

Learning objectives

By the end of this chapter you will be able to:

- define demand
- draw a demand curve
- recognise the link between individual and market demand in terms of aggregation
- distinguish between extensions and contractions in demand
- analyse the causes of shifts in the demand curve

Introducing the topic

Suppose you found that the price of your favourite snack had been reduced, would you buy more and, if so, why? What happens to the quantity of ice cream people buy in hot weather? Why do people in poor countries own fewer cars than people in rich countries? Economists answer these and other questions by examining the influences on demand.



**KEY TERM**

Demand: the willingness and ability to buy a product.

7.1 Definition of demand

When economists discuss **demand**, they are discussing effective demand. They define this as the *willingness* and *ability* to buy a product. An individual may want a product, but if they cannot afford it, their demand is not effective as a firm will not be prepared to sell it to them.

7.2 Demand and price

Demand and price are inversely related. This means demand will rise as price falls and fall as price rises. A higher price will mean that fewer people will be able to afford the product. They will also be less willing to buy it and will be more likely to switch to rival products. So, as price rises, the willingness and ability to buy a product falls.

**KEY TERMS**

Market demand: total demand for a product.

Aggregation: the addition of individual components to arrive at a total amount.

7.3 Individual and market demand

Economists study individual and, more commonly, **market demand**. As its name suggests individual demand is the amount of a product an individual would be willing and able to buy, at different prices. Market demand is the total demand for a product at different prices. It is found by adding up each individual's demand at different prices. This totalling up of the demand of all of the potential buyers is sometimes referred to as **aggregation**.

A demand schedule

A demand schedule lists the different quantities demanded of a product, at different prices over a particular time period. Table 7.1 shows a demand schedule for tickets on trains from Station X to Station Y.

Price (\$)	Quantity demanded
50	2200
45	2500
40	3000
35	3800
30	5000
25	7000

Table 7.1: Daily demand for train tickets from Station X to Station Y.

A demand curve

The information from a demand curve can be plotted on a diagram. Price is measured on the vertical axis (the line going up) and quantity demanded on the horizontal axis (the line going across). Figure 7.1 shows the information in Table 7.1 as a diagram.

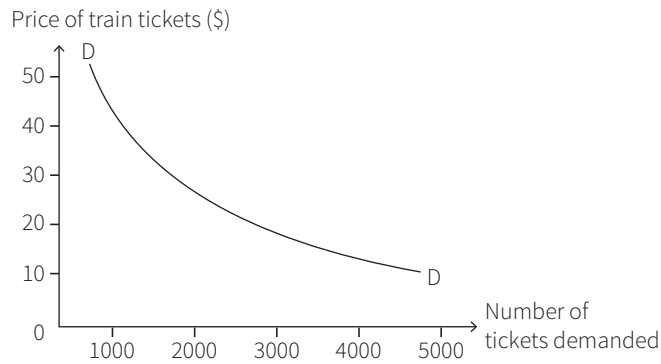


Fig. 7.1: Daily demand for train tickets from Station X to Station Y



TIP

In answering questions on demand and supply, it is useful to draw diagrams. A diagram must be accurately and fully labelled. It should also be large enough and clear. It is advisable to use at least one-third of an A4 size page for drawing a diagram. Also, explain the diagram in your text.

This demand curve and the demand schedule on which it is based do not show the demand over the full range of prices. It is possible to do this. Figure 7.2 illustrates such a curve.

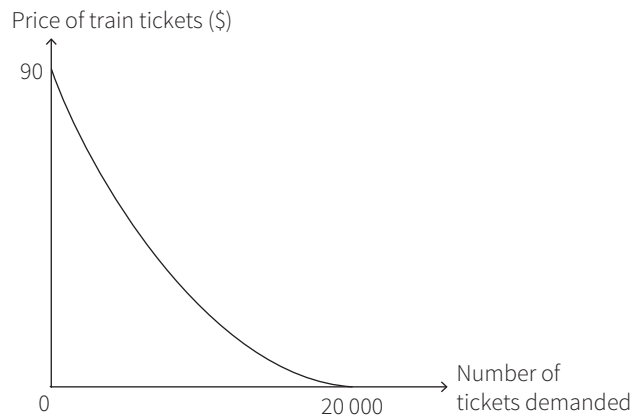


Fig. 7.2: A demand curve over the full range of prices

The curve shows the price, \$90, at which people would stop buying tickets – the service is priced out of the market. It also shows how many tickets people would want, if they were provided free of cost. As it is unusual for firms to charge either such a high price that demand is zero or a zero price, demand curves are often not taken to the axes.

To save time and for the sake of clarity, economists also often draw demand curves as straight lines as shown in Figure 7.3 (they are still referred to as curves!).

Such lines do not usually show exact quantities and prices, but can be used to illustrate the relationship between demand and price, and the effect of price changes on demand.

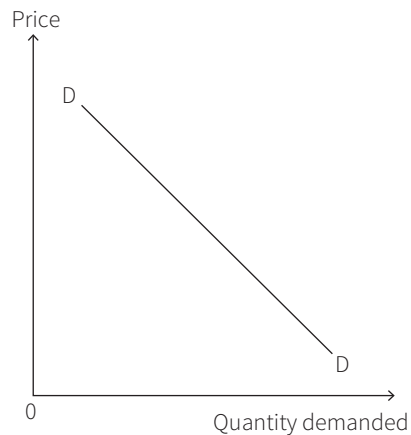


Fig. 7.3: A straight line demand curve

INDIVIDUAL ACTIVITY 1

Using the following demand schedule, plot the demand curve for rooms in a hotel in Delhi.

Price (\$)	Number of rooms
800	10
700	20
600	35
500	55
400	80
300	110



KEY TERM

Extension in demand: a rise in the quantity demanded caused by a fall in the price of the product itself.

The effect of a change in price on demand

As noted earlier, a fall in the price of a product is likely to lead to a rise in demand for it. Economists refer to this as **extension in demand**, expansion in demand or an increase in the quantity demanded. Seeing the words ‘an extension in demand’, ‘expansion in demand’ or ‘an increase in the quantity demanded’ will tell an economist that the cause of the change in demand is a change in the price of the product itself. Such a change can be illustrated on a demand curve, as shown in Figure 7.4.

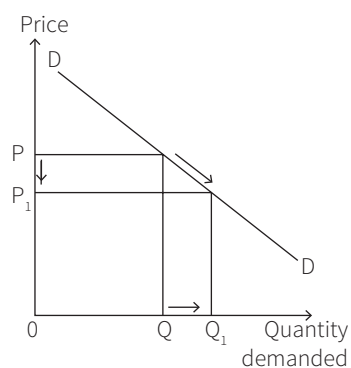


Fig. 7.4: An extension in demand

The diagram shows that a fall in price from P to P_1 has caused the demand to extend from Q to Q_1 . In contrast, a rise in price will cause a **contraction in demand** which can also be referred to as a decrease in quantity demanded.

Figure 7.5 shows the impact of a rise in price. Demand contracts from Q to Q_1 as a result of a rise in price from P to P_1 .

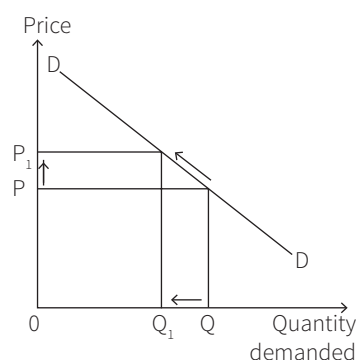


Fig. 7.5: A contraction in demand

INDIVIDUAL ACTIVITY 2

A shop changes the price of a can of soft drink from \$3 to \$2 and, as a result, demand changes from 40 cans a day to 50 cans.

- Illustrate this change on a demand curve.
- Identify whether demand has extended or contracted.

7.4 Conditions of demand

Price is not the only influence on demand. There are a range of causes for **changes in demand** – either more or less of a product being demanded – even if price is unchanged. These reasons are sometimes known as the conditions of demand. For example, in a period of hot weather there is likely to be an **increase in demand** for ice cream. The quantities demanded will rise at each and every price. A new demand schedule can be drawn up to show the higher level of demand.



KEY TERM

Contraction in demand: a fall in the quantity demanded caused by a rise in the price of the product itself.



KEY TERMS

Changes in demand: shifts in the demand curve.

Increase in demand: a rise in demand at any given price, causing the demand curve to shift to the right.

Price per ice cream	Quantities demanded per day	
	Original demand	New demand
\$ 5	2000	4000
4	3000	5000
3	4000	6000
2	5000	7000
1	6000	8000

Table 7.2: Demand for ice cream

On a diagram, an increase in demand is shown by a shift to the right of the demand curve. Figure 7.6 shows that at any given price, a larger quantity is demanded. At a price of \$2, for example, initially 5000 ice creams would be demanded a day. The hot weather would encourage people to buy more ice creams. Demand would increase to 7000.

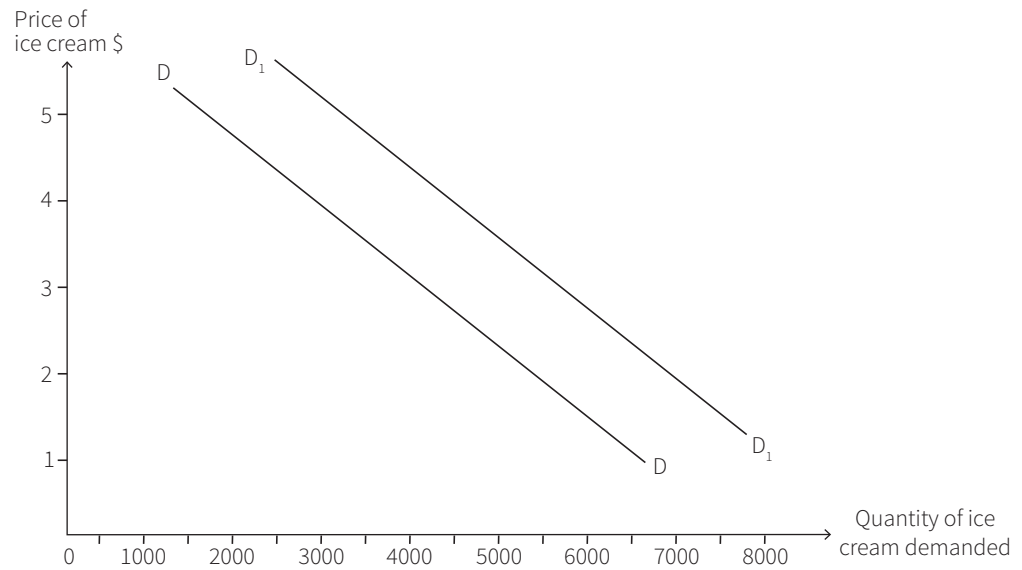


Fig. 7.6: An increase in demand

Besides increasing, demand for ice cream may decrease too. During periods of cold weather, consumers tend to demand less ice cream. Such a **decrease in demand** is illustrated by a shift to the left of the demand curve as shown on Figure 7.7.

KEY TERM

Decrease in demand: a fall in demand at any given price, causing the demand curve to shift to the left.

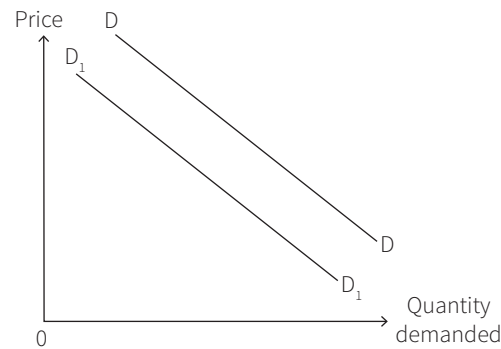


Fig. 7.7: A decrease in demand



There may be an increased demand for ice-cream on a warm day



TIP

Be careful to distinguish between a movement along a demand curve and a shift in demand. The only thing that can cause a movement *along* a demand curve is a change in the price of the product itself. Anything else that causes demand to change would be shown by a *shift* in the demand curve.

Causes of changes in demand

Among the factors that can cause consumers to demand different quantities of a product, even if the price has not changed, are changes in income, changes in the price of related products, advertising campaigns, changes in population, and changes in taste and fashion.

Changes in income

An increase in income raises consumers' purchasing power. For most of the products, this results in an increase in demand. In fact, so common is this positive relationship between income and demand that such products are referred to as **normal goods**. A few products have a negative relationship with income. These products are called **inferior goods**. When income rises, demand falls as consumers switch to better quality products.

INDIVIDUAL ACTIVITY 3

In China, household income grew by an average of 8% between 2010 and 2016. This contributed to a rise in demand for mobile (cell) phones, making China the world's largest mobile phone market.

- Illustrate the change in demand for mobile phones in China on a diagram.
- Is a mobile phone a normal or an inferior good? Explain your answer.



KEY TERMS

Normal goods:

a product whose demand increases when income increases and decreases when income falls.

Inferior goods:

a product whose demand decreases when income increases and increases when income falls.



KEY TERMS

Substitute: a product that can be used in place of another.

Complement: a product that is used together with another product.

Ageing population: an increase in the average age of the population.

Birth rate: the number of live births per thousand of the population in a year.

Changes in the price of related products

An increase in demand can be caused by a rise in the price of a **substitute** product. If the price of holidays to Morocco rises, demand for holidays to Mauritius may increase. Demand will also increase if the price of a **complement** falls. For example, if travel insurance becomes cheaper, demand for holidays to most of the destinations will increase.

GROUP ACTIVITY 1

Decide whether each of the following is a substitute or a complement to a Volkswagen car:

- a public transport
- b petrol
- c a Ford car.

Advertising campaigns

A successful advertising campaign will increase demand for a product. It may bring the product to the notice of some new consumers and may encourage some existing consumers to purchase more quantities of the product.

Changes in population

The population of a country can change in terms of both size and age composition. If there is an increase in the number of people in the country, demand for most products will increase. If there is an **ageing population**, with people living longer, and a fall in the **birth rate**, demand for wheelchairs is likely to increase while demand for toys is likely to decrease.

Changes in taste and fashion

Certain products are particularly influenced by changes in taste and fashion. These include food, clothes and entertainment. A rise in vegetarianism in a number of countries has caused the demand for meat to decrease. Health reports can have a significant influence on demand for particular foods. Designer trainers have become more popular in many countries, and the rise in the popularity of football in Asia and Africa has increased demand for football shirts and football merchandise.

Other factors

A range of other factors can influence demand for a product. It was mentioned earlier that a change in weather conditions will affect the demand for ice cream. Such a change would also shift the demand curve for umbrellas, soft drinks and clothing.

Expectations about future price rises can influence current demand. Demand for oil increased during the revolution in Libya in 2011. This was because it was widely anticipated that such an event would disrupt supplies of oil and raise prices. Special events can have an impact on demand for a particular product. For instance, the Summer Olympic Games held in Rio in 2016 may have increased the demand for holidays in Brazil.



TIP

When exploring the causes of changes in demand for a product avoid providing 'mirror image' comments. For example, if you have explained why the demand for smartphones may increase if incomes rise, you do not need to explain why demand would decrease if income falls.

GROUP ACTIVITY 2

Young people throughout the world are turning away from buying newspapers to new forms of media for their information and entertainment. For example, in the UK, in 1973, 80% of 15–24 year olds read a (paid for) national newspaper. By 2015, this percentage had fallen to 21%. Studies have found a number of reasons for this trend. These include young people having less time, less need, less interest and less opportunity to buy newspapers, and declining importance of newspapers for them. There are now many rivals to newspapers including social media and the internet, television and radio. Those young people who do buy newspapers tell the researchers that they read them more for entertainment than news.

- a What percentage of 15–24 year olds did not read a 'paid for' national newspaper in 2015?
- b Explain two reasons why young people throughout the world are demanding fewer newspapers.
- c Does the extract suggest that social media and the internet is a substitute for or a complement to newspapers? Explain your answer.
- d Discuss two ways through which newspaper publishers could raise demand for their newspapers.

GROUP ACTIVITY 3

Decide in each case whether the following would cause an extension in demand, a contraction in demand, an increase in demand or a decrease in demand for fish in a country:

- a A rise in the price of fish
- b A report that eating fish reduces heart diseases
- c Net emigration
- d A fall in the price of chicken

Summary***You should know:***

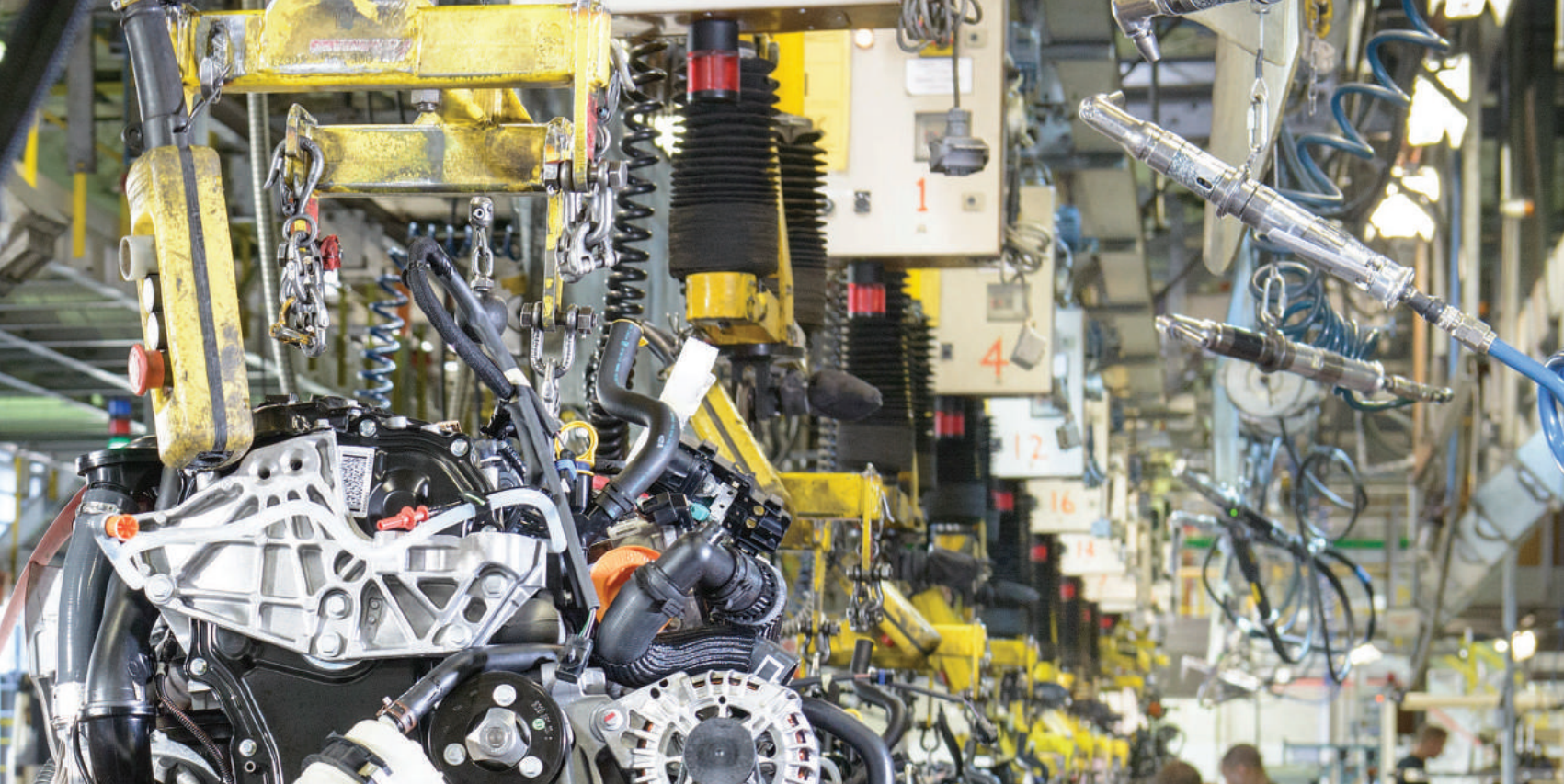
- A fall in the price of a product will make people more willing and able to buy it.
- A demand schedule lists, and a demand curve shows, the different quantities of a product that would be demanded at different prices.
- An extension in demand is caused by a fall in the price of the product whereas a contraction is caused by a rise in price.
- Causes of a change in demand include changes in income, changes in the price of substitutes and complements, advertising campaigns, changes in the size and age composition of the population and changes in taste and fashion.
- An increase in demand shifts the demand curve to the right.
- A decrease in demand shifts the demand curve to the left.

Multiple choice questions

- 1 What is measured on the vertical axis of a demand diagram?
- A Cost
 - B Price
 - C Quantity demanded
 - D Wants
- 2 What happens to people's willingness and ability to buy a product when its price falls?
- | Willingness | Ability |
|-------------|-----------|
| A increases | increases |
| B increases | decreases |
| C decreases | decreases |
| D decreases | increases |
- 3 An increase in demand is represented by:
- A A movement down the demand curve
 - B A movement up the demand curve
 - C A shift to the left of the demand curve
 - D A shift to the right of the demand curve
- 4 The price of a product rises. What will happen to the demand for its complement?
- A It will contract
 - B It will extend
 - C It will decrease
 - D It will increase

Four-part question

- a Define *market demand*. (2)
- b Explain the relationship between demand and a change in price. (4)
- c Analyse the effect of a rise in the price of tea on the demand for milk and the demand for coffee. (6)
- d Discuss whether or not the demand for bicycles will rise in the future. (8)



Chapter 8

Supply

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Learning objectives

By the end of this chapter you will be able to:

- define supply
- distinguish between extensions and contractions in supply
- recognise the link between individual and market supply in terms of aggregation
- analyse the causes of shifts in the supply curve

Introducing the topic

Have you seen a typewriter? In the past, there were many firms producing typewriters. Now there are very few typewriters produced. In contrast, the number of coffee shops is increasing and more and more trainers are being sold. Why does the supply of products change?



KEY TERM

Supply: the willingness and ability to sell a product.

8.1 Definition of supply

Supply is the willingness and ability to sell a product. It is important not to confuse supply with production. Supply is influenced by the amount produced, but is not the same as production. This is because some of the amount produced today may be stored, in order to be sold at a later date. Conversely, it is possible that some of the output offered for sale today may have come from stocks.

8.2 Supply and price

In contrast to demand, supply is directly related to price. A rise in price will lead to a rise in supply. Firms will be more willing to supply the product, as they are likely to earn higher profits. They will also be able to supply more as the higher price will make it easier for them to cover the costs of production.



KEY TERM

Market supply: total supply of a product.

8.3 Individual and market supply

Individual supply is the supply of one plant/firm, whereas **market supply** is the total supply of a product supplied by all the firms in the industry. Market supply is calculated in a similar way to market demand. The quantities that would be supplied by each firm at each price are added up. So aggregation of the supply of each individual firm gives the market supply.

A supply schedule

A supply schedule records the different quantities supplied at different prices. Table 8.1 shows a supply schedule for train tickets from Station X to Station Y.

Price (\$)	Quantity supplied
50	6000
45	5000
40	4300
35	3800
30	3600
25	3500

Table 8.1: Daily supply of train tickets from Station X to Station Y

From this information, a supply curve can be plotted as shown in Figure 8.1.

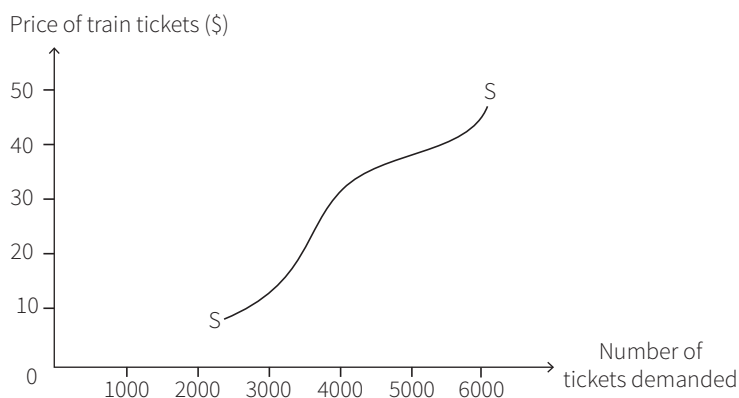


Fig. 8.1: Daily supply of train tickets from Station X to Station Y

As with demand curves, supply curves can be drawn as straight lines.



Train travel

The effect of a change in price on supply

Again, as with demand, a change in price of the product will cause an **extension in supply** (expansion or an increase in the quantity supplied) or a **contraction in supply** (a decrease in the quantity supplied). This time, however, it is a rise in price which will cause an extension in supply and a fall in price which will cause a contraction in supply. Figure 8.2 illustrates both these changes.

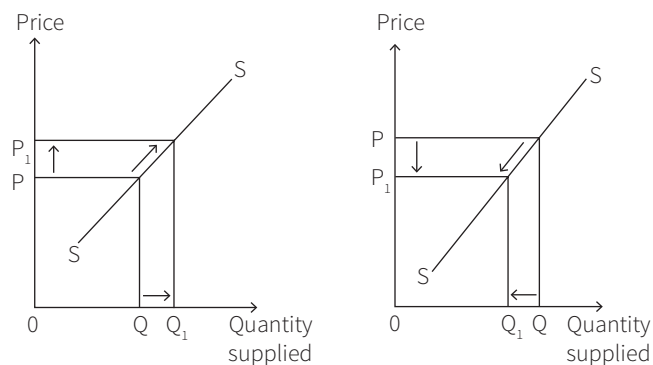


Fig. 8.2: (a) An extension in supply

(b) A contraction in supply

INDIVIDUAL ACTIVITY 1

Pakistan's paper industry is growing. In 2017 there were approximately 100 manufacturing firms producing writing paper, printing paper, wrapping paper and chip board. One well-known firm is Pakistan's Paper Products Ltd.

- What effect would a rise in the supply of Pakistan's Paper Products have on the market supply of paper?
- What would cause an extension in the supply of paper?



KEY TERMS

Extension in supply:

a rise in the quantity supplied caused by a rise in the price of the product itself.

Contraction in supply:

a fall in the quantity supplied caused by a fall in the price of the product itself.



TIP

Do not confuse supply and demand curves. Remember supply curves slope up from left to right, whilst demand curves slope down from left to right.



KEY TERM

Change in supply: changes in supply conditions causing shifts in the supply curve.

8.4 Conditions of supply

A **change in supply** occurs when the conditions facing suppliers alter. In such a situation, a different quantity will be offered for sale at each price. For instance, a good period of weather may increase the rice crop in a country. This will make it possible for rice farmers to supply more. Table 8.2 shows the original supply schedule in the previous season and the supply schedule in the current season.

Price per tonne (rupee)	Supply in previous season (millions of tonnes)	Supply in current season (millions of tonnes)
1000	110	130
900	100	120
800	90	100
700	80	90
600	70	80
500	60	70

Table 8.2: Rice production

Shifts in the supply curve

While a change in the price of the product itself causes a movement along the supply curve, a change in supply conditions causes the supply curve to shift. An **increase in supply** is illustrated by a shift to the right as shown in Figure 8.3. At each and every price, more is supplied.

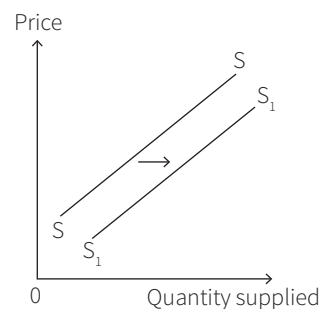


Fig. 8.3: An increase in supply

In contrast, a **decrease in supply** results in a movement of the supply curve to the left, as shown in Figure 8.4. Now whatever the price, less will be supplied.

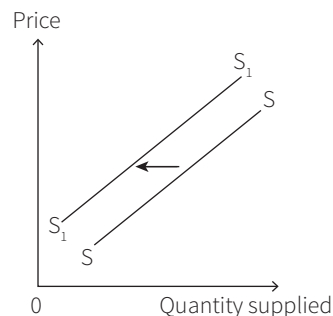


Fig. 8.4: A decrease in supply



KEY TERMS

Increase in supply: a rise in supply at any given price, causing the supply curve to shift to the right.

Decrease in supply: a fall in supply at any given price, causing the supply curve to shift to the left.

Causes of changes in supply

Among the factors that can cause changes in supply are changes in the costs of production, improvements in technology, taxes, subsidies, weather conditions, health of livestock and crops. It is also affected by the price of other products. Disasters, wars, discoveries of new sources and depletion, also contribute to this change of commodities.

INDIVIDUAL ACTIVITY 2

Since 2006, the world production of rice has increased from 600 million tonnes to 748 million tonnes in 2016. This has largely been the result of breakthroughs in seed generation and cultivation techniques.

- a Draw a diagram showing the change in supply of rice since 2006.
- b Identify two factors that can cause the supply curve for rice to move in the opposite direction.

Changes in the costs of production

If it costs more to produce a product, suppliers will want a higher price for it. For example, if it costs \$200 to produce four units, firms would supply four units at a price of \$50 per unit. If costs rise to \$280, they would be prepared to sell only four units, at a price of \$70 each.

The two basic reasons for a change in costs of production are

- a change in the price of any of the factors of production
- a change in their productivity.

If, for example, the price of raw materials used increases, it will be more expensive to produce a product. One cost which changes frequently is the cost of transporting goods. This is because the price of oil used in petrol, is itself very volatile.

A rise in the productivity of a factor of production will reduce unit cost. For example, if a worker who is paid \$200 a week produces 100 units, the labour cost per unit is \$2. If the worker's productivity rises to 200, the labour cost per unit would fall to \$1.

An increase in the wages paid to workers by itself would raise the costs of production and, therefore, cause a decrease in supply. However, if the increase in wages is accompanied by an equal rise in productivity, then **unit costs** and supply will remain unchanged.

INDIVIDUAL ACTIVITY 3

A firm employs ten workers and pays \$50 a day to each of them. The total output of ten workers is 100 units initially. The firm then raises the wage rate to \$60 a day and the output per worker rises to 20.

- a Showing your workings, calculate:
 - i the initial unit cost
 - ii the new unit cost.
- b Will supply decrease, stay the same or increase? Explain your answer.



KEY TERM

Unit cost: the average cost of production. It is found by dividing total cost by output.



KEY TERMS

Improvements in technology:

advances in the quality of capital goods and methods of production.

Direct taxes: taxes on the income and wealth of individuals and firms.

Indirect taxes: taxes on goods and services.

Tax: a payment to the government.

Subsidy: a payment by a government to encourage the production or consumption of a product.

Improvements in technology

This influence is closely related to the previous one, since **improvements in technology** raise the productivity of capital, reduce costs of production and result in an increase in supply. It has become much cheaper to produce a range of products due to the availability of more efficient capital goods and methods of production. For example, whilst world demand for personal computers has increased in recent years, the supply has increased even more as it has become easier and cheaper to produce them.

Taxes

Direct taxes on firms, including corporation tax, and **indirect taxes**, such as VAT and excise duty, are effectively a cost that firms have to pay. They are likely to try to recover at least some of this extra cost by raising the price paid by the consumers. Nevertheless, the firms themselves are largely responsible for passing on the revenue from the **tax** to the government. A rise in the rate of an existing tax or the imposition of a new tax, will make it more expensive to supply a product and hence will reduce supply. In contrast, a cut in a tax or its removal will increase supply.

Subsidies

A **subsidy** given to the producers provides a financial incentive for them to supply more. Besides being paid by the consumer, they are now being paid by the government also.

As a result, the granting of a subsidy will cause an increase in supply whilst the removal of a subsidy will cause a decrease in supply.

Most countries, throughout the world, subsidise some agricultural products. A number of them also give subsidies to new and important industries.

Less frequently, a government may also give a subsidy to consumers, to encourage them to buy a particular product. For example, grants may be given to households to enable them to buy houses. In this case, of course, it is demand and not supply conditions which change.

Weather conditions and health of livestock and crops

Changes in weather conditions affect particular agricultural products. A period of good weather around harvest time is likely to increase the supply of a number of crops. Very dry, very wet or very windy weather, however, is likely to damage a range of crops and thereby reduce their supply. The amount of agricultural products produced and available for supply is also influenced by the health of livestock and crops. The outbreak of a disease, such as foot and mouth in cattle or blight in crops, will reduce supply.

Prices of other products

Firms often produce a range of products. If one product becomes more popular, its price will rise and supply will extend. In order to produce more of this product, the firm may divert the resources from the production of other products. The prices of these other products have not changed but the firm will now supply less at each and every price. For example, if a farmer keeps cattle and sheep, a rise in the price and profitability of lamb is likely to result in the farmer keeping fewer cows and a corresponding decrease in the supply of beef.

Besides the products being supplied in a competitive environment, they can also be jointly supplied. This means that one product is automatically made when another product is produced, that is one product is a by-product of the other one. For example, when more beef is produced, more hides will be available to be turned into leather.

In the case of products which are jointly supplied, a rise in the price of one product will cause an extension in supply of the other product. Firms make more of one product because its price has risen. The supply of the other product will increase automatically. More is produced, not because it has risen in price but because the price of a related product has risen.

Disasters and wars

Natural disasters, such as hurricanes, floods and wars, can result in a significant decrease in supply. The earthquake and resulting tsunami that hit Japan in March 2011 caused extensive damage to infrastructure and killed workers. These effects reduced the supply of a range of products.

Discoveries and depletions of commodities

The supply of some commodities, such as coal, gold and oil, is affected by discoveries of new sources. For example, the discovery of new oilfields will increase the supply of oil. In contrast, if coal is used up in some mines, the supply of coal will be reduced in the future.

GROUP ACTIVITY 1

Decide whether the following would cause a decrease in the demand, an increase in the demand, a decrease in the supply or an increase in the supply of gold bracelets:

- a** a decrease in incomes
- b** a decrease in the cost of the equipment used to mine gold
- c** an increase in the price of silver bracelets
- d** an increase in the tax on gold
- e** the discovery of new deposits of gold
- f** a strike by gold mining workers

Summary

You should know:

- A fall in the price of a product will make suppliers less willing and able to sell it.
- Supply schedules and supply curves show the relationship between the price and the quantity supplied.
- A fall in price causes a contraction in supply, whereas a rise in price causes an extension in supply.
- Causes of a change in supply include changes in the costs of production, improvements in technology, taxes, subsidies, weather conditions, health of livestock and crops, changes in the price of related products, disasters, wars and discoveries of new sources and depletion of commodities.
- An increase in supply shifts the supply curve to the right.
- A decrease in supply moves the supply curve to the left.
- An increase in supply will lower the price and cause an extension in demand.
- A decrease in supply will raise the price and cause a contraction in demand.

Multiple choice questions

1 What is the relationship between demand and price and the relationship between supply and price?

Demand and price

- A directly related
- B directly related
- C inversely related
- D inversely related

Supply and price

- directly related
- inversely related
- directly related
- inversely related

2 What does a market supply curve show?

- A The proportion of total output produced by different firms in the industry
- B Proportion of total output sold
- C The relationship between the total quantity supplied and demand for the product
- D The relationship between the total quantity supplied and the price of the product

3 How would an increase in supply be illustrated?

- A A movement up the supply curve
- B A movement down the supply curve
- C A shift to the left of the supply curve
- D A shift to the right of the supply curve

4 What would cause an increase in the supply of milk?

- A An increase in the price of cattle feed
- B An increase in wages paid to farm workers
- C The introduction of a subsidy to cattle farmers
- D The outbreak of a disease affecting cows

Four-part question

- a Define *supply*. (2)
- b Explain why supply and price are positively related. (4)
- c Analyse, using a supply diagram, the effect of an improvement in the quality of the training car workers receive on the supply of cars. (6)
- d Discuss whether or not changes in demand or changes in supply have a larger influence on the market for tomatoes. (8)

Chapter 9

Price determination

Learning objectives

By the end of this chapter you will be able to:

- use demand and supply schedules and curves to establish equilibrium prices and sales in a market
- use demand and supply schedules and curves to identify disequilibrium prices and excess demand and supply in a market

Introducing the topic

Market traders of fresh fish are sometimes left with unsold fish at the end of the day which they have to throw away. The next day they are likely to lower the price they charge. On other occasions, they may find that they are selling out of fish very quickly. In this circumstance, they may decide to raise their price. In practice, it can be difficult for producers to know what is the appropriate price to charge and there may have to be adjustments to eliminate shortages and surpluses.

9.1 How prices are determined

Consumers want low prices, whilst sellers want high prices. So how is the price of a product determined? In some cases, there is direct bargaining between buyers and sellers. Buyers often haggle with market traders, seeking to drive the price down, and the traders aim to keep the price relatively high. In other cases, the bargaining is more indirect. Firms estimate and then charge what they think is the equilibrium price, that is the price where demand and supply are equal. If they find that they cannot sell all of their output at this price, they will lower it. If, on the other hand, they find that consumers want to buy more than what they are offering for sale at this price, they will raise the price.

9.2 Market equilibrium

Equilibrium price

Equilibrium price is also sometimes referred to as the *market clearing price*. This is because it is the price where demand and supply are equal, and so there are no shortages or surpluses of the product. The equilibrium price of a product can be found by comparing the demand and supply schedules of that product, and seeing where demand and supply are equal. Table 9.1 uses the information previously given on train tickets in Chapters 7 and 8.



KEY TERM

Equilibrium price: the price where demand and supply are equal.

Price (\$)	Quantity demanded	Quantity supplied
50	2200	6000
45	2500	5000
40	3000	4300
35	3800	3800
30	5000	3600
25	7000	3500

Table 9.1: The daily demand for and supply of train tickets from Station X to Station Y

In this case the equilibrium price is \$35, since at this point demand and supply are equal.

The equilibrium price can also be found by examining a demand and supply diagram. It occurs where the demand and supply curves intersect.

Figure 9.1 shows that the equilibrium price is P and the equilibrium quantity is Q. Prices will stay at P and sales at Q until demand and supply conditions change.

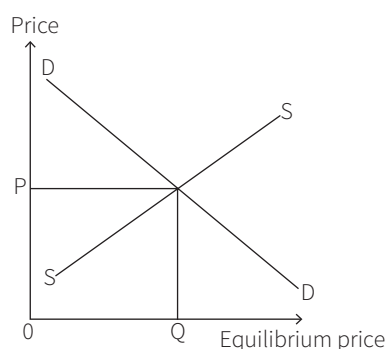


Fig. 9.1: Equilibrium price

9.3 Moving from market disequilibrium to market equilibrium

Market forces move price towards the equilibrium. If a firm sets the price above the equilibrium level, it will not sell all of the products it offers for sale – there will be a surplus (**excess supply**). To ensure the firm sells all of the products it wants to, it will lower price until the market clears, with the quantity demanded equalling the quantity supplied. Figure 9.2 shows a market initially being in a state of **disequilibrium** with supply exceeding demand.

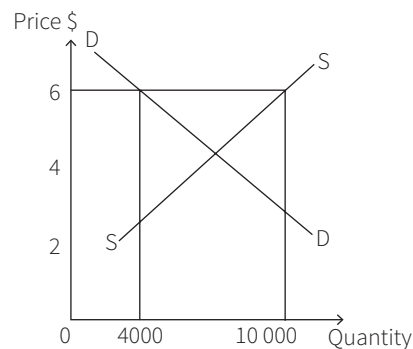


Fig. 9.2: Supply exceeding demand



TIP

It is useful to draw a demand and supply diagram when explaining how prices move from disequilibrium towards equilibrium.

At \$6, the firm is willing and able to sell 10 000 products, but consumers buy only 4000. This leaves 6000 unsold products. As a result price will fall, causing demand to extend and supply to contract until price reaches the equilibrium level. Figure 9.3 shows this adjustment.

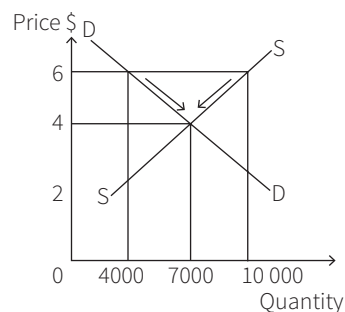


Fig. 9.3: Return to equilibrium



KEY TERMS

Excess supply: the amount by which supply is greater than demand.

Disequilibrium: a situation where demand and supply are not equal.

**KEY TERM**

Excess demand: the amount by which demand is greater than supply.

Market forces will also move the price, if it is initially set below the equilibrium level. In this case, there will initially be a shortage of the product with demand exceeding supply (**excess demand**) as shown in Figure 9.4.

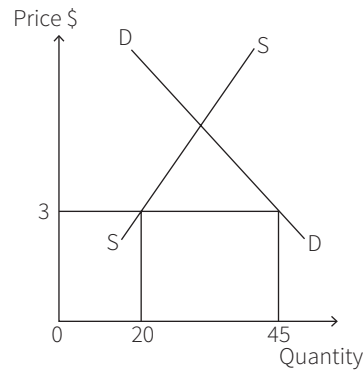


Fig. 9.4: Demand exceeding supply

Some consumers anxious to buy the product will be willing to pay a higher price and suppliers recognising this excess demand will raise the price. Figure 9.5 shows the price being pushed up to the equilibrium level of \$5.

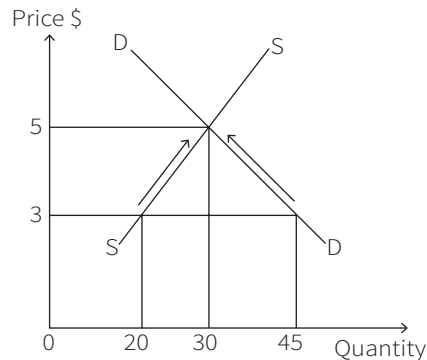


Fig. 9.5: Return to equilibrium

**TIP**

When drawing diagrams to show a market moving from disequilibrium to equilibrium include arrows to show the movements along the demand and supply curves.

INDIVIDUAL ACTIVITY 1

As the 2014 FIFA World Cup Brazil approached, sales of Brazilian football shirts increased not only in Brazil, but also in a number of other countries. Two weeks before the competition started, shops in London and Sao Paulo reported that demand for shirts was outstripping supply.

- On a demand and supply diagram, illustrate the market for Brazilian football shirts in Sao Paulo two weeks before the 2014 World Cup.
- What would you have expected to happen to the price of Brazilian football shirts in Sao Paulo in this situation? Explain your answer.

Summary

You should know:

- Price is determined by the interaction of demand and supply.
- At the equilibrium price, demand is equal to supply.
- If a market is in disequilibrium initially, market forces will move it towards equilibrium.
- If price is below the equilibrium price, there will be excess demand.
- If price is above the equilibrium price, there will be excess supply.

Multiple choice questions

- 1 Equilibrium price is the price at which:
- A Everything that is produced is sold
 - B The amount consumers demand is equal to the amount sellers supply
 - C The number of buyers equals the number of sellers
 - D Supply exceeds demand

- 2 A market is experiencing a shortage. What will happen to price and sales as the market moves back to equilibrium?

	Price	Sales
A	Decrease	Fall
B	Decrease	Rise
C	Increase	Fall
D	Increase	Rise

- 3 If there is excess demand in a market, what is the relationship between price and equilibrium price, and sales and equilibrium sales?

	Price	Sales
A	above equilibrium	above equilibrium
B	above equilibrium	below equilibrium
C	below equilibrium	below equilibrium
D	below equilibrium	above equilibrium

- 4 A market is operating with a disequilibrium price. What must this mean?
- A Demand and supply are not equal
 - B Shortages do not exist
 - C The price mechanism is not working
 - D There is no opportunity cost involved

Four-part question

- a** What may be the opportunity cost of buying apples? **(2)**
- b** Explain why the market for apples may be in disequilibrium. **(4)**
- c** Analyse, using a demand and supply diagram, why a surplus of apples will be eliminated. **(6)**
- d** Discuss whether or not consumers will benefit from a market being in disequilibrium. **(8)**



Chapter 10

Price changes

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Learning objectives

By the end of this chapter you will be able to:

- explain how changes in market conditions cause price changes
- use demand and supply diagrams to illustrate changes in market conditions and the consequences for equilibrium price and sales

Introducing the topic

The price of food and vegetables can vary significantly from month to month. The price of calculators has been falling for a number of years, while the price of housing in many countries has been rising. What causes prices to change?

10.1 The effect of changes in demand

Price changes when the market conditions of demand and supply change. Changes in demand will cause a change in price and a movement along the supply curve. Figure 10.1 shows the effect of an increase in demand. Initially there is a shortage of xy . This shortage forces the price to move up.

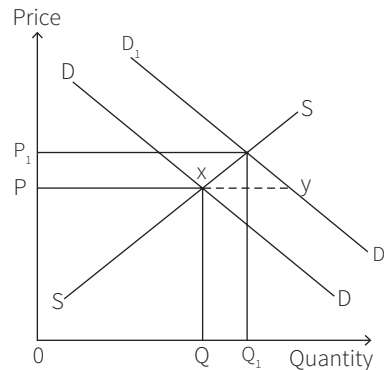


Fig. 10.1: The effect of an increase in demand

The higher price encourages an extension in supply until a new equilibrium price of P_1 is reached. At this price, demand and supply are again equal. In contrast, a decrease in demand will cause a fall in price and a contraction in supply. Figure 10.2 shows demand decreasing from DD to D_1D_1 . With lower demand, there will be a surplus of unsold products at the initial price of P . This surplus pushes down the price. As a result, supply contracts until the new equilibrium price of P_1 and a new quantity of Q_1 are reached.

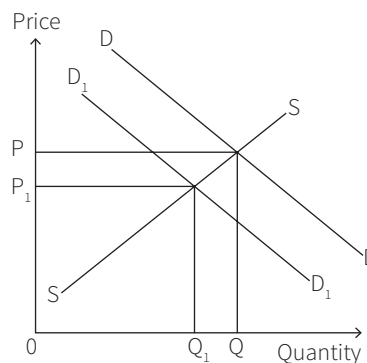


Fig. 10.2: The effect of a decrease in demand

INDIVIDUAL ACTIVITY 1

Use a demand and supply diagram to illustrate the effect of the following events on the market for economics books in India:

- a successful advertising campaign run in the country by publishers of economics books
- a decrease in the number of students studying economics.

10.2 The effect of changes in supply

Changes in supply cause a change in price and a movement along the demand curve. Initially, an increase in supply will cause a surplus. This surplus will drive down the price and result in an extension in demand, as shown in Figure 10.3.

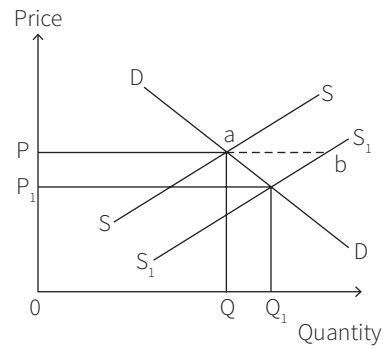


Fig. 10.3: The effect of an increase in supply

A decrease in supply will have the opposite effect. It will cause a rise in price, which in turn causes a contraction in demand, as shown in Figure 10.4.

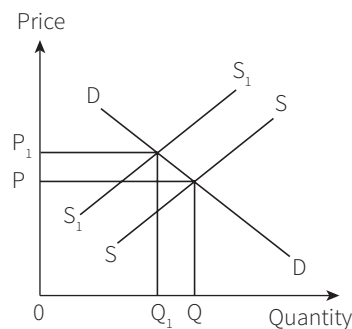


Fig. 10.4: The effect of a decrease in supply



TIP

When questions ask about the effect on the market of a product, make sure you cover demand, supply and price. Also, be careful to get the order of events right. For example, an increase in demand will first cause a rise in price and then an extension in supply.

INDIVIDUAL ACTIVITY 2

In each case, using a demand and supply diagram, analyse the effect on the market for Ghanaian football shirts.

- a** A fall in incomes in Ghana and neighbouring countries.
- b** A rise in the productivity of workers making Ghanaian football shirts.
- c** Ghana winning the World Cup.
- d** A tax being placed on Ghanaian football shirts.
- e** New, cheaper, but more efficient, machinery being introduced to make Ghanaian football shirts.

10.3 Changes in demand and supply

It is, of course, possible for both the conditions of demand and the conditions of supply to change at the same time. In this case, the impact on the market will depend not only on the direction of the changes, but also on the size of the changes. For example, a report may come out stating that eating apples is good for people's health and, at the same time, that good weather contributes to a record harvest. In this case, both demand and supply will increase. This will result in an increase in the quantity being bought and sold. The effect on price, however, will depend on relative strengths of shifts in demand and supply. Figure 10.5 shows the increase in demand being greater than the increase in supply. As a result, price rises.

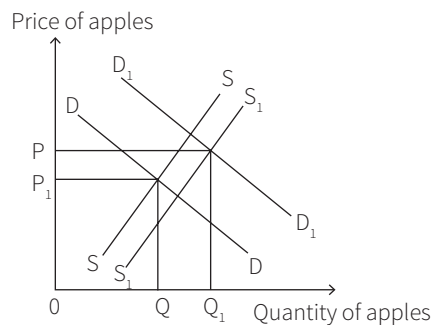


Fig. 10.5: The effect of demand increasing more than supply

In contrast, Figure 10.6 shows the increase in supply exceeding the increase in demand, causing price to fall.

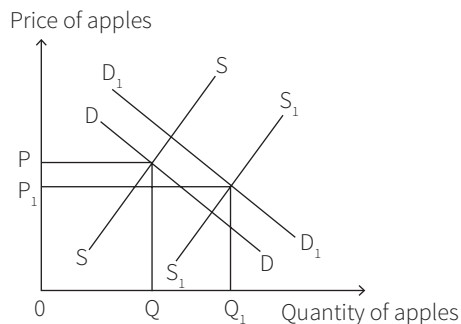


Fig. 10.6: The effect of supply increasing more than demand

GROUP ACTIVITY 1

Discuss why the price of agricultural products fluctuates more than the price of manufactured products.

INDIVIDUAL ACTIVITY 3

In 2013 and 2014, Vietnam suffered an outbreak of avian (bird) flu. Some chickens, suspected of having the disease, were slaughtered and some healthy chickens were vaccinated. This action was taken to prevent the spread of the disease not only among the chicken population but also to the human population.

Use a demand and supply diagram to analyse the effect this is likely to have on the market for chicken in Vietnam.

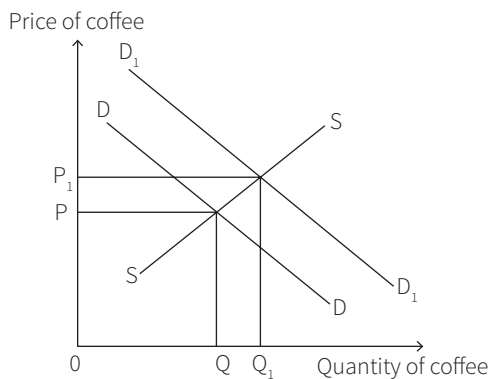
Summary

You should know:

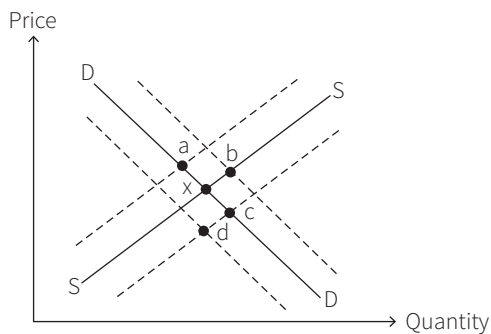
- An increase in demand will raise price and cause an extension in supply.
- A decrease in demand will lower price and cause a contraction in supply.
- An increase in supply will lower the price and cause an extension in demand.
- A decrease in supply will raise the price and cause a contraction in demand.
- An increase in supply will lower the price and cause an extension in demand.
- A decrease in supply will raise the price and cause a contraction in demand.

Multiple choice questions

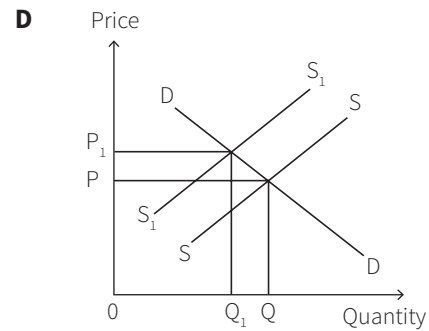
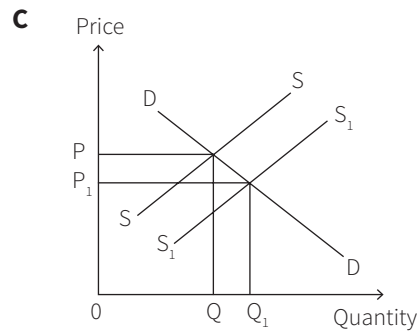
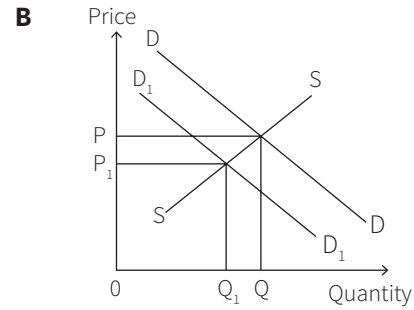
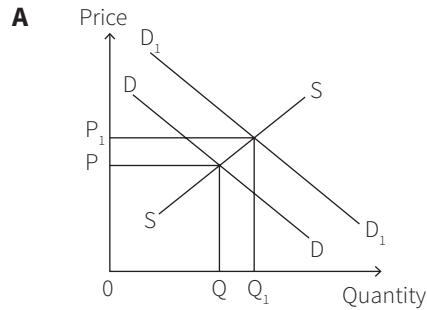
- 1 The diagram shows a change in the market for coffee. What could explain this change?
- A A rise in the price of coffee
 - B A rise in the price of tea
 - C A successful advertising campaign for tea
 - D A health report indicating that drinking coffee can cause headaches



- 2 The diagram shows the demand for and supply of a product. The initial equilibrium is at point x. The cost of raw materials used to produce the product falls. Which point represents the new equilibrium?



3 Which diagram best illustrates the effect of an increase in income on the market for an inferior good?



4 What effect would a decrease in supply of a product have on its price and demand?

- | | Price | Demand |
|----------|-----------|-----------|
| A | decreases | contracts |
| B | decreases | extends |
| C | increases | contracts |
| D | increases | extends |

Four-part question

- Identify **two** causes, apart from an increase in income, of an increase in demand for a product. **(2)**
- Explain why an increase in wages is likely to increase demand but may reduce supply. **(4)**
- Analyse, using a demand and supply diagram, the granting of a subsidy to the producers of a product. **(6)**
- Discuss whether or not the price of air travel is likely to rise in the future. **(8)**



Chapter 11

Price elasticity of demand

Learning objectives

By the end of this chapter you will be able to:

- define price elasticity of demand
- calculate price elasticity of demand
- interpret price elasticity of demand figures
- draw and interpret demand curves to show different price elasticity of demand
- explore the determinants of price elasticity of demand
- explain the relationship between price elasticity of demand and total spending on a product, and the revenue gained
- discuss the implications of price elasticity of demand for decision making by producers, consumers, producers and government

Introducing the topic

Would you expect a rise in the price of bread to have much impact on the demand for bread? Probably not and you are likely to think that the demand for a luxury watch will be more sensitive to price changes. Bread may be regarded to be a need, while a luxury watch is more of a want. Whether a product is a necessity or luxury is one influence on how responsive demand is to a change in price.

**KEY TERM****Price elasticity of demand (PED):**

a measure of the responsiveness of the quantity demanded to a change in price.

11.1 Definition of price elasticity of demand

Price elasticity of demand (PED) measures the extent to which the quantity demanded changes when the price of the product changes. The formula used to calculate it is:

$$\text{PED} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

This is often abbreviated to:

$$\text{PED} = \frac{\% \Delta \text{QD}}{\% \Delta \text{P}}$$

11.2 Calculating PED

To work out elasticity of demand, it is necessary to first calculate the percentage change in quantity demanded and the percentage change in price. To do this, the change in quantity demanded is divided by the original demand and multiplied by 100. The same process is used to work out the percentage change in price. For example, the quantity demanded may rise from 200 to 240 as a result of price falling from \$10 to \$9. In this case, the percentage change in quantity demanded is:

$$\frac{\text{Change in demand}}{\text{Original quantity demanded}} \times 100 \text{ i.e. } \frac{40}{200} \times 100 = 20\%$$

The percentage change in price is:

$$\frac{\text{Change in price}}{\text{Original price}} \times 100 \text{ i.e. } \frac{-\$1}{\$10} \times 100 = -10\%$$

When these changes have been calculated, the percentage change in quantity demanded is divided by the percentage in price to give the PED. In this case, this is 20%/−10%. Remember that a division involving different signs gives a minus figure. Hence the PED is −2.

INDIVIDUAL ACTIVITY 1

In each case, calculate the PED:

- A fall in price from \$4 to \$3 causes the demand to extend from 60 to 105.
- Demand falls from 200 to 180 when price rises from \$10 to \$12.
- A reduction in price from \$12 to \$6 results in an extension in demand from 100 to 140.

11.3 Interpretation of PED

The PED figure provides two pieces of information. One is given by the **sign**. In the vast majority of cases, it is a minus. This tells us that there is an inverse relationship between the quantity demanded and price – a rise in price will cause a contraction in demand and a fall in price will cause an extension in demand.

The other piece of information is provided by the **size** of the figure. This indicates the extent by which demand will extend or contract when price changes. A figure of -2 , for example, indicates that a 1% change in price will cause a 2% change in quantity demanded.

INDIVIDUAL ACTIVITY 2

Demand for a luxury product falls from 500 to 200 when price rises from \$2000 to \$2200.

- Calculate the PED.
- In this case, by what percentage would demand contract, if the price rose by 1%?

11.4 Elastic and inelastic demand

Most products have either elastic or inelastic demand. **Elastic demand** occurs when a change in price results in a greater percentage change in quantity demanded, giving a PED figure (ignoring the sign) of more than 1, but less than infinity.

When demand is elastic, price and total revenue move in opposite directions. For example, ten products may initially be demanded at a price of \$5 each, giving a total revenue of \$50. If the price falls to \$4 each and demand rises to 20 (giving a PED of -5 , i.e. $100\%/ -20\%$), then the total revenue would increase to \$80. In the case of elastic demand, a firm can raise total revenue by lowering the price, but it must be aware that if it raises the price, its total revenue will fall. Elastic demand is usually illustrated by a shallow demand curve. Figure 11.1 shows that the percentage change in quantity demanded is greater than the percentage change in price.

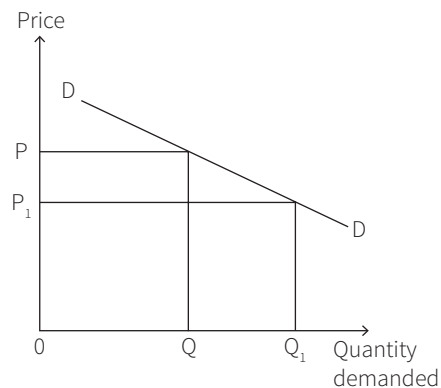


Fig. 11.1: Elastic demand

Inelastic demand is when the quantity demanded changes by a smaller change than the price and the PED is less than 1, but greater than zero. In this case, price and total revenue move in the same direction. If the price is raised, the quantity demanded will fall, but by a smaller percentage than the change in price and hence more revenue will be earned. If the price is lowered, more products will be demanded, but not enough to prevent the total revenue from falling. In this case, if a firm wants to raise revenue, it should raise its price.



KEY TERMS

Elastic demand:

when the quantity demanded changes by a greater percentage than the change in price.

Inelastic demand:

when the quantity demanded changes by a smaller percentage than the change in price.



LINK

Chapter 38.4 The consequences of a change in the exchange rate

Inelastic demand is usually represented by a relatively steep demand curve, as shown in Figure 11.2.

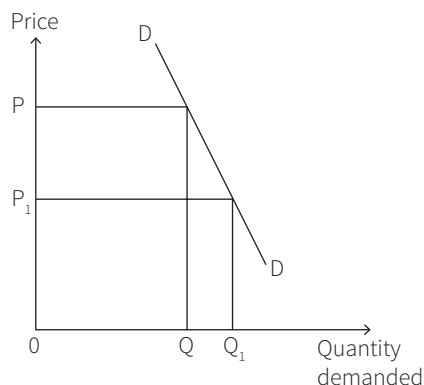


Fig. 11.2: Inelastic demand



TIP

In defining elastic demand, it is not accurate to state that it is when a change in price causes a large change in quantity demanded. This is because the change in price may have been larger than the change in quantity demanded. Elastic demand is when a change in price causes a greater *percentage* change in quantity demanded. The same care has to be taken with inelastic demand. In this case, it is smaller percentage change in quantity demanded.



TIP

As shown in this chapter, elastic demand is often shown by a shallow demand curve and inelastic demand by a steep demand curve. To be certain that this is the case, however, it would be necessary to know how the axes are measured.

11.5 Determinants of price elasticity of demand

The main factor that determines whether demand is elastic or inelastic is the availability of substitutes of a similar quality and price. If a product does have a close substitute, it is likely to have elastic demand. In this case, a rise in price will be likely to cause a significant fall in the quantity demanded as consumers will switch to the substitute. However, if there is no close substitute available, demand will probably be inelastic. The quantity demanded will not fall much in response to a rise in price because there is no suitable alternative to switch over to.

The other influencing factors are all linked to the availability of substitutes. These factors include the proportion of income spent on the product, whether the product is a necessity or a luxury, whether the product is addictive or not, whether its purchase can be postponed, how the market is defined and the time period under consideration.

If the purchase of a product takes up a small proportion of people's income, demand is likely to be inelastic. For example, if the price of salt rose by 20%, the quantity demanded is likely to alter by a much smaller percentage. This is because a 20% rise in price is likely to involve consumers paying only a little more. In fact, some may not even notice the rise in price. In contrast, products which take up a large proportion of people's income to be bought, tend to have elastic demand. In this case, a 20% rise in price would involve consumers paying

significantly more. Such a rise in the price of a new car would be likely to cause a greater percentage contraction in demand.

Besides taking up a large percentage of income, a new car may also be regarded as a luxury. Luxury products usually have elastic demand. They do not have to be purchased, so a rise in price may result in a greater percentage fall in quantity demanded. If their prices fall, however, the quantity demanded is likely to rise by a greater percentage as more of the population can afford to buy them now. In contrast to luxuries, necessities such as soaps tend to have inelastic demand. People cannot cut back significantly on their use, even if their prices rise.

People also find it difficult to cut back on their purchases of products which are addictive, such as cigarettes and coffee. This means that such products have inelastic demand. If the purchase of a product can be delayed, demand tends to be elastic. A rise in price will result in a greater percentage fall in the quantity demanded as people will postpone the purchase of the product, hoping that its price will drop back in the future. If it does, the quantity demanded will rise by a greater percentage, with the build-up of sales.

The more narrowly defined a product is, the more elastic its demand is. Demand for one brand of tea is more elastic than demand for tea in general and even more elastic than demand for hot drinks in general. This is because the narrower the definition, the more substitutes a product is likely to have. Demand also becomes more elastic, if the time period under consideration is long. This is because it gives consumers more time to switch their purchases. In the short term if the price of a product rises, customers may not have enough time to find alternatives and if it falls, new customers will not have sufficient time to notice the change in price and switch away from rival products.

GROUP ACTIVITY 1

Decide in each case whether demand is likely to be elastic or inelastic:

- a** cut flowers
- b** gold jewellery
- c** coffee
- d** train travel by commuters
- e** food.

Differences in PED

PED for the same products can differ with time. What were once seen as luxuries can turn into necessities as people become richer. This changes their demand from elastic to inelastic. In Europe and the USA, almost every teenager now has a mobile (cell) phone and a rise in price would not discourage many from buying the latest model. A wide range of other products, including TVs and cars, are seen as being essential requirements to sustain a modern lifestyle.

Due to different tastes, different income levels and different cultures, PED can also be found to vary between countries. Demand for rice is more inelastic in Bangladesh than it is in the USA, where it competes with a greater range of food products. In India, where cricket has a devoted following, demand for tickets to international cricket matches is more inelastic than it is in the Netherlands, where it is a relatively new sport.

Other degrees of elasticity

The most common degrees of elasticity are elastic and inelastic. Very occasionally other types are found.

- i Perfectly elastic demand** occurs when a change in price causes a complete change in the quantity demanded. A firm can sell any quantity at the going market price, for example Q or Q_1 , but nothing above this price. For example, if one of the many wheat farmers raises his price, he may lose all of his sales with buyers switching to rival farmers. In this case, PED is infinity and is represented by a horizontal straight line as shown in Figure 11.3.

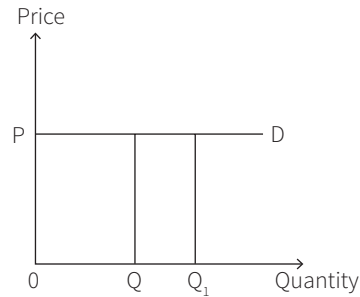


Fig. 11.3: Perfectly elastic demand

- ii Perfectly inelastic demand** is when the quantity demanded does not change when price changes. Consumers buy the same quantity despite the alteration in price and PED is zero. Figure 11.4 shows demand remaining unchanged at Q as price rises from P to P_1 .

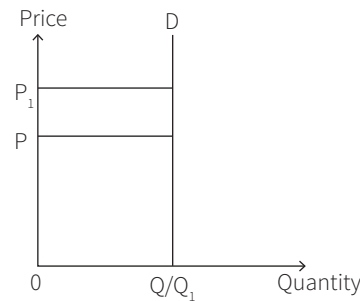


Fig. 11.4: Perfectly inelastic demand

- iii Unit elasticity of demand** is found when a percentage change in price results in an equal percentage change in quantity demanded, giving a PED of one (unity). When PED is unity, the area under the demand curve stays the same as price changes, showing that total revenue and total spending remain unchanged as price changes. Figure 11.5 illustrates this.

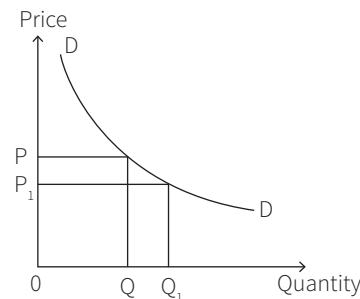


Fig. 11.5: Unit elasticity of demand



KEY TERMS

Perfectly elastic demand: when a change in price causes a complete change in the quantity demanded.

Perfectly inelastic demand: when a change in price has no effect on the quantity demanded.

Unit elasticity of demand: when a change in price causes an equal change in the quantity demanded, leaving total revenue unchanged.

PED and the total spending on a product and revenue gained

As mentioned above, when demand is inelastic, a change in price will cause total revenue (and total spending) to move in the same direction. So a rise in price will cause total revenue to rise. When demand is perfectly inelastic, a change in price will not only cause revenue to move in the same direction, but also by the same percentage. For instance, the price may originally have been \$10 and 50 units may have been sold. Total revenue would have been \$500. If the price rose by 20% to \$12, the quantity demanded would stay the same at 50 and so revenue would also rise by 20% to \$600.

When demand is elastic, a change in price results in total revenue moving in the opposite direction. In this case, a rise in the price will cause total revenue to fall. In the case of perfectly elastic demand, a rise in price will cause demand to fall to zero.

In the case of unit elasticity of demand, price and the quantity demanded change by the same percentage and so total revenue remains unchanged. It is interesting to note that it is the quantity demanded which remains unchanged when price changes in the case of perfectly inelastic demand, whereas it is total revenue which does not change in the case of unit price elasticity of demand.



TIP

Remember that inelastic demand does not mean that demand does not change with price changes. It does alter, but by a smaller percentage than price. It is only when demand is perfectly inelastic that demand does not change with price.

11.6 Changes in PED

PED becomes more elastic as the price of a product rises. Consumers become more sensitive to price changes, the higher the price of the product. This is because, for example, a 10% rise in price when price was initially \$10 000 would involve consumers having to spend considerably more (\$1000) to buy the product. If a supplier was foolish enough to keep raising the price, a point would come when the product would be priced out of the market. At this point, demand would be perfectly elastic.

As the price falls, demand becomes more inelastic. For example, a 10% fall in price when the price was initially \$1 is not very significant and is unlikely to result in much extra demand. If the price falls to zero, there will be a limit to the amount people want to consume. At this point, demand is perfectly inelastic. Figure 11.6 shows how PED varies over a straight line demand curve. At the mid-point there is unit PED, with the percentage change in quantity demanded matching the percentage change in price.

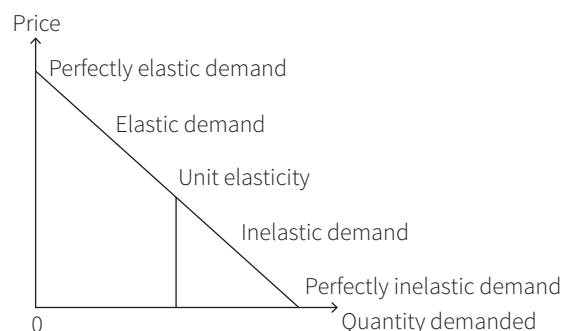


Fig. 11.6: Variation of PED over a demand curve

PED also changes when there is a shift in the demand curve. The more consumers want and are able to buy a product, the less sensitive they are to price changes. So a shift in the demand curve to the right reduces PED at any given price. In Figure 11.7, PED is initially -5 ($50\%/ -10\%$) when price falls from $\$10$ to $\$9$. Then, when demand increases to D_1D_1 , PED falls to -2.5 ($25\%/ -10\%$).

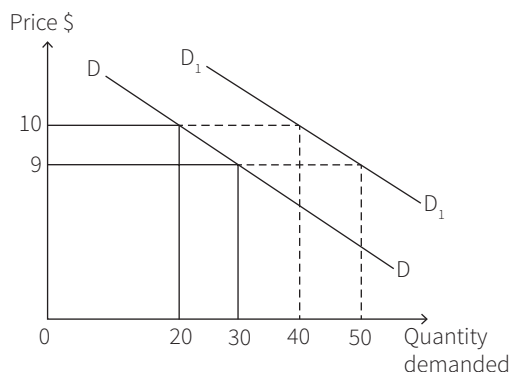


Fig. 11.7: The effect of an increase in demand on PED

When demand decreases, consumers become more sensitive to price changes and demand becomes more elastic. Figure 11.8 shows PED rising from -5 ($50\%/ -10\%$) to -10 ($100\%/ -10\%$).



Fig. 11.8: The effect of a decrease in demand on PED

INDIVIDUAL ACTIVITY 3

In each of the following examples, first calculate the PED and then decide if the PED is elastic, inelastic, perfectly elastic, perfectly inelastic or unity.

- The price of a product falls from $\$8$ to $\$6$, causing demand to extend from 1250 to 12500.
- Demand contracts from 500 to 400 when price rises from $\$40$ to $\$42$.
- Demand extends from 2000 to 2800 when price falls from $\$20$ to $\$18$.
- Price rises from $\$15$ to $\$30$, but demand stays unchanged at 5000.
- An increase in price from $\$80$ to $\$90$ and as a consequence, a decrease in quantity demanded from 400 to 300.

11.7 Implications of PED for decision making

A change in a product's price is often the main influence on its demand. This is one of the reasons why economists study the effect of a price change in some depth.

Consumers are more likely to benefit from lower prices and higher quality when demand is elastic. This is because producers would be reluctant to raise price as demand would contract by a greater percentage and revenue would fall. The quality may also be high if the elastic demand is the result of the existence of close substitutes. In this case, a producer may have to provide a good quality product to remain competitive.

It is widely recognised that a fall in price will result in an extension in demand. A producer, however, in considering whether to cut the price of a product will need to know the extent of any rise in demand. If demand is going to rise by only a relatively small amount, it may not pay to reduce the price. For instance, the producer's firm may be currently selling 100 units a day at \$4 each and hence earning a total revenue of \$400. If it is expected that by lowering its price to \$3, demand will only rise to 120, the firm would experience a fall in revenue of \$40.

A producer may try to make the firm's product more distinctive. This would discourage consumers switching to other firms' products as they would not be seen as such close substitutes. It would make demand for the firm's product more price inelastic and would give the producer more power to raise price.

While taking a decision on its subsidy and taxation policies, a government also needs to know the responsiveness of the quantity demanded to a change in price. It may, for instance, be seeking to discourage consumption of a certain product. In this case, it is more likely to be successful if demand is elastic. If, however, demand for a product does not alter much with a change in price, placing a tax on such a product will not be a very effective way of achieving this aim.

Summary

You should know:

- It is important for economists, firms and the government to know the extent to which demand changes as a result of a change in price.
- Price elasticity of demand is a measure of the extent to which the quantity demanded changes as a result of a change in price.
- The most common types of PED are elastic and inelastic. Elastic demand is when the quantity demanded changes by a greater percentage than the change in price, whereas inelastic demand is when the quantity demanded changes by a smaller percentage than the change in price.
- The main factor that determines whether demand is elastic or inelastic is the availability of close substitutes of the product.
- Demand for a product is likely to be inelastic if it has no close substitutes, takes up a small proportion of income to be bought, is a necessity, addictive or its purchase cannot be postponed.
- PED can vary with time and between countries.
- The categories of PED are elastic, inelastic, perfectly elastic, perfectly inelastic and unity.
- As price rises, demand becomes more elastic.
- An increase in demand will make the demand more inelastic.

Multiple choice questions

- 1** What is price elasticity of demand?
 - A** A measure of the extent to which price changes when the quantity demanded changes
 - B** A measure of the extent to which the quantity demanded changes when price changes
 - C** A measure of the extent to which total revenue changes when price changes
 - D** A measure of the extent to which price changes when total revenue changes

- 2** Demand for a product is inelastic. What effect will a fall in price have?
 - A** Demand will not change
 - B** Demand will change by a greater percentage
 - C** Total revenue will fall
 - D** Total revenue will rise

- 3** What characteristic is likely to make the demand for a product elastic?
 - A** It is a necessity
 - B** It is habit-forming
 - C** It is relatively cheap
 - D** It has close substitutes

- 4** The price of a product rises from \$60 to \$90. This causes demand to contract from 800 to 600. What type of price elasticity of demand does this product have over this price range?
 - A** Perfectly inelastic
 - B** Inelastic
 - C** Unity
 - D** Elastic

Four-part question

- a** Define *price elasticity of demand*. **(2)**
- b** Explain the difference between inelastic demand and perfectly inelastic demand. **(4)**
- c** Analyse how the price elasticity of demand of a product influences the relationship between changes in price and total revenue. **(6)**
- d** Discuss whether or not demand for laser eye surgery will become more inelastic over time. **(8)**



Chapter 12

Price elasticity of supply

83

Learning objectives

By the end of this chapter you will be able to:

- define price elasticity of supply
- calculate price elasticity of supply
- interpret price elasticity of supply figures
- draw and interpret supply curves to show different price elasticity of supply
- explore the determinants of price elasticity of supply
- discuss the implications of price elasticity of supply for decision making by producers, consumers, producers and government

Introducing the topic

Why does the supply of container ships change less quickly than the supply of pens when their price changes? Why would an increase in demand and a rise in price have no impact on the number of seats offered for sale at a football match between Barcelona and Real Madrid? How might advances in technology, such as the development of 3D printing, affect the supply of car parts? All of these questions relate to the extent to which supply adjusts to changes in price and so to the changes in demand which have caused the alterations in price.



KEY TERM

Price elasticity of supply (PES):

a measure of the responsiveness of the quantity supplied to a change in price.

12.1 Definition of price elasticity of supply

Economists make use of the concept of **price elasticity of supply (PES)** to study how responsive supply is to a change in price. PES measures the extent to which the quantity supplied changes when the price of a product changes. The formula is:

$$\text{PES} = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}}$$

The abbreviated form of this is:

$$\text{PES} = \frac{\% \Delta \text{QS}}{\% \Delta \text{P}}$$

12.2 Calculating PES

PES is calculated in the same way as price elasticity of demand (PED). This time, however, it is the percentage change in quantity supplied which has to be calculated. Again, it is found by dividing the change in quantity supplied by the original quantity supplied, and multiplying by 100. Similarly, the percentage change in price is calculated by dividing the change in price by the original price and multiplying by 100. For example, the quantity supplied may rise from 100 to 130 as a result of price increasing from \$10 to \$12. In this instance, the percentage change in quantity supplied is:

$$\frac{\text{Change in quantity supplied}}{\text{Original quantity supplied}} \times 100 \text{ i.e. } \frac{30}{100} \times 100 = 30\%$$

And the percentage change in price is:

$$\frac{\text{Change in price}}{\text{Original price}} \times 100 \text{ i.e. } \frac{\$2}{\$10} \times 100 = 20\%$$

This means that the PES is:

$$\frac{30\%}{20\%} = 1.5$$

INDIVIDUAL ACTIVITY 1

In each case, calculate the PES:

- A fall in price from \$5 to \$4 causes supply to contract from 10 000 to 4000.
- Supply extends from 200 to 210 when price rises from \$10 to \$14.
- An increase in price from \$4000 to \$4400 results in an extension of supply from 80 to 90.

**TIP**

In the case of both PED and PES, do not forget to divide the change by the **original** figure and multiply by 100, while calculating percentages.

12.3 Interpretation of PES

As the quantity supplied and price are directly related, PES is a positive figure. The figure indicates the degree of responsiveness of the quantity supplied to a change in price. The higher the figure, the more responsive supply is. A PES of 2.6, for example, means that a 1% rise in price will cause a 2.6% extension in supply.

INDIVIDUAL ACTIVITY 2

Supply of a product rises from 5000 to 7000 due to a rise in price from \$4 to \$5.

- Calculate the PES.
- In this case, by what percentage would supply extend if price rose by 1%?

12.4 Elastic and inelastic supply

Supply is usually found to be elastic or inelastic. **Elastic supply** is when the percentage change in quantity supplied is greater than the percentage change in price. In this case, PES is greater than 1, but less than infinity. The higher the figure, the more elastic supply is. Elastic supply is usually illustrated by a shallow curve, as shown in Figure 12.1. A straight-line supply curve illustrating elastic supply would touch the vertical axis.

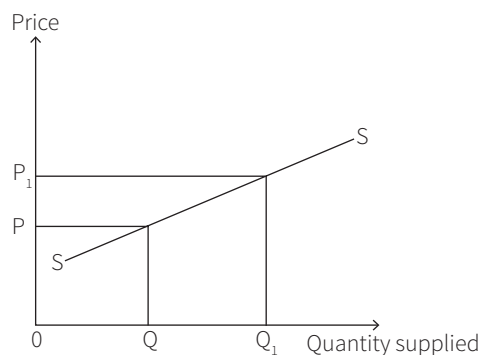


Fig. 12.1: Elastic supply

In contrast, **inelastic supply** is when the percentage change in quantity supplied is less than the percentage change in price and so PES is less than 1, but greater than zero. A PES of 0.2 would mean that supply is more inelastic than that for a PES of 0.7. Figure 12.2 illustrates inelastic supply. The supply curve is steep, showing that the quantity supplied changes by less than the price in percentage terms. A straight-line supply curve illustrating inelastic supply would touch the horizontal axis.

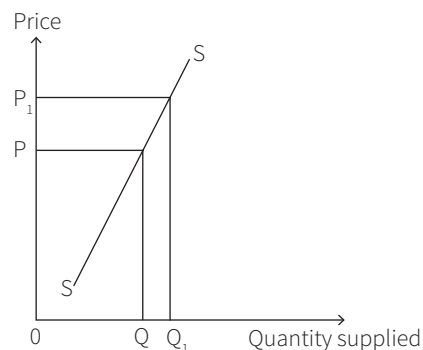


Fig. 12.2: Inelastic supply



KEY TERMS

Elastic supply: when the quantity supplied changes by a greater percentage than the change in price.

Inelastic supply: when the quantity supplied changes by a smaller percentage than the change in price.

12.5 Determinants of price elasticity of supply

The three main factors which determine the PES of a product are:

- i the time taken to produce it
- ii the cost of altering its supply and
- iii the feasibility of storing it.

If the product can be made quickly, the cost of altering its supply is low. Also, if it can be stored, the quantity supplied can be adjusted relatively easily in the event of a price change. In such a case, a rise in price will result in a greater percentage change in supply. This is because firms can alter the amount they offer for sale by making more, using up spare capacity, shifting resources and employing more resources, and by drawing on stocks. If the price falls, firms will cut back on production, remove some products from the market and place them in storage.

In contrast, if it takes a long time to make a product, it is expensive to change production (perhaps because firms are working at full capacity). Again, if the product cannot be stored, it will be more difficult to adjust its supply in response to a change in price. As a result, supply will be inelastic. Supply of many agricultural products is inelastic. This is because it takes time for crops to grow and animals to mature, and many agricultural products cannot be stored. If the price of apples falls, for example, it is unlikely that the quantity offered for sale will decline significantly. This is because once picked, apples have a relatively short shelf-life. If the price of apples rises, again farmers cannot alter the quantity supplied substantially. It can take years before new apple trees start producing a significant crop. However, the supply of apples in one area or one country may be relatively elastic if apples can be moved from one place to another in response to a difference in demand and hence price.

GROUP ACTIVITY 1

Decide, in each case, whether supply is likely to be elastic or inelastic:

- a rubber bands
- b t-shirts
- c aircraft
- d pencils
- e lamb.

Other degrees of PES

In addition to elastic and inelastic supply, three other degrees of elasticity may be found, although not nearly as frequently as elastic and inelastic supply.

- i **Perfectly inelastic supply** is when the quantity supplied does not alter with price changes and PES is zero. If, for example, more people are demanding to see a film at a particular cinema, ticket prices may rise. However, it is unlikely to increase the seating capacity in the short run. In the longer run, if demand remains high, the owners of the cinema are likely to increase its size.

Figure 12.3 shows perfectly inelastic supply. A rise in price from P to P_1 leaves the quantity supplied unchanged at Q .



KEY TERM

Perfectly inelastic supply: when a change in price has no effect on the quantity supplied.



Fig. 12.3: Perfectly inelastic supply

- ii Perfectly elastic supply** is when a change in price will cause an infinite change in supply, giving a PES of infinity. PES may come close to infinity in very competitive markets. In this case, firms would supply whatever quantity people want to buy at the given price. An increase in demand would not cause a change in price. If demand and price were to fall, supply would fall to zero. Figure 12.4 illustrates perfectly elastic supply.



Fig. 12.4: Perfectly elastic supply

- iii Unit PES** occurs when a given percentage change in price causes an equal percentage change in supply. Unit PES is illustrated by any straight line that goes through the origin (the point where the vertical and horizontal axes intersect) as shown in Figure 12.5.

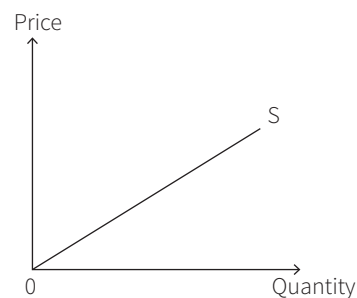


Fig. 12.5: Unit price elasticity of supply

**KEY TERMS**

Perfectly elastic supply: when a change in price causes a complete change in quantity supplied.

Unit PES: when a change in price causes an equal percentage change in the quantity supplied.

12.6 Changes in PES

As already suggested, PES can vary with time. The supply for most of the products becomes more elastic as the time period increases. This is because producers have more time to adjust their supply. This may involve switching production from/to other products, and building new factories and offices or selling off existing plants.

Advances in technology, by reducing the production period and lowering costs of production, make the supply more elastic. In recent years, it has become much easier and cheaper to produce magazines. As a result, not only has the number of magazines on offer increased, but also the speed with which new titles appear and titles which are declining in popularity, disappear.

12.7 Implications of PES for decision making

Consumers benefit from supply being elastic. This is because it means that supply is responsive to consumer demand. If demand increases, price will rise. If supply is elastic, the quantity supplied will rise by a greater percentage than the change in price. Sales may rise significantly without there being a large increase in price as shown in Figure 12.6.

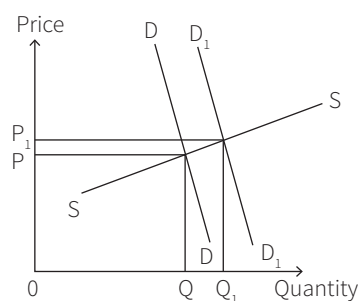


Fig. 12.6: The responsiveness of supply in a market with elastic supply

Producers want their supply to be as elastic as possible. Their profits will be higher, the quicker and more fully they can adjust their supply in response to changes in demand and hence price.

If governments want to encourage the output and consumption of a product they are likely to be more successful giving a subsidy to producers if supply is elastic. Governments use a variety of policy measures to promote flexibility in production, for example a number of governments have changed the law making it easier for firms to hire and fire labour.

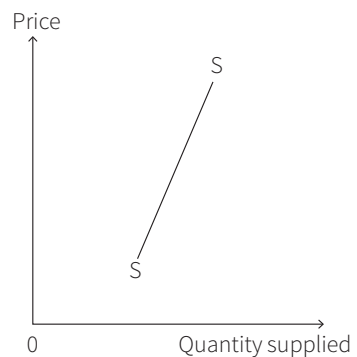
Summary

You should know:

- PES is a measure of the responsiveness of the quantity supplied to a change in price.
- The most common types of PES are elastic and inelastic supply. Elastic supply is when the quantity supplied changes by a greater percentage than price whereas inelastic supply is when the quantity supplied changes by a smaller percentage than price.
- The main factors that determine whether supply is elastic or inelastic are whether production can be changed cheaply and quickly and whether the product can be stored.
- Supply of a product is likely to be inelastic if it takes a long time to produce it, if it is expensive to alter production and if it cannot be stored.
- Supply tends to become more elastic with time.
- The categories of PES are elastic, inelastic, perfectly elastic, perfectly inelastic and unity.

Multiple choice questions

- 1 What is the formula for PES?
- A** $\frac{\text{Change in quantity supplied}}{\text{Change in price}}$
- B** $\frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}}$
- C** $\frac{\text{Change in quantity supplied}}{\text{Change in quantity demanded}}$
- D** $\frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in quantity demanded}}$
- 2 What does a PES of 0.8 indicate?
- A** Supply is elastic **B** Supply is perfectly elastic
- C** Supply is perfectly inelastic **D** Supply is inelastic
- 3 In what circumstance would supply of a product be elastic?
- A** It is costly to produce
- B** It takes time to produce
- C** It can be stored
- D** It uses resources which are in short supply
- 4 Which diagram illustrates elastic supply?

**A****B****C****D**

Four-part question

- a** Define *perfectly inelastic supply*. **(2)**
- b** Explain how an economist can determine whether the supply of a product is elastic or inelastic. **(4)**
- c** Analyse why the supply of agricultural products tends to be more inelastic than the supply of manufactured products. **(6)**
- d** Discuss whether or not producers would want the demand and the supply of their product to be more price elastic. **(8)**



Chapter 13

Market economic system

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Learning objectives

By the end of this chapter you will be able to:

- define a market economic system
- explain the difference between private and public sectors
- discuss the advantages and disadvantages of the market economic system
- recognise how efficiency can be assessed
- describe the role of market forces in different countries

Introducing the topic

A number of countries are increasing the role of market forces and reducing the role of the government in their economies. For example, Cuba is increasing the role of market forces in its economy. The country's government has legalised the private sale of cars and homes, and removed some price controls and regulations. Why is it making these changes?

13.1 The market economic system

As noted in Chapter 6, resources move automatically as a result of changes in price. In turn, price changes are determined by the interaction of demand and supply. The use of resources is changing all the time in response to changes in consumer demand and the costs of production. Resources move towards those products whose demand is rising and away from those which are becoming less popular. Figure 13.1 shows an increase in demand for air travel and a decrease in demand for sea travel.

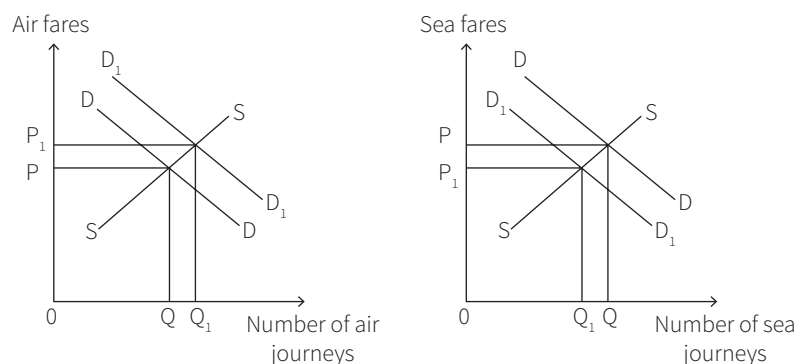


Fig. 13.1: (a) An increase in demand (b) Changes in the markets for air travel and sea travel

The changes in demand cause prices to change. These alterations in price encourage firms to switch their resources from sea travel to air travel.

INDIVIDUAL ACTIVITY 1

The price of onions rose significantly in India in 2015. Traders blamed the hike in price on a poor crop after unusually light monsoon rains. In the same year in India, the price of tomatoes rose, largely due to higher demand caused by an increase in incomes.

- Draw a diagram, in each case, to show why the price of onions and the price of tomatoes rose in India in 2015.
- Explain how, in each case, the markets responded to changing circumstances.

The importance of competition and incentives

The advantages of a market economic system rely, in large part, on competitive pressures. One of the benefits claimed for a market system is *choice*. If there is a large number of firms producing a product, consumers will have a choice of producers. This should increase the prospects of consumers deciding what is made, with producers competing with each other to meet their demand. In such a case, consumers are said to be *sovereign*.

Competition, whether actual or potential, should also result in low prices. Actual competition arises when there are rival firms in the industry. Potential competition occurs when it is easy for firms to enter or leave the industry. If it is possible for consumers to switch from high price firms to low price firms, or for other firms to start producing the products if prices and profits are high, there will be pressure on firms to keep their prices low in order to stay in business. To do this, they will seek to keep their costs low. The more successful a firm is in keeping its costs low and the more it targets the desires of consumers, the more efficient it is said to be.

The market economic system encourages efficiency by rewarding those entrepreneurs and workers who respond to market signals and punishes those who do not. This is sometimes

referred to as the market system providing both a *carrot* (a reward) and a *stick* (punishment) to promote efficiency.

Entrepreneurs, who are quick to pick up on changes in consumer demand, are likely to earn high profits. These provide them with the incentive and ability to innovate and expand. In contrast, those entrepreneurs who are unresponsive to changing consumer demand are likely to suffer losses.

In labour markets, workers increase their chance of earning high wages by developing those skills which are in high demand, working hard, accepting more responsibility and by being willing to change their nature and place of work. Those who are not prepared (or able) to work, who lack the appropriate skills and who are geographically, or occupationally, immobile may receive no or low incomes.

INDIVIDUAL ACTIVITY 2

In 2016, a shortage of up to 48 000 lorry drivers in the USA led some US companies to recruit truckers from India and a range of other countries. The companies attracted the drivers by offering them higher wages than they could earn at home. In fact, the wages were twelve times those paid in India.

- What market incentive is touched on in this passage?
- Explain (using a diagram) what is likely to have happened to the wages paid to lorry drivers in India, in 2016.

Private and public sectors

The **private sector** covers business organisations which are owned by shareholders or individuals. These organisations respond to changes in market forces and are profit motivated. The public sector is controlled by the government. It covers government run services and **state-owned enterprises (SOEs)**, also called nationalised industries.

The government's priority may be to promote the welfare of the country's population.



LINK

Chapter 15.3
Government measures to address market failure (Nationalisation and privatisation)



TIP

Be careful with the word 'public'. Sometimes, it refers to the government as in 'public expenditure' and 'public sector'. It can, however, also refer to people as a whole as in the 'general public' or open to all people, as in a 'public limited company'.

GROUP ACTIVITY 1

India has a long tradition of government planning, but the degree of government intervention in the economy has been reduced in the last two decades. **Privatisation** started in 1991, with the creation and sale of a small number of shares in some SOEs. This process speeded up in the first decade of the 2000s. It slowed down in the second decade, but there was still some debate about whether a number of state-run enterprises, including the national airline, Air India, should be transferred from the private to the public sector.

Explain one reason for better performance of a firm when:

- it is in the private sector
- it is in the public sector.



KEY TERMS

Public sector: the part of the economy controlled by the government.

State-owned enterprises (SOEs): organisations owned by the government which sell products.

Privatisation: the sale of public sector assets to the private sector.

13.2 The advantages of a market economic system

A market economic system has the potential to provide some significant, connected advantages.



KEY TERM

Price mechanism: the system by which the market forces of demand and supply determine prices.

- A market economic system should be very responsive to changes in consumer demand. In fact, in this economic system, consumers are said to be *sovereign*. This means that it is consumers who have the power to determine what is produced.
- Resources should change automatically and quickly to reflect changes in consumer demand. This is for three reasons. One is that the **price mechanism** in a market economic system provides information on which products are increasing in demand and which ones are falling in demand. The second is that the market economic system provides an incentive for resources to move in response to changes in demand. For example, if demand for books is increasing, whilst the demand for cinema tickets is falling, profits and wages will be rising in the publishing industry, while they will be falling in the film industry. These changes will encourage some firms to switch production and some workers to change their jobs. The third reason is that the market economic system punishes those firms, workers and owners of capital and land who do not respond to changing demand. For example, if a firm continues to produce a product which is falling in demand, it will make a loss.
- There is choice. Consumers can choose which products to buy and which firms to buy from. Firms can also decide what they want to produce and workers can choose who to work for.
- Costs and prices may be low. The profit motive and competition promote efficiency. Those firms which produce at the lowest costs, and so which are able to charge the lowest prices, are likely to sell more and earn more profit. In contrast, those firms which produce products of the same quality at a higher price are likely to go out of business. Indeed, by rewarding efficiency, and punishing inefficiency, the market economic system should encourage the production of the goods and services that consumers want and are prepared to pay for, in the right quantities and at the lowest possible cost per unit.
- Quality may be high. Market forces can promote the improvement of methods of production and a rise in the quality of products made. It does this by putting competitive pressure on firms, and by providing them with the profit incentive to try to gain more sales by making their products more attractive to consumers.



TIP

Efficiency is a key economic concept. In assessing the performance of an economy or firm, consider whether it is efficient or not.

13.3 The disadvantages of a market economic system

There is a risk that the market forces of demand and supply may not work well. In fact, **market failure** may occur, with market forces failing to ensure the maximum benefit for society. There are a number of reasons for this.

- Consumers and private sector firms may only take into account the costs and benefits to themselves, and not the costs and benefits of their decisions to others. For example,



KEY TERM

Market failure: market forces resulting in an inefficient allocation of resources.

some people may smoke, even if it annoys and endangers the health of those around them. Another example is that to keep their costs and prices down, firms may dump waste material in local rivers rather than process it.

- Competition between firms should ensure efficiency but, in practice, there may be little competition. A market may become dominated by one or a few firms. These firms have considerable market power leading to limited or no choice for consumers. They can raise the prices of their products and produce poor quality products, as people have no choice but to buy from them.
- Even when there is competition and firms want to respond to desires of consumers, they may not be able to do this. This may be because they cannot attract more workers as workers lack the right skills or are geographically immobile.
- Firms will not make products unless they think they can charge for them. There are some products, such as defence, which most people may want, but know that if they are provided for some, they will have to be provided for all. In such cases, people can act as **free riders**. They can benefit from the product even if they do not pay for it. When it is not possible to exclude non-payers, private sector firms do not have the financial incentive to produce the product.
- Advertising can distort consumer choice. It can persuade people to buy products they would not otherwise have wanted or encourage them to buy larger quantities. Consumers and producers may also lack information and hence may make inefficient choices.
- As well as market forces sometimes failing to achieve efficiency, they can also result in what may be regarded to be inequitable (unfair) outcomes. In a market economic system, some consumers will have a lack of income. There can be a very uneven distribution of income, with some people being very rich, and others being very poor. The sick and disabled may find it difficult to earn incomes. The old may not have made adequate financial provision for their retirement. Some workers may become unemployed and may find it difficult to find new jobs.
- Differences in income will increase over time. Those earning high incomes can afford to save and buy shares. Their savings and shares will earn them interest and dividends (a share of profits). In contrast, the poor cannot afford to save. The children of the rich will be more likely than the children of the poor, to earn high incomes. This is because their parents are able to spend more on their education, provide better equipment such as computers at home for them and thus they have high hopes of what they can achieve.



KEY TERM

Free rider: someone who consumes a good or service without paying for it.



LINK

Chapter 15.3
Government measures to address market failure (Unfairness)

GROUP ACTIVITY 2

- 1 In the USA there is a considerable gap between the rich and the poor. Explain, how in a market economy, some people can be:
 - a rich
 - b poor.
- 2 Decide which of the following may be found in a market economy:
 - a most people working for SOEs
 - b controls on the prices of most products
 - c entrepreneurs earning high profits
 - d most land being privately owned.



KEY TERM

Allocative efficiency: when resources are allocated to produce the right products in the right quantities.

13.4 Allocative efficiency

Allocative efficiency occurs when resources are allocated in a way that maximises consumers' satisfaction. This means that firms produce the products that consumers demand, in the right quantities.

Figure 13.2a shows allocative efficiency being achieved with supply matching consumers' demand. In contrast, Figures 13.2b and 13.2c depict allocative inefficiency. In the case of 13.2b, there are too few resources being devoted to the product, which results in a *shortage*. In 13.2c, too many resources are allocated for producing the product and there is a *surplus*.

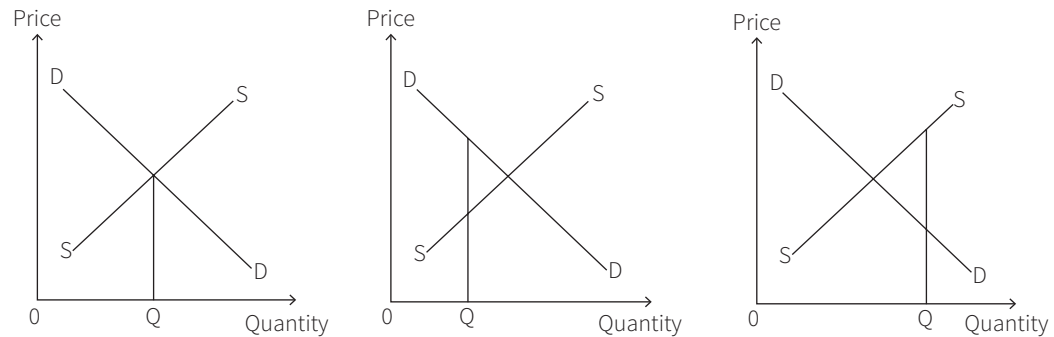


Figure 13.2: (a) Allocative efficiency

(b) Allocative inefficiency: under-production

(c) Allocative inefficiency: over-production

Market forces, by changing prices, should eliminate shortages and surpluses, and move markets towards allocative efficiency. Competition can play a key role in this process. This is because in a competitive market, a firm has an incentive to be allocatively efficient in the form of profit. It also has a threat of punishment in the form of the risk of going out of business if it is not allocatively efficient. If it is more responsive to the needs of consumers as compared to its rivals, it should gain a larger market share and earn high profits at least for a while. In contrast, if it does not produce commodities demanded by consumers, it will lose sales to rivals and may be driven out of the market.

INDIVIDUAL ACTIVITY 3

In recent years, UK consumers have become more health conscious. This has led to a fall in demand for crisps. A number of crisp producers have gone out of business.

- What effect is a fall in demand likely to have on price?
- What evidence is there above of the UK crisp market working efficiently?



KEY TERM

Productively efficient: when products are produced at the lowest possible cost and making full use of resources.

13.5 Productive efficiency

A firm is said to be **productively efficient** when it produces at the lowest possible cost per unit. Again, in a competitive market, a firm has both an incentive and a threat of punishment which should drive it towards being productively efficient. If it can drive its costs down to the lowest possible level, it may capture more sales and gain more profit. If, however, its costs per unit are higher than its rivals, it will lose market share and possibly all of its sales.

If a firm is productively efficient, it means that it is not wasting resources. If all producers in a country are productively efficient, the economy will be able to make full use of its resources and hence will be producing on its production possibility curve.

In Figure 13.3, production point A is productively efficient. With its given resources and technology, the economy is making as many products as possible. Point B is productively inefficient as some resources are either not being used or not being put to good use. For example, some workers may be unemployed, some workers may be lying idle, and some factory and office space may be empty. Also, there may be some workers involved in jobs to which they are not best suited and the capabilities of some capital goods may not be fully exploited.

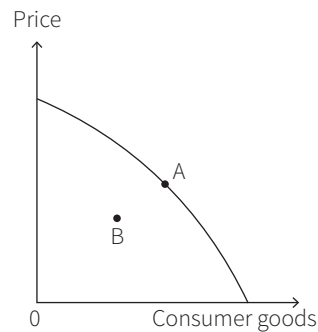


Fig. 13.3: Productive efficiency (A) and inefficiency (B)

13.6 Dynamic efficiency

Dynamic efficiency arises when resources are used efficiently, over a period of time. The profit incentive, and threat of going out of business, can encourage firms in a market system to spend money on research and development, and to innovate. Those firms that introduce new methods of production and bring out new, improved products, increase their chance of gaining high profits. Those that do not seek to keep up with new ideas to produce products and do not develop new products, run the risk of being driven out of the market.



KEY TERM

Dynamic efficiency: efficiency occurring over time as a result of investment and innovation.

GROUP ACTIVITY 3

Bata Pakistan Limited is a shoe producer and retailer. In recent years, it has expanded the range of products it produces. It now, for example, produces and sells handbags. The firm has faced increased competition which has reduced the growth of its profits.

- What evidence is there in the passage, that Bata may have been responding to consumer demand?
- How may consumers benefit from the high profits earned by a firm?

13.7 Examples of the different economic systems

To a certain extent, all economies are mixed economies. This is because there is some government intervention in all economies and some private sector production. The term *mixed economy*, or *mixed economic system*, however, is largely used to describe an economy which has private and public sectors of reasonably similar sizes. An example of such an economy is Sweden.

Whilst there is no economy without a public sector, the USA is often described as a market economy. The US government does carry out some functions, for example providing defence. The economy is, nevertheless, considered to be a market economy as most capital and land

is owned by individuals, and groups of individuals, and market forces play the key role in deciding the fundamental economic questions.

In North Korea, there is a very limited degree of small scale private sector agricultural production, but the economy is largely a planned economy. Most land and capital is owned by the government and it makes most of the decisions as to what to produce, how to produce it and who receives the output.

Changes in economic systems

In the 1980s and 1990s a number of economies, including the UK and New Zealand, moved from being largely mixed economies to being mainly market economies. The role of the government was reduced by removing a number of government regulations, selling off SOEs and parts of SOEs (privatisation) and lowering taxation.

There was an even more dramatic change in the economies of Eastern Europe, including Poland and Russia, in the 1990s. They moved from being planned economies towards market economies. These economies have experienced a significant increase in consumer choice and a rise in the quality of products produced. They have also, however, seen a rise in income inequality and poverty.

Recent years have witnessed an increasing role of market forces in a number of economies in Asia, including China and India, and in Africa, including South Africa. In contrast, there has been a rise in government intervention in a number of Latin American economies, including Bolivia and Venezuela.

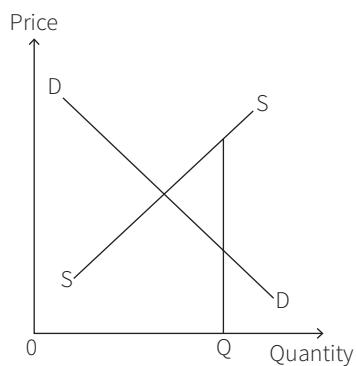
Summary

You should know:

- In a market system, changes in prices cause the shift in resources, from making products that are becoming less popular to making those that are becoming more popular.
- Competition and incentives, including higher profits and higher wages, play key roles in a market system.
- The main advantages claimed for a market economy are that output reflects consumer tastes, consumers have greater choice, competition promotes efficiency which lowers prices and increases quality, and financial incentives encourage hard work and enterprise.
- Among the disadvantages that may arise from operating a market economy are that output may not reflect the full costs and benefits, private sector firms may abuse their market power, resources may be immobile, products that consumers want, but cannot be charged for directly, cannot be produced, and there may be poverty.
- A market system rewards efficiency and punishes inefficiency.
- Allocative efficiency is achieved when the products desired by consumers are made in the right quantities.
- A firm that produces at the lowest possible average cost is productively efficient.
- Innovation can lead to dynamic efficiency.
- In a mixed economy, resources are allocated by means both of the price mechanism and government decision.
- Recent decades have seen a number of countries in Eastern Europe, Asia and Africa move towards a market economy.

Multiple choice questions

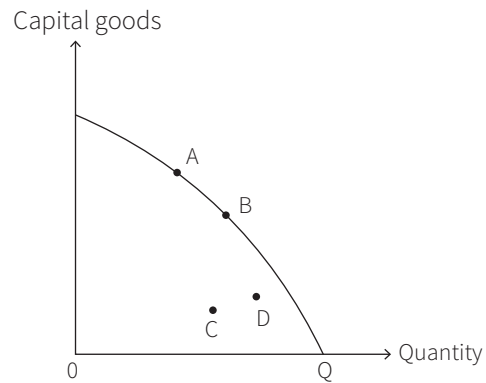
- What is an advantage of a market economy?
 - An absence of poverty
 - Consumer sovereignty
 - Firms having considerable market power
 - Full employment
- What encourages firms to produce what consumers demand?
 - The chance to earn a high profit
 - The chance to experience high unit costs of production
 - The desire to attract new firms into the industry
 - The desire to keep revenue as low as possible
- The diagram below shows the current position in a market. How will market forces move the situation towards allocative efficiency?



	Price	Demand	Supply
A	fall	fall	rise
B	fall	rise	fall
C	rise	fall	rise
D	rise	rise	fall

- In a market system, what encourages firms to keep their costs low?
 - Competition
 - Government regulations
 - Subsidies
 - Taxation

- 5 In the diagram below, which movement shows an increase in productive efficiency?



- A A to B
- B B to C
- C C to D
- D A to D

Four-part question

- a Identify **two** differences between the private sector and the public sector. (2)
- b Explain why consumers are said to be sovereign in a market economic system. (4)
- c Analyse the role of profit in a market economic system. (6)
- d Discuss whether or not prices will be low in a market economic system. (8)

Chapter 14

Market failure

Learning objectives

By the end of this chapter you will be able to:

- define market failure
- distinguish between social, private and external costs and benefits
- explain why external costs and external benefits cause market failure
- explain why information failure may cause market failure
- define merit and demerit goods
- explain why merit and demerit goods result in market failure
- define public goods and private goods
- distinguish between private and public goods
- explain why public goods result in market failure
- explain why monopoly power causes market failure
- explain why factor immobility results in market failure
- discuss the consequences of market failure

Introducing the topic

Do you think enough resources are devoted to education and healthcare in your country?

Do you think too many resources are devoted in the global economy to cigarette production?

Are you worried about the level of pollution in your country and the world? Why do market forces sometimes result in a misallocation of resources?

Chapter 13 described the benefits that arise when markets work well. In practice, however, there are a number of reasons why markets may fail to be efficient. These reasons were introduced in the previous chapter, and are now explained in more depth here. Some of the measures that governments can take to correct market failure are also outlined briefly.

14.1 The nature of market failure

Market failure occurs when market forces fail to produce the products that consumers demand, in the right quantities and at the lowest possible cost. In other words, market failure arises when markets are inefficient. There are a number of indicators of market failure including shortages, surpluses, high prices, poor quality and lack of innovation.

If left to market forces, some products may be under-produced, some over-produced and some may not be produced at all. Prices may be high due to lack of competitive pressure and difficulties in lowering the costs. A lack of investment and reduction in expenditure on research and development, can also slow down the improvement in products.



KEY TERMS

Third parties: those not directly involved in producing or consuming a product.

Social benefits: the total benefits to a society of an economic activity.

Social costs: the total costs to a society of an economic activity.

Private benefits: benefits received by those directly consuming or producing a product.

Private costs: costs borne by those directly consuming or producing a product.

External costs: costs imposed on those who are not involved in the consumption and production activities of others directly.

14.2 Failure to take into account all costs and benefits

The consumption and production of some products may affect people who are not involved in their consumption or production directly (those indirectly affected are often referred to as **third parties**). In such cases, the total benefits and total costs to society, called **social benefits** and **social costs**, are greater than the benefits and costs to the consumers and producers, known as **private benefits** and **private costs**. For example, the social costs of a firm producing chemicals will include costs not only to the firm, but also to people living nearby.

Costs to third parties are called **external costs**. Amongst the private costs to the firm will be the cost of buying raw materials, fuel and wages. The external costs imposed on those living nearby may include noise pollution, air pollution and water pollution. If the decision to produce chemicals is based only on the private costs to the firm, there will be over-production. Figure 14.1 shows that if only the private costs to the firm are taken into account, then the supply would be curve SS , whereas the full cost to society is higher at curve $SxSx$. The difference between the two is accounted for by the external costs. The allocatively efficient output is Qx , but the market output is Q .

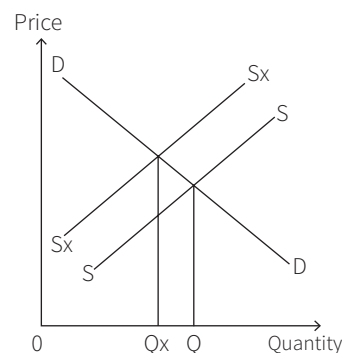


Fig. 14.1: Over-production

Demand, based just on the private benefits to those consuming the product, will lead to under-consumption and hence under-production if the total benefit to society is greater. For example, among the benefits students may receive by undertaking university degree courses are greater number of career choices, higher future earnings, life-long interests and life-long friends. The social benefits include not only these private benefits, but also the benefits to other people (**external benefits**) who will be able to enjoy a higher quantity and quality of output as graduates are usually highly productive workers. In Figure 14.2 the demand for degree courses, based on private benefits, is curve DD, whilst the total benefit to the economy is shown by curve DxDx. The number of degree courses that would be undertaken, if left to market forces, is Q, whereas the number which would cause the maximum benefit to the society is Qx.

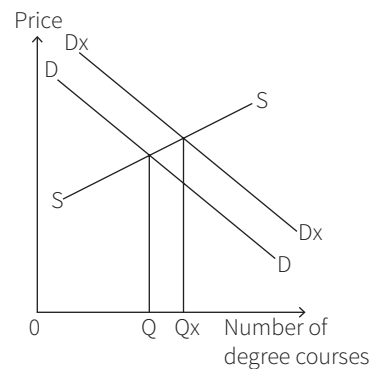


Fig. 14.2: Under-production

Whenever there is a gap between the total effects on society, and the effects on those directly consuming and producing the products, markets will fail to allocate resources efficiently. The level of output which will cause maximum benefit to the society (**socially optimum output**) will occur when the social benefit of the last unit produced is equal to the social cost of that unit. If the social cost exceeds the social benefit, it implies that too many resources are being devoted to the production of the product. Society would benefit from reducing its output. In contrast, if the benefit society would gain from producing more of the product is greater than the cost to society of producing more output, then more resources should be devoted to its production.

A case where the social cost (in most countries) exceeds the social benefit, is the use of road space by private cars. When people are thinking of making a trip in their car, they take into account the private costs and benefits, that is the cost and benefits to themselves. If the benefits received by them by undertaking the journey exceed the costs, for example the cost of petrol and wear and tear on the vehicle, they will make the journey. What they do not consider is the external costs caused by them, including air pollution, noise pollution, congestion and accidents. A number of governments, including Singapore and the UK, have introduced *road pricing schemes*. These seek to charge the full costs of their journeys. Different amounts are charged according to when and where people drive. Someone driving along a deserted country road is likely to cause lower external costs than someone driving into a city centre at peak time.



KEY TERMS

External benefits: benefits enjoyed by those who are not involved in the consumption and production activities of others directly.

Socially optimum output: the level of output where social cost equals social benefit and society's welfare is maximised.



Pollution is an external cost



TIP

It is a common mistake to confuse social and external costs and benefits. Remember: social costs and benefits are the total costs and benefits of an economic activity. They include both the external and private costs and benefits.

INDIVIDUAL ACTIVITY 1

In January 2016, people in Buenos Aires and other major cities in Argentina demonstrated against the building of a new, large chemical factory. The demonstrators claimed that the factories would pollute the local river – harming local tourism, farming and fishing.

- a Identify two private costs of building a factory.
- b Explain why pollution is an external cost.

14.3 Information failure

For consumers to buy the products that will give them the highest possible satisfaction at the lowest possible prices, they have to be fully informed about the nature of the products on offer, the benefits they can receive from them and their prices. Workers need to know what jobs are on offer, the location of the workplace, the qualifications required and the remuneration they would receive. They should also be aware about the nature of jobs for which their skills are best suited.

Similarly, producers need to know what products are in demand, where good quality raw materials can be purchased at lowest possible prices and what are the most cost-effective methods of production. If they lack this information, they will make decisions that are not in their best interests. Besides consumers paying more than required and buying products of lower quality than available, workers may end up in the wrong jobs, and producers' costs may be higher and revenues lower than possible due to information failure.

Information failure can occur in a number of ways. There may be a lack of information or inaccurate information. There may also be asymmetric information which occurs when consumers and suppliers do not have equal access to information. For instance, if a car mechanic tells a motorist that her or his car needs an expensive repair, the motorist may lack the technical knowledge to question the advice.

14.4 Merit goods

In the case of some products, there is both the problem of information failure and the problem of social benefits or costs being greater than the private benefits or costs.

Merit goods are products that are more beneficial to the consumers than they themselves realise, and they have benefits for those who are not involved in their consumption directly, that is external benefits. This failure of the consumers to acknowledge the true value to themselves, and to others, means that these products would be under-consumed and hence under-produced, if left to market forces.

Healthcare is an example of a merit good. For instance, some people may not recognise the importance of regular medical check-ups and/or visiting a doctor. Hence, they are unlikely to take into account the benefits of their fitness to others. The associated external benefits may include higher output as a result of workers having less time off work (hence being more productive) and prevention of spread of diseases.

There are various measures that a government may adopt to overcome the problem of a lack of consumption, in the case of merit goods. One is by providing information on the benefits of consuming the products. If successful, there should be an increase in demand. In the absence of an increase in demand, the government may need to try another approach. Figure 14.3a shows the demand that will exist if left to market forces, DD , and demand based on the full benefits to society, $DxDx$. To persuade consumers to purchase the allocatively efficient quantity of Qx , the price of the product needs to fall to P_1 . Figure 14.3b shows this being achieved, as a result of a subsidy shifting the supply curve to the right.

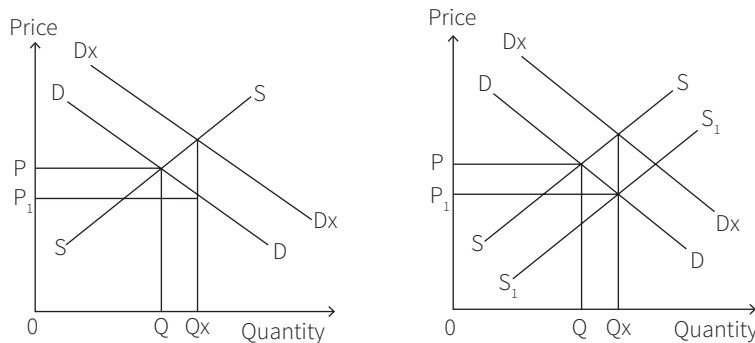


Fig. 14.3: (a) Under-consumption if left to market forces

(b) The effect of subsidy

If a government thinks that consumers undervalue the product significantly or there are considerable external benefits, it may provide the product free to consumers and/or make its consumption compulsory. For example, inoculation against a range of diseases is provided free, and the wearing of seat belts in cars is compulsory in the UK.



KEY TERM

Merit goods:

products which the government considers consumers do not fully appreciate how beneficial they are and so which will be under-consumed if left to market forces. Such goods generate positive externalities.



LINK

Chapter 15.3
Government measures to address market failure (Direct provision)

GROUP ACTIVITY 1

Some African countries provide free primary education. In a number of other African countries, state schools charge fees.

- a Identify two arguments for providing free primary education.
- b Explain why, if left to market forces, education is likely to be under-consumed.



KEY TERM

Demerit goods: products which the government considers consumers do not fully appreciate how harmful they are and so which will be over-consumed if left to market forces. Such goods generate negative externalities.

14.5 Demerit goods

As their name suggests, **demerit goods** are the opposite of merit goods. Demerit goods are more harmful to consumers than they realise and they generate external costs. For example, cigarettes are a demerit good. Some people do not fully realise the damage smoking inflicts on their health. Their smoking also imposes costs on people around them by polluting the air, causing a number of them to develop cancer through passive smoking and generating litter.

Demerit goods are over-consumed and hence over-produced. To tackle this problem, a government could raise their price by imposing a tax on them. It could also seek to discourage consumption, by providing information about their harmful effects. Also, if it thinks that the consumption of certain products causes serious problems, it may ban them.

Recently a number of countries, including the UK and Ireland, have imposed a ban on smoking in public places. This measure is designed not only to discourage smoking, but also to protect the health of non-smokers. Other measures that governments use to reduce smoking include government sponsored health campaigns, placing health warnings on packets of cigarettes, taxation and banning the advertising of cigarettes. Bhutan has gone further than most countries in banning the purchase of cigarettes in the country.

GROUP ACTIVITY 2

Between 2007 and 2016, alcohol-related medical emergencies and hospital treatments increased by 50% in the UK. In 2015 the state funded National Health System (NHS) treated 333 010 people for medical problems caused by excessive drinking, including liver disease and severe alcohol poisoning.

- a Explain why alcohol is a demerit good.
- b Explain two ways which the UK government could use to reduce the consumption of alcohol.



KEY TERM

Public good: a product which is non-rival and non-excludable and hence needs to be financed by taxation.

14.6 Public and private goods

The degree of market failure is greater in the case of **public goods** than merit goods and demerit goods. Whilst too few merit goods and too many demerit goods will be produced if left to market forces, no public goods would be made.

As mentioned in Chapter 13, private sector firms will not have any incentive to make products they cannot charge for. It is not possible to exclude non-payers from taking advantage of the benefits of products such as defence. If these public goods are provided for some people, others can consume them without paying for them. Those who do take advantage in this way

are called free riders. For example, if a flood defence system is built to protect a coastal town, all homes in the area would be protected whether their owners are prepared to pay for it or not.

Besides non-excludability, public goods have another key characteristic. This is non-rivalry. This means that consumption of the product by one more person does not reduce someone else's ability to consume it. For example, one more person walking down a lit street does not reduce the benefit that other people receive from the street lights.

Public goods also usually have two other characteristics.

- They are non-rejectable. It is not possible for people to reject the services of the police, for example.
- The cost of supplying a public good to one more consumer is often zero. Defending one more person in the country will be unlikely to cost the army anything.

Most products, including merit and demerit goods, are **private goods**. These products are both rival and excludable. In these cases, it is possible to stop non-payers from enjoying the products and if one person consumes a unit of the product, someone else cannot. For example, an individual cannot take a computer out of a shop without paying for it and if they do buy it, no one else can have that particular computer. Even though primary and secondary education, and healthcare, are not directly charged for in some countries, they are nevertheless private goods. This is because they can be charged for, and also because they are rival goods (in some cases). If one child is occupying a place in a class or one patient is occupying a hospital bed, no one else can occupy these places. Of course, education and healthcare are examples of a special type of private goods – that is, merit goods.

Markets will supply private goods, although not necessarily in the right quantities. They will not, however, supply public goods. This means that public goods have to be financed through taxation. The government can then produce them itself or pay a private sector company to produce them.



Flood defences are a public good



KEY TERM

Private good: a product which is both rival and excludable.



LINK

Chapter 15.3
Government measures
to address market
failure (Direct
provision)

GROUP ACTIVITY 3

Decide whether the following are private goods or public goods:

- biscuits
- lighthouse protection for shipping
- a flood control system
- public car parking spaces
- public library services.

**LINK**

Chapter 23.2 Monopoly markets

**KEY TERMS**

Monopoly: a single seller.

Price fixing: when two or more firms agree to sell a product at the same price.

14.7 Abuse of monopoly power

Market failure can arise due to producers having more market power than consumers. If one firm dominates a market, it may not be allocatively, productively or dynamically efficient. It will lack competitive pressure to respond to consumer demands, to keep its costs low and to improve its product. If it is the only firm selling the product, that is a **monopoly**: consumers will have no choice but to buy from it, even if the price of the product is high, the product does not meet the needs of the consumers and its quality is poor.

Abuse of market failure can also occur, when there is more than one firm producing the product. If there are, for example, five major producers in a market there is a risk that they may collude to reduce competition and, in effect, act as one seller. For example, they may all agree to charge the same high price. This is referred to as **price fixing**.

There are various ways through which governments try to promote competition and prevent firms from abusing their market power. These include removing restrictions on the entry of new firms into a market and making uncompetitive practices such as price fixing illegal. They may also stop some firms from merging, that is joining together to form one new firm, if it is thought that the merged firm will act against the interests of consumers by charging high prices and producing poor quality products.

**TIP**

In deciding whether a good is a private or a public good, the key thing to consider is not whether a price is charged for it, but whether a price could be charged for it.

INDIVIDUAL ACTIVITY 2

In recent years, a number of agreements have been signed between different countries to allow more airlines to fly between particular locations, including between Heathrow Airport in London and the USA. Until 2008, only four airlines – British Airways (BA), Virgin Atlantic, American Airlines and United Airlines – were permitted to fly between London and New York. Now a range of airlines including Air France, Air India, British Airways, Delta, Lufthansa, KLM and Virgin Atlantic fly between Heathrow Airport and the USA.

- What incentive would encourage more airlines to fly on a particular route?
- Explain two benefits offered by increased competition to consumers.

14.8 Immobility of resources

To achieve allocative efficiency, it is necessary for resources to move from producing products that are decreasing in demand towards those which are experiencing an increase in demand. This requires resources to be both occupationally and geographically mobile. In practice, some resources may be immobile. If, for example, demand for a country's financial services might be increasing, whilst demand for its steel may be decreasing, there may be a shortage of financial services, unemployment of workers and under-utilisation of capital equipment if resources cannot easily move between the two.

The main measures a government can take to promote occupational mobility of labour are to improve education and to provide training in the new skills needed. Also, governments can provide investment grants to make it easier for firms to change the use of land and buildings. Geographical mobility of workers can be encouraged by making it easier for them to buy or rent housing in areas where demand for labour is high. This might be achieved by construction of more houses in such areas or by the government providing financial help for those workers who move to these locations.

14.9 Short-termism

There is a risk that market forces may not result in sufficient resources being devoted to capital goods. If a country produces a high quantity of consumer products, people can enjoy a high living standard. For them to enjoy more consumer products in the future, some resources have to be diverted for making capital goods. Private sector firms may be interested in making quick profits and may not plan for times ahead. Such a short-sighted approach can result in a lack of investment. As a result, a government may have to stimulate private sector investment by, for example, cutting taxes on firms and undertake some investment itself.



Chapter 2.2 Mobility of the factors of production

Summary

You should know:

- Market failure occurs when markets do not operate efficiently.
- If left to market forces, those products whose social benefits exceed their private benefits will be under-consumed and hence under-produced. There will be over-consumption and over-production of products, if their social costs exceed their private costs.
- Consumers, workers and producers may not make the right choices due to lack of information, inaccurate information or because they have less information than the other party in a transaction (asymmetrical information).
- Merit goods would be under-consumed, if left to market forces, because people do not realise their true value to themselves and because they generate benefits to third parties.
- Demerit goods would be over-consumed in a market system. They are more harmful to the consumers than they realise and involve external costs.
- Public goods are both non-excludable and non-rival. They would not be produced in a market system, as it is not possible to stop free riders from enjoying them.
- Where there is a lack of competition, a firm may not keep its costs down, may charge a high price and may produce a poor quality product.
- The most efficient allocation of resources may not be achieved due to a lack of mobility of resources.
- Private sector firms, keen to earn high profits in the short term, may under-invest.

**TIP**

In discussing whether a market system works well, or any other economic issue, consider arguments for and against and where appropriate come to a conclusion.

Multiple choice questions

1 In which case is market failure occurring?

- A Consumers determining what is produced
- B Firms producing above the lowest possible cost
- C Price falling as a result of a decrease in demand
- D Price rising as a result of an increase in costs of production

2 A merit good is one which:

- A has an absence of external benefits
- B has higher private benefits than consumers realise
- C imposes costs on those who are not involved in its production directly
- D is both non-excludable and non-rival

3 Which type of goods would be over-produced if left to market forces?

- A Basic necessities
- B Capital goods
- C Demerit goods
- D Public goods

4 What is a cause of market failure?

- A Competition between firms
- B Consumers lacking information about where the lowest prices can be found
- C Differences in pay between skilled and unskilled workers
- D Resources being both geographically and occupationally mobile

Four-part question

- a Define an *external cost*. (2)
- b Explain the difference between a merit and a demerit good. (4)
- c Analyse why the social benefit of education exceeds the private benefits. (6)
- d Discuss whether or not trees in the rainforests of Brazil should continue to be cut down. (8)

Chapter 15

Mixed economic system

Learning objectives

By the end of this chapter you will be able to:

- define a mixed economic system
- explore the effects of imposing maximum and minimum prices in product and labour and markets
- explain how a range of policy measures including indirect taxation, subsidies, regulation, privatisation, nationalisation and direct provision may be used by the government to correct market failure
- discuss how effective government intervention is in overcoming the drawbacks of a market economic system
- compare expenditures by public and private sectors

Introducing the topic

Why do governments in every country intervene in the economy and why do they do this to a different extent? Can a government actually improve the performance of an economy? Do you think the measures it can take will be successful?



KEY TERM

Mixed economic system: an economy in which both the private and public sectors play an important role.

15.1 A mixed economy

Governments intervene in a mixed economic system. A **mixed economic system** has a combination of the features of a planned and a market economic system. Some firms are privately owned (in the private sector) and some are government owned (in the public sector). Some prices are determined by the market forces of demand and supply, and some are set by the government. In this type of economic system, both consumers and the government influence what is produced.

A mixed economy seeks to gain the advantages of both a market and a planned economy, whilst avoiding their disadvantages. Having some products produced by the private sector may generate choice, increase efficiency and create incentives. Benefits may also be gained as a result of state intervention. They may include:

- The government should take into account all the costs and benefits that will arise from their decisions. This should mean, for example, that even if a railway line and station would not make a profit in the private sector, they would be maintained by the state if the benefit to society is greater than the cost.
- Government can also encourage the consumption of products that are more beneficial for consumers and others than they realise by granting subsidies, providing information or passing legislation.
- Government can discourage the consumption of products that are more harmful for consumers and others than they appreciate by imposing taxes on such products, providing information or passing legislation.
- Government can finance the production of products that cannot be charged for directly, for example, defence.
- Government can seek to prevent private sector firms from exploiting consumers by charging high prices.
- Government is likely to seek to make maximum use of resources, including labour, and hence try to ensure that those people willing and able to work can find jobs.
- There is a possibility that the government will plan ahead to a greater extent than private sector firms and hence may devote more of its resources to capital goods.
- Government can help vulnerable groups, ensuring that they have access to basic necessities. It can also create a more even distribution of income, by taxing the rich at a high rate.



The government in a mixed economy may encourage a healthy diet

There are, nevertheless, risks attached even to a mixed economic system and there is no guarantee that it will perform better than the other two types of systems. Market failure can occur and government intervention may make the situation worse.



TIP

Be careful not to confuse a market economic system and a mixed economic system. In a market economic system, it is the price mechanism which allocates resources. In a mixed economic system, it is both the price mechanism and the government which decide the use of resources.

15.2 Maximum and minimum prices

A government may limit firms' ability to set their own prices by imposing price controls. A government may set a maximum ceiling on the price in order to enable the poor to afford basic necessities. To have any impact, a maximum price has to be set below the equilibrium price. Figure 15.1 shows a maximum price being set at P_x below the equilibrium price of P . Some people will now be able to purchase the product at a lower price. The problem is, however, that a shortage will be created as at this lower price the quantity demanded exceeds the quantity supplied. To prevent the development of an illegal market in the product, some method of its allocation will have to be introduced. This might be through queuing, **rationing** or even a **lottery**.

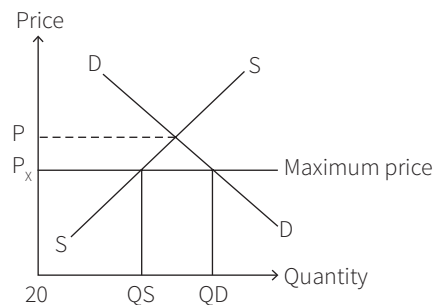


Fig. 15.1: The effect of setting a maximum price

To encourage production of a product a government may set a minimum price (P_x). This is a price floor, as it represents the lowest price producers are allowed to charge. To have an impact on a market, this will have to be set above the equilibrium price as shown in Figure 15.2. This time the problem created is a surplus, with the quantity supplied being greater than the quantity demanded. To prevent the price being driven down, the surplus will have to be bought up by the government or some other official body.

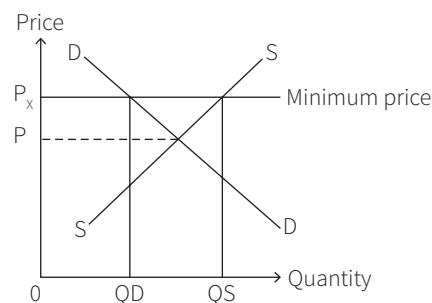


Fig. 15.2: The effect of setting a minimum price

A minimum price may also be set on the price of labour in the form of a minimum wage. The motives for such a move and its impact are discussed in Chapter 18. Minimum and maximum prices can also be used in exchange rate systems.



KEY TERMS

Rationing: a limit on the amount that can be consumed.

Lottery: the drawing of tickets to decide who will get the products.



LINK

Chapter 18.2 Wage determination and the reasons for differences in earnings (Government policies)

Chapter 33.3 Possible government policy measures to reduce poverty

Chapter 38.1 A foreign exchange rate (A fixed exchange rate)

INDIVIDUAL ACTIVITY 1

China has recently removed price controls on most consumer goods. Their prices are now determined by the market. The prices of a number of services, however, remain under the control of the National Development Reform Commission – the chief economic planning body in the country. These include, water, oil, power, cable TV fees and parking fees for cars. The price controls are designed to protect people against monopolies and to keep inflation low. There is some evidence, however, that price controls are distorting the market and damaging the economy. Petrol stations in Southern China, for example, run out of oil quite regularly.

- How are prices determined by the market?
- How do price controls distort the market?
- Does the passage suggest that the Chinese National Development Reform Commission sets maximum or minimum prices on the products mentioned? Explain your answer.

15.3 Government measures to address market failure

Subsidies and indirect taxes

A government may subsidise a number of the country's firms. In contrast, all firms are likely to be affected by taxes in some way. Government tax firms' profits, which has an impact on the ability and willingness of firms to invest. Indirect taxes raise firms' costs of production, whilst income tax lowers consumers' disposable income, and as a result demand for firms' products.

The effect of a subsidy given to producers is influenced by the size of the subsidy and the price elasticity of demand. As explained in Chapter 8, a subsidy being an extra payment to producers, shifts the supply curve to the right. The larger the subsidy, the more increase there is in supply.

On a diagram, the size of the subsidy is represented by the distance between the two supply curves. In Figure 15.3, the subsidy per unit is SY . If all the subsidy is passed on to consumers, prices would fall to P_2 . As demand is inelastic, producers have to pass on most of the subsidy to encourage an extension in demand. Price actually falls to P_1 with consumers receiving most of the benefit ($PSXP_1$) and the producers keeping the rest (P_1XYP_2).

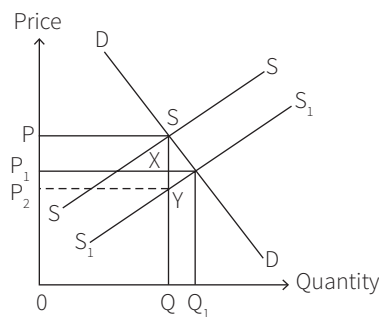


Fig. 15.3: The effect of a subsidy in the case of inelastic demand

If demand is elastic, a subsidy will have more impact on the quantity sold and less on the price. In this case, the producers can keep more of the subsidy as shown in Figure 15.4. In deciding whether to grant a subsidy, a government has to consider the opportunity cost as the money which could have been used for another purpose.



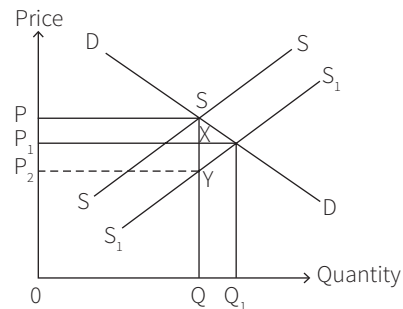


Fig. 15.4: The effect of a subsidy in the case of elastic demand

The impact of a tax is again influenced by the size of the tax and the price elasticity of demand. The higher the tax, the greater is its impact. A tax on a product with inelastic demand would have a greater effect on price than the quantity sold. In the case of a product with elastic demand, it is the other way round.

If a government wants to raise revenue, it should tax products with inelastic demand. This is because the quantity sold will not fall by much. For example, a tax of \$2 per product may be placed on a product that initially has sales of 2000 a day. If the tax causes sales to fall to 1800, the government will receive \$3600 in revenue. However, if the demand had been elastic and sales had fallen to 900, the government tax revenue would have been only \$1800.

In contrast, if the government's aim is to discourage the consumption of a product (in particular a demerit good) it will be more successful if demand is elastic. This is one of the problems in using taxation to discourage smoking, as demand for tobacco products is inelastic.



Chapter 11.4 Elastic and inelastic demand
Chapter 12.4 Elastic and inelastic supply



TIP

In answering questions on subsidies, check whether the question is asking about subsidies to producers (which would shift the supply curve) or subsidies to consumers (which would shift the demand curve). If the question just refers to a subsidy, presume it is a *subsidy to a producer* as this is the most common form of subsidy.

INDIVIDUAL ACTIVITY 2

Emissions of carbon dioxide from the aviation industry more than doubled between 1990 and 2016 and are forecast to double again by 2030. Under international law, aviation fuel for international flights is exempt from taxation. Environmentalists argue that airlines should be taxed for the pollution they cause.

- Identify two external costs caused by air travel.
- What impact is a tax on air travel likely to have on the number of flights?
- Explain one external benefit that could arise from the operation of a new airport.

Competition policy

Competition policy seeks to promote competitive pressures and prevent firms from abusing their market power. There are a number of ways a government might be able to do this, including prevention of mergers that it thinks will not be in the interest of consumers,

removal of barriers to entry and exit into markets, regulation of monopolies and prohibition of uncompetitive practices. Uncompetitive practices may include, for example, predatory pricing and limit pricing. Predatory pricing involves a firm charging a price below the cost to drive a rival firm (or firms) out of the market. Limit pricing is setting the price low enough to discourage the entry of new firms into the market.

Environmental policies

Firms can be affected by a range of policies designed to improve environmental conditions. A government may place restrictions on the amount of pollutants emitted by firms into the air, sea and rivers. It may then fine any firms which exceed these limits.

Another policy, which has become more popular in recent years, is tradable permits. This involves a government issuing permits to firms, allowing them to pollute up to a certain limit and to sell part of their allocated limit, if they pollute less. The idea is that the cleanest firms will be able to sell most of their permits, whilst those who pollute the most will have to buy more of other firms' permits. This will reduce the costs of the cleanest firms, whilst raising the costs of the worst polluting firms. As a result, the cleanest firms should capture a higher market share and consequently, pollution should fall.

INDIVIDUAL ACTIVITY 3

The European Union, an economic bloc of European countries, runs an emissions trading scheme. Companies in certain energy-intensive sectors are issued with permits to produce a certain tonnage of carbon dioxide. If they produce less than their allowance, they can sell the excess.

- a** What is meant by an energy-intensive sector?
- b** Explain how an emissions trading scheme may reduce pollution.

Regulation

Regulation includes rules and laws which place restrictions on the activities of firms. Besides setting price controls, outlawing uncompetitive behaviour and limiting the amount of pollution emitted by a firm, a government may regulate the target audience for the product, the quality of products and mode of staff management by firms. For example a government may pass a law banning the sale of cigarettes to children. It may also require firms to ensure that the products produced by them meet certain standards and that they allow their workers a specified number of regular holidays. In addition, it may place restrictions on timing for opening/closing of shops and control the routes that buses must follow.

As a measure to correct market failure, regulations have the advantages of being backed up by law and easily understood. The government does, however, have to check that the rules and laws are being followed and this may be difficult and expensive. Also, a regulation works only if most people agree with it. For example, it would be difficult to enforce a law that everyone wears a safety helmet when riding a motorcycle if such a move is opposed by most of the riders. This is because too much time and money would need to be spent on prosecuting the offenders and the government may become very unpopular.

There are a number of other problems with imposing regulations, for example they do not directly compensate those who suffer as a result of market failure and regulations may be too restrictive – reducing market flexibility and creating barriers to entry.

Nationalisation and privatisation

To benefit the public and to improve economic performance, a government may set up an industry or **nationalise** a private sector industry. Industries owned by the government are known as state-owned enterprises, **public corporations**, and nationalised industries. The chairman and board of managers are appointed by the government. They are responsible for the day-to-day management, but are accountable to the government. There are no shareholders in state-owned enterprises. The funds come from the government, from government approved loans and from the private sector. State-owned enterprises do not always seek to make a profit. Their prime aim is to work in the public interest.

There are a number of advantages that can be claimed for state-owned enterprises. Some of them are as follows:

- State-owned enterprises base their decisions on the full costs and benefits involved.
- They can be used to influence economic activity. To boost the country's output, public corporations can be directly encouraged to increase their output.
- In cases where it is practical to have only one firm in the industry, such as rail infrastructure, a state-owned enterprise would not abuse its market power.
- Ownership of a whole industry by the government makes planning and coordination easier. For example, if the state runs the train system, it can ensure that train timetables are coordinated.
- It is important to ensure that basic industries, such as electricity and transport, survive, charge low prices and produce good quality, as other domestic industries depend on them.

There are, however, a number of disadvantages associated with state-owned enterprises.

- They can be difficult to manage and control. The large size of the organisations may mean that time has to be spent on meetings and communicating with staff, slowing down decision making.
- They may become inefficient, produce low quality products and charge relatively high prices, due to a lack of competition and the knowledge that they cannot go bankrupt.
- They will need to be subsidised if they are loss making. The use of tax revenue to support them has an opportunity cost – it could be used to spend on, say, training more teachers and nurses.

Concern about the performance of state-owned enterprises and increased confidence in market forces has led a number of countries to sell their state-owned enterprises, or part of their state-owned enterprises, to the private sector. Those supporting this move argue that private sector firms are likely to produce the products desired by consumers, at a low cost and offer them at low prices. This is because market forces provide an incentive for firms to be efficient in the form of profit and a threat of bankruptcy if they are inefficient. Besides low prices and high quality, privatisation may result in greater choice. Freedom from government regulation may reduce administration costs and enable managers to respond more quickly to changing conditions. There may, also, be less risk of under-investment in the private sector. The funds available to a public sector firm for investment will depend on the profits it earns and its ability to convince shareholders and lenders of its success. Public corporations may be kept short of funds for investment, however successful they are, if the government wants to spend the money elsewhere.



KEY TERMS

Nationalisation: moving the ownership and control of an industry from the private sector to the government.

Public corporation: a business organisation owned by the government which is designed to act in the public interest.



LINK

Chapter 13.1 The market economic system



TIP

Be careful with the word 'public'. Sometimes, it refers to the government as in 'public expenditure' and 'public sector'. It can, however, also refer to people as a whole as in the 'general public' or open to all people, as in a 'public limited company'.



Chapter 13.1 The market economic system (Private and public sectors)

Privatisation, however, is itself criticised. There is no guarantee that private sector firms will face the full pressure of market forces. Some private sector firms may not face competition – they may be monopolies (i.e. the only firm selling the product). In this case, they can be inefficient, charge high prices and produce low quality products without compromising on profits. They may not take into account the total costs and benefits to the society due to their actions. For example, they may cause pollution. Privatisation also reduces a government’s control of the economy.

INDIVIDUAL ACTIVITY 4

Copy and complete the table, which compares a state-owned enterprise and a private sector firm.

	State-owned enterprise	Private sector firm
Ownership	The government	
Sector		Private
Aim	Acts in the public interest	

A comparison of a public corporation and a public limited company

Direct provision

Most governments produce at least some goods and services that they think are essential. In some countries, governments provide affordable housing to rent. Housing, education and healthcare are seen as essential services, and some governments produce them and provide them to people free of cost or at subsidised prices. Besides being essential products, education and healthcare are also merit goods.



Education is a merit good

As explained in Chapter 14, a merit good is one whose benefit to consumers and others is undervalued by them. As a result, they would under-consume it and so private sector firms would under-produce it. This is why some governments produce educational and healthcare services and other merit goods such as library services. To stimulate the consumption of merit goods, governments also pay private sector firms to produce them, provide information about their benefits and, in some cases, make their consumption compulsory.



Chapter 26.2 The reasons for government spending

Chapter 14.4 Merit goods

Chapter 14.6 Public and private goods

Chapter 13.3 The disadvantages of a market economic system

There are some products that private sector firms have no incentive to produce. This is not because people do not want them, but because they know that if they are provided, they can consume them without paying. For example, it is not possible to exclude someone from enjoying the benefits of street lighting even if they are not prepared to pay for them directly. This is why governments produce them, or pay private sector firms to make them, and raise finance through taxation. It is also interesting to note that public goods are non-rival. This means that a person enjoying the product does not reduce someone else's enjoyment. An additional family moving into a town protected by sea defences, does not reduce the defence experienced by other families.

Unfairness

Besides intervening in a market economy to correct market failure, governments also intervene on grounds of equity – that is, fairness. As mentioned in Chapter 13, income distribution can become very uneven if it is solely determined by market forces. Some people will be very rich, but some will be very poor. Private sector firms will only produce those products that people are willing to buy and able to pay for. This may mean that they will not produce products needed by the poor.

A government is likely to try and ensure that everyone in the country has access to basic necessities including housing, education and healthcare. To achieve this, it can give financial assistance to the poor and provide some essential products free to consumers. In fact, in a number of countries, state education and healthcare is provided free, not only because they are merit goods, but also to make them accessible to the poor. Such free state services are financed by taxation. Taxation and benefits may also be used to reduce income and wealth inequality.

A big difference in the income and wealth of the rich and poor, besides being unfair, can be socially divisive and can result in some workers being less productive. Some people in the country, including the elderly and the sick, may be unable to earn incomes. There may be social unrest if there is considerable income inequality. Also, if people are poor they may be less healthy, less well educated and consequently less productive.

Effectiveness of government intervention

As suggested above, government intervention can reduce market failure. There is a risk, however, that government failure may occur. It may overestimate the extent of the private benefits offered to the people by consuming merit goods and it may find it difficult to calculate the most efficient quantity of public goods to supply.

Governments can take time to make decisions and those decisions may be influenced by political factors and, in some cases, corruption. For example, a government may decide not to raise the tax on petrol, despite concerns about the environment, because it may be politically unpopular and may lose it votes.

Government intervention may also reduce economic efficiency by reducing incentives. If taxes on earned income and unemployment benefits are high, some people may be discouraged from working. High taxes on firms' profits can reduce entrepreneurs' willingness and ability to invest.

A development of effectiveness of government intervention

There is some debate as to whether public or private sector expenditure leads to a more efficient allocation of resources. Do households and firms make better decisions than the government? In practice, there are advantages and disadvantages of both private and public sector expenditure. A new airport, for example, could be built by the private or public sector. There may be a

number of advantages in it being built by a private sector firm. The profit incentive and force of competition may imply that it will build a high quality airport at low cost and in less time.

There is a risk, however, that a private sector firm may be a monopoly and hence may not be forced to keep its costs down. Thus, it may charge a high price for building the airport. Also, a private sector firm will take only private costs and benefits into account.

Using public expenditure to build an airport may also have its own drawbacks. Knowing that the state is paying, a state-owned enterprise, or private sector firm hired by the government, may not keep its costs down. A state-owned enterprise may lack the commercial expertise to complete the project on time. There may also be delays in decision making by the government to go ahead with the project. A major benefit, however, of a major investment project being undertaken by government is that it will base its decision (as to whether to proceed with it) on the consideration of all factors involved, that is social impact, costs and benefits. It is likely to carry out a **cost benefit analysis (CBA)** in the first place. This involves measuring all the private costs and benefits involved. In the case of an airport, the private costs will involve the cost of the land, the cost of the labour employed to build and run the airport, and the cost of the building material and maintenance. The major private benefit is the revenue that will be earned.

After measuring the private costs and benefits, the economists carrying out a CBA, then seek to place a value on external costs and benefits. This is not an easy process. The external costs may include operation of the airport, damage to the environment, noise due to risk of accidents and traffic congestion near the airport. The external benefits may include employment in the area due to tourism and making it a more attractive as a site for domestic firms and **multinational companies (MNCs)**.

When all the calculations have been made, the social costs and benefits are compared. If social costs exceed social benefits, the government will not proceed with the project. If social benefits exceed social costs, it will go ahead (if the net social benefit is greater than that on rival projects). There will still be a debate, however, on whether it is the best use of government money. Government expenditure on one item always involves a significant opportunity cost. The money could have been spent on, for example, education.

GROUP ACTIVITY 1

The private sector in China is responsible for a growing amount of output and employment. Some economists argue that private sector firms are more profitable and efficient than the state sector.

In your group, discuss the questions below.

- a How may the government benefit from private sector firms being more profitable?
- b Why may private sector firms be more efficient than state-owned enterprises?

KEY TERMS

Cost benefit analysis (CBA): a method of assessing investment projects which takes into account, social costs and benefits.

Multinational companies (MNCs): companies which produce in more than one country.

Summary

You should know:

- In a mixed economy, resources are allocated by means both of the price mechanism and government decision.
- Subsidies and taxes influence firms' output and the price they charge for their products.
- The impact of a subsidy/tax depends on its size and price elasticity of demand.
- Other types of policies which influence private sector firms are industrial, competition and environmental policies.

- Maximum prices are set below the equilibrium price. They lower prices, but lead to shortages.
- Minimum prices are set above the equilibrium price. They can help producers, but lead to surpluses.
- Regulations are backed up by law, but it can be expensive to implement them and difficult to check their violation by people. Their effectiveness is influenced by their acceptance by the people.
- Besides correcting market failures, governments intervene in economies to protect vulnerable groups and to ensure an even distribution of income and wealth.
- Expenditure by the private sector on an investment project may ensure efficiency, but a private sector firm considers only private costs and benefits.

Multiple choice questions

- 1 The production of which of types of goods, given below, has to be financed by the government?

A Capital	B Consumer
C Merit	D Public

- 2 A government decides to subsidise rail travel. What will be an external benefit of this move?

A A rise in government expenditure	B Increased crowding on trains
C Lower fares for train passengers	D Reduced congestion on roads

- 3 A firm, concerned about its reputation, decides to install new equipment in order to reduce the pollution created by it. What impact will this have, on private and external costs?

Private costs	External costs
A fall	fall
B fall	rise
C rise	fall
D rise	rise

- 4 What is an argument for state intervention in an economy?

A To encourage the consumption of harmful products	B To increase the role of the price mechanism in allocating resources
C To make the distribution of income more uneven	D To prevent private sector firms from overcharging consumers

Four-part question

- a Define a *minimum price*. (2)
- b Explain how a maximum price will affect a market. (4)
- c Analyse **three** ways a government could encourage consumption of a merit good. (6)
- d Discuss whether or not consumers benefit more from a market economic system or a mixed economic system. (8)

Exam-style questions

Multiple choice questions

1 Who decides what is produced in a market economy?

- A consumers
- B managers
- C shareholders
- D the government

2 The table shows demand and supply schedules for bread.

Price of a loaf of bread (\$)	Number of loaves demanded per week	Number of loaves supplied per week
0.80	500	180
1.00	400	240
1.20	320	320
1.40	240	500

What will be the equilibrium price for a loaf of bread?

- A \$0.80
- B \$1.00
- C \$1.20
- D \$1.40

3 Price is initially set above equilibrium. Market forces then move it towards equilibrium. As price falls, what will happen to demand and supply?

Demand **Supply**

- A contracts contracts
- B contracts extends
- C extends extends
- D extends contracts

4 Which of the following is likely to cause the price of the lamb to decrease?

- A an increase in the number of sheep farmers
- B an increase in the price of beef
- C a subsidy given to sheep farmers
- D a successful advertising campaign for lamb

5 What effect is an increase in advertising expenditure likely to have, on the demand and supply curves of a product in the short term?

Demand **Supply**

- A decreases decreases
- B decreases increases
- C increases increases
- D increases decreases

- 6 The table shows the demand and supply of a book published by a Japanese firm.

Price per book (\$)	Quantity demanded per week	Quantity supplied per week
10	5000	2000
15	4000	3000
20	3000	4000
25	2000	5000

When the price rises from \$10 to \$15 per book, what is the price elasticity of demand for the book?

- A** -0.4
B -0.8
C -1.0
D -2.5
- 7 What could make demand for a product become more elastic?
A a fall in its price
B a fall in the proportion of income spent on the product
C a decrease in the time period under consideration
D an increase in the number of close substitutes
- 8 What is meant by inelastic supply?
A when a fall in price causes a greater percentage fall in supply
B when a fall in price causes a smaller percentage fall in supply
C when a rise in price causes a fall in supply
D when a rise in price causes no change in supply
- 9 Which profit-making enterprise will not harm the environment?
A intensive farming using chemical fertilisers
B recycling waste paper into newspapers
C steel manufacturing, which generates the emission of carbon dioxide
D deforestation in tropical rainforests to obtain timber for furniture production
- 10 Which government measure is designed to increase external benefits?
A A decision to reduce spending on education
B A subsidy given to bus companies
C A reduction in the tax on alcohol
D The removal of fines on companies that pollute

Data response questions

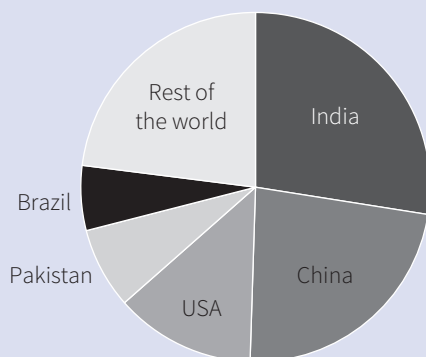
Study the source material for each question carefully and then answer Questions 1 and 2.

Source material: Transport and cotton production

There is not much traffic on the motorway between Islamabad and Lahore. This first motorway built in Pakistan was opened in 1997. It cost \$1.2 billion to construct. One reason for the lack of traffic on the motorway is the existence of a rival road, the Grand Trunk Road, which is shorter and toll-free.

Improvements in road infrastructure can bring a number of benefits to an economy. These include reducing costs of production faced by a number of industries including construction materials, cotton and paper products.

Some economists, however, argue that less tax revenue should be spent by the government on roads and more on education. Higher spending on education can increase labour productivity which, in turn, can reduce unemployment and increase productive potential. Labour productivity, for example, is higher in the USA in the cotton industry than in the other major cotton producers. The pie chart shows the share of the global output of cotton (96.5 million bales) in the five largest producers in 2016.



Percentage share of global cotton production

One of the reasons for the greater productivity in the USA is that workers work with more advanced farm machinery.

India is seeking to raise its labour productivity by a range of ways. These include reducing congestion on its roads. Between 2000 and 2015, the number of cars on India's roads tripled. The higher volume of traffic is causing considerable pollution. In 2016 India's capital city, Delhi, was named by the World Health Organisation (WHO) as the world's most polluted city. The government has introduced new regulation including stricter emissions standards for new vehicles and has stopped subsidising diesel fuel in an attempt to reduce pollution. It is also increasing its investment to modernise and expand the country's train service.

- 1 Referring to the source material in your responses, complete all parts of Question 1.
 - a Identify **one** example of a capital good. (1)
 - b Explain **one** external cost. (2)

- c Explain a possible opportunity cost of the Pakistan government building more roads. **(2)**
- d Analyse the effect of improvements in road infrastructure on the market for cotton. **(5)**
- e Analyse, using a production possibility curve diagram, the effect of the change in labour productivity on the economy. **(5)**
- f Explain the pattern of cotton production. **(4)**
- g Discuss whether or not train travel is a close substitute to road travel in a city. **(6)**
- h Discuss whether or not regulation, in the form of stricter emission standards for new cars, is likely to reduce pollution. **(6)**

Source material: Jordan's search for new sources of energy

Jordan is currently trying to find new sources of energy for the country's firms, farms and households to use. It is exploring the possibility of nuclear power generation and has started to produce solar energy. The country benefits from long hours of sunshine and the solar energy industry converts sunshine into power.

Jordan is not the only country to be developing a solar energy industry. Other countries include China, Dubai, India, Italy, the UAE and the UK. Indeed, 2016 was the first year in which the world invested more in the industry than in coal and gas-fired power generation. Solar power is seen as a cleaner and more environmentally friendly source of energy. With advances in technology, the price of solar panels is falling. This is reducing the cost of producing solar energy and its price to customers, increasing its price competitiveness. In a number of countries the price of coal is rising which is reducing the sales of coal.

Jordan's agricultural industry needs a boost. The country lacks water and some of its land is not very fertile. It does produce a range of agricultural products including citrus fruits, tomatoes, cucumbers and olives. The country has benefited from an increased preference for fruit. In 2016, shortages of lemons pushed up their price and increased imports. The country could not take full advantage of this change as the price elasticity of supply was only 0.25. The table shows how the price of lemons rose throughout one month in 2016 and how this affected demand.

Price of 1 kilogram of lemons (Jordanian dinars)	Daily demand for lemons (tonnes)
1.00	200
1.20	180
1.50	144
2.00	32

The price and demand for lemons in one month in Jordan in 2016

Agriculture is a small industry in the country. It only accounted for 4% of the country's output and employed only 2% of its workers in 2016. Most of the country's workers are employed in the public sector where wages are higher. For example, in 2016 25 000 people were employed in the police force. This position is, however, changing. A number of the country's industries have been privatised and market forces are playing an increasing role in the economy.

- 2** Referring to the source material in your responses, complete all parts of Question 2.
- a** Explain why sunshine is a free good. **(2)**
 - b** Explain why demand for coal is likely to become more elastic in the future. **(2)**
 - c** Calculate the effect that an 8% rise in the price of lemons would have on the demand for lemons. **(2)**
 - d** Analyse, using a demand and supply diagram, the effect of an increased preference for fruit on the market for fruit. **(5)**
 - e** Analyse how changes in the price of lemons affected the price elasticity of demand for lemons. **(4)**
 - f** Explain whether Jordan operates a market economic system or a mixed economic system. **(3)**
 - g** Discuss whether or not a rise in the price of a product, such as coal, will always be accompanied by a fall in sales. **(6)**
 - h** Discuss whether or not governments have to produce public goods such as the police service. **(6)**

Four-part questions

- 1** Air-India is a state-owned airline. Most airlines are, however, in the private sector and the prices they charge move between equilibrium and disequilibrium as a result of changes in market forces. The price elasticity of demand for air travel differs from other forms of transport.
- a** What is meant by market forces? **(2)**
 - b** Explain the difference between an equilibrium price and a disequilibrium price. **(4)**
 - c** Analyse why different products have different price elasticities. **(6)**
 - d** Discuss how useful knowledge of price elasticity is to an airline company. **(8)**
- 2** Gym membership is a normal good. More people throughout the world are joining gyms in a bid to get fitter. This change in demand is also affecting the demand for substitutes and complements to gym membership. In some countries gym membership is taxed. Some economists argue that rather than taxing gym membership, governments should subsidise it.
- a** Define a *normal good*. **(2)**
 - b** Explain the difference between a complement and a substitute. **(4)**
 - c** Analyse, using a demand and supply diagram, the effect of introducing a tax on gym membership. **(6)**
 - d** Discuss whether or not governments should subsidise gym membership. **(8)**

SECTION 3

Microeconomic decision makers



Chapter 16

Money and banking

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Learning objectives

By the end of this chapter you will be able to:

- state the forms of money
- explain the functions of money
- describe the characteristics of money
- analyse the role of commercial banks
- discuss the importance of commercial banks
- analyse the role of central banks
- discuss the importance of central banks

Introducing the topic

Would you like more money? Most people would. What would you do with it? You might, perhaps, spend it. On the other hand, you might save it. You might even lend it to someone else. Banks lend money and look after our savings. All our lives are affected by banks more than we realise. The policy measures of some countries' central banks can change the prices of products not only in their own countries, but also in other countries.

16.1 Money

Forms of money

The main forms of **money** used in most countries are coins, notes and bank accounts. Coins are often used to make small purchases and are given in change. Notes are used to buy more expensive items. In most countries, the main form of money is bank accounts. These are responsible for the largest proportion (in terms of value) of payments made. There are a number of ways of transferring money from one bank account to another. These include direct debits, credit cards and mobile phones.

Although bank accounts are the most important form of money they are not legal tender, whereas coins (up to a certain value) and bank notes are. Legal tender is any form of payment which, by law, has to be accepted in settlement of a debt. So a person has to accept bank notes in payment, but they have the right to refuse, for example, a credit card. In practice, however, most people and firms find payment from bank accounts convenient and hence are willing to accept it.



KEY TERM

Money: an item which is generally acceptable as a means of payment.

The functions of money

Money carries out four functions. It acts as a:

- medium of exchange
- store of value
- unit of account
- standard of deferred payments.

Money allows people to buy and sell products. In carrying out this function, money is said to act as a medium of exchange. Products are exchanged for money and that money is used to buy other products.

Products → Money → Products

Enabling people to exchange products is money's most important function. Acting as a store of value means that money can be saved. It would be pointless to save eggs, for example, as eggs go bad over time and no one will be prepared to accept them a few weeks after they have been laid. Money, however, does not deteriorate with time and hence will be acceptable in the future.

Money can also be used to place a value on an item. Prices are expressed in monetary terms. A newspaper may be priced at \$2 and a book at \$30. This function of acting as a unit of account, or measure of value (as it is sometimes called), enables buyers and sellers to agree on what items are worth, relative to each other. In the example above, one book is worth fifteen newspapers. With \$60 to spend, a person can either buy two books or thirty newspapers.

The fourth function of money is to act as a standard of deferred payments. This means that money allows people to borrow and lend. Someone who wants to buy something now can get it by borrowing money from someone who does not want to use it now. They can make an agreement about the amount to be repaid in the future.

The characteristics of money

To act as money, an item does not need to have intrinsic value. This means that it does not have to be worth something in its own right. For example, both silver and bank notes can act

as money, but whereas silver is wanted for a variety of purposes, bank notes have no intrinsic value. An item does have to possess a number of characteristics for it to serve as money. The most important one is that it should be generally acceptable. If people are not prepared to accept the item as payment, it will not be able to carry out the functions of money. To achieve general acceptability, the item has to be in limited supply. Why, for instance, should people accept twigs as payment in a country with many trees?

The other characteristics an item needs are that it is durable (will last some time), portable (can be carried around easily), divisible (can be divided into units of different values), homogeneous (every note or coin of the same value should be exactly the same) and recognisable (people can easily see that the item is money).

**TIP**

Do not confuse the functions and characteristics of money. Remember: the functions concern the transactions/operations that money helps to make possible, whereas the characteristics are the features which an item needs to possess to act as money.

GROUP ACTIVITY 1

Discuss how many characteristics of money each of the following items possesses:

- a** leaves **b** sea shells **c** gold.

16.2 Banking

Commercial banks

Banking is a major industry in a number of countries. It helps people to borrow and lend and carry out a range of other financial activities. By doing this, it enables more efficient use of resources and encourages the growth of output of economies.

Commercial banks are also called retail or high street banks. All three names tell us something about them. Commercial indicates that they are business organisations which usually seek to make a profit. Retail suggests that they are selling the public something – in this case banking services. High street tells us that these banks are found in most towns and cities. They are the banks we are most familiar with.



Commercial banks are a familiar sight in towns and cities

**KEY TERM**

Commercial banks: banks which aim to make a profit by providing a range of banking services to households and firms.

The role and importance of commercial banks

The three main and traditional functions of commercial banks are to accept deposits, to lend and to enable customers to make payments. The first function enables customers to keep their money in a safe place. Deposits can be made into two types of bank account. One is a current account, sometimes called a demand account or sight account. There is easy and immediate access to money in this type of account, but usually interest is not paid on money held in such an account. Customers use current accounts mainly to receive and make payments. The other type of account is a deposit or time account. A period of notice often has to be given before money can be withdrawn from this account. Interest is paid on any money held in a deposit account and customers use deposit accounts as a way of saving.

There are two main ways of borrowing from a bank. One is in the form of an overdraft. This enables a customer to spend more than what is in her or his account, up to an agreed limit. Interest is charged on the amount borrowed. This can be a relatively expensive way of borrowing and is mainly used to cover short-term gaps between expenses and income. The other way of borrowing is by taking a loan. This is usually for a particular purpose and for a particular period of time. Interest is charged on the full amount of the loan but the rate of interest is likely to be lower than that on an overdraft. A customer may be asked to provide some form of security, known as collateral, when taking a loan. This is to ensure that if the loan is not repaid, the asset given as collateral can be sold and the money recovered. In practice, though, banks try to avoid doing this by checking very carefully whether the person seeking a loan will be able to repay it. In the case of a firm, this is likely to involve a scrutiny of the firm's accounts and business plan.

The first two functions of banks, effectively borrowing from their customers and lending to them, means that they act as financial intermediaries. They accept deposits from those with more money than they currently want to spend and lend it to those with an immediate desire to spend more money than they have at hand. In other words, they channel money from lenders to borrowers.

Lenders → Banks → Borrowers

Commercial banks make most of their profit by charging a higher interest rate to borrowers than they pay to people who save their money with them.

The third main function that banks carry out is to enable their customers to receive and make payments. This is referred to as acting as agents for payments and providing money transmission services. There is now a range of ways in which people can receive money and make payments out of their accounts. These include credit cards, standing orders, direct debits, debit/credit cards and online banking.

Other functions of commercial banks

Over a period of time, commercial banks have built up a range of other services that they offer their customers. Most commercial banks now provide and change foreign currency. Customers can leave important documents, such as house deeds and small valuables, with their banks, and the banks are also likely to be willing to help with the administration of customers' wills.

They can provide advice and help with a number of financial matters, such as completion of tax forms, and the purchase and sale of shares. Many banks also now sell insurance and offer a wide variety of savings accounts, with a range of conditions and interest rates. Some now offer mortgage loans, which are loans to buy houses.

GROUP ACTIVITY 2

From 2003 to 2015 the profits of Brazil's four largest commercial banks increased by 460% from 5 billion Reais to more than 28 billion Reais. This was despite the high interest rates the banks were charging, particularly on overdrafts.

- a What is an overdraft?
- b Discuss whether Brazil's banks are likely to continue to earn high profits.



KEY TERMS

Liquidity: being able to turn an asset into cash quickly without a loss.

Central bank: a government-owned bank which provides banking services to the government and commercial banks and operates monetary policy.

The aims of commercial banks

The key aim of a commercial bank is to make a profit for its shareholders. The main way it does this is by giving loans (which bankers often refer to as advances). Another aim which can conflict with the key aim is what is known as **liquidity**. Banks have to ensure that they can meet their customers' requests to withdraw money from their accounts. To do this, banks have to keep a certain amount of what are called liquid assets. These are items which can be turned into cash quickly and without incurring loss. Banks earn most of the interest by giving long-term loans. However, if they tie up all their money in such loans, they would not be able to pay out cash to the customers requesting it. They have to balance profitability and liquidity – having some assets earning high interest but being illiquid, and having others earning low or no interest but being liquid.

Islamic finance

In a number of Islamic countries, commercial banks are not allowed to charge interest on bank loans. This is because many Muslims regard charging of interest, sometimes called usury, as a sin. Traditionally, Islamic banks have provided finance for firms by lending to them in return for a share in their profits. In recent years, more US and European commercial banks have sought to expand existing branches and open up new branches in Islamic countries in the Middle East and Asia. Most employ Islamic sharia scholars and experts who can issue religious edicts (*fatwas*) that approve financial products including loans. The US-based bank Citigroup, for example, has created an independent sharia advisory board of Islamic scholars to offer it advice.

INDIVIDUAL ACTIVITY 1

ICICI Bank is India's largest private sector bank. It has more than 4500 branches in India and also operates in more than eighteen other countries including China, Dubai, South Africa, UK and the USA. The bank's overseas branches aim their services mainly at Indian communities. They are, however, attracting a high number of non-Indian customers. The main reason why they have been so successful is largely because they have often paid a higher interest rate on deposits than rival banks.

- a What function of a commercial bank is mentioned in the extract?
- b Explain one other function of a commercial bank.

Central banks

A **central bank** is the single most important and influential bank in the country or, in the case of the European Union, the region. The five most well-known central banks in the world are probably the Federal Reserve Bank of the USA (often called the Fed), the European Central Bank (ECB), the Bank of England, the Reserve Bank of India and the People's Bank of China. Central banks are owned by governments and are responsible to them.

Role and importance of a central bank

The role a central bank plays in an economy means that it can have a significant impact on households, firms and the performance of the economy. Its functions include:

- **Acts as a banker to the government.** Tax revenue is paid into the government's account at the central bank, and payments by the government for goods and services are made out of this account.
- **Operates as a banker to the commercial banks.** Holding accounts at the central bank enables commercial banks to settle debts between each other and to draw out cash, if their own customers are taking more cash from their branches than usual.
- **Acts as a lender of last resort.** This means it will lend to banks which are temporarily short of cash.
- **Manages the national debt.** The national debt is the total amount the government owes. Over time, government debt tends to build up. The central bank carries out borrowing on behalf of the government by issuing government securities, for example government bonds, pays interest on these and repays them when they fall due.
- **Holds the country's reserves of foreign currency and gold.** The central bank keeps foreign currency and gold to influence the exchange rate.
- **Issues bank notes.** The central bank is responsible for printing notes and destroying notes which are no longer suitable for circulation. It also authorises the minting of coins.
- **Implements the government's monetary policy.** The prime aim of this is to keep inflation low and steady. This involves controlling the money supply and influencing interest rates throughout the economy, by changing the interest rate it charges on its loans. The government may instruct the central bank to increase or decrease the money supply. In some cases, central banks implement interest rate changes decided by their respective governments. In other cases, central banks have been given the responsibility to set interest rates.
- **Controls the banking system.** Many central banks play a key role in regulating and supervising the banking system.
- **Represents the government** at meetings with other central banks and international organisations such as the World Bank and the International Monetary Fund.

INDIVIDUAL ACTIVITY 2

The Reserve Bank of India (RBI) is the central bank of India. It is based in Mumbai and has nineteen regional offices across India. One of its functions is to implement and monitor monetary policy. Another is to ensure that the country's commercial banks follow sound policies, including sensible lending policies.

- Identify one way in which a central bank differs from a commercial bank.
- What is the key feature of a sensible lending policy?
- Explain one other function of a central bank.

Independence of central banks

A number of governments have given their central banks the authority to decide the rate of interest. The governments still decide the aims of their central banks and give them a target for inflation. The Bank of England, for example, is instructed to use the rate of interest to achieve an inflation target of 2%. If it thinks that there is a danger that the price level will increase by more than 2%, it is likely to raise the rate of interest whereas if it thinks it will fall below 2%, it is likely to lower the rate of interest.



LINK

Chapter 38.1 A foreign exchange rate (A fixed exchange rate)

Chapter 38.5 The advantages and disadvantages of floating and fixed exchange rates



TIP

When answering a question on banking, check very carefully, the type of bank focused on in the question. It is a common mistake to confuse a commercial and a central bank.

There are a number of advantages in allowing the central bank to decide the rate of interest for banking. Unlike a national government, a central bank is unlikely to be tempted to lower the rate of interest to win public support. Most central banks also have extensive knowledge of the banking system and the appropriate rate of interest to set.

Summary

You should know:

- The four functions of money are – medium of exchange, store of value, unit of account and standard of deferred payments.
- To act as money, an item has to be generally acceptable, limited in supply, durable, portable, divisible, homogeneous and recognisable.
- The three main functions of commercial banks are – to accept deposits, lend and to enable their customers to make payments.
- Other functions of commercial banks include dealing in foreign currency, holding important documents and small valuables, helping with wills and tax, selling insurance and providing mortgage loans.
- A central bank is owned by the government. Its functions include acting as the banker to the government and commercial banks, managing the national debt, holding reserves of foreign currency, acting as lender of last resort, issuing bank notes, controlling the money supply, implementing interest rate changes, supervising the banking system and meeting with other central banks and international organisations.

Multiple choice questions

- 1 Money enables people to save. Which function of money does this describe?

A Medium of exchange	B Store of value
C Unit of account	D Standard for deferred payments
- 2 What would make an item unsuitable to act as money?

A It is easy to carry	B It is generally acceptable
C It is perishable	D It is recognizable
- 3 What is a function of a central bank?

A Controlling the money supply	B Deciding on the amount of government expenditure
C Issuing shares	D Raising taxes
- 4 What is the main aim of a commercial bank?

A To act as banker to the government	B To issue bank notes
C To make a profit	D To manage the national debt

Four-part question

- a Identify **two** characteristics of money. (2)
- b Explain **two** functions of a central bank. (4)
- c Analyse in what circumstances a commercial bank will increase its lending. (6)
- d Discuss whether or not gold rings can carry out the functions of money. (8)



Chapter 17

Households

Learning objectives

By the end of this chapter you will be able to:

- discuss the influences on the spending of households
- discuss the influences on the saving of households
- discuss the influences on the borrowing of households

Introducing the topic

Some households spend large sums of money, while others spend only a small amount each week. Some households also save large sums of money each week. Others do not save anything some weeks. The amount that households and their members borrow also varies. Why do you think there are these differences?

17.1 Spending

People spend in order to buy goods and services and to maintain a given standard of living. Among the main items involving expenditure are food, clothing and footwear, housing, gas, electricity, water, consumer durables, transport, entertainment, and leisure goods and services.



KEY TERMS

Disposable income: income after income tax has been deducted and state benefits received.

Wealth: a stock of assets including money held in bank accounts, shares in companies, government bonds, cars and property.

Rate of interest: a charge for borrowing money and a payment for lending money.

Influences on spending

The main influence on the amount spent by a person or household is **disposable income**. As income rises, people usually spend more in total, but less as a percentage of their income.

Among the other factors influencing the amount of expenditure are **wealth**, confidence, the rate of interest, the distribution of income and advances in technology.

Wealth is linked to expenditure in four main ways. One is that wealth generates income, for example, dividends from shares and this income can be spent. The second is that wealth can be cashed in by, for example, withdrawing money from a bank account or selling a car, and then spent. The third way is that people can use their wealth as security for loans. The fourth, and last way, is that wealth also affects confidence. If, for example, the value of people's housing rises, people will feel richer and are likely to spend more.

Confidence is an important influence on consumption. If people feel more optimistic about their future career prospects and income, they are likely to spend more. In contrast, if they become pessimistic about economic prospects they will tend to spend less. Expenditure may also fall if the **rate of interest** rises. This is because, it will make borrowing more expensive, encourage saving and reduce the amount spent by people who have borrowed in the past. Of course, those people who have savings will gain more income and consequently, they may spend more. Their higher spending, however, will be more than offset by reduced expenditure of others. This is because savers tend to be richer than borrowers and tend to spend a smaller percentage of their income.

The difference that exists between the proportion of income that high and low income groups spend means that a more even distribution of income and transfer of income from the rich to the poor, is likely to increase expenditure in a country.

Advances in technology may also increase expenditure. This is because new products, such as plasma TVs, encourage people to replace existing products.



Making a spending decision

Income and consumption

People can either spend or save their disposable income. When people are very poor, they cannot afford to save. All of their disposable income will be spent on buying basic necessities to survive. In fact, some may have to spend more of their income in order to be able to buy enough food, clothing and pay for housing. When people spend more than their income, they are said to be *dissaving*. This is because they are either drawing on their past savings or, more likely, borrowing other people's savings.

As income rises people are able to both spend and save more. As people become richer they buy more and better quality products. However, whilst the total amount spent rises with income, the proportion spent tends to fall. A top class footballer in Italy may earn a disposable income of \$80 000 a week, whilst an unemployed person in Italy may live on benefits of \$120 a week. The unemployed person may spend all of the \$120. The footballer can clearly afford to spend more and is likely to do so. However, even if he has a very luxurious lifestyle, it is unlikely that he will spend all of the \$80 000. If he spends \$60 000 (a huge amount) he will only be spending 75% of his disposable income, whilst the unemployed person is spending 100% of his income.

The proportion of income which people spend is sometimes referred to as the **average propensity to consume (APC)**. It is calculated by dividing **consumption** by disposable income. Table 17.1 shows that as income rises, expenditure increases, but the APC falls. For example, at an income of \$300 people spend 90% of their income.

Disposable income (\$)	Consumption (\$)	APC
100	120	1.2
200	200	1.0
300	270	0.9
400	320	0.8
500	350	0.7

Table 17.1: The relationship between disposable income and consumption

The relationship between disposable income and consumption can also be shown graphically. Figure 17.1 shows that at very low levels of income, there is dissaving. At Z level of income, all income is spent. Then as income rises past Y, saving occurs. Over the complete range of income, expenditure continues to rise but it rises at a slower rate.

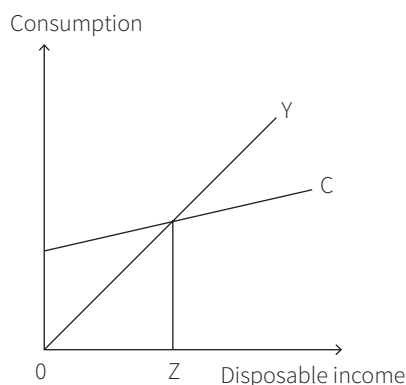


Fig. 17.1: The relationship between disposable income and consumption



KEY TERMS

Average propensity to consume (APC): the proportion of household disposable income which is spent.

Consumption: expenditure by households on consumer goods and income.

Pattern of expenditure

Different income groups tend to have different patterns of spending. The poor tend to spend a higher proportion of their income, and total expenditure, on food and clothing than the rich. This is not because they eat more and wear more than the rich! Indeed, the rich are likely to spend more in total on food, as they tend to buy a greater variety and higher quality of food, and more on clothes, as they buy more clothes and clothes of a higher quality. The amount they spend is, however, usually a smaller proportion of their income and total expenditure. A rich US family may spend \$400 a week on food and clothing out of a disposable income of \$2000 and a poor family may spend \$40 out of a disposable income of \$100. This would mean that 40% of the disposable income of the poor family goes on food and clothing, as against 20% of the disposable income of the rich one.

The rich spend more, both in total and as a proportion, on luxury items, consumer durables, entertainment and services. For example, the rich spend more on cars, jewellery, theatre trips and foreign holidays. This difference in spending patterns also occurs between countries, with spending, as a proportion of disposable income and total expenditure on food and other necessities, being higher in poor countries, while spending on luxuries forms a greater share of disposable income and total expenditure in rich countries.

Spending patterns vary within income groups in a country, according to differences in household composition, tastes and age. Households without children are likely to spend a higher proportion on recreation and eating out than households with children. Some households may value cultural activities more than others, whilst others may be keener to spend more on medical care. The retired tend to spend a higher proportion, than average, on heating and a lower proportion on transport and entertainment. On the other hand, people in their late teens and twenties often spend a higher proportion on clothing and entertainment.



TIP

It is important to distinguish between the absolute amount spent and percentage of expenditure spent on a particular item or category of items.

GROUP ACTIVITY 1

The table shows how three people spend their disposable income. Place the three people in the most likely order of disposable income from the richest to the poorest.

	Person A	Person B	Person C
Food and clothing	35%	45%	15%
Consumer durables	35%	35%	45%
Leisure goods and services	30%	20%	40%

17.2 Saving

There are a number of forms of saving. Some forms are *contractual*. This means that people sign a contract, agreeing to save a certain amount on a regular basis. The main forms of contractual saving are insurance policies and pension schemes.

Non-contractual saving includes placing money in bank and building society accounts, buying government securities, shares and property. By its very nature, non-contractual saving varies more with time and is more heavily influenced by changes in interest rates than contractual saving.

Reasons for saving

People save for a variety of reasons. Some people are what are called target savers. This means that they save to gain a particular sum of money for a particular purpose. This may be, for example, to buy a car or a home.

People also save for their retirement, for their children's future, for precautionary reasons and to provide an income or capital gain. When people retire, their income from their work stops. Even if they receive a state pension and an occupational pension, income from savings can make their retirement more comfortable.

Some people save in order to help finance their children's education or to leave them an inheritance when they die. Most people like to have some savings to cope with emergencies and unexpected problems and take advantage of any unforeseen opportunities. For example, people may lose their jobs, their drains may become blocked or they may see a car for sale (at what they regard to be a bargain price).

Some people also save to increase their current income. The more people save, the more interest they tend to receive not only in total, but also per unit saved. This is because financial institutions usually reward, disproportionately, those who save large amounts. Those who hold their savings in the form of shares, government bonds or a house, may also hope that they will benefit from a rise in the value of their assets.

Influences on saving

Among the influences on saving we have:

- **Income.** As with consumption, the main influence on saving is disposable income. As disposable income rises, the total amount saved and the proportion saved (the **savings ratio**) increases.
- **Wealth.** The wealthier people are, the easier they will find it to save.
- **The rate of interest.** A rise in the rate of interest may reduce some target saving as people can now attain their target amounts by saving less. Overall, it is likely to increase non-contractual saving as it pushes up the reward for saving.
- **The tax treatment of savings.** Tax concessions on the income earned from saving will encourage people to save. In a number of countries there are some tax free savings schemes where no tax is charged on the interest earned.
- **The range and quality of financial institutions.** The greater the variety of saving opportunities on offer, the more likely people will find a scheme that will suit them. Confidence in the ability of institutions to pay an interest and repay the amount saved, is also important.
- **Age structure.** The young and the old tend to save less than middle-aged people. The old, especially the very old, draw on their savings to ensure a reasonable living standard during retirement.
- **Social attitudes.** The attitude to saving varies between countries. In some it is held in high esteem, while in others people prefer to spend most of their income when they receive it.



KEY TERM

Savings ratio:
the proportion of household disposable income that is saved.

INDIVIDUAL ACTIVITY 1

The table below shows the household savings ratios of selected countries in 2016.

Country	%
Bangladesh	9.8
Chile	20.0
India	23.2
Pakistan	10.5
South Africa	-0.80

- Explain how South Africa could have had a negative savings ratio.
- What was the rate of household expenditure in Bangladesh, in the period shown?
- What might Chile's and Bangladesh's savings ratios suggest about the relative income levels in the countries in this period?
- Explain the possible reasons, other than differences in disposable income, which may be responsible for the savings ratio of India being higher than that of Pakistan.



TIP

Remember that a rise in disposable income enables people to both spend and save more.



KEY TERM

Average propensity to save (APS): as savings ratio, it is the proportion of household disposable income that is saved.

Income and saving

Saving is disposable income which is not spent. As already noted, it is not possible to save below a certain income level. As disposable income rises, both the total amount saved and the proportion of disposable income saved increases. Table 17.2, using the same disposable income and consumption figures as in Table 17.1, shows this. The **average propensity to save (APS)** is calculated by dividing saving by disposable income. The APS is the same as the savings ratio or savings rate.

Disposable income (\$)	Consumption (\$)	Savings (\$)	APS
100	120	-20	-0.2
200	200	0	0.0
300	270	30	0.1
400	320	60	0.2
500	350	150	0.3

Table 17.2: The relationship between disposable income and saving

At an income of \$500, people save 30% of their disposable income. It is useful to note that APS plus APC add up to 1, since disposable income is either spent or saved. Figure 17. 2 shows the usual relationship between disposable income and saving.

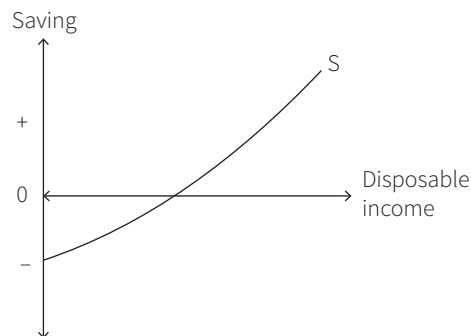


Fig. 17. 2: The relationship between disposable income and saving

INDIVIDUAL ACTIVITY 2

The table shows the relationship between disposable income, consumption and saving.

- Copy and complete the table
- Calculate what proportion of income is spent when income is (i) \$100 and (ii) \$300

Income (\$)	Consumption (\$)	Saving (\$)
100	100	
200	180	
300	240	
400	280	
500	300	

INDIVIDUAL ACTIVITY 3

The savings ratio in Japan fell from 14% in 1990 to 11.6% in 2016. One reason given for this by Japanese economists was the rise in the number of retired people in relation to the number of workers.

- Define the term *savings ratio*.
- Explain why the savings ratio may fall due to a rise in the number of retired people in relation to the number of workers.

17.3 Borrowing

Borrowing moves income from people who do not want to spend it now to those who need more money than they currently have. Some people who run into financial difficulties borrow in a bid to maintain their living standards. These people hope that their income will soon rise, so that they can repay the loans and overdrafts. Other people borrow in order to, for example, buy a car or go

**KEY TERM**

Mortgage: A loan to help buy a house.

on a foreign holiday. Most people who buy a house have to borrow some of the money to finance their purchase. The loan they take out is called a **mortgage**. People may also borrow to finance their own education or the education of their children or to cover healthcare costs.

Borrowing enables people to spend more than their current disposable income. It does, however, involve a cost in the form of interest which has to be paid. It is also usually a temporary situation as loans and overdrafts have to be repaid. The poor, whilst sometimes having a greater need to borrow, are likely to experience greater difficulty in borrowing. This is because they will have less security to offer for any loan and lenders may be more worried about their ability to keep up interest payments and repay any loan. The influences affecting the amount of money people borrow include:

- **The availability of loans and overdrafts.** The easier it is to borrow, the more likely people are to borrow.
- **The rate of interest.** A rise in the rate of interest will increase the cost of borrowing, which is likely to reduce borrowing.
- **Confidence.** The more confident people are about the future, the more they will anticipate earning in the future. They may adjust their spending patterns now, financing some of their extra expenses by borrowing with an expectation that their higher income will enable them to repay their loans.
- **Social attitudes.** Some countries and some groups within countries are more concerned about the risks of people getting into debt by borrowing, than others.

Summary

You should know:

- Disposable income can be spent or saved.
- As disposable income rises people spend more in total, but less as a percentage.
- Saving rises in total and as a percentage of disposable income, as people get richer.
- The poor spend a higher proportion of their total expenditure and disposable income on food and other basic necessities than the rich, but a smaller proportion on luxuries.
- The influences on expenditure include the level of disposable income, wealth, confidence, the rate of interest, the distribution of income and advances in technology.
- Some forms of saving are contractual and some are non-contractual.
- People save to buy certain products, to make their retirement more comfortable, to help their children, to cope with unexpected expenses and opportunities and to earn income.
- The main influences on saving are income, wealth, the rate of interest, the tax treatment of saving, the range and quality of financial institutions, age structure and social attitudes.
- By borrowing, people can spend more than their disposable income.
- The key influences on borrowing are the availability of loans, the rate of interest, confidence and social attitudes.

Multiple choice questions

1 Interest rates rise. How is this likely to affect household savings and expenditure?

Saving Expenditure

- A rise rise
- B rise fall
- C fall fall
- D fall rise

2 What is most likely to cause a rise in expenditure in an economy?

- A A rise in confidence
- B A rise in income tax
- C A reduction in wealth
- D A more uneven distribution of income

3 What can cause a fall in saving?

- A A rise in the range of financial institutions
- B A fall in the rate of interest
- C A rise in disposable income
- D A fall in the rate of tax imposed on earnings from saving

4 What must be occurring, if consumption is less than disposable income?

- A Borrowing
- B Income levels are falling
- C Income is being redistributed to the poor
- D Saving

Four-part question

- a Identify the *opportunity cost of saving*. (2)
- b Explain **two** reasons why young workers may save less than middle-aged workers. (4)
- c Analyse the causes of a reduction in borrowing by households. (6)
- d Discuss whether or not an increase in income will cause an increase in spending. (8)



Chapter 18

Workers

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Learning objectives

By the end of this chapter you will be able to:

- analyse the wage and non-wage factors that influence an individual's choice of occupation
- analyse how wages are determined
- discuss the influences on wage determination
- draw demand and supply diagrams to analyse labour markets
- discuss the reasons for differences in earnings
- discuss the advantages and disadvantages of division of labour/specialisation for workers, firms and the economy

Introducing the topic

What career would you like to follow? What influences your choice? One factor, although it is unlikely to be the only one, is the wages you might expect. Why do you think some careers get paid more than others? Do you think you would enjoy a job if it was very specialised?

18.1 Factors that influence an individual's choice of occupation

There is a wide range of factors that may influence a person's choice of jobs. These can be divided into wage factors (also called monetary or pecuniary factors), non-wage factors (also referred to as non-monetary or non-pecuniary factors) and limiting factors.

Wage factors

An important influence on what jobs a person decides to do, is the pay on offer. The total pay a person receives is known as his **earnings**. In addition to the basic wage, earnings may also include overtime pay, bonuses and commission.

Wages

Wages may also be referred to as pay or salaries. Generally, the higher the **wage rate** on offer, the more a person would want to do the job. Higher pay is one reason why working for example as a doctor is a more attractive prospect than working as a cleaner.

The wages of many workers are based on a standard number of hours. Some workers' wages, however, vary according to the number of hours they work (a time rate system) or the amount they produce (a piece rate system). The former benefits the employers as they can easily estimate their labour costs and also the workers as they can bargain collectively about the rate paid. However, a time rate system does not reward hard work since it pays lazy and industrious workers the same.

This problem is overcome by a piece rate system, which pays workers according to their output. This system can only be used if a worker's output can be easily measured and the product is standardised. This is why, though it is sometimes found in agriculture and manufacturing, it is very uncommon in the services sector. For example, it could not be applied to doctors. One doctor may carry out three operations, while another may perform eight operations in a day. The three operations, however, might have been more complex operations. Less supervision may be needed with a piece rate system, but workers may focus on quantity at the expense of quality. Also, the health of some workers may suffer, if they feel pressurised to produce a high output.



KEY TERMS

Earnings: the total pay received by a worker.

Wage rate: a payment which an employer contracts to pay a worker. It is the basic wage a worker receives per unit of time or unit of output.



Doctors are well-trained and well-paid

Overtime pay

Overtime pay may be paid to the workers who work in excess of the standard working week. It is usually paid at a higher rate. Overtime can benefit both employees and employers. Workers with young families, for example, are often anxious to increase their pay and may be attracted by jobs that offer regular overtime. It enables employers to respond to higher demand without taking on new workers, until they are sure that the higher demand will last. It is easier, less costly and less disruptive to reduce overtime than to sack workers if demand declines.

There is a risk, however, that workers may become tired as a result of working for longer hours. If this does occur, the output they produce over the day may not increase and even its quality may fall. In fact, some employers have found that when workers are aware that they are going to be working for longer hours, they pace themselves accordingly and put less effort into each hour.

Bonuses

A bonus is an extra payment. It can be paid to workers who produce above a standard amount, finish a project ahead of time, secure a profitable contract or contribute to higher profits in some other way. Bonuses can provide an incentive for workers to produce both a high and a good quality output or to stay with a firm. However, care has to be exercised while awarding them. Resentment may be caused if it is thought that they are awarded unfairly. This resentment can lead to those workers who do not receive a bonus becoming demotivated. As a result, the quantity or quality of their output may fall and some workers may resign.

Those people who welcome a challenge and have confidence in their own ability may be attracted to the jobs which pay bonuses. In recent years, there have been instances when very large bonuses have been paid to some workers in the financial sector, particularly in merchant banking.

Commission

Commission is often paid to the sales people. It involves them receiving a proportion of the value of the sales they make. Sometimes, this is in addition to a standard wage and sometimes it makes up their total payment.

INDIVIDUAL ACTIVITY 1

Chinese airlines are among the fastest growing, carrying more and more passengers. The country's airline industry is expanding more rapidly than the rate at which pilots can be trained. As a result, it is seeking to recruit foreign pilots. In 2016, some Chinese airlines were offering pilots from other countries wages of \$320 000 a year. This was four times the average wage of Brazilian pilots and approximately one and half times the average wage of US pilots.

- a How much were pilots paid, on average, in Brazil in 2016?
- b Explain what would be expected to happen to pilots' pay in Brazil.

Non-wage factors

People do not always choose the highest paid job on offer. They take into account a range of other factors including job satisfaction, type of work, working conditions, working hours, holidays, pensions, fringe benefits, job security, career prospects, size of firm and location.

Job satisfaction

Nursing and teaching are not particularly well-paid occupations and a number of those undertaking them can earn more in other occupations. These jobs, however, can provide a high degree of job satisfaction. Nurses and teachers can derive considerable satisfaction from improving people's health and educating students. Of course, some jobs provide both high pay and a high level of job satisfaction. Brain surgeons, TV presenters and top football players all have interesting, challenging and well-paid jobs.

Type of work

Most people would rather do non-manual than manual work. This is because it is physically less tiring and generally offers more mental stimulation. Non-manual work also tends to be better paid. People also like to do jobs which enjoy a high status and most of these tend to be non-manual. For example, university professors tend to be held in higher regard than stone-masons. Some people are prepared to undertake dangerous work, for example deep sea diving and bomb disposal, but most people prefer to work in a safe environment.

Working conditions

Working conditions are an important determining factor. People like to work in pleasant surroundings, with friendly colleagues and enjoying regular breaks.

Working hours

Occupations vary in terms of the number of hours expected from workers and the timing of those hours. Managers and senior officials tend to work for longer hours than shop workers.

Some occupations offer workers the opportunity to work part-time, say 16 hours a week. A number of them also offer flexible working hours, where workers alter the hours they work from week to week. This is sometimes to suit the employer, with workers working longer hours when demand for the product is high, and sometimes to suit the worker. An example of the latter case is parents engaging in term-time working.

Nurses, emergency plumbers and catering staff often work unsociable hours, for example they often have to work at nights and in the evenings when other people are resting or enjoying themselves. Some nurses and other workers, including factory workers, work in shifts. This involves working at different periods of the day and night. There may be day and night shifts or three eight-hour shifts during the day.

Holidays

In a number of countries, the law sets down a minimum length of holiday entitlement for full-time workers. Even in these countries, however, the length of holidays varies. Teaching is one occupation, well known for the length of holidays on offer. In fact, one reason for people preferring to go for teaching is the benefit of long holidays. Having time off when their children are on holiday is an advantage for parents.

Pensions

With people living longer in most countries, occupational pensions are becoming an important influence. There is considerable variation in the provision of occupational pensions. Some jobs provide their workers with generous pensions, whilst others do not provide any financial help post retirement. In many countries, for example, the police can retire relatively early on good pensions, whereas casual agricultural workers are unlikely to receive a pension. Generally, workers in the public (state) sector receive more generous pensions than those in the private sector.

Fringe benefits

Fringe benefits are the extra benefits provided to workers by their employers. These may include free or subsidised meals, health schemes, and social and leisure facilities. Playing for a major football club, such as Real Madrid or Manchester United, will bring a wide range of fringe benefits. The club may, for example, buy a player a house, arrange insurance for him and get his car repaired.

Job security

Many workers are attracted by occupations which offer a relatively high degree of job security. A high degree of job security means that workers are unlikely to be made redundant. Such a situation is more likely to occur in occupations where there is a high demand for the product and workers are given long-term contracts. High demand for the product would mean that employers would not want to get rid of the workers and a contract would restrict their ability to do so. Civil servants often have a high degree of job security, but casual workers, including agricultural and building workers, have little job security and can be dismissed at short notice.

Career prospects

People are often prepared to accept low wages at the start of their careers, if they think there is a good possibility that they will gain promotion to a well-paid and interesting post. Trainee accountants, barristers and doctors are not usually highly paid and often work for long hours at the beginning of their careers. They will expect, however, that as they pass examinations and gain experience, their pay will rise to a relatively high level and their work will become more challenging.

Size of the firms

People are often attracted to jobs in large firms and organisations. This is because such firms and organisations often pay more and offer better career prospects, job security and fringe benefits than smaller ones. For example, a number of people are attracted to work for the country's civil service for such reasons. On the other hand, some people prefer to work for smaller firms. This is because they believe that the atmosphere will be more friendly than in a large firm. Studies have found that labour relations are indeed better in small factories and offices.

Location

People may choose an occupation which is close to their home. This will mean that they do not have to spend much money or time on travelling to and from work.

GROUP ACTIVITY 1

In 2016, in the UK five of the most popular occupations for new graduates were in accountancy, the civil service, investment banking, public sector healthcare (the National Health Service NHS) and public sector broadcasting (BBC). Some of those who applied for jobs with the NHS were attracted by what they considered to be good career opportunities provided by the country's largest employer.

- a** How many of the five occupations mentioned are in the public sector in the UK?
- b** Apart from good career opportunities, explain two possible reasons for a graduate to opt for a job in public sector healthcare.

Limiting factors

Most people would obviously like a well-paid, satisfying job with good working conditions, long holidays, generous fringe benefits, good career prospects and a convenient location.

In practice, however, people's choice of occupation is limited by a number of factors including the qualifications they have, the skills they possess, the experience they have and the place where they live. The more occupationally mobile and the more geographically mobile people are, the wider the choice of occupation available to them.

Occupational choice and opportunity cost

Choosing to take up one occupation involves rejecting other occupations. Workers have to decide what is important to them. A worker may be prepared to give up a well-paid job, or the opportunity to undertake such as job, in favour of a less well-paid job that offers more job satisfaction. For example, a merchant banker may resign to take up a job as a teacher.

GROUP ACTIVITY 2

- Identify three reasons why a person may want to be a pilot.
- Explain three reasons why a person, despite wanting to be a pilot, may not succeed in becoming a pilot.



TIP

If you are asked a question about *non-wage factors* influencing a person's choice of occupation it is not relevant to include a discussion on wages, overtime, pay, bonuses or commission.

18.2 Wage determination and the reasons for differences in earnings

The key factors that determine the amount of pay received by workers and why some workers earn more than others are the demand for and supply of their labour. Other influencing factors include the relative bargaining power of employers and workers, government policies, public opinion and discrimination.

Demand and supply

The higher the demand for and the lower the supply of workers in an occupation, the higher the pay is likely to be. Figure 18.1 shows the markets for doctors and for cleaners.

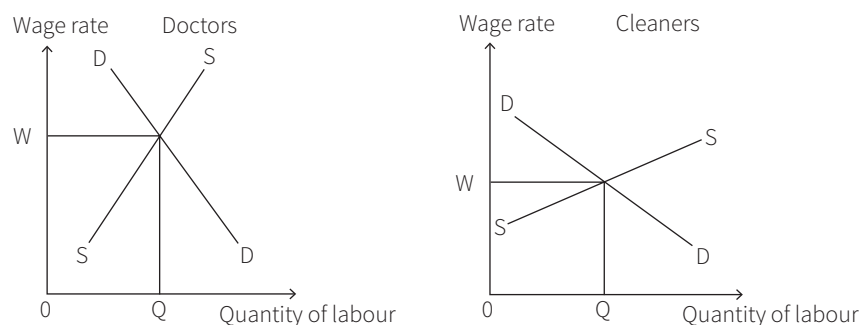


Fig. 18.1: The market for doctors and cleaners

The supply of doctors is low, relative to demand for their services. There is only a limited number of people with the necessary qualifications, and the willingness and ability to undertake a long period of challenging training to become doctors.

It might also be expected that the supply of cleaners would be low and their pay high, as few people would want to work as cleaners. Cleaning is not a particularly interesting job as it can involve unsociable hours, not very pleasant working conditions and does not usually offer good career prospects. The supply of cleaners, nevertheless, is often high relative to their demand. This is because although some people may not be keen to work as cleaners, they do so because the job does not require any qualifications, or special skills, and only a minimum amount of training is sufficient. This often results in the supply of cleaners being high relative to their demand.

Unskilled workers are generally paid less than skilled workers. Demand for skilled workers is high, whilst their supply is low. There are two main influences on the demand for workers. One is the amount of output they can produce and the other is the price for which that output can be sold. Skilled workers are usually highly productive, producing both a high quantity and a high quality of output per hour. Also, the supply of skilled workers is usually lower than that of unskilled workers.

Supply also explains why some workers, who are involved in dangerous jobs, are well-paid. There is a limited supply of people who are willing to work as steeplejacks. To try to overcome this reluctance a number of employers pay workers undertaking this job a higher rate than that paid to other building workers.

The supply of workers in the agricultural and manufacturing sectors varies. In a number of countries, including some Asian and African countries, there is a surplus of agricultural workers which results in lower agricultural wages. The demand for and price of products made by manufacturing industries tend to increase at a more rapid rate than those made by primary sector industries. This helps to keep the demand for manufacturing workers high, relative to agricultural sector workers.

Demand and supply of workers in the private and public sectors vary among countries. In some countries the public sector is expanding, whilst in others it is contracting. A number of people like working in the public sector because of greater job security, longer holidays and better pensions than those offered in the private sector.

INDIVIDUAL ACTIVITY 2

Under which circumstance is an occupation likely to be well-paid?

- a** Demand is high/low.
- b** Supply is high/low.
- c** Workers have strong/weak bargaining power.
- d** Workers are skilled/unskilled.

Relative bargaining power of employers and workers

Wages are likely to be higher in occupations where workers have strong bargaining power relative to employers. This is more likely to be the case if most of the workers are members of a trade union or professional organisation which can bargain collectively on their behalf.

Most doctors and lawyers, for example, belong to their professional organisation which represents their interests. This bargaining position is strengthened by the knowledge that they would be difficult to replace with other workers and any industrial action taken by them would have serious consequences. In contrast, most cleaners and waiters do not belong to a workers' organisation. Their bargaining strength is further reduced by the fact that they are usually widely dispersed and therefore are not organised as a strong union. Also, they can be replaced by other workers relatively easily.



Public sector workers in many countries, including the UK and India, are more likely to belong to a trade union or professional organisation than private sector workers. In some cases, this can be attributed to the fact that the governments are more willing to negotiate with trade unions than private sector employers. In other cases, it is because public sector workers find it easier to get together to operate as one bargaining body.

Public sector workers also tend to be affected by government labour market policies more than their counterparts in the private sector. These policies may or may not raise wages. A government is, for example, likely to ensure that all its workers are paid at, or above, a **national minimum wage (NMW)**, whereas some private sector firms may seek to find ways round such legislation. If, however, a government introduces a policy to hold down wage rises in a bid to reduce inflationary pressure, it is in a stronger position to restrict the wage rises of its own workers.



KEY TERM

National minimum wage (NMW): a minimum rate of wage for an hour's work, fixed by the government for the whole economy.

Government policies

Government policies affect wages in a variety of ways. A government clearly influences the wages of those workers whom it employs in the public sector. Its policies also influence wages in the private sector. Those policies, which promote economic growth, tend to push up wages throughout the economy as they increase demand for labour.

Specific government policies may have an impact on particular occupations. For example, if a government introduced a law requiring car drivers to take a test every ten years, demand for driving instructors would be likely to rise, pushing up their wages.

Government labour market policies, of course, directly affect wages. One of the best known labour market policies is a national minimum wage (NMW). Such a policy imposes a wage floor, making it illegal to pay a wage rate below that. The aims behind a NMW are to raise the pay of low-paid workers and reduce poverty. To have any impact on wages, however, a NMW must be set above the market equilibrium wage rate. This has led some economists and politicians to argue that it may cause unemployment.



LINK

Chapter 15.2 Maximum and minimum prices

Figure 18.2 shows a NMW raising the wage rate from W to W_1 , but this causes unemployment since the supply of people wanting to work at this wage rate exceeds demand for workers' labour.

Other economists argue that a NMW can raise both the wage rate and employment.

They think that paying a higher wage to workers will raise their motivation and hence their productivity. This, combined with higher demand for products arising from higher wages, can increase demand for labour. Figure 18.3 shows that if demand for labour does increase,

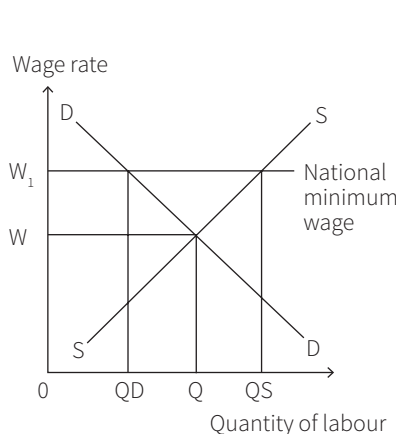


Fig. 18.2: A national minimum wage causing unemployment

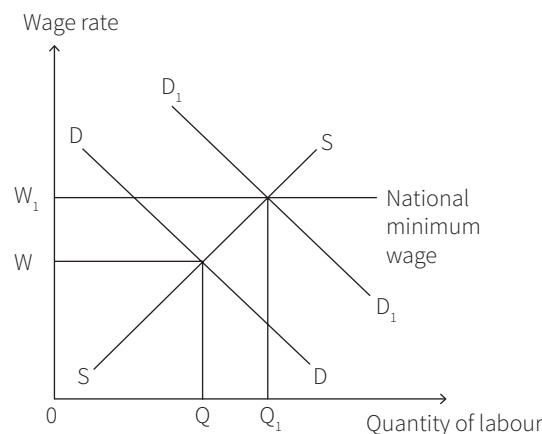


Fig. 18.3: A national minimum wage with rising employment

**KEY TERM**

Wage differential:
the difference in
wages.

the equilibrium wage rate may be equal to NMW. The introduction of a NMW may provoke some workers, who were previously being paid a wage at or just above that level, to press for a wage rise to maintain their **wage differential**.

Public opinion

Public opinion tends to consider that jobs which involve long periods of study and training should be highly rewarded. There are variations in how some occupations are regarded in different countries. For example, engineers are more highly regarded in Scandinavian countries than they are in the UK. A number of occupations are generally held in high esteem, like doctors and nurses.

Public opinion can influence wage rates in a number of ways. One is through the wage claims made by the workers. For example, firefighters tend to regard their labour as being worth as much as that undertaken by the police. So, if the police get a pay rise, firefighters are likely to seek an equivalent pay rise. In most countries, there is usually a league table of wage rates, with workers trying to maintain their position in the table and challenging it only occasionally. So, for example, a hotel porter is unlikely to expect to be paid as much as a veterinary doctor.

Public opinion can put pressure on a government to revise the wages it pays to the public sector workers. The public may, for example, believe that nurses should be more highly rewarded. A government seeking to gain or maintain popular support, may feel compelled to raise nurses' pay. There are a relatively high number of women working in the nursing profession. In some countries, social attitudes are against working women. In these countries, it is harder for women to find employment and they may be receiving significantly less pay than their male counterparts.



Firefighting can be a high-risk job

INDIVIDUAL ACTIVITY 3

Factory workers in the garment industry in Mauritius are among the lowest paid in the country, earning less than the workers in mining, transport and construction industries. Most work on 'piece rates' and are paid a productivity bonus if they exceed their production targets. As their pay is so low, they are heavily dependent on both bonuses and overtime. These extra payments take their earnings above the national minimum wage.

- a** Define:
- i** piece rates
 - ii** national minimum wage.
- b** Explain three possible reasons why factory workers in the garment industry may receive lower pay than construction workers.

Discrimination

Discrimination occurs when a group of workers is treated unfavourably in terms of employment, the wage rate, the training received and/or promotional opportunities. For example, some employers may be reluctant to have female workers. The lower demand will result in lower pay, as shown in Figure 18.4.

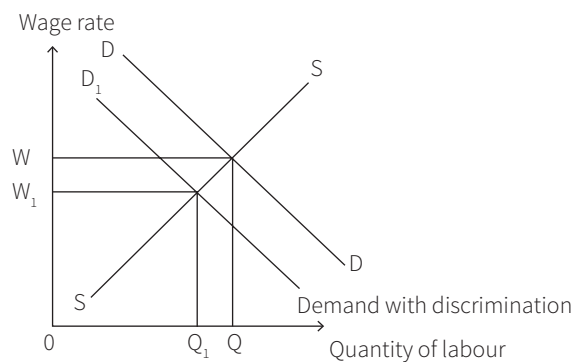


Fig. 18.4: The effect of discrimination

Increasingly, governments are making such discrimination illegal. Nevertheless, throughout the world, women are (on average) still paid less than men. One reason for this is that women tend to work for fewer hours than men. Even when hourly wage rates are considered, however, women still get paid less than men. There are a number of reasons for this:

- women tend to be less well qualified than men, but this is changing in a number of countries, with more women now going to university than men
- they tend to be more heavily concentrated in low-paid occupations
- they are less likely to belong to trade unions and professional organisations
- they are still discriminated against.

INDIVIDUAL ACTIVITY 4

Latin America has a relatively large gender gap. In 2015 men of the same age and level of education earned 17% more than women. In that year, female workers in Chile earned 18% less than male workers. A smaller proportion of women are working in Chile, as compared to any other Latin American country. To encourage more women to enter the labour force and to generate greater wage equality, the Chilean government introduced a new labour code for the public sector. This forbids pregnancy tests, removes the need for mention of a candidate's gender from job applications and requires training during normal working hours. The government is encouraging the private sector to adopt the code as well.

- Identify two possible reasons for a smaller proportion of working women in Chile than in other Latin American countries.
- What evidence is there in the passage that suggests female workers are being discriminated against in Chile?

18.3 Why earnings of occupations change over time

Change in demand and supply of labour

The main reason for a rise or, less commonly, fall in earnings is a change in demand and/or supply of labour. Other reasons include changes in the stages of production, in bargaining power, changes in government policies and changes in public opinion.

Changes in the demand for labour

If demand for labour increases, earnings are likely to rise. The wage rate may be pushed up and bonuses increased. In addition, more overtime may become available and it may be paid at a higher rate too. Figure 18.5 shows the wage rate for bricklayers being driven up by an increase in demand for their labour.

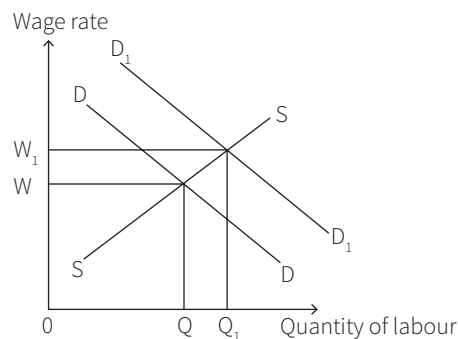


Fig. 18.5: The effect of an increase in the demand for bricklayers' labour

What can cause demand for labour to increase? There are three main causes:

- An increased demand for the product. Demand for labour is a *derived demand*. The higher the demand for products, the greater is the number of workers employed.
- A rise in labour productivity. Higher productivity increases the return from hiring workers.
- A rise in the price of capital. In some occupations, it is possible to substitute labour for capital in the production process.

In recent years, the pay of pilots has been rising throughout the world. More and more people are travelling by plane for both business purposes and leisure and hence the demand for the services of pilots is increasing. In contrast, in many countries the wages of agricultural

workers have been falling relative to the wages of other workers. Demand for their labour has been declining, in part, because it has become easier to replace it with capital.

Changes in the supply of labour

A decrease in the supply of labour for a particular occupation or sector would be expected to raise the wage rate. Among the factors that could cause a decrease in the supply of workers are:

- A fall in the labour force. If there are fewer workers, in general, it is likely that an individual business will find it more difficult to recruit workers.
- A rise in the qualifications or length of training required to do the job. This will reduce the number of people eligible for the job.
- A reduction in the non-wage benefits of a job. If, for example, the working hours or risks involved in doing a job increase, fewer people are likely to be willing to do it.
- A rise in the wage or non-wage benefits in other jobs. Such a change would encourage some workers to switch from one occupation to another.

Consider the situation shown in Figure 18.6. One of the reasons the wage for accountants, for example, has risen is that the qualifications to do the job have increased. The figure shows the wage rate of accountants being driven up by a decrease in the supply of their labour.

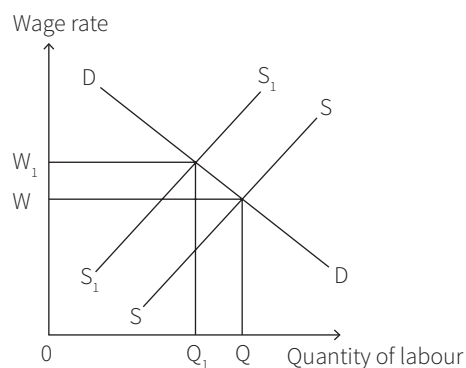


Fig. 18.6: The effect of a decrease in the supply of accountants' labour

GROUP ACTIVITY 3

India has one of the fastest growing air travel markets in the world. It started to expand in the mid-1990s when the monopoly of state-run Air India ended, and Jet Airways and Air Sahara were launched. Its rate of expansion accelerated in 2003 with the founding of Air Deccan, a 'no-frills' carrier. In 2005 Spice Jet, Go Air and Kingfisher Airlines were launched. More airlines have been established since then, for example, Pinnacle Air (2013), TruJet (2015) and Air Carnival (2016). This expansion has resulted in an increase in the number of pilots and air cabin crew employed in India.

- Explain what is likely to have happened to the wages of air cabin crew in India in recent years.
- Explain two reasons for pilots receiving a higher remuneration than the air cabin crew.

Changes in the stages of production

People working in the **primary sector** are usually less well-paid than those who work in **secondary** and **tertiary** sectors. This is because the workers in the primary sector tend to be less skilled and have fewer qualifications. In addition, as an economy develops, the demand



LINK

Chapter 10.2 The effect of changes in supply



TIP

It is essential that you apply demand and supply analysis when analysing the differences in earnings between different occupations.



KEY TERMS

Primary sector:

covers agriculture, fishing, forestry, mining and other industries which extract natural resources.

Secondary sector:

covers manufacturing and construction industries.

Tertiary sector:

covers industries which provide services.



LINK

Chapter 20.1 Classification of firms (The stages of production)

for primary sector workers usually declines. Demand for workers in the secondary sector first increases and then demand for workers in the tertiary sector. Some of the best-paid workers are employed in the tertiary sector. For example, some judges and some surgeons receive high wages. Demand for a number of services rises with income and high qualifications needed to carry out a number of jobs in the tertiary sector. Of course, there are some high-paid workers in the primary sector and some low-paid workers in the tertiary sector. For example, an engineer working in the oil industry is likely to earn more than a shop assistant.

Changes in bargaining power

A change in unions' bargaining power or willingness to take industrial action can affect earnings. If, for example, a government removes a ban on agricultural workers forming unions collectively, it would be expected that the wage rate of agricultural workers would rise. In recent years, the greater willingness of UK NHS workers to threaten industrial action is perceived as one reason why their pay has increased.

Changes in government policy

The pay of public sector workers is likely to rise if the government decides to expand the public sector. A government decision to reduce road building, in contrast, may reduce the wages of those working for private sector road construction firms. Among the other ways a governments can change wage rates are:

- Raising the national minimum wage will increase the pay of low-paid workers.
- Despite the rise in supply, improved education may actually raise the wages of skilled workers, as it may increase their demand more than the supply. This is because employing more skilled workers should reduce costs of production and increase international competitiveness. If this is the case, demand for products produced by the country's firms should increase and more multinational companies (MNCs) may be attracted to set up their franchises in the country.
- Government policies on immigration can also affect wages. Making it easier for foreign people to live and work in the country should increase the supply of labour. If a country is short of, for example, information and communication technology (ICT) workers, giving more permits to foreign workers should increase the supply of such workers and may hold down wage rises too.
- The introduction of government anti-discrimination laws may help to increase the career prospects and wages of disadvantaged groups. Such legislation works, in part, by changing public opinion. In many countries attitudes to working women have become more favourable, and the capabilities and services of female workers are being valued more. This, combined with a rise in the educational performance of women, has raised women's wages.
- Advances in technology can alter wage rates. In some cases, it can put downward pressure on wage rates by reducing demand for workers. For example, new technology in the banking industry has reduced the number of banking staff in a number of countries. In other cases, however, new technology can increase wages. For example, the development of online shopping in recent years has increased demand for the services of delivery drivers.

Changes in public opinion

Over time, how occupations and those who undertake them are viewed can change. For instance, one possible reason why the relative pay of journalists has fallen in the USA in recent years is a decline in the regard the occupation is held in. In contrast, the pay and job

opportunities for women is increasing in Saudi Arabia where social attitudes about women working are changing.

GROUP ACTIVITY 4

In a number of countries there is discrimination against workers on the grounds of age. Both young and old workers are paid less than other workers in these countries.

- Explain three reasons which may explain payment of lower wages to workers who are discriminated against.
- How may a payment of higher wages to both older and younger workers reduce labour costs?

Changes in the earnings of individuals over time

The earnings of most individuals change over the course of their working life. For most workers, their earnings increase as they get older. This is because the longer people work, the more skilled and productive they tend to become. Their productivity increases because they gain experience and, in some cases, undertake training. Becoming more skilled increases a worker's chances of being promoted and achieving higher pay.

Some workers may switch employers in pursuit of higher pay. Others may agree to take on more responsibility for more pay. There is a chance, however, that earnings may fall with passage of time. Some older workers may decide to give up working overtime and some may switch to less demanding work. The firm, or organisation, that people work for, may experience financial difficulties and as a result it may reduce wages and cut bonuses.

18.4 The extent to which earnings change

The magnitude of the change in the wage rate due to a change in demand for, or supply of, labour is influenced not only by the size of the change, but also by the **elasticity of demand for labour** and the **elasticity of supply of labour**. Figure 18.7 shows demand for labour increasing by the same amount in both cases, but the impact on the wage rate is much greater in the first case where both the demand for and supply of labour are inelastic.

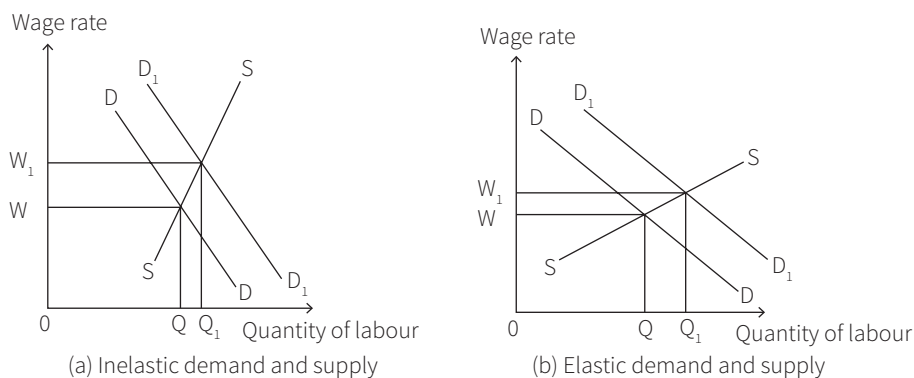


Fig. 18.7: The influence of elasticity on the effect of an increase in demand for labour

The main determinants of elasticity of demand for labour are:

- **The proportion of labour costs in total costs.** If labour costs form a large proportion of total costs, a change in wages would have a significant impact on costs and hence demand would be elastic.



KEY TERMS

Elasticity of demand for labour: a measure of the responsiveness of demand for labour to a change in the wage rate.

Elasticity of supply of labour: a measure of the responsiveness of the supply of labour to a change in the wage rate.

- **The ease with which labour can be substituted by capital.** If it is easy to replace workers with machines, demand would again be elastic.
- **The elasticity of demand for the product produced.** A rise in wages increases costs of production which, in turn, raises the price of the product. This causes demand for the product to contract and demand for labour to fall. The more elastic the demand for the product is, the greater the fall in demand for it and hence for workers, making demand for labour elastic.
- **The time period.** Demand for labour is usually more elastic in the long run as there is more time for firms to change their methods of production.

There are also a number of determinants of elasticity of supply of labour. These are:

- **The qualifications and skills required.** The more qualifications and skills needed, the more inelastic supply will be. For example, a large increase in the wage paid to brain surgeons will not have much effect on the supply of labour. This is especially true in the short-run, as it will take years to gain the required qualifications and experience.
- **The length of training period.** A long period of training may put some people off the occupation. It will also mean that there will be a delay before those who are willing to take it up are fully qualified to join the labour force. Both effects make the supply of labour inelastic.
- **The level of employment.** If most workers are employed already, the supply of labour to any particular occupation is likely to be inelastic. An employer may have to raise the wage rate quite significantly to attract more workers and encourage the workers employed in other occupations to switch jobs.
- **The mobility of labour.** The easier workers find it to change jobs, or to move from one area to another, the easier it will be for an employer to recruit more labour by raising the wage rate. Thus, higher mobility makes the supply elastic.
- **The degree of vocation.** The stronger the attachment of workers to their jobs, the more inelastic supply tends to be in case of a decrease in wage rate.
- **The time period.** As with demand, supply of labour tends to become more elastic over time. This is because it gives workers more time to notice wage changes and to gain any qualifications or undertake any training needed for a new job.

GROUP ACTIVITY 5

In which of the following occupations is the demand for labour likely to be elastic?

- An occupation in which technical progress is continually developing inexpensive labour-saving techniques.
- An occupation which produces a product with inelastic demand.
- An occupation belonging to a labour-intensive industry.
- An occupation where labour costs form a small proportion of total costs.



KEY TERM

Specialisation: the concentration on particular products or tasks.

18.5 Specialisation and division of labour

Specialisation means the concentration on particular products or tasks. Instead of making a wide range of products, a firm may specialise in manufacture of one or a few products. A doctor may concentrate on treating patients with heart problems, rather than on treatment of patients suffering from a number of illnesses.

Division of labour occurs when workers specialise. Instead of producing the whole good or service, a worker carries out one particular task. The key advantage claimed for specialisation of workers is lower cost per unit produced. There are a number of reasons why this may occur.

One is that workers can specialise on the task they are best at and by doing this task over and over again, they become very good at it – *practice makes perfect*. This should mean that output per worker increases. Concentrating on a particular task means that workers can be trained more quickly and knowledge about handling a full range of equipment may not necessarily be imparted to them. Time may be saved as workers will not have to move from one job to another and breaking down the production process into a number of tasks may also make it easier to design machinery, enabling the use of workers alongside.

There is no guarantee, however, that specialisation of workers will reduce unit costs. In fact, there is a risk that specialisation may result in higher unit costs. Workers may get bored doing the same task each day. This may lead to workers not taking care of their work and as a result making more mistakes. Boredom may also result in workers taking more days off due to sickness and staying in jobs for shorter periods of time. Having specialised staff may make it difficult for other workers to cover up for those absent, due to both sickness and training.

Workers who are specialised can become very skilled and, if their skills are in high demand, can earn high wages. Concentrating on a particular task or job can enable workers to pursue their specific interests. For example, doctors who are interested in brain disorders and injuries may seek to specialise in neuroscience. Specialising in less demanding jobs can reduce the pressure on workers. Some factory workers who have undertaken the same task for some years may be able to do it almost without thinking.

There are, however, possible disadvantages to workers being specialised. One is that demand for their services may fall and if they are trained or practised in only one job, they may encounter problems getting another job. For example, if demand for coal falls, coal miners may not find it easy to gain jobs if the jobs on offer require different skills. Also, as previously mentioned, concentrating on a particular task or job may be boring and may not make full use of a worker's talents.

Whether division of labour will benefit an economy will depend on how it affects the cost of production and the quality of the products produced. If it does result in lower costs of production and higher quality, the economy may benefit from being able to produce and export more goods and services.

**KEY TERM**

Division of labour: workers specialising in particular tasks.

GROUP ACTIVITY 6

Rank the following educational workers, starting with the most specialised and finishing with the least specialised:

- a** a teacher of 19th-century French history
- b** a supply teacher who covers for absent teachers
- c** a teacher of 19th-century history
- d** a teacher of history
- e** a teacher of history and geography.

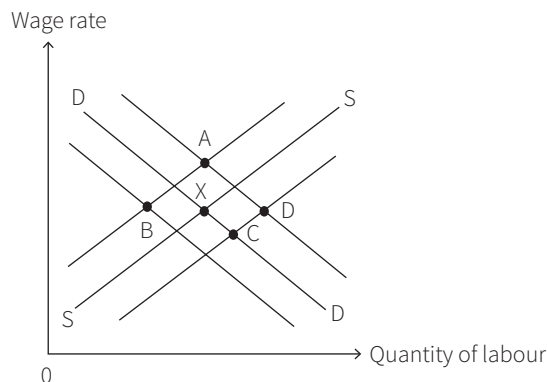
Summary

You should know:

- A person's choice of occupation is influenced by both wage and non-wage factors.
- High wages tend to attract more workers.
- Some workers may receive earnings above the basic wage or salary rate because of overtime pay, a bonus or commission.
- People are likely to be attracted to occupations which offer high job satisfaction, good working conditions, short working hours, long holidays, generous pensions, good fringe benefits, job security, good career prospects, size of firm, type of work and a convenient location.
- The main reasons for some occupations receiving higher earnings than others is because demand for their labour is higher, whilst supply of their labour is lower.
- Demand for workers is likely to be high if they are productive and the price, for which their output can be sold, is high.
- The supply of labour can be limited by the need for high qualifications, long periods of training and special skills.
- Other reasons for higher earnings include workers having strong bargaining power, favourable government policies, workers being held in high public esteem and absence of discrimination.
- A national minimum wage is likely to raise the wages of the low-paid, but its effect on unemployment are uncertain.
- Skilled workers are paid more than unskilled workers because they are more productive and are in shorter supply.
- An increase in demand for labour will increase the wage rate.
- The main causes of an increase in demand for labour are an increased demand for the product produced, a rise in labour productivity and a rise in the price of capital.
- A decrease in the supply of labour will increase the wage rate.
- Among the causes of a decrease in the supply of labour are a fall in the labour force, a rise in the qualifications or length of training required, a reduction in the non-wage benefits of a job, a rise in the wage or non-wage benefits of other jobs.
- Extent of change in wage rates, as a result of a change in the demand for and supply of labour, is influenced by the elasticity of demand for and supply of labour.
- The main determinants of elasticity of demand of labour are the proportion of labour costs in total costs, ease of substitution of labour by capital and the elasticity of demand for the product produced.
- The main determinants of elasticity of supply of labour are the qualifications, skills and length of training required, the level of employment, the mobility of labour and the degree of vocation.
- An increase in bargaining strength, more favourable government policies and more favourable public opinion can increase the wage rate.
- Division of labour can reduce cost per unit produced, as workers can concentrate on what they are best at, training costs are reduced, money spent on equipment is decreased, workers' time can be saved and the production process can be mechanised.
- Firms may experience certain disadvantages due to specialisation of their workers. One is that workers may get bored due to the monotonous nature of their job and as a result make more mistakes, take time off work and possibly even resign. Another is that firms may find it difficult to cover for the workers who are off sick or under training.

Multiple choice questions

- What is a non-wage factor that may influence a person's choice of occupation?
 - Bonuses
 - Fringe benefits
 - Overtime payments
 - Salary
- Piece rates are a method of payment to workers based on:
 - How many hours they work
 - When they work
 - The output they produce
 - The output they sell
- What would increase a woman's choice of occupation?
 - An increase in her qualifications
 - An increase in transport costs
 - An increase in gender discrimination
 - An increase in housing costs
- Point X in the diagram shows the market for electricians in a country. There is an increase in the number of people who train as electricians. What is the new equilibrium point?



Four-part question

- How are wages determined in a free market? **(2)**
- Explain **two** benefits a chef may gain from specialising in cooking one type of food such as Thai food. **(4)**
- Analyse, using a demand and supply diagram, how an increase in demand for restaurant meals may affect the wage rate that chefs are paid. **(6)**
- Discuss whether or not an increase in the wage rate paid to chefs will encourage more people to become chefs. **(8)**



Chapter 19

Trade unions

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Learning objectives

By the end of this chapter you will be able to:

- define a trade union
- analyse the role of trade unions in the economy
- describe the factors that influence the strength of trade unions
- discuss the advantages and disadvantages of trade union membership for workers, firms and the government

Introducing the topic

In 2016, 82% of workers in Iceland belonged to a **trade union**, while only 10% of workers in the USA were trade union members. What is a trade union? How do they affect the economy? Would you have the opportunity to join a trade union in your country? If so, would you choose to join?



KEY TERM

Trade union: an association which represents the interests of a group of workers.

19.1 Types of trade unions

Trade unions are associations of workers formed to represent their interests and improve their pay and working conditions. There are four main types of trade unions. These are:

- **Craft unions.** These represent workers with particular skills, for example plumbers and weavers. These workers may be employed in a number of industries.
- **General unions.** These unions include workers with a range of skills and from a range of industries.
- **Industrial unions.** These seek to represent all the workers in a particular industry, for example, those in the rail industry.
- **White collar unions.** These unions represent particular professions, including pilots and teachers.

Unions in a country often belong to a national union organisation. For example, in India, a number of unions belong to the All India Trade Union Congress (AITUC). This is the oldest and one of the largest trade union federations in the country. A number of them also belong to international trade union organisations such as the International Trade Union Confederation which has 340 affiliated organisations in 163 countries.

GROUP ACTIVITY 1

Decide what type of union the following Indian and UK unions are:

- Andhra Pradesh Auto Rickshaw Drivers and Workers' Union
- The National Union of Teachers
- Transport and General Workers' Union
- Pondicherry Textile Labour Union
- Punjab Breweries Workers' Union
- Musicians Union.

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19.2 The role of the trade unions

Trade unions carry out a number of functions. They negotiate on behalf of their members on wages, job security, working hours and working conditions. These areas can include basic pay, overtime payments, holidays, health and safety, promotion prospects, maternity and paternity rights, and job security. Depending on the circumstances, unions may be trying to protect or improve workers' rights.

They also provide information on a range of issues for their members, for example on pensions. They help with education and training schemes, and may also participate in measures designed to increase demand for the product produced and hence for labour. Some trade unions also provide a range of benefits to their members including strike pay, legal advice and sickness pay. In addition, many get involved in pressurising their governments to adopt legislation that will benefit their members or workers in general, such as fixing a national minimum wage.



KEY TERM

Collective bargaining: representatives of workers negotiating with employers' associations.

Collective bargaining

An individual worker may not have the skill, time or willingness to negotiate with her or his employer. A worker is also likely to have limited bargaining power. If she, or he, presses for a wage rise or an improvement in working conditions, the employer may be able to dismiss her, or him, and take on someone as a replacement. Trade unions enable workers to press their claims through **collective bargaining**. This process involves negotiations between union officials, representing a group of workers, and representatives of employers.



Trade union representatives negotiate with an employer

The basis of wage claims

There are a number of arguments a trade union can put forward while asking for a wage rise.

- One is that the workers deserve to be paid more because they have been working harder and have increased productivity.
- Another argument is that an industry whose profits have risen can afford to pay higher wages to its workers. This argument may be linked to the first one as the workers are likely to have contributed to the higher profits.
- A third argument is known as the *comparability argument*. A union may argue that the workers it represents, should receive a pay rise to keep their pay in line with similar workers. For example, a union representing nurses may press for a wage rise if doctors are awarded higher pay. The nurses' union is unlikely to ask for the same pay as doctors. What is more likely is that they will seek to maintain their wage differential. So, if before the rise of doctors' pay, nurses received a wage that was 60% of the doctors' earnings, they are likely to demand a rise that will restore this differential.
- A fourth argument that is often put forward is that workers need a wage rise to meet the increased cost of living. If the price level is rising by 6%, workers will need a wage rise of at least 6% to maintain their wage's purchasing power. This is sometimes referred to as maintaining their **real income** (income adjusted for inflation).



KEY TERM

Real income: income adjusted for inflation.

INDIVIDUAL ACTIVITY 1

In May 2016 university lecturers in the UK rejected a 1.1% pay-off and went on strike. The lecturers wanted higher pay, claiming that their pay had fallen behind similar workers.

- What type of argument were the university lecturers advancing?
- What type of union is likely to represent university lecturers?

19.3 Factors affecting the strength of a trade union

Among the factors which empower a trade union are:

- **A high level of economic activity.** If output and income in a country are increasing, most industries are likely to be doing well, and so should be able to improve the pay and conditions of workers. When output reaches high levels and most people who want to work are employed, firms will be competing for workers. To retain their existing workers

and to recruit more workers, firms are likely to be more willing to agree to union requests for higher pay and better working conditions.

- **A high number of members.** The more members a union has, the more funds it is likely to have to finance its activities. Also, the employers will find it difficult to replace union labour by non-union labour in such a scenario.
- **A high level of skill.** Unions representing skilled workers are in a relatively strong position, as it can be difficult to replace their workers with other skilled workers and expensive to train unskilled workers.
- **A consistent demand for the product produced by the workers.** Unions that represent workers making goods and services that are essential to consumers are in a strong position to bargain.
- **Favourable government legislation.** A union will be in a stronger position if laws allow trade unions to take industrial action.

Industrial action

If negotiations break down on wage claims, or disputes occur over working conditions, there is a range of **industrial actions** that can be initiated by a union in support of its claim. There could be an overtime ban, with workers refusing to work longer than their contracted hours. Workers may also 'work to rule'. This involves workers undertaking the tasks required by their contracts only.

The most well-known form of industrial action, however, is a **strike**. This involves workers withdrawing their labour. A strike can be official or unofficial. An official strike is one which is approved and organised by the union. In contrast, an unofficial strike is one which has not been approved by the union. This can occur when the strike is called by local union representatives and is over before the union has the time to approve it, or in the cases when the union does not agree with the action. Strike action can be measured in three main ways. These are:

- the number of strikes
- the number of workers involved
- the number of working days lost.

The last measure gives the clearest indication of the impact of the strike on the economy. Governments often try to prevent strikes by encouraging unions' and employers' representatives to go to arbitration, in case negotiations break down. Arbitration concerns the involvement of a third party seeking to reach an agreement. The arbitrator may be a government body or an independent third party chosen by both the parties.



KEY TERMS

Industrial action:

when workers disrupt production to put pressure on employers to agree to their demands.

Strike: a group of workers stopping work to put pressure on an employer to agree to their demands.

GROUP ACTIVITY 2

In each case decide which union is likely to be more successful, if it pursues strike action:

- A trade union representing fire fighters or a union representing flower sellers.
- A trade union representing skilled workers or a union representing unskilled workers.
- A trade union striking during a period of high unemployment or a union striking during a period of low unemployment.

Influence on the supply of labour

Besides negotiating and taking industrial action, trade unions can seek to raise the wages of its members by restricting the entry of new workers into the industry, occupation or craft. Unions may seek to do this by insisting that new recruits have high qualifications or may operate a closed shop. The latter occurs when employers can only employ those workers who are members of the union or who agree to join the union. (In contrast, an open shop occurs when an employer is free to employ members or non-members of the union.)

19.4 Advantages and disadvantages of trade union membership

Firms and workers

Firms can be harmed by industrial action undertaken by trade unions. The amount of revenue lost and damage done to the reputation of a particular firm by a strike will be influenced by the effect on rival firms and the length of the strike. A firm's costs and flexibility will also be adversely affected by overtime bans and 'work to rule' action.



Workers taking industrial action

Trade unions, however, can provide benefits to the firms. It is less time consuming, less stressful and hence cheaper to negotiate with workers as a group, than to negotiate with each worker individually. Unions also provide a useful channel of communication between employers and workers. They often encourage workers to engage in education and training which raises productivity and promotes improved health and safety. They also provide an outlet to vent workers' discontent and channel their grievances to the employers, thereby reducing conflict. Unions can also benefit non-unionised labour as any improvement in pay and working conditions usually applies to non-members also.



TIP

In discussing trade unions, it is useful to refer to the role of trade unions (if any) in your country.

19.5 Trade unions and the government

The role and importance of trade unions varies across the world. In fact, in some countries, including Saudi Arabia, trade unions are illegal. Industrial workers in Pakistan have the right to form trade unions, but a number of laws restrict their actions and hence their effectiveness. The government can, for example, ban any strike that may cause ‘serious hardship for the community, endanger the national interest or has continued for 30 days or more.

Trade union membership, as a percentage of the labour force, is relatively high in Mauritius. Approximately 20% of workers are in a union. The rate is, however, lower in the country’s Export Processing Zones (EPZs). In these areas, managers often make it difficult for workers to join a union by threatening to close down their factories if workers join them.

Trade unions are more powerful in European countries. They are particularly strong in the Nordic countries of Finland and Sweden, where union membership is high. Union membership fell in the UK in the 1980s and 1990s for two main reasons. One was legislation which reduced trade union rights and the other was a rise in unemployment, particularly in sectors that had been heavily unionised. In more recent years, membership has grown among women workers. It continues to be higher among public sector workers (55% in 2016) than private sector workers (14% in 2016). France has one of the lowest union densities in Europe, with approximately only 8% of workers belonging to trade unions (in comparison to 25% in the UK). French unions do, however, exert considerable power. This is because the unions enjoy public support, are willing to take strike action and French laws secure the importance of their role. For example, in France, unemployment benefit is set by an independent body which has to negotiate with unions, and union representatives have the right to a seat on firms’ works councils.

Summary

You should know:

- There are four main types of trade unions. These represent workers with particular skills, from particular industries, from particular professions and from a diverse background.
- Trade unions seek to protect and enhance workers’ pay, working hours and working conditions.
- Trade unions allow workers to bargain more effectively through collective bargaining.
- Trade unions can argue for a wage rise on a number of grounds including appropriate returns for hard work, apportionment of higher profits earned, relatively higher wages of similar workers and increased cost of living.
- A trade union will be stronger the more members it has, the higher the level of economic activity the firm/industry enjoys, the more skilled the workers are, the more public support it enjoys, the lower the contribution of wage costs to total costs, and the fewer substitutes there are for the product produced.
- Industrial action includes overtime bans, ‘work to rule’ and strikes.
- Trade unions may seek to raise wages by restricting the supply of labour through demanding high qualifications and restricting the employment to union members (closed shop).
- Trade unions may also lower firms’ costs by making it easier for the employers to communicate with workers and by encouraging the workers to participate in schemes which raise productivity.
- The role and importance of trade unions vary in different countries. Some countries do not allow trade unions to operate whereas in other countries trade unions are relatively powerful.

Multiple choice questions

- 1** In which circumstance is a trade union most likely to be able to raise the wages of its members?
 - A** It is easy to replace workers with machines
 - B** It is easy to replace unionised labour with non-unionised labour
 - C** The profits of the firms in the industry are low
 - D** The share of labour costs in total costs is low

- 2** Which measure of strike activity indicates workers' sentiment about the strike?
 - A** The number of strikes
 - B** The number of workers involved
 - C** The amount of working time lost
 - D** The amount of revenue lost by firms

- 3** Which of the following is not a function of a trade union?
 - A** Improving working conditions
 - B** Increasing shareholders' dividends
 - C** Raising members' wages
 - D** Representing members' interests

- 4** A trade union is pressing for a wage rise for its members. Which of the following would increase its chances of being successful?
 - A** An increase in productivity
 - B** An increase in unemployment
 - C** A decrease in profitability
 - D** A decrease in union membership

Four-part question

- a** Define *trade union*. **(2)**
- b** Explain **two** reasons why trade union membership may decline in a country. **(4)**
- c** Analyse the factors that influence the strength of a trade union. **(6)**
- d** Discuss whether or not trade unions benefit workers. **(8)**



Chapter 20

Firms

Learning objectives

By the end of this chapter you will be able to:

- describe the classification of firms in terms of sectors, ownership and size
- analyse the reasons for the existence of small firms
- discuss the advantages and disadvantages of small firms
- describe the causes of the growth of firms
- discuss the advantages and disadvantages of horizontal, vertical and conglomerate mergers
- discuss how internal and external economies and diseconomies of scale can affect a firm/industry as the scale of production changes

Introducing the topic

In every country, there are firms of different sizes. Each year new firms are set up. Some of these go out of business quickly, while others grow to become large firms with names you are probably familiar with. Large firms can have significant advantages, but there are cases where small firms are still able to compete with them.

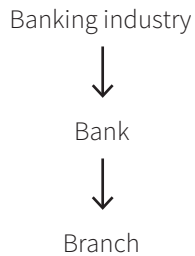


Fig. 20.1: Production in the banking industry

20.1 Classification of firms

Industries consist of firms producing the same product. The car **industry**, for example, includes firms such as Volvo, General Motors and Toyota. A firm is a business entity, also sometimes referred to as a business organisation. Firms can have a number of plants. A plant is a production unit or workplace such as a factory, farm, office or branch. A firm may own several plants. The major car firms have factories throughout the world. Figure 20.1 shows the level of production in the banking industry.

Firms may be classified in a number of ways. One is in terms of the stage of production they produce in. Another is in terms of who owns the firms and a third is in terms of the size of the firms.



KEY TERMS

Industry: a group of firms producing the same product.

The quaternary sector: covers service industries that are knowledge based.

The stages of production

Industries and their firms and plants operate at different stages of production.

- The **primary sector** is the first stage of production. It includes industries, such as agriculture, coal mining and forestry, involved in the extraction and collection of raw materials.
- The **secondary sector** is involved with the processing of raw materials into semi-finished and finished goods – both capital and consumer goods. It covers manufacturing and construction. The building, clothing and steel industries are in this sector.
- The third stage of production is called the **tertiary sector**. Industries producing services such as banking, insurance and tourism, come into this sector.
- Some economists identify a fourth sector also, the **quaternary sector**. This is really a sub-section of the tertiary sector. It covers those service industries which are involved with the collection, processing and transmission of information – essentially information technology.

As economies' income grows, their industrial structure usually changes. Poor countries often have a large proportion of their output accounted for and the labour force employed in industries in the primary sector. As they develop, the secondary sector becomes more important and gradually the tertiary sector accounts for most of their output and employment. Table 20.1 shows the contribution to output of the three sectors in five selected countries in 2016.

Country/ Region	Primary %	Secondary %	Tertiary %
Pakistan	21	20	59
India	17	30	53
China	8	41	51
USA	1	19	80
Hong Kong	0	7	93

Table 20.1: Percentage contribution to selected countries' output by different industrial sectors

GROUP ACTIVITY 1

The following is a list of industries. Decide the sector to which each industry belongs:

- a** chemicals
- b** education
- c** fishing
- d** retailing
- e** telecommunications
- f** transport

Ownership of firms

In a market economic system, most firms are in the private sector, whereas in a planned economy, they are in the public sector (state-owned enterprises). In a mixed economic system, they are in both the private and public sectors.

The size of firms

There are three main measures of the size of a firm. These are the number of workers employed, the value of the output it produces and the value of the financial capital it employs.

The size of a particular firm is influenced by a number of factors. These include:

- The **age of the firms**. Most firms start small. Every year new firms are set up, but not all of them survive. Those that do, may take some time to grow in size.
- The **availability of financial capital**. The more financial capital a firm has to draw on to finance its expansion, the larger it is capable of growing.
- The **type of business organisation**. Multinational companies (MNCs) are larger than, for instance, a shop owned by one person. Private sector MNCs can use retained profits, borrow and sell shares to raise the finance to expand. A business owned by one person is unlikely to be able to sell shares and is likely to find it more difficult and more costly to borrow.
- **Internal economies and diseconomies of scale** (see 20.5 below). If a firm is experiencing lower average costs as it expands, it can lower the price for its products and capture more market share. The reluctance to experience internal diseconomies of scale, where average costs rise with increases in output, may limit a firm's growth.
- The **size of the market**. This is the key factor in determining the size of a firm. If there is a large demand for the product, it is possible for a firm to grow to a large size.

20.2 Small firms

Despite the benefits of growth, a large proportion of the firms in any country are small. There are a number of reasons for this.

- **The small size of the market**. As suggested earlier, this is probably the key influence. If demand for the product is small, a firm producing it cannot be large. Demand for very expensive items, such as luxury yachts, may be small as it may be for individually designed items, such as designer dresses and suits and for repair work.



LINK

Chapter 13.1 The market economic system (Private and public sectors)

Chapter 15.3 Government measures to address market failure (Nationalisation and privatisation)

- **Preference of consumers.** For some personal services, such as hairdressing, consumers prefer small firms. Such firms can cater to their individual requirements and can provide a friendlier and more personal service.
- **Owner's preference.** The owner (or owners) of a firm may not want it to grow. People who own and run firms have various motives. Some may want to avoid the stress of running a large firm and may be worried that expanding the firm may lead to loss of control.
- **Flexibility.** Despite the advantages of large firms, small firms may survive because they may be able to adjust to changes in market conditions more quickly. A sole trader, in particular, is likely to be in regular touch with his, or her, customers and should be able to pick up on changes in their demand. He, or she, can also take decisions more quickly as there is no need to consult with other owners.
- **Technical factors.** In some industries, little or no capital is needed. This makes it easy for new firms to set up. It also means that technical economies of scale are not important and small firms do not suffer a cost disadvantage. The lower the barriers to entry, the larger the number of small firms there are likely to be in the industry.
- **Lack of financial capital.** Some firms may want to expand but they may lack the finance required to do so. As mentioned above, it may be difficult for sole traders to raise financial capital.
- **Location.** If a product is relatively heavy in relation to its value, transport costs can form a high proportion of total costs. This can lead to emergence of local rather than national markets, and such markets can be supplied by small firms.
- **Cooperation between small firms.** For example, small farmers may join together to buy seeds, foodstuffs and equipment such as combine harvesters.
- **Specialisation.** Small firms may supply specialist products to, and distribute the products of, larger firms. For instance, a relatively small firm may provide training services for a large accountancy firm.
- **Government support.** Governments in many countries provide financial help and advice to small firms. This is because small firms provide a large number of jobs, develop the skills of entrepreneurs and have the potential to grow into large firms.

GROUP ACTIVITY 2

Decide which of the following circumstances are likely to explain the existence of a number of small firms in an industry.

- The need for high expenditure on research and development.
- The existence of diseconomies of scale at a low level of output.
- Low barriers to entry and exit.
- High start-up costs.
- A global market.
- Discounts given for bulk buying.



20.3 Causes of the growth of firms

There are two ways a firm can increase in size. One is called **internal growth**. This is also sometimes referred to as natural or organic growth. It involves a firm increasing the market for its current products or diversifying into other products. This type of growth may occur through increasing the size of existing plants or by opening new ones. For example, McDonald's, the US fast food chain, has grown to a large size by opening more and more outlets throughout the world.

The other way through which a firm can grow is through **external growth**. This involves the firm joining with another firm/firms to form one firm through a merger or a takeover. The three main types of merger are a **horizontal merger**, a **vertical merger** and a **conglomerate merger**.

External growth allows a firm to increase its size more quickly than internal growth. With internal growth, however, there is more control over the size of the firm. There is a risk that external growth may take a firm past its optimum size.

INDIVIDUAL ACTIVITY 1

Aditya Birla Fashion and Retail (ABFRL), an Indian MNC, bought Forever 21 in 2016 for \$26 million. Forever 21 is involved in fast fashion, that is designs that move quickly from catwalks into the high street.

- a What type of growth was experienced by ABFRL in 2016?
- b Explain two influences on the size of a firm.

20.4 Mergers

Horizontal merger

A horizontal merger is the merger of two firms at the same stage of production, producing the same product, for example, the merger of two car producers or two TV companies. There are two key motives behind a horizontal merger. One is to take greater advantage of economies of scale. The new firm will be larger and hence may be able to produce at lower average cost. The other is to increase the market share. By merging with another firm producing the same product, a direct competitor is eliminated.

Another possible benefit that may arise from a horizontal merger is **rationalisation**. If the two firms had not been using all their resources fully, merging could enable them to sell off the redundant resources, for instance, one office block. The new firm may also be able to save on managerial staff. There is a risk, however, with a horizontal merger that the merged firm may experience diseconomies of scale. Also, a large firm can be difficult to control. It may also be difficult to integrate the two firms if they initially had different management structures or are located some distance apart.

Vertical merger

A vertical merger occurs when a firm merges with another firm involved with the production of the same product, but at a different stage of production. It can take the form of vertical merger backwards or vertical merger forwards.



KEY TERMS

Internal growth: an increase in the size of a firm resulting from it enlarging existing plants or opening new ones.

External growth: an increase in the size of a firm resulting from it merging or taking over another firm.

Horizontal merger: the merger of firms producing the same product and at the same stage of production.

Vertical merger: the merger of one firm with another firm that either provides an outlet for its products or supplies it with raw materials, components or the products it sells.

Conglomerate merger: a merger between firms producing different products.

Rationalisation: eliminating unnecessary equipment and plant to make a firm more efficient.



KEY TERMS

Vertical merger backwards: a merger with a firm at an earlier stage of the supply chain.

Vertical merger forwards: a merger with a firm at a later stage of the supply chain.

Vertical merger backwards is when a firm merges with a firm that is the source of its supply of raw materials, components or the products it sells. For example, a supermarket chain may take over a bakery and a tyre manufacturer merge with a producer of rubber. The main motive behind such a merger is to ensure an adequate supply of good quality raw materials at a reasonable price. Another aim might be to restrict the access of the rival firms to the supplies.

Vertical merger forwards is when a firm merges with, or takes over, a market outlet. For instance, an oil company may buy a chain of petrol stations and an airline may merge with a tour operator. The two key motives behind this form of vertical merger are to ensure that there are sufficient outlets, and the products are stored and displayed well in high quality outlets. A firm may also hope that such a merger may help in the development and marketing of new products.

As with a horizontal merger, problems may be encountered with a vertical merger. Again, there may be management problems. The managers of the merged firms may not be familiar with running, for instance, a market outlet. The two firms may also have been of different sizes and this may require some adjustment or the buying in of some supplies from other firms or the selling of supplies to other firms.

Conglomerate merger

A conglomerate merger involves the merger of two firms making different products. For example, an electricity company may merge with a travel company and an insurance company may merge with a chocolate producer. The main motive behind a conglomerate merger is diversification. Such a merger spreads a firm's risks and may enable it to continue its growth, even if the market of one of its products is declining. Coordinating a firm producing a range of products can, however, prove to be very challenging. In fact, after a number of years, some firms demerge, i.e. they divide into two or more firms.

The effect of a merger on consumers

A merger can bring advantages and disadvantages to consumers. If it leads to greater economies of scale, consumers may enjoy lower prices. They may also benefit from high quality products and innovation, if the merger increases the efficiency of the firm.

However, if the merger results in diseconomies of scale, consumers may experience higher prices and poorer quality. There is also a risk, in the case of a horizontal merger, of reduced choice for consumers and use of greater market power by the merged firm to push up prices.

INDIVIDUAL ACTIVITY 2

In 2016, Al Baraka Bank (Pakistan), a part of Bahrain's Al Baraka Banking Group, agreed to merge with Pakistan's Burj Bank. Takeovers and mergers occur frequently in the banking industry throughout the world.

- a Identify two reasons to explain a merger of banks.
- b Explain two advantages gained by bank customers from a bank merger.

**TIP**

It is useful to explore a merger in your own country, including the reasons for the merger and whether it has benefited consumers.

20.5 Economies and diseconomies of scale

The meaning of economies of scale

Economies of scale are the advantages, in the form of lower long run average costs (LRAC), of producing on a larger scale. When economists and entrepreneurs talk about economies of scale, they are usually referring to **internal economies of scale**. These are the advantages gained by an individual firm by increasing its size, that is having larger or more plants. The advantages come in a variety of forms – see below.

The other type of economies of scale are **external economies of scale**. These are the advantages available to all the firms in an industry, resulting from the growth of the industry.

The meaning of diseconomies of scale

Diseconomies of scale are essentially the disadvantages of ‘being too large’. A firm that increases its scale of operation to a point where it encounters rising long run average costs is said to be experiencing **internal diseconomies of scale**. **External diseconomies of scale** arise from an industry being too large, causing the firms within the industry to experience higher long run average costs.

Internal economies and diseconomies of scale

As a firm changes its scale of operation, its average costs are likely to change. Figure 20.2 shows the usual U-shaped LRAC curve. Average costs fall at first, reach an optimum point and then rise.

In very capital-intensive industries, such as oil refining, long run average costs may fall over a considerable range of output as shown in Figure 20.3.

In other cases, average costs may fall relatively quickly to their lowest point (the minimum efficient scale) and then remain constant over a large range of output. This would give an L-shaped LRAC curve as shown in Figure 20.4.

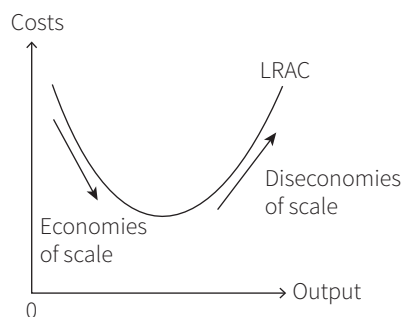


Fig. 20.2: Internal economies and diseconomies of scale

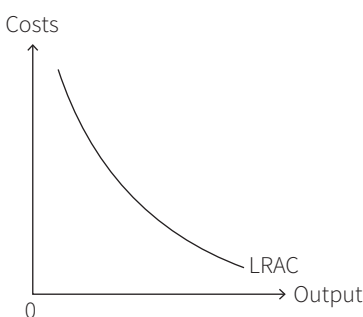


Fig. 20.3: Downward-sloping LRAC curve

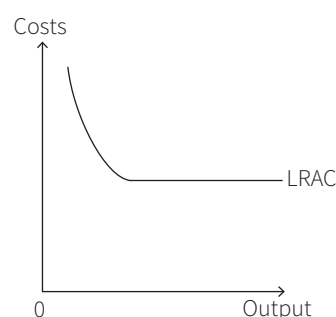


Fig. 20.4: L-shaped LRAC curve

**LINK**

Chapter 22 Average total cost

**KEY TERMS**

Internal economies of scale: lower long run average costs resulting from a firm growing in size.

External economies of scale: lower long run average costs resulting from an industry growing in size.

Internal diseconomies of scale: higher long run average costs arising from a firm growing too large.

External diseconomies of scale: higher long run average costs arising from an industry growing too large.

External economies and diseconomies of scale

External economies and diseconomies of scale have a different effect on a firm's LRAC curve. In the case of external economies of scale, a firm's average costs will be reduced not by changes in the firm's output, but by changes in its industry's output. Figure 20.5 shows how external economies of scale result in a downward shift of a firm's LRAC curve.

In contrast, external diseconomies of scale will raise a firm's LRAC curve at each and every level of output as shown in Figure 20.6.

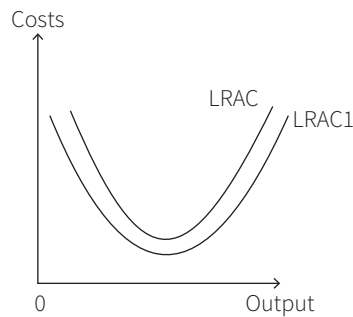


Fig. 20.5: The effect of external economies of scale

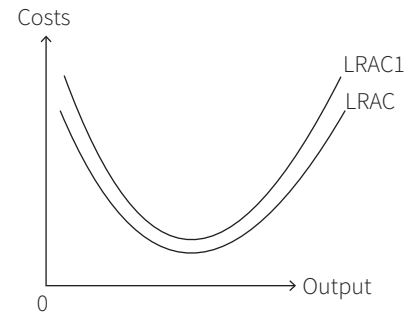


Fig. 20.6: The effect of external diseconomies of scale

Types of internal economies of scale

As a firm increases its scale of operation, there are a number of reasons responsible for a decline in its average cost. These include:

- **Buying economies.** These are probably the best known type. Large firms that buy raw materials in bulk and place large orders for capital equipment usually receive a discount. This means that they pay less for each item purchased. They may also receive better treatment than small firms in terms of quality of the raw materials and capital equipment sold and the speed of delivery. This is because the suppliers will be anxious to keep such large customers.
- **Selling economies.** The total cost of processing orders, packing the goods and transporting them does not rise in line with the number of orders. For instance, it costs less than twice as much to send 10 000 washing machines to customers than it does to send 5000 washing machines. A lorry that can transport 40 washing machines does not cost four times as much to operate as four vans which can carry 10 washing machines each. A large volume of output can also reduce advertising costs. The total cost of an advertising campaign can be spread over more units and, again, discounts may be secured. A whole-page advertisement in a newspaper or magazine is usually less than twice the cost of a half-page advertisement. Together, buying and selling economies of scale are sometimes referred to as marketing economies.
- **Managerial economies.** Large firms can afford to employ specialist staff in key posts as they can spread their pay over a high number of units. Employing specialist buyers, accountants, human resource managers and designers can increase the firm's efficiency, reduce costs of production, and raise demand and revenue.
- **Labour economics:** Large firms can engage in division of labour among their other staff. For example, car workers specialise in a particular aspect of the production process.
- **Financial economies.** Large firms usually find it easier and cheaper to raise finance. Banks tend to be more willing to lend to large firms because such firms are

well-known and have valuable assets to offer as collateral. Banks often charge large borrowers less, per \$ borrowed, in order to attract them and because they know that the administrative costs of operating and processing large loans are not significantly higher than the costs of dealing with small loans. Large firms can also raise finance through selling shares, which is not an available option for sole traders and partnerships. Public limited companies can sell to the general public. The larger and better known the companies are, the more willing people are to buy their shares.

- **Technical economies.** The larger the output of a firm, the more viable it becomes to use large, technologically advanced machinery. Such machinery is likely to be efficient, producing output at a lower average cost than small firms.
- **Research and development economies.** A large firm can have a research and development department, since running such a department can reduce average costs by developing more efficient methods of production and raise total revenue by developing new products.
- **Risk bearing economies.** Larger firms usually produce a range of products. This enables them to spread the risks of trading. If the profitability of one of the products it produces falls, it can shift its resources to the production of more profitable products.

GROUP ACTIVITY 3

Decide the type of internal economies each of the following may be an example of:

- a A farmer using a combine harvester.
- b A pharmaceuticals company setting up a laboratory to develop anti-AIDS drugs.
- c A supermarket chain employing an expert in chocolate to place its orders with suppliers.
- d A book publisher buying a large quantity of paper.
- e A soap manufacturer buying a two-minute advertisement on national television.
- f A car manufacturer issuing new shares.

Internal diseconomies of scale

Growing beyond a certain output can cause a firm's average costs to rise. This is because a firm may encounter a number of problems including:

- **Difficulties controlling the firm.** It can be hard for those managing a large firm to supervise everything that is happening in the business. Management becomes more complex. A number of layers of management may be needed and there may be a need for more meetings. This can increase administrative costs and make the firm slower in responding to changes in market conditions.
- **Communication problems.** It can be difficult to ensure that everyone in a large firm has full knowledge about their duties and available opportunities, such as training etc. Also, they may not get the opportunity to effectively communicate their views and ideas to the management team.
- **Poor industrial relations.** Large firms may be at a greater risk from a lack of motivation of workers, strikes and other industrial action. This is because workers may have less sense of belonging, longer time may be required to solve problems and more conflicts may arise due to the presence of diverse opinions.

External economies of scale

A larger industry can enable the firms in that industry to reduce their average costs in a number of ways including developing:

- **A skilled labour force.** A firm can recruit workers who have been trained by other firms in the industry.
- **A good reputation.** An area can gain a reputation for a high quality production. For example, the Bordeaux region of France is well known for its high quality wine production and the Maldives has a reputation of being a popular holiday resort.
- **Specialist suppliers of raw materials and capital goods.** When an industry becomes large enough, it can become worthwhile for other industries, called ancillary industries, to set up providing for the needs of the industry. For instance, the tyre industry supplies tyres to the car industry.
- **Specialist services.** Universities and colleges may run courses for workers in large industries and banks, and transport firms may provide services specially designed to meet the particular needs of firms in the industry.
- **Specialist markets.** Some large industries have specialist selling places and arrangements such as corn exchanges and insurance markets.
- **Improved infrastructure.** The growth of an industry may encourage a government and private sector firms to provide better road links and electricity supplies, build new airports and develop dock facilities.

External economies of scale are more likely to arise if the firms in the industry are located in one area. This is why they are sometimes referred to as *economies of concentration*.

External diseconomies of scale

Just as a firm can grow too large, so can an industry. With more and larger firms in an area, there will be an increase in transport with more vehicles bringing in workers and raw materials, and taking out workers and finished products. This may cause congestion, increased journey times, higher transport costs for firms and possibly reduced workers' productivity. The growth of an industry may also result in increased competition for resources, pushing up the price of key sites, capital equipment and labour.



TIP

Economies of scale result from the growth of a firm or industry – they do not cause it. The type of economy of scale that is defined incorrectly by students most frequently is financial economies.

INDIVIDUAL ACTIVITY 3

Goldcorp, a Canadian gold producer, expanded its production at its mines and opened new mines in 2016. Mining only contributed 3% to Canada's output in 2016, but the industry is still growing.

- Explain two types of internal economies of scale that can be enjoyed by a mining company.
- Explain two types of external economies that may be experienced by firms in the mining industry.

Summary

You should know:

- Industries consist of many firms producing the same products and firms may have a number of plants.
- The three main stages of production are – primary (collecting and extracting raw materials), secondary (manufacturing and construction) and tertiary (services).
- The key factors influencing the size of a firm are its age, the availability of financial capital, the type of business organisation, output over which it will experience economies of scale, and (most significantly) the size of the market.
- Firms can grow internally by increasing their output or externally by merging with, or taking over, another firm.
- The three main types of merger are horizontal, vertical and conglomerate.
- Horizontal merger increases market share and may enable the new firm to take greater advantage of economies of scale.
- Vertical merger backwards secures supplies whilst vertical merger forwards secures outlets.
- The key motive behind a conglomerate merger is diversification.
- Despite the advantages of a large size, small firms continue to exist because of limited demand, consumers' preference for personal attention, the owner's disinclination to expand, flexibility, low or no barriers to entry, a lack of financial capital required for expansion, role of suppliers of specialist goods or services to larger firms and government assistance.
- Increasing output can reduce long run average costs. The savings made are referred to as economies of scale.
- Internal economies of scale are falling long run average costs resulting from the growth of a firm.
- Examples of internal economies of scale include buying economies, selling economies, managerial economies, labour economics, financial economies, technical economies, research and development economies and risk-bearing economies.
- Internal diseconomies of scale are rising long run average costs, resulting from a firm growing too large.
- Examples of internal diseconomies of scale include difficulties controlling the firm, communication problems and poor industrial relations.
- External economies arise from the growth of the industry and include a skilled labour force to draw on, a good reputation, specialist supplies of raw materials and capital equipment, specialist services, specialist markets and improved infrastructure.
- External diseconomies of scale are caused by an industry growing too large and experiencing disadvantages like congestion and a rise in the cost of factors of production.
- Internal economies and diseconomies of scale explain the usual U-shape of the long run average cost curve.
- If the increasing size of the industry gives rise to external economies of scale, a firm's long run average cost curve will shift downwards. The creation of external diseconomies of scale will cause the long run average cost curve to move upwards.

Multiple choice questions

- 1** What is most likely to be supplied by small firms?
 - A** Banking
 - B** Film production
 - C** Shoe repair
 - D** Steel

- 2** A toy manufacturer merges with a chemical company. What type of merger is this?
 - A** Conglomerate
 - B** Horizontal
 - C** Vertical merger backwards
 - D** Vertical merger forwards

- 3** What is meant by financial economies of scale?
 - A** Lower average costs experienced by large banks and other financial institutions
 - B** Lower average costs arising from a large firm operating its finance department more efficiently
 - C** Lower average costs due to the ability of large firms to borrow more cheaply
 - D** Lower average costs occurring because of the use of larger capital equipment

- 4** Why might the growth of an industry reduce a firm's costs of production?
 - A** It may cause a decrease in subsidiary industries
 - B** It may create greater competition for resources
 - C** It may lead to the development of specialist markets
 - D** It may reduce the supply of infrastructure

Four-part question

- a** Define a *state-owned enterprise*. **(2)**
- b** Explain why a firm may decide to stay small. **(4)**
- c** Analyse **two** internal economies of scale. **(6)**
- d** Discuss whether or not a merger between two book publishing firms will benefit consumers. **(8)**



Chapter 21

Firms and production

Learning objectives

By the end of this chapter you will be able to:

- analyse the influences on the demand for factors of production
- analyse the reasons for adopting labour-intensive production or capital-intensive production
- distinguish between productivity and production

Introducing the topic

Why do some industries employ many workers, but use little capital equipment, while others use a high proportion of capital? Why do the same industries in different countries use different combinations of factors of production? For example, why is the number of farm workers per unit of land much lower in the USA than in Mali? How may varying the combination of labour and capital affect production and productivity?



Chapter 18.2 Changes in the demand for labour

21.1 Demand for factors of production

What factors of production are employed

The type of factors of production employed is influenced by the type of product produced, the productivity of the factors and their cost. A firm producing a standardised model of car is likely to be very capital-intensive, whereas a beauty salon is likely to be labour-intensive.

When factors of production are substitutes, a rise in the productivity, or a fall in the cost of one of them, may result in a change in the combination of resources being employed. A fall in the price of capital goods, for example, might lead to the replacement of some workers with machines. In other cases, where factors of production are complements, a fall in the price of one, or a rise in its productivity, may increase the employment of all factors in a firm. For example, a fall in the price of aircraft may make it possible for an airline to fly to more destinations. If so, they will also employ more pilots, more cabin crew and obtain more take-off and landing slots at airports.



TIP

Remember that whilst production is output, productivity is output per worker or output per factor of production.

Altering factors of production

If a firm wants to change the quantity of resources employed by it, it will find it easier to do this with some factors than others. In the short run, there is likely to be at least one fixed factor of production. This means the quantity cannot be altered quickly. The most obvious example is the size of the factory or office. It will take time for a firm desiring expansion, to extend its buildings or build new ones. Similarly, one wanting to reduce output is unlikely to be able to stop renting or sell off its buildings quickly. In contrast, it is likely to be easier to change the quantity of labour. Even in the very short run, it may be possible to alter the quantity of labour by changing the amount of overtime available. It may also be possible to change orders for raw materials and capital equipment, but it will depend on the length of contracts and, in the case of increasing demand, the availability of spare capacity in firms producing them.

Combining the factors of production

It is important to achieve the right combination of factors of production. For example, it would not make sense for a hairdressing salon to have ten hairdryers and two hairdressers, or a farmer to have a large amount of land and only a few cattle. In the first case, labour would be under-utilised and in the second case, there would be an insufficient number of livestock to make full use of land. While deciding the combination of resources, firms seek to achieve the highest possible productivity. For example, Table 21.1 shows that the most appropriate number of workers to be employed (in terms of productivity) with five machines is seven, since this is where output per worker is highest. The combination is not always one machine per worker. This is because workers may work in shifts, some workers may be undertaking training and, of course, in some cases one worker may use more than one piece of machinery.

No. of machines	No. of workers	Total output (units)	Output per worker (average product) (units)
5	1	50	50
5	2	120	60
5	3	210	70
5	4	320	80
5	5	450	90
5	6	600	100
5	7	770	110
5	8	800	100
5	9	810	90

Table 21.1: Combining labour with machines

INDIVIDUAL ACTIVITY 1

From the following information, calculate the average product of labour and decide the most efficient combination of workers and machines.

No. of machines	No. of workers	Total output (units)
4	1	10
4	2	24
4	3	45
4	4	72
4	5	100
4	6	108
4	7	112

Factors influencing demand for capital goods

Among the key factors influencing demand for capital goods are the price of capital goods, price of other factors of production, profit levels, **corporation tax**, income, interest rates, confidence levels and advances in technology.

- A rise in the price of capital goods will cause a contraction in demand for capital goods, whereas an increase in the price of another factor of production, particularly labour, may increase the demand for capital goods. This will occur if the factors are substitutes and the rise in price of another factor makes the production of a unit of output more expensive than that involving a rise in capital. If another factor is a complement, an increase in its price would cause a decrease in demand for capital.
- If profit levels are high, firms will have both the ability and the incentive to buy capital goods.
- A cut in corporation tax would also mean that firms would have more profit available to plough back into the business and greater incentive to do the same.
- Rising real disposable income will lead to an increase in consumption. This, in turn, is likely to encourage firms to invest as they will expect to sell a higher output in the future.
- A cut in interest rates would also tend to raise consumption and thereby encourage firms to expand their capacity. In addition, lower interest rates would increase investment

**KEY TERM**

Corporation tax:
a tax on profits of a company.

because they would reduce the opportunity cost of investing and lower the cost of borrowing. Firms can use profits to buy more capital goods instead of depositing them in bank accounts. With low interest rates, firms would be sacrificing less interest by buying capital goods. Borrowing to buy capital goods would also be less costly.

- Another key influence on investment is firms' expectations about the future. If they are confident that sales will rise, they will invest now. In contrast, a rise in pessimism will result in a decline in investment.
- Advances in technology will increase the productivity of capital goods. If new and more efficient machinery is developed, firms are likely to invest more.

Demand for land

Productivity is a key factor influencing demand for land. In terms of agricultural land, the most fertile land will be in highest demand and receive the highest rent. City centre sites are also very productive as firms have the potential to attract a high number of customers. If a shop in the centre of New York becomes vacant, it is likely that a number of retail firms would compete for it in the expectation that they could earn a high revenue there. The competition pushes up the rent that can be charged for a favourable site.

One natural resource, which is experiencing an increasing world demand, is water. Water is used for domestic, agricultural, industrial and energy production purposes. As countries become richer, they make heavier demands on scarce water supplies. The global use of water has increased six times in the last one hundred years and is predicted to double again by 2050.

INDIVIDUAL ACTIVITY 2

Rising living standards in China and India are increasing the demand for water, which in turn is affecting the price of water.

- Explain how improving living standards would increase the demand for water.
- Using a demand and supply diagram, explain what is likely to happen to the price of water in the future.



Chapter 20.1
Classification of
firms (The stages of
production)

Factors of production and sectors of production

The demand for factors of production can alter as an economy changes its industrial structure. As mentioned in Chapter 20, the distribution of resources among different sectors changes with economic development. In most cases, agricultural reform permits resources to move to low-cost manufacturing. Then, resources move to higher value added manufacturing and then finally the service sector becomes the most important one. Not all economies, however, conform to this pattern. India's service sector has expanded before it has built up a sizeable manufacturing sector. Now, in most countries, the service sector makes the largest contribution to output. Indeed, in 2016 the service sector accounted for 63% of global output.

Different industries make use of different factors of production. The chemical industry, for example, is very capital-intensive and agriculture is land-intensive (along with being water-intensive).

INDIVIDUAL ACTIVITY 3

The broadband revolution is revolutionising the mode of working for many. It is enabling more people to work from home and effectively introducing a new piece work model. The more flexible a country is in creating new employment relationships, the better it will be at getting the most of the new technologies.

- a** What is meant by a 'piece work' model?
- b** Explain how having workers working from home may affect a firm's:
 - i** output
 - ii** costs of production.

21.2 Labour-intensive or capital-intensive production

There are a number of reasons why some producers use labour-intensive methods of production. One is that there is a large supply of labour in the country, making labour relatively cheap.



The garment industry is labour intensive

Another reason is that some producers may be too small to take advantage of capital equipment. If, for example, a machine could produce 3000 pairs of shoes a day, but a producer could only sell 50, she would not consider it worthwhile to buy the machine. The small producer of shoes may also want to produce handmade shoes, as some people may be willing to pay a high price for such shoes. Consumers may think that handmade products are of a higher quality and more likely to meet their individual needs than mass produced products. This may make consumers willing to pay a higher price for them. Custom-made products can also provide greater status and some consumers like the personalised attention that labour-intensive production may make possible.

Relying more on labour than capital has a number of other advantages. Workers can be more flexible in terms of what they do and the size of the labour force can be adjusted by small amounts. Labour can also provide feedback on how to improve production methods and the quality of products.

**TIP**

Employing capital goods does not involve just a one-off cost. As well as the cost of buying or renting capital goods, firms have the cost, on a regular basis, of maintaining the capital goods and, on some occasions, repairing them.

Firms may switch from capital-intensive production to labour-intensive production if the price of capital increases and labour can carry out the same functions with the same level of productivity as the machines they replace. In practice, however, firms tend to switch from labour-intensive production to capital-intensive production. This is because advances in technology tend to make capital goods more affordable and more productive. Education, for example, is becoming more capital-intensive with developments such as online university degrees. As well as often having the capacity to produce more products at a lower average cost (technical economies), capital goods produce products of a uniform standard unaffected by human error. They do not engage in industrial action. They also do not have time off ill and are not affected by tiredness, although they do need to be maintained and can break down.

GROUP ACTIVITY 1

Decide whether the following industries are usually capital-intensive or labour-intensive:

- a air travel
- b fruit picking
- c hotels
- d oil production
- e telecommunication.

21.3 Production and productivity

There are clear links between production and productivity, but they are not the same thing. If output per worker hour increases and the number of working hours stays the same, production will increase. It is possible, however, that productivity could rise and production could fall. This could occur if unemployment increases. Indeed, a rise in unemployment may increase productivity as it is the most skilled workers who are likely to keep their jobs.

As economies develop, both production and productivity tend to increase due to advances in technology and improvements in education. These developments can result in productivity rising so much that total output can increase while the number of working hours declines.

Summary

You should know:

- The key factors that influence the factors of production employed are the type of products produced, the productivity of the factors and their cost.
- In the short run, there is likely to be at least one fixed factor of production, most commonly capital.
- The average product of labour (productivity) is total output divided by the number of workers.
- Demand for capital goods is influenced by the price of capital goods, the price of other factors of production, profit levels, income, interest rates, confidence and advances in technology.
- City centre sites command a high rent because they are in high demand.
- The factors of production, used in an economy, are influenced by the economy's industrial structure.
- Capital-intensive production can result in higher output at a lower average cost, and avoids human error and disruptions caused by strikes, tiredness and sickness.
- Labour-intensive production may be appropriate where there is a high supply of low wage labour, personal attention is important, consumers want custom-made products and where workers' ideas can make significant improvements to production methods.

Multiple choice questions

- 1 The table shows the distribution of the labour force of a country between two years.

	Employment in millions	
	Year 1	Year 2
Agriculture	10	8
Mining	4	5
Manufacturing	20	20
Retailing	10	12
Education	5	5

How did the distribution of employment change between year 1 and year 2?

	Primary industry	Secondary industry	Tertiary industry
A	fell	unchanged	rose
B	rose	fell	unchanged
C	unchanged	rose	fell
D	rose	unchanged	fell

- 2 A doctor and an operating theatre are:
- A Complementary factors of production
 - B Substitute factors of production
 - C An example of labour and land
 - D An example of enterprise and capital
- 3 Which of the following would cause an increase in demand for capital goods?
- A A decrease in corporation tax
 - B A fall in disposable income
 - C A rise in interest rates
 - D A rise in pessimism
- 4 Twenty-five workers produce a total output of 300. What is the average product per worker?
- A 12
 - B 25
 - C 300
 - D 7500

Four-part question

- a Define *investment*. (2)
- b Explain why the production of cars may increase whilst the productivity of car workers may fall. (4)
- c Analyse the reasons why car production has become more capital-intensive. (6)
- d Discuss whether or not industries becoming more capital-intensive will increase unemployment. (8)



Chapter 22

Firms, costs, revenue and objectives

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Learning objectives

By the end of this chapter you will be able to:

- define total cost, average total cost, fixed cost, variable cost, average fixed cost and average variable cost
- calculate total cost, average total cost, fixed cost, variable cost, average fixed cost and average variable cost
- draw and interpret diagrams that show how changes in output can affect costs of production
- define total revenue and average revenue
- describe how sales affect revenue
- discuss the objectives of firms including survival, social welfare, profit maximisation and growth

Introducing the topic

How do costs and revenue change as a firm changes its output? What motivates firms? Do all firms seek to gain as much profit as possible? If you were setting up a business what would be your objective?

22.1 Calculating the costs of production

Total and average total cost

Total cost (TC), as its name implies, is the total cost of producing a given output. The more the output is produced, the higher the total cost of production. Producing more units requires the use of more resources. **Average total cost** (ATC) is also referred to as average cost (AC), or unit cost, and is given as total cost divided by output. Table 22.1 shows the relationship between output, total cost and average cost.

Output	Total cost (\$)	Average total cost (4)
0	10	–
1	30	30
2	48	24
3	60	20
4	88	22
5	125	25

Table 22.1: Total and average cost

Fixed costs

Table 22.1 indicates that there is a cost even when output is zero. In the short run, some factors of production are in fixed supply. When a firm changes its output, the costs of these factors remain unchanged – they are **fixed costs** (FC). For instance, if a firm raised its output, the interest it pays on past loans would remain unchanged. If it closed down during a holiday period, it may still have to pay for security and rent for buildings.



KEY TERMS

Total cost: the total amount that has to be spent on the factors of production used to produce a product.

Average total cost: total cost divided by output.

Fixed costs: costs which do not change with output in the short run.



TIP

Remember that while total cost rises with output, average total cost may rise, remain the same or fall.



The steel industry has a high fixed cost

Figure 22.1 shows that total fixed cost (TFC) remains unchanged as output changes. Fixed costs are also sometimes referred to as overheads or indirect costs.

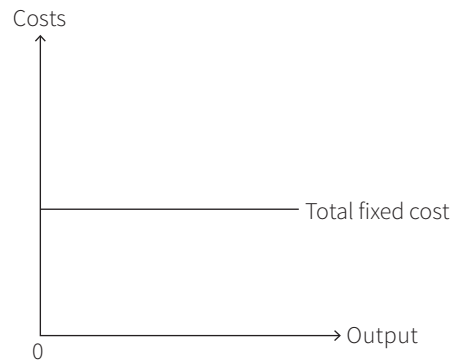


Fig. 22.1: Total fixed cost

Average fixed cost

Average fixed cost (AFC) is total fixed cost divided by output. As total fixed cost is constant, a higher output will reduce average fixed cost. Table 22.2 and Figure 22.2 show how the average fixed cost falls as output increases.

Output	Total fixed cost (\$)	Average fixed cost (\$)
0	10	–
1	10	10
2	10	5
3	10	3.33
4	10	2.5
5	10	2

Table 22.2: Average fixed cost

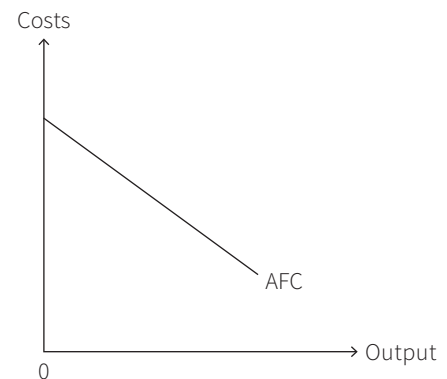


Fig. 22.2: Average fixed cost



KEY TERMS

Average fixed cost: total fixed cost divided by output.

Variable costs: costs that change with output.



TIP

Remember that while total fixed cost remains unchanged as output rises, average fixed cost falls.

Variable costs

Variable costs (VC), also sometimes called direct costs, are the costs of the variable factors. They vary directly as output changes. Production and sale of more cars will involve an increased expenditure on component parts, electricity, wages and transport for a car firm.

As output increases, total variable cost rises. It usually tends to rise slowly at first and then rise more rapidly. This is because productivity often rises at first and then begins to decline after a certain output. Figure 22.3 shows the change of total variable cost (TVC) with output.

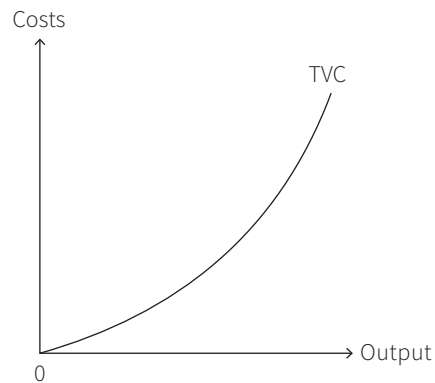


Fig. 22.3: Total variable cost

Average variable cost

Average variable cost (AVC) is total variable cost divided by output. As output increases in the short run, average variable cost tends to fall and then rise. This is for the same reason which accounts for an increase in total variable cost at different rates with increase in output. Table 22.3 and Figure 22.4 show the change in average variable cost with output.



KEY TERM

Average variable cost: total variable cost divided by output.

Output	Total variable cost (\$)	Average variable cost (\$)
1	40	40
2	70	35
3	90	30
4	120	30
5	175	35

Table 22.3: Average variable cost

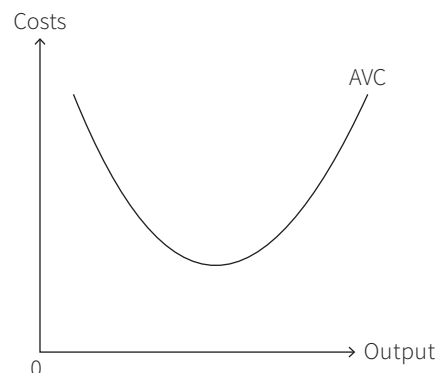


Fig. 22.4: Average variable cost

GROUP ACTIVITY 1

A bakery is faced with the following costs: flour, yeast, rent, business rates, insurance, overtime pay, depreciation and energy costs. Decide which are fixed and which are variable costs.

Fixed and variable costs

In practice, it is not always easy to decide whether a cost is fixed or variable. This is particularly true of payments to workers. It is clear that overtime payments and the wages of temporary workers are variable costs as they vary directly with output. The basic wage or salary paid to workers, however, may be regarded as a fixed cost since it has to be paid irrespective of the amount of output.

The sum of total fixed cost and total variable cost equals total cost. For instance, if fixed costs are \$800 and variable costs are \$4200 a week, the total cost of production would be \$5000 a week. Figure 22.5 shows how total cost is made up of fixed and variable costs.

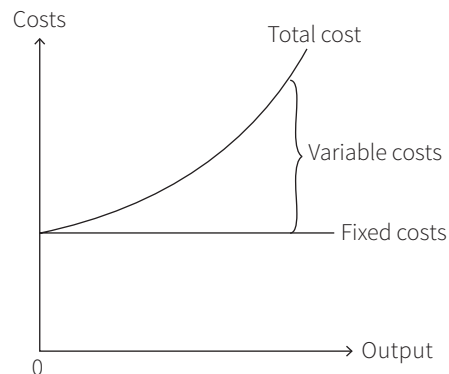


Fig. 22.5: The composition of total cost

In the long run, however, all costs are variable. This is because all factors of production can be altered, if sufficient time is available. For instance, a firm can increase the size of its factory, office or farm. Therefore, its rent and business rates would rise and it can hire more workers, pushing up the wage bill. Figure 22.6 shows total cost in the long run.

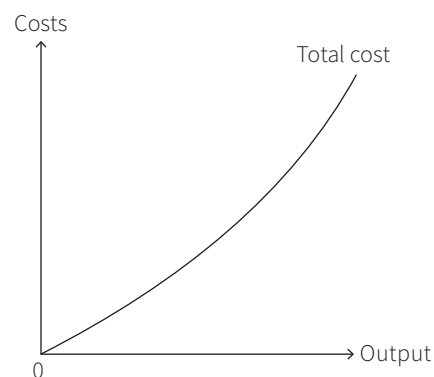


Fig. 22.6: Long-term total cost

Average total cost

In the short run, average cost consists of average fixed cost and average variable cost. The shape of the short run average cost curve is usually U-shaped. The **long run** average cost curve is also usually U-shaped. This can be explained as follows. As a firm alters its scale of production, it first experiences economies of scale and then, after reaching a certain output, it may encounter diseconomies of scale.



TIP

While deciding whether costs are fixed or variable, remember to consider whether the costs will change with output in the short run. Remember that **all** costs change with output in the long run.



KEY TERM

Long run: the time period when all factors of production can be changed and all costs are variable.



LINK

Chapter 20.5
Economies and
diseconomies of scale

INDIVIDUAL ACTIVITY 1

Copy and complete the table with the costs of production.

Output	TC	TFC	TVC	AC	AFC
0	60				
1	110				
2	150				
3	180				
4	200				
5	230				
6	300				

22.2 Calculating revenue

The money received by firms from selling their products is referred to as revenue. Total revenue is, as its name suggests, the total amount of money received by firms through the sale of their products. Average revenue is found by dividing total revenue by the quantity sold and is the same as **price**.

In very competitive markets each firm's output may have no effect on price. In this case, total revenue rises consistently as more quantity is sold. Table 22.4 shows the change of total revenue with sales.



KEY TERM

Price: the amount of money that has to be given to obtain a product.

Quantity sold	Average revenue (price per unit) (\$)	Total revenue (\$)
1	10	10
2	10	20
3	10	30
4	10	40
5	10	50
6	10	60
7	10	70

Table 22.4: Average and total revenue of a perfectly competitive firm

Figure 22.7 shows the same information graphically.

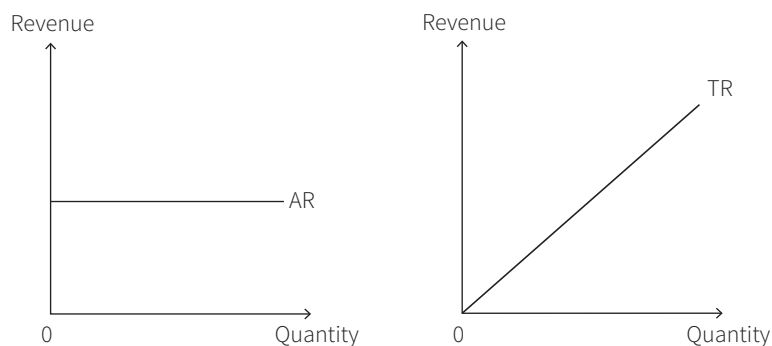


Fig. 22.7: The average and total revenue curves of a perfectly competitive firm



KEY TERMS

Total revenue:
the total amount of money received from selling a product.

Average revenue: the total revenue divided by the quantity sold.

In most markets, however, firms are price makers and need to lower price to sell more. Table 22.5 and Figure 22.8 illustrate the change in **total revenue** and **average revenue** in a monopoly market.

Quantity sold	Average revenue (price per unit) (\$)	Total revenue (\$)
1	10	10
2	9	18
3	8	24
4	7	28
5	6	30
6	5	30
7	4	28

Table 22.5: Average and total revenue in a monopoly market

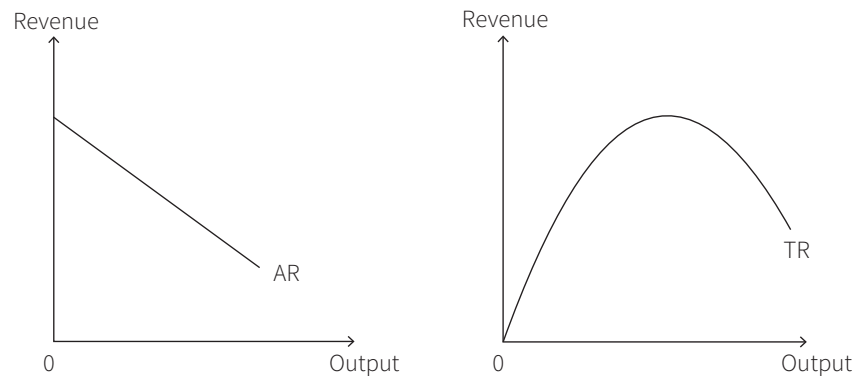


Fig. 22.8: The average and total revenue curves of a monopoly firm

Average revenue falls as the quantity sold rises. Total revenue rises at first, reaches a peak and then falls beyond a certain level of sales.



KEY TERMS

Profit satisfying:
sacrificing some profit to achieve other goals.

Profit maximisation:
making as much profit as possible.

22.3 Objectives of firms

Firms may pursue a range of objectives including survival, growth, social welfare, **profit satisfying** and **profit maximisation**.

Survival

When firms are started, their initial objective may be just to survive in what may be a very competitive market. A firm may be content to just cover its costs until it can become better known. During difficult times when demand is falling, even large firms may have survival as their key objective. They will try to stay in the market in the hope that conditions will improve.

Growth

Some firms may pursue the objective of growth. Increasing the size of the firm may bring a number of advantages. High and expanding sales tend to enable firms to take advantage of a number of internal economies of scale and so, for instance, to raise finance more easily

and to buy raw materials at a discounted rate. Those who run firms, the managers, directors and chief executives, may have the growth of the firm as their key objective because their pay and status may be more closely linked to the size of the firm they run. Those in charge of large firms are usually paid more than those running smaller firms and also tend to be held in higher esteem. They may also have greater job security as the larger the firm they run, the more difficult it will be for any other firm to take it over and replace them with their own managerial team. If growth is achieved by merging with other firms, competition will be reduced and the firm will gain a larger market share.

Social welfare

State-owned enterprises may be given by the government the objective of improving social welfare. They may, for instance, charge a relatively low price for their products to ensure they are affordable to even the poor. They are more likely than private sector firms to base their production decisions on social costs and benefits.

In recent years, some private sector firms have also been showing a greater concern about the environmental and social effects of their actions. A number of firms have sought to clean up their production processes and ensure that they source their raw materials from firms that do not employ child labour.

Profit satisficing

In some cases, firms may engage in what economists call profit satisficing. This involves making enough dividends to keep shareholders happy while pursuing other objectives. For example, a firm may be prepared to sacrifice some profit, at least in the short run, in order to improve staff facilities or to get their raw materials from more sustainable sources.

Profit maximisation

Traditional theory, however, suggests that firms seek to maximise profits. This means that they try to earn the largest profit possible over a period of time. Whilst some of the other objectives may appear to conflict with profit maximisation, pursuit of them may actually increase profits in the longer term. For instance, growth may involve reducing the number of competitors. This would reduce the price elasticity of demand for its product and so its ability to raise price and revenue. In addition, increasing the scale of operation may reduce average costs. Both of these outcomes would increase profits.

Seeking to increase social welfare may also increase profits in the long run. For example, pursuing environment friendly policies and being socially responsible may raise costs of production, but it may also increase demand and revenue, as consumers are becoming increasingly concerned that firms should act in an ethical manner. Treating workers better may help retain workers which would reduce the costs of recruiting and training workers.

When profit maximisation is achieved

Profit is made when the revenue earned by a firm is greater than the costs incurred by it. Profit maximisation is an objective pursued by most private sector firms. Total profit is the positive difference between total revenue and total cost. Profit per unit (sometimes referred to as the profit margin) is the positive difference between average revenue (revenue per unit) and average total cost (unit cost). Profit is maximised when the positive gap between revenue and cost is greatest. Table 22.6 shows that profit would be maximised at 40 units of output.

Output	Total revenue (\$)	Total cost (\$)	Total profit (\$)
10	200	220	-20
20	380	380	0
30	500	480	20
40	600	540	60
50	660	620	40
60	700	710	-10

Table 22.6 The relationship between total revenue, total cost and total profit

Besides calculating total profit, the profit per unit can be found by deducting average cost from average revenue, as shown in Table 22.7. In this case, profit is maximised at three units.

Output	Average revenue (\$)	Average cost (\$)	Total profit (\$)
1	15	15	0
2	14	12	2
3	12	9	3
4	9	8	1
5	5	10	-5

Table 22.7: The relationship between average revenue, average cost and total profit

From the information in Table 22.7, it is possible to calculate total revenue (by multiplying average revenue with output), total cost (by multiplying average cost with output) and total profit (by multiplying profit per unit with output). These figures are shown in Table 22.8.

Output	Total revenue (\$)	Total cost (\$)	Total profit (\$)
1	15	15	0
2	28	24	4
3	36	27	9
4	36	32	4
5	25	50	-25

Table 22.8: Total revenue, total cost and total profit

If information is given on output, costs and revenue, it is possible to work out revenue as shown in Table 22.9. This is because it is known that

$$\text{profit} = \text{revenue} - \text{cost}$$

So, $\text{revenue} = \text{profit} + \text{cost}$. Similarly, from information on output, revenue and profit, cost can be calculated.

$$\text{cost} = \text{revenue} - \text{profit}$$

Output	Total profit (\$)	Total revenue (\$)	Total cost (\$)
10	0	400	400
20	100	800	700
30	300	1200	900
40	400	1600	1200
50	300	2000	1700

Table 22.9: The relationship between total profit, total revenue and total cost

INDIVIDUAL ACTIVITY 2

- 1 From the following information, determine the profit maximising output.

Output	Total revenue (\$)	Total cost (\$)
10	80	90
20	150	150
30	210	190
40	260	210
50	300	260

- 2 From the following information, copy the table and complete the column for total cost.

Output	Total revenue (\$)	Total profit (\$)	Total cost (\$)
10	80	-20	
20	150	0	
30	210	30	
40	260	20	
50	300	-40	

Effects of changes in profits

Profits provide an incentive for entrepreneurs to undertake production. An increase in profit will encourage more firms to enter a competitive market. It will also provide firms with more finance to update their capital equipment and expand their business.

A profitable firm will also find it easier to obtain external finance. Shareholders are more likely to want to buy shares in profitable firms and banks are usually willing to give them loans. These firms may also find it easier to recruit top managers and directors, attracted by their success.

The effect of a fall in profit may vary with time. At first it may have little impact on the behaviour of firms, if they think that it will only be short lived. After a while, if profits remain low, or fall further, some firms will cut back on production and others will cease production.

Ways of increasing profit

The two fundamental ways of increasing profit are to

- reduce costs of production, and
- raise revenue.

There are a number of ways of reducing costs of production. One is by reducing any wastages and inefficiency. Another is by increasing the productivity of factors of production. In the short run the second strategy may actually raise costs, but in the long run it may lower average costs and raise revenue by improving quality. For instance, a firm may spend more on training workers and may replace existing equipment with a more technologically advanced version. In the longer run, these measures should increase output per worker and per machine and therefore reduce average cost. A third way is by increasing the size of the firm through merger or takeover. A larger firm may be able to take advantage of economies of scale. The firm will be likely to have higher total revenue. It may also have a higher total profit and profit per unit, due to its greater market share. Firms with considerable market power



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diseconomies of scale

often have inelastic demand for their products. When demand is inelastic, a firm can increase its revenue by raising price. In contrast if demand is elastic, the revenue may be raised by cutting down price.

Besides trying to raise revenue by changing price, firms may seek to increase demand for the products. There is a variety of ways in which this can be done. They may seek to improve the quality of their products, diversify and be more responsive to changes in consumer demand by improving their market research. Another method that firms may employ is advertising. A successful advertising campaign is one which increases revenue by more than the cost and hence raises profit.

**TIP**

Remember that profit is not the same as revenue. Revenue might increase but profit would fall, if costs rise by more than revenue.

GROUP ACTIVITY 2

In 2015, the US retailer Wal-Mart experienced a rise in total revenue, but was predicting a fall in profit. A company spokesperson said the firm was seeking to reduce stock levels and expected the demand to increase in the future.

- a** How can total revenue rise but profits fall?
- b** Explain:
 - i** how a reduction in stock levels could increase profit
 - ii** one way a firm could increase demand.

INDIVIDUAL ACTIVITY 3

In 2016, Next, a well-known UK clothes retailer, received a total revenue of \$4.1bn and earned a profit of \$821m. A year before, its revenue had been \$4bn and its costs were \$3.2bn.

The way that clothes retailers seek to raise demand for their products varies. Some spend a lot on advertising, while others concentrate on buying good sites and window displays, and expanding online sales.

- a** Calculate Next's total cost in 2016.
- b** Calculate Next's profit in 2015.
- c** Explain how buying good sites, window displays and online shopping can increase profits.

Summary

You should know:

- Total cost rises with output.
- In the short run, firms incur both fixed and variable costs.
- Fixed costs do not change with output in the short run.
- Average fixed costs fall as output rises.
- Variable costs increase as output rises.
- Average variable cost tends to fall and then rise, as output increases.
- In the short run, total cost consists of fixed and variable costs.
- In the long run, all costs are variable.
- The shape of the long run average variable cost is influenced by economies and diseconomies of scale.
- Average revenue (price) is total revenue divided by the quantity sold.
- In a perfectly competitive market, average revenue stays the same as the quantity sold rises. In most markets, however, firms have to lower the price to sell more.
- Firms may seek to survive, grow, promote social welfare, earn enough profit to satisfy shareholders while pursuing other aims or make as much profit as possible.
- Profits are maximised when the positive gap between revenue and cost is greatest.
- Total profit is total revenue minus total cost whilst profit per unit is the difference between average revenue and average cost.
- A change in profit may affect the number and size of firms in the industry.
- Profit can be increased by raising revenue or cutting costs.
- Costs can be cut by reducing wastages and inefficiency, raising productivity and increasing the scale of operation.
- Revenue can be raised by altering price, improving the product, adapting more quickly to changes in consumer demand and advertising.

Multiple choice questions

- 1 Which of the following is a fixed cost to a manufacturing firm?
 - A Insurance on buildings
 - B Overtime payments to workers
 - C The cost of energy
 - D The cost of raw materials

- 2 A firm produces 50 units of output. The total variable cost of this output is \$200 and the total fixed cost is \$300. What is the average total cost of production?
 - A \$2
 - B \$4
 - C \$6
 - D \$10

- 3 A firm sells 100 units at a price of \$4 per product. From this information, calculate the firm's total revenue (TR) and average revenue (AR).

	Total revenue (\$)	Average revenue (\$)
A	100	4
B	100	25
C	400	4
D	400	25

- 4 A firm achieves profit maximisation. What does this mean?
- A** It cannot increase its profit by changing its output
 - B** It makes more profit than the other firms in the industry
 - C** It maximises its total revenue
 - D** It produces at the lowest possible cost

Four-part question

- a** Giving an example, define *variable cost*. (2)
- b** Explain **two** causes of an increase in a firm's profit. (4)
- c** Analyse, using diagrams, how a rise in output affects total fixed cost and average fixed cost. (6)
- d** Discuss whether or not firms try to maximise profits. (8)



Chapter 23

Market structure

201

Learning objectives

By the end of this chapter you will be able to:

- analyse the effect of having a high number of firms on price, quantity, choice, profit
- describe the characteristics of a monopoly
- discuss the advantages and disadvantages of monopoly

Introducing the topic

In some markets, there are many firms selling a product, while in others there is only one. Which type of market would you prefer to buy in and why?



KEY TERMS

Market structure:

the conditions which exist in a market including the number of firms

Competitive market:

a market with a number of firms that compete with each other.

23.1 Competitive markets

Market structure is a term for the conditions which exist in a market. There are a number of categories of market structure from very competitive to a monopoly which does not face any direct competition.

The more competitive a market is, the more sellers and buyers there are. With a high number of sellers, each firm will have a small share of the market, accounting for a small amount of the total market supply. This means that the change in the output of one firm has little or no effect on price. The existence of a number of firms means that consumers can switch between the products of the rival firms.

In **competitive markets**, there is usually relatively free entry into and exit from the market. This means that there must not be anything which makes it difficult for the firms to enter or leave the industry, that is to start or stop producing the product.



A rickshaw driver competes with taxi drivers for customers

GROUP ACTIVITY 1

- a Identify three reasons accounting for consumer preference for one firm's products over that of rival firms.
- b If a firm's products become more popular than those of its rivals, what will happen to its market share?

The behaviour of competitive firms

In a competitive market, there is pressure for firms to keep prices low. If an individual firm charges a higher price, it runs the risk of losing all of its sales to its rivals as the products are likely to be close substitutes. Firms may seek to gain a competitive advantage by improving their products. They are likely to respond quickly and fully, to any changes in demand.

Easy entry and exit will mean that in the long run firms will probably earn relatively low profits. In some cases, this may be just enough profit to keep them producing the product. In the short run, they may earn more, or less, than this level of profit which is referred to as **normal profit**. If demand for the product rises, the firms in the industry will make higher than normal profit. This level of profit, called **supernormal profit** or abnormal profit, will attract new firms into the industry. Their entry will increase supply which, in turn, will lower the price and return profit to the normal level. If, on the other hand, demand falls, firms would initially make a loss. This will force some firms out of the industry. The exit of the firms will reduce supply, cause prices to rise and restore normal profits.

Performance of competitive firms

A high level of competition is usually expected to promote efficiency. It provides firms with both an incentive and a threat to produce according to consumers' wants at the lowest possible cost. Any firm that can respond more quickly to consumers' demands, or can cut its costs, should gain a competitive advantage and earn higher profits. The threat arises because any firm that is not efficient, produces at a higher cost, or does not respond to changes in consumer tastes, will be driven out of the market. A high level of competition may drive the price down to a level which just covers the cost. That price, however, may not be that low. This is because competitive firms are likely to be small and often production on a larger scale reduces unit costs.

23.2 Monopoly markets

The usual meaning of a **monopoly** is a sole supplier of a product having 100% share of the market. This is often referred to as a pure monopoly and we will concentrate on this definition. Some governments define a monopoly as a firm that has 25% or more share of the market, and a dominant monopoly when a firm has a 40% share of the market.

Characteristics of a monopoly

- The firm is the industry. It has a 100% share of the market.
- There are high **barriers to entry and exit**, making it difficult for other firms to enter the market.
- A monopoly is a price maker. Its output is the industry's output and so changes in its supply affect the market price.

Why do monopolies arise?

It may be worthwhile to consider the causes which lead to a firm having total control of a market. In some cases, a monopoly may develop over time. One firm may have been so successful in cutting its costs and responding to changes in the consumer tastes in the past, that it has driven out rival firms and captured the whole of the market. Also, mergers and takeovers may result in the number of firms being reduced to one.

Alternatively, a monopoly may exist from the start. One firm may own, for example, all the gold mines in a country or it may have been granted monopolistic powers by a government, which makes it illegal for other firms to enter the market. A patent would also stop other firms from producing the product.



KEY TERMS

Normal profit: the minimum level of profit required to keep a firm in the industry in the long run.

Supernormal profit: profit above that needed to keep a firm in the market in the long run.

Monopoly: a market with a single supplier.

Barrier to entry: anything that makes it difficult for a firm to start producing the product.

Barrier to exit: anything that makes it difficult for a firm to stop making the product.



TIP

Identify a monopoly in your country and evaluate its performance so that you can use it as an example.



KEY TERMS

Scale of production: the size of production units and the methods of production used.

Sunk costs: cost that cannot be recovered if the firm leaves the industry.

Why do monopolies continue?

Another important question to be asked is ‘What stops new firms from breaking into the market and providing competition to a monopoly?’ It is the existence of barriers to entry and exit. One type of barrier is a *legal barrier*. As mentioned above, this may be in the form of a patent or a government act.

Another important barrier to entry is the **scale of production**. If the monopoly is producing on a large scale, it may be able to produce at a low unit cost. Any new firm, unable to produce as much, is likely to face higher unit costs and therefore will be unable to compete. It can also be expensive to set up a new firm, if large capital equipment is required. Other barriers to entry include the creation of brand loyalty through branding and advertising, and the monopoly’s access to resources and retail outlets.

Barriers to exit can also stop new firms from entering the market. One barrier to exit may be a *long-term contract* to provide a product. Some firms may be reluctant to undertake such a commitment. A significant barrier to exit is the existence of **sunk costs**. These are the costs, such as advertising and industry-specific equipment, which cannot be recovered if the firm leaves the industry.

GROUP ACTIVITY 2

In each case, consider what type of barriers to entry and exit may exist in the following markets:

- | | |
|--------------------------|---------------------------|
| a airlines | c steel production |
| b film production | d window cleaning. |

The behaviour of a monopoly

The existence of barriers to entry, means that a monopoly can earn supernormal profits in the long run. Firms outside the industry may not be aware of the high profits being earned. Even if they do know about the high profits and want to enter the industry, they are kept out by the high barriers to entry and exit.

A monopoly has control over the supply of the product, but although it can seek to influence the demand, it does not have control over it. In fact, a monopoly has to make a choice. It can set the price, but then it has to accept the level of sales that consumers are prepared to buy at that price. If, on the other hand, it chooses to sell a given quantity, the price will be determined by what consumers are prepared to pay for this quantity. Figure 23.1 shows that if a firm sets a price P , the demand curve determines that it will sell amount Q . If it decides to sell amount Q_1 , it will have to accept a price of P_1 .

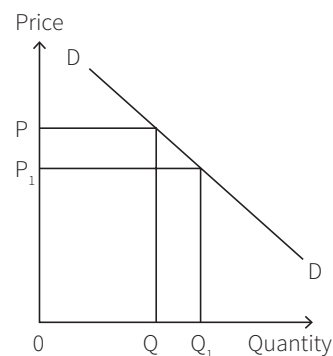


Fig. 23.1: The choice facing a monopolist

The performance of a monopoly

Monopolies are often criticised. This is because there are concerns that the absence of competition may lead to inefficiency. A monopoly may restrict the supply to push up prices and may produce a poor quality product, knowing that consumers cannot switch to rival products. It may also fail to respond to changes in consumer tastes and develop new products.

It is possible, however, that a monopoly could be relatively efficient and actually benefit consumers. If it produces on a large scale, its unit cost and price may be lower than that in a more competitive market. In fact, in some cases a monopoly would definitely be more efficient than competition. This would be the case when it prevents the wasteful duplication of capital equipment. For example, it would be expensive, and possibly unsafe, to have a number of different firms laying and operating rail tracks.

A monopoly's high profits would also enable it to spend on research and development and, therefore, it may introduce new, improved variations. Although it does not have direct competitive pressure to do this, it knows that it will receive all the profits resulting from any successful introduction of new methods and products. In addition, the need to overcome barriers to entry and break the monopoly may encourage firms outside the industry to try and develop a better product.



LINK

Chapter 14.7 Abuse of monopoly power

Occurrence of monopoly

The number of firms that can be defined as monopolies depends, in part, on the way markets have been defined. The more narrow the definition, in terms of the product and geographical area, the more examples will be found. For example, a country may have only one firm supplying gas, but several firms in its energy industry. There may be a relatively high number of food retailers in a town, but only one food shop on an estate, making it a local monopoly.

INDIVIDUAL ACTIVITY 1

Copy and complete the table which shows a comparison of a competitive market and a monopoly.

	Competitive market	Monopoly
Level of competition		none
Number of producers	many	
Barriers to entry		high
Type of long term profit	normal	
Influence on price	limited or none	
Number of substitutes		none

Summary

You should know:

- The key characteristics of a competitive markets are the presence of many buyers and sellers, and entry to and exit from the market.
- Competitive firms usually earn relatively low profits in the long run.
- Competitive markets may promote efficiency, keep prices low and quality high. However, low-scale production may mean that prices are not as low as possible and also there may be a lack of choice of types of products.

- The key characteristics of a monopoly are dominance of the market by one firm and high barriers to entry and exit.
- A monopoly is a price maker which can earn supernormal profits in the long run due to barriers to entry and exit.
- A monopoly can arise because one firm captures the market, one firm is formed by mergers and takeovers or the law protects a firm's monopolistic power.
- Barriers to entry include legal barriers, scale of operation, high set-up costs, brand loyalty and monopolistic access to resources and retail outlets.
- A monopoly can determine price or the quantity it sells, but not both.
- A monopoly may raise price, reduce quality and fail to innovate. However, it is also possible that it may produce at a low cost and hence charge a low price. It may also innovate due to the availability of finance and sense of security.

Multiple choice questions

- 1 Which of the following is a feature of a competitive market?
 - A Easy entry and exit
 - B Firms with a high market share
 - C Small number of buyers
 - D Small number of sellers

- 2 Indian Railways is a monopoly firm. What does this mean?
 - A The firm is a price taker
 - B The firm has no competitors
 - C The firm has a small share of the market
 - D The firm is not protected by barriers to entry

- 3 In which type of market structure can supernormal profits be earned in the short run?
 - A Monopoly
 - B Competitive market
 - C Monopoly and competitive market
 - D Neither monopoly nor competitive market

- 4 Which of the following is a barrier to entry?
 - A Brand loyalty
 - B Lack of advertising
 - C Low set-up costs
 - D Perfect information

Four-part question

- a Define a *barrier to entry*. (2)
- b Explain **two** characteristics of a competitive market. (4)
- c Analyse how a change in the number of firms in a market can affect the profits that are earned. (6)
- d Discuss whether or not a monopoly benefits consumers. (8)

Exam-style questions

Multiple choice questions

1 'Money enables people to borrow and lend'. Which function of money does this describe?

- A measure of value
- B medium of exchange
- C standard for deferred payment
- D store of value

2 What is a function of a commercial bank?

- A to control the money supply
- B to decide on the amount spent by the government
- C to lend to individuals and firms
- D to manage the national debt

3 Which statement about different income groups is true?

- A Low income groups save more, in percentage terms, than high income groups
- B Low income groups find it easier to borrow than high income groups
- C High income groups spend less, in percentage terms, than low income groups
- D High income groups do not borrow money

4 More people throughout the world visit the cinema. What impact is this likely to have on the demand for actors and their wages?

- | Demand for actors | Wages of actors |
|--------------------------|------------------------|
| A decreases | decrease |
| B decreases | increase |
| C increases | increase |
| D increases | decrease |

5 Which combination of events would increase a trade union's ability to negotiate a wage rise for its members?

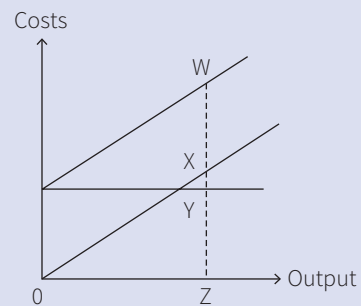
- | Labour productivity | Unemployment |
|----------------------------|---------------------|
| A decreases | decreases |
| B decreases | increases |
| C increases | increases |
| D increases | decreases |

- 6 The following information shows the cost and revenue of a firm producing coats.

Total output of coats	Total costs (\$)	Total revenue (\$)
100	2000	2400
200	3600	4200
300	4500	5000
400	5200	5600

At what output does the firm maximise profits?

- A 100
 B 200
 C 300
 D 400
- 7 The diagram shows the fixed costs, variable costs and the total cost of a firm. Which distance represents the firm's variable costs at Z units of output?



- A WX
 B XY
 C WY
 D YZ
- 8 A firm sells 200 units at \$9 each. Its average fixed cost is \$2 and its average variable cost is \$4. How much profit does the firm make?
- A \$400
 B \$600
 C \$800
 D \$1800
- 9 A firm's long run average cost curve shifts upwards. Which of the following could have caused this?
- A internal economies of scale
 B internal diseconomies of scale
 C external economies of scale
 D external diseconomies of scale

10 Which of the following will benefit a small firm?

- A bulk buying
- B easy access to finance
- C flexibility
- D specialist managers

Data response questions

Carefully study the source material for each question, then answer Questions 1 and 2.

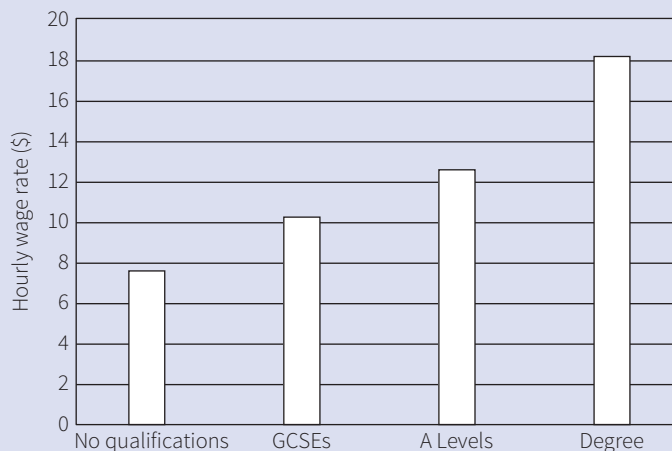
Source material: Corporate lawyers

Corporate lawyers specialise in advising firms on their legal rights and undertake legal work in drawing up contracts. They work in law firms and in large companies including commercial banks. In a commercial bank, a corporate lawyer may undertake legal work on, for example, the setting up of a new saving scheme, a merger with another bank or on the rights of the bank's shareholders.

Corporate lawyers' wages are high in comparison to the wages paid in most other countries. In 2016 the average wage received by a US corporate lawyer was \$120 000 a year. This compared with an average of \$30 000 a year in India, for example. Some experienced corporate lawyers working for top law firms and for multinational companies may earn in excess of \$300 000. The average wage for US corporate lawyers has, however, not changed much in recent years. Indeed, it did not increase in 2016. The number of law school graduates has been increasing in the country for some time. In recent years, there has also been an increase in corporate legal work with more mergers taking place and more legal cases being brought against firms.

While the average wage paid to corporate lawyers in the USA did not rise in 2016, the average bonus paid to corporate lawyers did. Bonuses paid to US corporate lawyers can vary significantly from year to year. They rise when firms' profits are increasing and when it is considered that the productivity of the corporate lawyers is increasing.

The average wage of a corporate lawyer in the UK in 2016 was \$80 000. In the UK, as in other countries, the average wage a worker receives is influenced by the qualifications she or he possesses. The chart shows the average hourly wage rate for workers with different qualifications in the UK in 2016.



Average hourly wage rate by qualification, UK, 2016

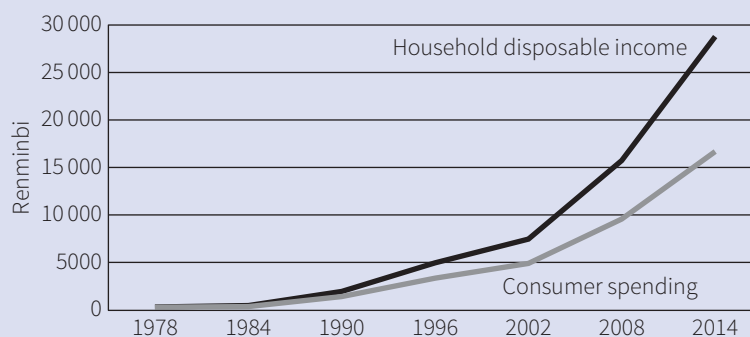
- 1 Referring to the source material in your responses, complete all parts of Question 1.
 - a Identify an example of a horizontal merger. **(1)**
 - b Calculate, in percentage terms, how much more on average corporate lawyers earned in the USA than in India in 2016. **(2)**
 - c Explain **one** function of a commercial bank. **(2)**
 - d Analyse, using a demand and supply diagram, **one** possible reason why the average wage of US corporate lawyers did not increase in 2016. **(5)**
 - e Explain why US firms prefer to pay bonuses rather than raise the wages of corporate lawyers. **(4)**
 - f Analyse the relationship between qualifications and the average hourly wage rate. **(4)**
 - g Discuss whether or not a firm will benefit from its workers specialising. **(6)**
 - h Discuss whether or not higher wages in the USA will result in Indian corporate lawyers moving to the USA. **(6)**

Source material: E commerce in China

The e-commerce delivery business is expanding rapidly in China and throughout the world. More and more people are ordering products online and a number of firms are delivering these products to people's doors. These delivery firms are investing in advanced IT systems and new methods of delivery. Some firms are exploring drone deliveries to speed up their deliveries, which would reduce the number of workers and the amount of warehouse space needed, and also reduce the wages and rent.

One Chinese e-commerce delivery firm, Cainiao, is increasing its market share by buying out other e-commerce delivery firms. Its growth in size has enabled it to process orders and to use larger delivery vehicles more efficiently. It had got its average cost of delivery down to \$1.50 in 2016 and is now delivering to more than 2800 districts in China. The firm might be able to reduce its average cost further by employing a greater proportion of capital. It currently makes good use of a supply of skilled workers and employs some temporary workers to deal with peaks in demand. The average delivery price it charged was 30% higher than its unit cost in 2016. This profit margin is below that of some of its competitors. To widen the gap between revenue and cost, the ecommerce delivery firms are seeking to be more responsive to changes in consumer demand and to be more productively efficient.

Globally there are three major firms in the market – DHL, FedEx and UPS. These firms are building up delivery networks in China, attracted by the rise in consumer spending in China. The diagram shows how household disposable income and consumer spending changed over the period 1978–2014.



Household disposable income and consumer spending in China, 1978–2014 (Rmb)

- 2 Referring to the source material in your responses, complete all parts of Question 2.
- a Identify an example of a fixed cost. **(1)**
 - b Calculate how much Cainiao charged, on average, for a delivery in 2016. **(2)**
 - c Explain **one** type of economy of scale that Cainiao is able to enjoy. **(2)**
 - d Explain **two** advantages of labour-intensive production. **(4)**
 - e Analyse how firms following the objective of profit maximisation may benefit consumers. **(5)**
 - f Analyse what happened to China's savings ratio over the period shown. **(4)**
 - g Discuss whether or not an increase in disposable income will always increase the savings ratio. **(6)**
 - h Discuss whether or not small e-commerce delivery firms can compete against large e-commerce delivery firms. **(6)**

Four-part questions

- 1 In April 2016 teachers in Hungary took industrial action. In that year, a teacher with five years' experience was paid \$800 a month, compared to the national average of \$995. Of course, some Hungarian workers were paid less than teachers. For example, some farm workers were paid just the country's minimum wage of \$382 a month. A number of other workers experienced a fall in pay which affected their spending.
- a What is meant by *industrial action*? **(2)**
 - b Explain how the spending of the poor is likely to differ from that of the rich. **(4)**
 - c Analyse the reasons why someone may continue to work in a job despite a fall in pay. **(6)**
 - d Discuss whether or not teachers will always earn more than farm workers. **(8)**
- 2 Recent years have seen a number of mergers in food processing firms throughout the world.
- In 2015 two large US food processing firms, Kraft Foods and H.J.Heinz, merged to form the Kraft Heinz Company. It was hoped that the merger would reduce average fixed cost. The food processing industry is growing at a rapid rate and becoming more capital-intensive. These changes are having an impact on the profits of the firms in the industry.
- a Define *average fixed cost*. **(2)**
 - b Distinguish between a horizontal merger and a vertical merger and give an example of each. **(4)**
 - c Analyse **three** causes of an increase in demand for capital goods. **(6)**
 - d Discuss whether or not the growth of an industry will increase the profit earned by the firms in the industry. **(8)**

SECTION 4

Government and the macroeconomy



Chapter 24

The role of government

214

Learning objectives

By the end of this chapter you will be able to:

- describe the role of government, locally, nationally and internationally

Introducing the topic

We have seen how governments may seek to influence individual markets. We will now look at how governments may try to improve the performance of the economy on a local, national and international level.

24.1 Factors that influence the role of government

A government plays a larger role in an economy operating a mixed economic system than one operating a more market based economic system. How much the government intervenes in mixed economies differs according to both the perceived extent of market failure and how effective government policy measures are.

24.2 The government's influence on the local economy

Some local areas are very dependent on particular industries. Some of these industries may be state-owned industries. In this case, the government will be making decisions such as how much to produce and the wages to pay, which directly affect the local community. The industries which are in the private sector may be subsidised by the government to, for instance, prevent unemployment rising in a relatively poor area.

Some decisions on economic policies will be taken at the local level, rather than the national level. The extent to which decisions are made at the local level differ from country to country. **Local governments** may provide a range of goods and services including refuse collection, libraries, housing and local roads. To finance these, local governments may impose some taxes and charges and may receive grants from the national government.

24.3 The functions of government at local and national levels

The government carries out a range of functions. It is an owner of industries and assets such as schools and hospitals, a producer, a regulator, a collector of taxes and a director of the level of economic activity.

The government as a producer

A government may produce products which it believes are of key importance, the products that are produced by a **natural monopoly**, those which it thinks are essential and hence should be available to all and those which the private sector may under-produce or not produce.

Most countries seek to ensure that their key industries survive and do well.

Key industries may be **strategic industries** or **national champions**. In China and France, for instance, such industries are often run by state-owned enterprises. In Italy, they receive favoured loans from banks. In a number of countries, the government also stops foreign companies from taking them over or merging with them, such as rail infrastructure which may be run or regulated by the government. This is, in part, to prevent consumers being exploited by a private sector firm charging a high price. In addition, to produce at a low average cost a high output may be required and at such an output, a loss may be incurred.

A government may also produce essential products, such as housing, on grounds of equity and merit and public goods.



TIP

Find out what goods and services the government provides in the area where you live.



LINK

Chapter 15.3
Government measures to address market failure (Direct provision)



KEY TERMS

Local government:

a government organisation with the authority to administer a range of policies within an area of the country.

Natural monopoly:

an industry where a single firm can produce at a lower average cost than two or more firms because of the existence of significant economies of scale.

Strategic industries:

industries that are important for the economic development and safety of the country.

National champions:

industries that are, or have the potential to be, world leaders.

Public sector contracts and partnerships between the public and private sectors

Private sector firms provide a range of products and services for the public sector. For example, private sector road building firms construct and maintain roads for the government in many countries, and private pharmaceutical firms supply state healthcare systems with medicines.

In recent years, in more and more countries, the government is forming partnerships with private sector firms. A common form of partnership is where the private sector initially provides the finance for a state project, such as the building of a hospital. The private sector firm then builds it and maintains it for a number of years. The government rents it and operates it, buying it back over time.

In other cases, the public and private sectors provide part of a service. For instance, private sector firms may run train operating companies, whilst the government builds and maintains the infrastructure.

GROUP ACTIVITY 1

Over the years, the Chinese government has identified a number of national champions. In recent years, these have included the biotechnology industry, the new energy cars industry and the rare earths industry.

- a** Identify two ways a government could promote the growth of a national champion.
- b** Identify a possible national champion from your country and explain your choice.

The government as an employer

The government employs workers and managers to operate its state-owned enterprises. Employing people helps a government to achieve some of its aims for the economy. To reduce unemployment, the government can employ more workers. To control rises in prices, the government can limit wage rises of its own workers and the prices charged by its enterprises. It can also set an example in terms of employment practice by, for instance, providing its workers with good quality training, preventing discrimination and ensuring good pensions to its workers.

INDIVIDUAL ACTIVITY 1

The number of letters and parcels being sent by post (mail) is declining throughout the world. In some countries, for example the Netherlands, the postal industry is in the private sector. In others, it is in the public sector, for example the Nigerian Postal Service is government owned and operated.

- a** Explain one argument for:
 - i** the state delivering mail
 - ii** private sector firms delivering mail.
- b** Explain two advantages of working for a state-owned enterprise.

24.4 The role of the government at an international level

Some governments promote free international trade, allowing firms to export and import what they want. Other governments place restrictions on what can be purchased from and sold to other countries.



LINK

Chapter 37.4 Methods of protection

Governments also vary in their policies towards foreign multinational companies (MNCs) wanting to set up in their countries. Some governments seek to attract them, believing they will generate jobs and increase the output that is produced in the country. Other governments stop foreign MNCs setting up in their countries as they think they will drive domestic firms out of business.

Some governments are also members of **trade blocs** such as the European Union (EU) and Mercosur (a Latin American trade bloc). Trade blocs promote trade between the member countries and may restrict trade with non-members. In addition, governments belong to international organisations. For instance, in 2016 there were 164 member countries of the World Trade Organisation (WTO). The WTO deals with global rules of trade between member countries. Its main aim is to promote **free international trade**.



KEY TERMS

Trade bloc: a regional group of countries that remove trade restrictions between themselves.

Free international trade: the exchange of goods and services between countries without any restrictions.

GROUP ACTIVITY 2

In August 2006, the government of Bahrain announced that government departments, schools, universities and other state institutions would have weekend holidays of Friday and Saturday instead of Thursday and Friday. The change was designed to bring Bahrain in line with other countries in the region, including Libya, Iraq and Syria which had also changed their weekends. It was also designed to make it easier for Bahrain's private sector firms, the majority of which work from Sunday to Thursday, to do business with the government. Six years later the government brought in new employment legislation. These included more anti-discrimination rules, for example, banning dismissal from employment being based on sex, colour, religion or membership of a trade union, and an increase in annual leave from 28 to 30 days. Bahrain is a member of the WTO and along with Kuwait, Oman, Qatar, Saudi Arabia and the UAE, a member of the Gulf Cooperation Council (GCC).

- Identify three products that may be supplied by private sector firms to government schools.
- Explain how increasing annual leave and reducing discrimination may increase a country's output.
- Find out whether your country is a member of a trade bloc.

Summary

You should know:

- Governments may raise some taxes and provide some goods and services at the local level.
- A government may seek to ensure the survival of key industries by running them as state-owned enterprises.
- A government may run a natural monopoly and may produce essential products.
- Governments produce, or at least finance, the output of public goods and may produce merit goods.
- Governments may work in partnership with the private sector to finance a government project or to provide a good or service.
- Employing workers can help a government achieve its aims for the economy including reducing unemployment, keeping inflation low and raising the standard of employment practices.
- Governments may promote free international trade or impose restrictions on international trade.

Multiple choice questions

- 1 What is the name of an industry in which the most efficient number of firms is one?
 - A A national champion
 - B A natural monopoly
 - C A primary sector industry
 - D A strategic industry

- 2 In what type of economy are most workers employed by the government?
 - A Free enterprise
 - B Market
 - C Mixed
 - D Planned

- 3 A government decides to limit the wage increase of state employees. What is it most likely trying to achieve?
 - A A reduction in employment
 - B A reduction in inflationary pressure
 - C An increase in the wages paid to private sector employees
 - D An increase in the attractiveness of public sector employment relative to private sector employment

- 4 A move from a planned economy to a market economy is most likely to reduce:
 - A Employment in the agricultural sector
 - B Employment in the public sector
 - C Flexible employment
 - D Self-employment

Four-part question

- a Define a *private good*. (2)
- b Explain **two** reasons why a government may run hospitals. (4)
- c Analyse how the level of government intervention varies according to the type of economic system countries operate. (6)
- d Discuss whether or not the government of a country with a large industry producing cigarettes should ban the production of cigarettes. (8)



Chapter 25

The macroeconomic aims of government

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Learning objectives

By the end of this chapter you will be able to:

- describe the macroeconomic aims of government
- explain the reasons behind this choice of aims
- describe the criteria that governments set for each aim
- explain the possible conflicts between macroeconomic aims

Introducing the topic

Each government has aims for the economy of its country. In 2015 the Chinese government announced in its five-year plan for 2016 to 2020 that it was aiming for its economy to produce a minimum of 6.5% more output each year. A year later the Indian government said that it would try to ensure that the price level would not rise by more than 4% for the period 2016 to 2021. Do you know what your government is trying to achieve for the macroeconomy?

25.1 Governments' macroeconomic aims

The main government aims for the economy are economic growth, low unemployment, price stability, balance of payments stability, and redistribution of income. A government can operate a range of policy measures to achieve these aims and it is judged on their success or otherwise. Performance of the economy, however, is influenced not just by government policies. In a market that is becoming increasingly global, one economy's macroeconomic performance is being affected more and more by the dynamics of other economies.



KEY TERMS

Economic growth: an increase in the output of an economy and in the long run, an increase in the economy's productive potential.

Actual economic growth: an increase in the output of an economy.

Potential economic growth: an increase in an economy's productive capacity.

Aggregate demand: the total demand for a country's product at a given price level. It consists of consumer expenditure, investment, government spending and net exports (exports – imports).

Aggregate supply: the total amount of goods and services that domestic firms are willing to supply at a given price level.

Economic growth

When an economy experiences **economic growth**, there is an increase in its output in the short run. This is sometimes referred to as **actual economic growth**. In the long run, for an economy to sustain its growth, the productive potential of the economy has to be increased. Such an increase can be achieved as a result of a rise in the quantity and/or quality of factors of production.

The difference between actual and **potential economic growth** can be shown on a production possibility curve. In Figure 25.1, the movement from point A to point B represents actual economic growth – more capital and consumer goods are made. The shift outwards of the production possibility curve from YY to ZZ represents potential economic growth – the economy is capable of producing more.

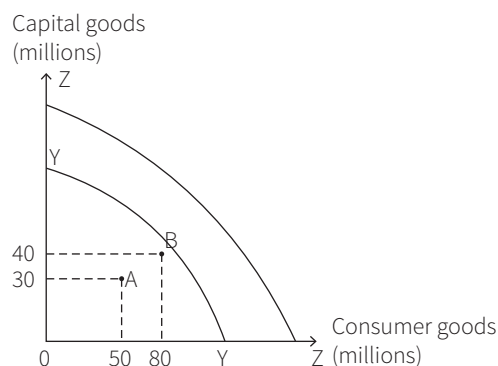


Fig. 25.1: Actual and potential economic growth

In analysing economic growth and other macroeconomic issues, economists also make use of aggregate demand and aggregate supply diagrams. **Aggregate demand (AD)** is the total demand for a country's products at a given price level. It is $C + I + G + (X - M)$. C is consumption. This is spending by households on goods and services. Investment (I) is spending by the private and public sectors on capital goods. G is government spending on state provided goods and services. $X - M$ is net exports which is the value of exports minus imports. A fall in the country's price level causes an extension in aggregate demand. This is because households and firms would have more purchasing power and because it increases the international competitiveness of the country's products. There are a number of causes of an increase in aggregate demand, and a shift to the right of the AD curve. These include an increase in population, a cut in the rate of interest, a lower exchange rate and greater confidence.

Aggregate supply (AS) is the amount of goods and services that domestic firms are willing and able to sell at a given price level. Aggregate supply is perfectly elastic if the economy has a significant number of unemployed resources, as then more can be produced without a contingent rise in costs of production and prices. The curve becomes more inelastic as the economy approaches full employment, since then the firms will be competing for resources and this will push up their costs and, as a result, the price level. At full employment of

resources, aggregate supply becomes perfectly inelastic, since at this point a further increase in output is not possible. Aggregate supply will increase, and the AS curve shift to the right, if costs of production fall and if the quantity or quality of resources increases.

Changes in AD and AS affect the macroeconomy. Figure 25.2 shows actual economic growth. The rise in AD has resulted in a rise in the country's output and a small rise in the price level.

Figure 25.3 shows potential economic growth. The maximum amount that the economy can produce, has increased.

In this case, the rise in the quantity and/or quality of resources has no impact on output. If, however, an increase in productive potential occurs when an economy is operating close to full employment, it can cause a rise in the country's output and a fall in the price level as shown in Figure 25.4.



LINK

Chapter 29.3 Economic growth (Causes)



TIP

It is not a requirement to use the terms 'aggregate demand' and 'aggregate supply'.

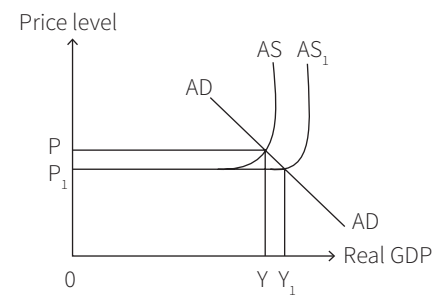
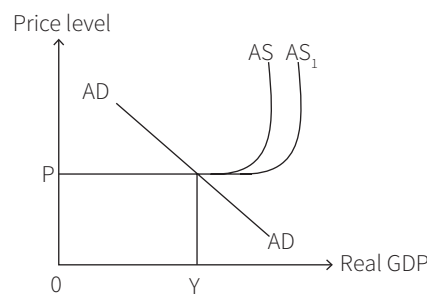
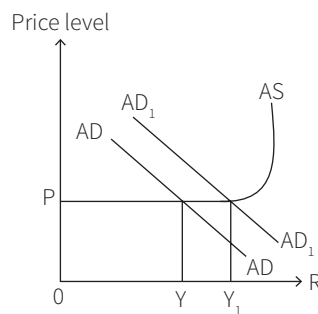


Fig. 25.2: Actual economic growth Fig. 25.3: Potential economic growth

Fig. 25.4: Potential economic growth causing a rise in national output

The reasons why governments aim for economic growth

Governments want to achieve economic growth because producing more goods and services can raise people's living standards. Economic growth can indeed transform people's lives and enable them to live longer because of better nutrition, housing and healthcare.

Economic growth can also help a government achieve its other economic aims. As output increases, employment is likely to rise. If output increases to match higher demand, upward pressure on the price level can be avoided. A country's trade position may be improved if some of the extra output is exported. Some of the poor may gain jobs and some may be helped by the extra tax revenue generated.

Criteria that governments set for economic growth

The determinant of a country's possible economic growth rate is its level of output, in relation to its current maximum possible output and its growth in productive capacity. If, for instance, an economy is growing at 2% below its maximum possible output and its productive capacity is expected to increase by 3% this year, its possible economic growth rate is 5%. Most governments would like their economies to be working at full capacity. Some governments set a target for the economic growth rate of their economies based on their assessment of the possible economic growth rate.

Low unemployment

Most governments try to achieve as low a level and rate of unemployment as possible. This is sometimes expressed as **full employment**. Those people who are willing and able to work at the going wage rate can find employment. Of course, not everyone wants to work or is able to work. These people are not in the labour force. They are said to be economically inactive and are dependent on those in the labour force. They include children, the retired, those



KEY TERMS

Full employment: the lowest level of unemployment possible.

**KEY TERMS**

Economically active:
being a member of the labour force.

Unemployment rate:
the percentage of the labour force who are willing and able to work but are without jobs.

**LINK**

Chapter 30.6 The consequences of unemployment

engaged in full-time education, home makers and those who are too sick or disabled to work. Those who are in work or are unemployed, but actively seeking work, form the labour force and are said to be **economically active**.

The **unemployment rate** is calculated as a percentage of the labour force:

$$\frac{\text{Unemployment}}{\text{Labour force}} \times 100$$

So, if 5 million people are unemployed out of a labour force of 40 million, the unemployment rate is:

$$\frac{5 \text{ m}}{40 \text{ m}} \times 100 = 12.5\%$$

The reasons why governments aim for low unemployment

Unemployment is a waste of resources. Those unemployed can suffer a number of disadvantages including low income and government tax revenue may have to be spent supporting the unemployed.

Criteria that governments set for unemployment

Most governments and economists think that it is not possible to achieve 0% unemployment. This is because they think that even in a strong economy with demand for labour equalling the supply of labour, there will always be some workers changing jobs and being unemployed for short periods. As a result, governments aim for a low rate of unemployment. This rate can vary from country to country depending on their economic circumstances, with what is regarded as the full employment rate varying between countries and over time. In most countries, it is thought to be difficult to get unemployment below 3%.

GROUP ACTIVITY 1

In 2016, Mexico had an economic growth rate of 2.1%, an unemployment rate of 3.7% and an underemployment rate of 25%. The table shows Mexico's industrial structure by output and employment in 2016.

	% share of output	% share of employment
Agriculture	4	14
Manufacturing	33	24
Services	63	62

- What is meant by an 'economic growth rate of 2.1%'?
- What do you think is meant by underemployment?
- In which sector is underemployment likely to have been the highest in 2016? Explain your answer.
- From the information given, explain whether Mexico had the potential to grow at a faster rate than 2.1% in 2016.

**KEY TERM**

Price stability:
the price level in the economy not changing significantly over time.

Price stability

Price stability means that the price level in the economy is not changing significantly over time. The price of some products may be falling while the price of others may be rising, but generally the amount households are paying for the products they are buying is relatively stable.

The reasons why governments aim for price stability

Governments aim for price stability because it ensures greater economic certainty and prevents the country's products from losing international competitiveness. If firms, households and workers have an idea about future level of prices, they can plan with greater confidence. It also means that they will not act in a way that will cause prices to rise in the future. Firms will not raise their prices because they expect their costs to be higher, households will not bring forward purchases for fear that items will be more expensive in the future and workers will not press for wage increases just to maintain their real disposable income.

Criteria that governments set for inflation

In seeking to achieve price stability, most governments are not aiming for a 0% change in price. Some governments, for instance, have set a target **inflation rate** of 2%. Others have a rather higher rate. They do not aim for unchanged prices, for two main reasons. One is that measures of inflation tend to overstate rises in prices. A price index, for instance, might indicate that the general price level has risen by 1%, but in practice, prices might not have changed and might have even fallen slightly. Some of the prices paid by people are lower than those appearing in the official price level indices, as people buy some products at reduced prices in sales and also make second-hand purchases. Price rises can also hide the improvements in products. A car may cost \$100 more this year than last year, but it may incorporate a number of new features such as satellite navigation. So the question arises, is the car actually more expensive or is it a different car?

A second reason is that a slight rise in prices can provide some benefits. It can encourage producers to increase their output, as they may think that higher prices will lead to higher profits. It can also enable firms to cut their wage costs by not raising wages in line with inflation. The alternative to such a move might be a cut in employment.

Governments also try to avoid a fall in the price level if it is caused by a fall in aggregate demand. This is because it could result in a decline in output and a rise in unemployment.



KEY TERMS

Inflation rate: the percentage rise in the price level of goods and services over time.

Balance of payments: the record of a country's economic transactions with other countries.

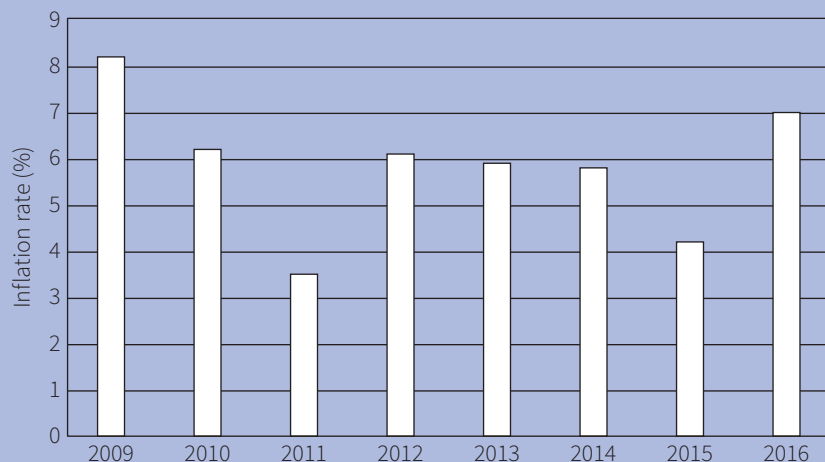


LINK

Chapter 31.2
Measurement of inflation and deflation
(Constructing a price index)

INDIVIDUAL ACTIVITY 1

In 2009 the South African government set its central bank, the South African Reserve Bank, an inflation rate target of between 3 and 6%. This target range was still in force in 2016. The graph shows the country's inflation rate for the period from 2009 to 2016.



- Identify one function of a central bank other than controlling the inflation rate.
- Comment on how successful the South African Reserve Bank was in achieving the government's inflation rate target over the period shown.

Balance of payments stability

A key part of a country's **balance of payments** is its record of revenue received from selling exports and its expenditure on imports. Over the long run, most governments want the value of their exports to equal the value of their imports, so that what the country earns from exports equals what it spends on imports.

The reasons why governments aim for balance of payments stability

If expenditure on imports exceeds revenue from exports for a long period of time, the country will be living beyond its means and will get into debt. If export revenue is greater than import expenditure, the inhabitants of the country will not be enjoying as many products as possible.

Criteria that governments set for balance of payments stability

While governments usually aim for export revenue to equal import expenditure, they may not be concerned if there is a surplus of export revenue over import expenditure or a deficit of export revenue, provided this is of a small amount or if it lasts a short period of time. There may be a move to a deficit caused by an increase in the import of raw materials and capital goods. This is unlikely to be a cause for concern as the products purchased may increase the economy's ability to produce more goods and services to sell at home and abroad. Short-term deficits and surpluses may also arise from fluctuations in income at home and abroad.

GROUP ACTIVITY 2

The table shows selected economic indicators in 2016.

Economy	Economic growth rate %	Unemployment %	Inflation rate %
Greece	0.4	23.2	0.8
India	7.0	5.0	5.0
Japan	1.0	3.0	0.2
Pakistan	5.8	5.9	3.8
Venezuela	13.7	7.3	425.0

- Do you think any of the countries shown achieved all of their macroeconomic aims in 2016? Explain your answer.
- Which country is likely to have had the highest number of unemployed workers in 2016? Explain your answer.

Redistribution of income

A government may seek to redistribute income from the rich to the poor. The more money someone has, the less they tend to appreciate each unit. A rich person with an income of \$10 000 a week is unlikely to miss \$10, but that sum would make a huge difference to someone currently struggling on \$20 a week.

Governments redistribute income by taxing and spending. The rich are taxed more than the poor. Some of the money raised is spent directly on the poor by means of benefits such as housing benefit and unemployment benefit. Other forms of government expenditure, such as that on education and health, particularly benefit the poor. Without the government providing these services free of cost or at subsidised prices, the poor may not find them accessible.

The reasons why governments may seek to redistribute income

Inequality of income and wealth may mean that some people are experiencing poverty. Governments try to reduce poverty because of the hardships it causes. Inequality can grow

without government intervention. The rich tend to marry the rich and benefit from better education and have more opportunity to save. A significant gap between the rich and the poor can also cause social unrest as the poor may feel a sense of social injustice.

Criteria that governments set for income redistribution

Governments are unlikely to aim for a perfectly equal distribution of income. This is because people have different needs. It is also because taxing the rich too heavily and providing too generous benefits may act as a disincentive to effort and enterprise.

25.2 Possible conflicts between macroeconomic aims

There is the risk that full employment may conflict with stable prices. When there is a low level of unemployment, it will be difficult to increase output to match increases in aggregate demand. In this case, higher aggregate demand is likely to lead to higher prices. A low level of unemployment is likely to push up wages as firms compete for workers. The resulting higher costs of production are likely to result in inflation.

Full employment and economic growth may conflict with balance of payments stability. Producing a higher output may be partly the result of higher exports. The resulting rise in employment is likely to increase incomes, however, and spending on imports may increase by more than export revenue. To produce a higher output, firms may also import more imported raw materials and capital goods.

Priority

If the aims appear to conflict, a government may have to decide between, for instance, reducing inflation and reducing unemployment. Its choice will be influenced by the relative scale of the problem, the consequences of the problem and which problem the country's citizens are most concerned about.



TIP

Find out the unemployment rate, inflation rate, economic growth rate and current account position of your own country and compare them with the figures for three major economies. In answering questions about macroeconomic performance, it is useful to show an awareness of the events in your economy and other economies.

Summary

You should know:

- The main macroeconomic aims of the government are economic growth, full employment, price stability, balance of payments stability and redistribution of income.
- Economic growth can improve people's living standards by increasing the availability of goods and services.
- For economic growth to continue in the future, a country's productive capacity has to increase.
- Full employment is usually considered to be the lowest rate of unemployment possible.
- Price stability implies low and stable inflation.
- Low and stable inflation creates certainty and avoids a loss of international competitiveness.
- Measures of inflation tend to overstate rises in prices.
- Most governments aim for a match between export revenue and import expenditure in the long run.
- Governments redistribute income from the rich to the poor by means of taxation and government expenditure.
- There is the possibility that full employment may conflict with stable prices and economic growth and full employment may conflict with balance of payments stability.

Multiple choice questions

- 1 Which of the following is a macroeconomic aim of the government?
 - A A fall in national output
 - B High unemployment
 - C Imports exceeding exports
 - D Price stability

- 2 A country has a population of 120 million and a labour force of 50 million, of which 6 million of its labour force are unemployed. What is the unemployment rate?
 - A 3.53%
 - B 5%
 - C 10.71%
 - D 12%

- 3 Which of the following could increase a country's productive potential?
 - A An improvement in education
 - B A reduction in the retirement age
 - C Retention of worn out machinery by firms
 - D Migration of workers to other countries

- 4 What is meant by potential economic growth?
 - A An increase in the total demand in the economy
 - B An increase in productive capacity of an economy
 - C The economy's export revenue being greater than its import expenditure
 - D The economy operating at full employment

Four-part question

- a Identify **two** macroeconomic aims apart from full employment. **(2)**
- b Explain what is meant by full employment. **(4)**
- c Analyse why governments want to achieve full employment. **(6)**
- d Discuss whether or not all governments will have the same economic aims. **(8)**



Chapter 26

Fiscal policy

227

Learning objectives

By the end of this chapter you will be able to:

- define the budget
- analyse the reasons for government spending
- analyse the reasons for levying taxes
- describe the different types of taxes
- explain the principles of taxation (the qualities of a good tax)
- analyse the impact of taxation on consumers, producers, government and the economy as a whole
- define fiscal policy
- analyse the effect of fiscal policy measures on the budget position
- calculate the size of a budget deficit or surplus
- discuss the effect of fiscal policy on government macroeconomic aims

Introducing the topic

Do you know which of the products you buy have a tax on them? Do you know how much of the pay you may receive in your chosen career will be taxed? You might have heard people complaining about the taxes that they pay. Do you think they know why governments impose taxes and why they change tax rates?

26.1 The budget

A government sets out the amount it plans to spend and raise in revenue in a **budget** statement. It shows the relationship between government revenue and government spending. A **budget deficit** is when the government's spending, also sometimes called public expenditure, is higher than its revenue. In this case, the government will have to borrow to finance some of its spending. In contrast, a **budget surplus** occurs when government revenue is greater than government spending. A balanced budget, which occurs less frequently, is when government spending and revenue are equal.



KEY TERMS

Budget: the relationship between government revenue and government spending.

Budget deficit: government spending is higher than government revenue.

Budget surplus: government revenue is higher than government spending.

National debt: the total amount the government has borrowed over time.



India's finance minister on Budget day

26.2 The reasons for government spending

Governments spend for four essential reasons. These are

- **To influence economic activity.** A government may, for example, increase its spending in order to increase aggregate demand in the hope that the higher aggregate demand will stimulate higher output and so result in economic growth.
- **To reduce market failure.** Governments spend on public goods as this would not be financed by the private sector. They spend on merit goods as market forces would not allocate sufficient resources to their production. In addition, they spend money regulating markets where there is a difference between social and private costs and benefits and abuse of market power.
- **To promote equity.** Governments provide benefits and products to vulnerable groups and the unemployed. For example, some governments provide state pensions to the retired, subsidised housing for the poor and free education to children.
- **To pay interest on national debt.** If a government has borrowed in the past to finance a gap between its spending and its tax revenue, it will have to pay interest on the loans.

Government spending can be a powerful government measure. This is because of the **multiplier effect** whereby any initial increase in spending will eventually cause a greater increase in a aggregate demand. For example, if a government raised its expenditure by \$20m,



LINK

Chapter 15.3
Government measures to address market failure

Chapter 33.3 Possible government policy measures to reduce poverty



KEY TERM

Multiplier effect: the final impact on aggregate demand being greater than the initial change.

the final rise in the country's income, expenditure and output would be greater. This is because those who benefit from the \$20m extra expenditure, may themselves spend \$16m (saving \$4m). In turn those who receive the \$16m may spend \$13m and so on. If expenditure continues to rise at this rate, total spending, income and output will rise by \$100m. In this case, the final increase in expenditure is five times greater than the initial rise.

INDIVIDUAL ACTIVITY 1

The Maldives had a budget deficit of \$100m in 2015. It was predicting that the budget deficit would double to \$200m in 2016 with a forecast government revenue of \$1.4bn. One-third of government spending was expected to go on public sector wages and a smaller proportion on promoting tourism. The Maldivian government gets revenue from a number of sources including taxation and leasing islands for agriculture, fisheries and resort development.

- a Calculate how much the Maldivian government was expected to spend in 2016.
- b Explain how a decline in tourism would be expected to affect the budget position of the Maldives.

26.3 The reasons for levying taxation

Most people think that taxes are used to raise revenue for government expenditure. This is, indeed, a key aim of taxation and in a number of countries, tax revenue is the main source of government revenue. There are, however, other aims as well, including:

- **To redistribute income from the rich to the poor.** Higher income groups usually pay more in tax than the poor and some of the revenue raised is used to pay benefits to the poor.
- **To discourage the consumption of demerit goods.** These are products that the government considers more harmful to consumers than they realise, for example, cigarettes and alcohol.
- **To raise the costs of firms that impose costs on others** by, for example, causing pollution.
- **To discourage the consumption of imports and hence protect domestic industries.** By placing tariffs on rival imported products, the country's inhabitants may buy less foreign and more domestic products.
- **To influence economic activity.** As with government spending, changes in taxation can be used to change aggregate demand. If an economy is experiencing rising unemployment, its government may cut taxes to stimulate an increase in consumption and investment.

26.4 The main categories of taxes

Taxes are either direct or indirect and progressive, proportional or regressive. **Direct taxes** are taxes levied on a person's or a firm's income or wealth. They are called direct taxes because the people or firms responsible for paying the tax have to bear the burden of the tax. **Indirect taxes**, which can also be called expenditure or outlay taxes, differ from direct taxes in two key ways. One is that they are levied on spending. The other is that the firms that actually make the tax payment to the government may pass on at least some of the burden of the tax, to other people. For example, most of the tax that governments impose on petrol is passed on by petrol companies to the customers in the form of higher prices.

A **progressive tax** is one which takes a higher percentage of the income or wealth of the rich. As taxable income or wealth rises, so does the rate of taxation. In the case of a **proportional tax**, the percentage paid in tax stays the same as income or wealth change. With a **regressive tax**, the percentage paid in tax falls as income or wealth rises. So in this case, people with higher incomes pay a smaller percentage of their income in tax than the poor do.



LINK

Chapter 33.3 Possible government policy measures to reduce poverty

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KEY TERMS

Direct taxes: taxes on income and wealth.

Indirect taxes: taxes on expenditure.

Progressive tax: one which takes a larger percentage of the income or wealth of the rich.

Proportional tax: one which takes the same percentage of the income or wealth of all taxpayers.

Regressive tax: one which takes a larger percentage of the income or wealth of the poor.

In the case of all three types of tax, the total amount of tax paid usually rises with income or wealth but what differs is the percentage paid (this is shown in Table 26.1). For example, a rich and a poor person pay the same excise duty per litre of petrol bought. The rich person is likely to buy more petrol and so will pay more tax in total. The amount paid, however, is likely to form a smaller percentage of his or her income, making this a regressive tax.

Progressive tax		
Income (\$)	Tax paid (\$)	Tax rate (%)
100	10	10
500	100	20
1000	400	40
Proportional tax		
Income (\$)	Tax paid (\$)	Tax rate (%)
100	25	25
500	125	25
1000	250	25
Regressive tax		
Income (\$)	Tax paid (\$)	Tax rate (%)
100	40	40
500	150	30
1000	200	20

Table 26.1: Progressive, proportional and regressive taxes

INDIVIDUAL ACTIVITY 2

Some countries, including Bangladesh, Brazil and South Africa, have banned plastic carrier bags. Other countries, including Ireland, the UK and the USA, impose taxes on plastic bags. The main reason for this is to cut their use and so reduce litter.

- Is a tax on plastic carrier bags a direct or an indirect tax? Explain your answer.
- Identify a reason, other than reducing litter, for imposing a tax on plastic carrier bags.
- Using a demand and supply diagram, explain the effect of imposing a tax on plastic carrier bags, on their market.

The main types of taxes

The types of taxes imposed vary from country to country. There are some taxes, however, which are levied in most countries. Among the most common type of direct taxes are:

- **Income tax.** This is a tax on income that people receive from their employment and investment income. People are given a tax allowance, which is an amount of income they earn free of tax. Income above this level is referred to as taxable income.
- **Corporation tax.** This is also referred to as corporate tax and is a tax on the profits of firms.
- **Capital gains tax.** This is a tax on the profit made on assets when they are sold for a higher price than what they were bought for. A capital gain may be made, for example, by shareholders selling shares for more than what they paid for them. When a capital gains tax is imposed, exemptions are usually made. These normally include any money made on the sale of people's main residence.

- **Inheritance tax.** This is a tax on wealth above a certain amount which is passed on to other people, when a person dies.

Common types of indirect taxes are:

- A sales tax is a tax imposed when products are sold. The main examples of sales tax are GST (general sales tax) and VAT (value added tax).
- Excise duties are taxes charged on certain domestically produced goods, most commonly on alcoholic drinks, petrol and tobacco. They are charged in addition to VAT.
- Customs duties are taxes on imports and are also called tariffs.
- A licence may be needed to use a range of products including a television and a car.

Local taxes

Most taxes are levied on a national basis, but some are levied on a local basis. Local taxes are used to pay for local services such as education, fire services, libraries, roads and refuse collection. There are two main types of local taxes. One is based on the property of local firms and the other is based largely on the value of household property.

In a number of countries, business rates are levied on local firms. The government collects the revenue and then distributes it to local authorities on the basis of the number of people living in each area. Council tax is based on the value of people's housing and expenditure of each council. It is collected directly by the local authority. Some countries also use local sales tax.

GROUP ACTIVITY 1

In Egypt, in 2016, the standard rate of corporation tax was 22.5%. Oil exploration and production firms, however, were charged a higher rate of 40.55%. After a tax free allowance, the rate of income tax increased from 10%, to 15%, to 20% and then 22.5% as income rose.

- Explain why a government may charge oil firms a higher corporation tax rate than other firms.
- Explain whether Egypt was operating a progressive or regressive income tax system in 2016.



TIP

Find out examples of direct and indirect taxes in your own country.

26.5 The principles of taxation

Economists have identified a number of qualities that a good tax should possess. These include:

- **Equity.** This means fairness in the sense that the amount of tax people and firms have to pay, should be based on their ability to pay. A rich person has a greater ability to pay tax than a poor person.
- **Certainty.** A tax should be easy to understand, and households and firms should be able to calculate the amount of tax required to be paid by them.
- **Convenience.** A tax should be easy to pay.
- **Economy.** The cost of collecting a tax should be considerably less than the revenue it generates.
- **Flexibility.** It should be possible to change the tax if economic activity changes or government aims change. The revenue from some taxes changes automatically to offset economic booms and slumps. For example, tax revenue rises from income tax and sales tax, without any change in the rates, when there is an economic boom. This is because more people will be employed, incomes will rise and people will spend more. Such a rise in tax revenue may slow down the rise in aggregate demand and prevent inflationary pressure building up.
- **Efficiency.** A tax should improve the performance of markets or at least not significantly reduce the efficiency of markets. For example, an extra one-off tax, sometimes called a *windfall tax*, imposed on high supernormal profits of banks may encourage banks to



TIP

Consider whether a particular tax in your country fulfils all the requirements of a 'good tax'.

reduce the charges they impose on customers. A tax on pollution may result in a cleaner environment. Income tax rates should not be set so high that they discourage effort. In practice, it is unlikely that a tax will have all of these qualities. For example, income tax can score high on equity and flexibility but not on certainty if a number of tax allowances are given.

GROUP ACTIVITY 2

In most countries, small firms are entitled to tax relief for the purchase of capital goods and expenditure on research and development.

- a What type of tax is levied on firms?
- b Why may governments give small firms a tax advantage?

26.6 Impact of tax

Tax base and tax burden

The tax base is the source of tax revenue, that is what is taxed. A wide tax base means that a large range of items and people are taxed. There can be a link between tax rates and the tax burden. A wide tax base may enable tax rates to be relatively low. High tax rates, particularly corporate tax rates, can reduce the tax base. This is because they may cause firms to move out of the country.

The tax burden relates to the amount of tax paid by people and firms. It is sometimes expressed as a percentage of the country's total income (Gross Domestic Product, or GDP). The higher the tax burden, the greater the percentage of people's and firms' income taken through tax.

Impact of taxation

The incidence of taxation refers to the distribution of the burden of an indirect tax, shared between consumers and producers. In the case of products with inelastic demand, consumers bear most of the tax. This is because the producers can pass on a high proportion of the tax in the form of a higher price as they know it will not reduce the demand significantly. In contrast, if products have elastic demand it is producers who bear most of the tax. This is because they know that they cannot pass on much of the tax to consumers as such a move would bring down the sales significantly. Figure 26.1 shows the contrasting impact of a tax on a product with inelastic demand and a product with elastic demand.

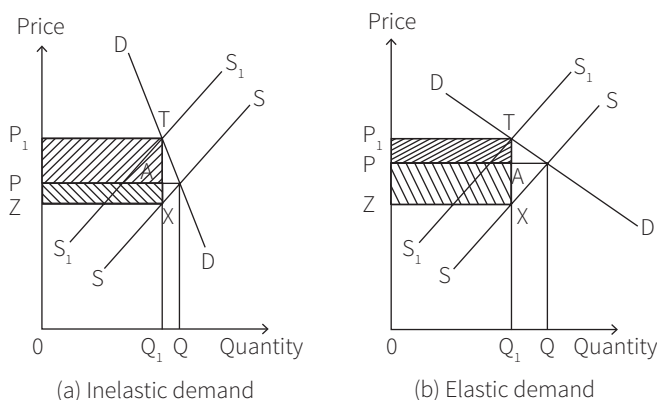


Fig. 26.1: The influence of the price elasticity of demand (PED) on the incidence of taxation

In both (a) and (b) in Figure 26.1 the tax shifts the supply curve to the left by the amount of the tax (TAX). The total revenue is P₁TXZ. The proportion of tax borne by consumers is represented by the change in price multiplied by the quantity sold, i.e. PP₁TA. The proportion borne by

producers is the amount by which the price producers receive after tax is below the original market price, multiplied by the quantity sold, i.e. $P \times X \times Z$. Elasticity of supply also influences the incidence of taxation. The more inelastic supply is, the more the tax will be borne by the suppliers. In contrast, if supply is elastic, more of the tax will be borne by consumers.

The impact of direct taxes

There is a risk that direct taxes, if set too high, may discourage effort, enterprise and saving. High rates of income tax may stop some people from working overtime and taking promotion and prevent some people from entering the labour force. High rates of corporation tax may discourage entrepreneurs from expanding their firms and investing in new markets. On the other hand, high tax rates may encourage some people to work harder. This is particularly likely to be the case with workers who have fixed financial commitments, such as mortgages. In addition, a number of workers cannot alter the hours they work for as they are contracted for a fixed number of hours per week.

The impact of high taxes on income earned from saving is also important. As they reduce the return from saving, they may cause some people to save less but they may encourage target savers to save more. Direct taxes have the benefits of being able to redistribute income and wealth, act as **automatic stabilisers** and as a good source of tax revenue in countries with organised labour markets, high literacy rates and high incomes.

The impact of indirect taxes

Whilst direct taxes tend to be progressive, indirect taxes are regressive and therefore proportionately fall more heavily on the poor. Increasing indirect taxes will also raise prices. This increase may stimulate workers to press for wage increases and set off a trend of rising prices, that is **inflation**. Indirect taxes do, however, have a number of benefits. They are relatively easy and cheap to collect as firms do some of the work. It is believed that they act as less of a disincentive to effort and enterprise than direct taxes. They can be used selectively to achieve particular aims such as reducing the consumption of alcohol. They tend to be harder to evade than direct taxes and easier to adjust. To a certain extent, people also have more choice with indirect taxes. The amount of tax paid by them depends on what they buy. They may decide not to buy products which are highly taxed.

Indirect taxes are also a useful source of income, especially in countries where it is difficult to raise much from income tax because a significant number of workers work in the **informal economy**. Also in countries with low literacy rates, people might face problems while filling in the tax forms.

INDIVIDUAL ACTIVITY 3

The French government has been reducing reliance on income tax and increasing reliance on indirect taxes. In 2016 less than 50% of French households paid any income tax. Income tax contributed less than 20% of government revenue compared to 51% received from VAT.

- a Explain whether the change in the source of government tax revenue is making France's tax system more or less progressive.
- b Explain one advantage and one disadvantage of using income tax as a source of tax revenue.

Changes in taxes

In recent decades, in a number of countries governments have become more reliant on indirect taxes and less on direct taxes. This move has been designed to reduce disincentive effects and tax evasion. Even more recently, some countries have been adopting what are called **flat taxes**. A pure flat rate tax system would involve income tax, corporation tax and VAT being set at the



KEY TERMS

Automatic stabilisers: forms of government expenditure and taxation that reduce fluctuations in economic activity, without any change in government policy.

Inflation: the rise in the price level of goods and services over time.

Informal economy: that part of the economy that is not regulated, protected or taxed by the government.

Flat taxes: taxes with a single rate.

same rate with no exceptions. Several East European countries, for example, have replaced a number of income and corporate tax rates with one rate. In most of these countries, tax rates have been lowered as they have been flattened. For example, Ukraine has replaced a very progressive income tax system which had a top tax rate of 90% with one rate of 13%.

A number of advantages are claimed for flat taxes. They are simple to administer for governments and firms, there is less incentive to evade paying tax and more incentive for workers and entrepreneurs to earn and produce more. However, concerns have been expressed about the regressive nature of flat taxes although in practice, all existing flat taxes have set the uniform rate above a tax-free level of income.

**KEY TERM**

Fiscal policy: decisions on government spending and taxation designed to influence aggregate demand.

26.7 Fiscal policy and the budget

Fiscal policy refers to decisions on government spending and taxation taken to influence total (aggregate) demand in the economy. It has a direct effect on the budget balance. To calculate a government's budget balance, as indicated above government spending is deducted from its revenue. The size of any budget deficit or budget surplus can be expressed in absolute amounts, for example \$10bn, or as a percentage of GDP.

If government spending equals government revenue, and then the government increases its spending or cuts taxes, it will cause a budget deficit in the short run. It is possible, however, that the effects of these changes may be different in the long run. For example, an increase in government spending on education may increase productivity and output which would be expected to raise tax revenue. Similarly, a cut in corporation tax may attract firms from overseas to set up in the country and for domestic firms to expand and so increase revenue from corporation tax.

INDIVIDUAL ACTIVITY 4

This table shows government spending and revenue in New Zealand in 2016.

Government spending (NZ\$bn)		Government revenue (NZ\$bn)	
Healthcare	16.2	Income tax	32.5
Education	13.5	GST	19.1
Pensions	12.9	Other indirect tax	6.5
Unemployment & other benefits	12.3	Corporate tax	11.6
Law and order	3.8	Other revenue	8.8
Other	18.8		

- Calculate New Zealand's budget position in 2016.
- Identify one form of government spending in the table which is spending on a public good.
- What proportion of New Zealand's government revenue was accounted for by income tax?

**KEY TERMS**

Expansionary fiscal policy: rises in government expenditure and/or cuts in taxation designed to increase aggregate demand.

Contractionary fiscal policy: cuts in government expenditure and/or rises in taxation designed to reduce aggregate demand.

26.8 The effects of fiscal policy on government macroeconomic aims

If a government wants to raise aggregate (total) demand in order to increase economic growth and employment, it will increase its expenditure and/or cut taxation by lowering tax rates, reducing the items taxed or raising tax thresholds. For example, a government may cut income tax rates. This will raise people's disposable income, which will enable them to spend more. Higher consumption is also likely to raise investment. Figure 26.2 shows the effect of an **expansionary fiscal policy**.

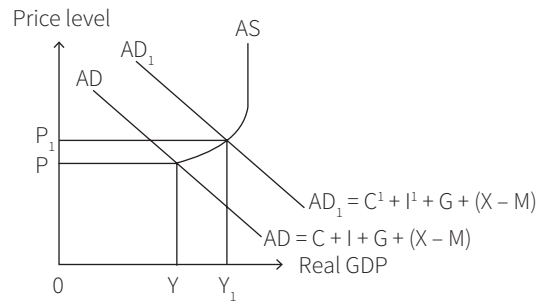


Fig. 26.2: The effect of an expansionary fiscal policy

The higher aggregate demand, in this case, causes economic growth. With more goods and services being produced, employment is likely to rise. A government may implement a **contractionary fiscal policy** to reduce inflationary pressure. A cut in government expenditure on, for example, education would reduce aggregate demand. Such a reduction may lower the rise in the general price level. It may also reduce an excess of import expenditure over export revenue. This is because spending is likely to fall, including spending on imports. Domestic firms, facing lower demand at home, may also put more effort into exporting.



Chapter 29.4 The policies to promote economic growth

Chapter 30.7 The policies to reduce unemployment

Chapter 31.5 Policies available to control inflation

Chapter 31.8 Policies available to control deflation

Chapter 33.3 Possible government measures to reduce poverty

Summary

You should know:

- The budget shows the relationship between government spending and government revenue.
- Governments spend money to influence economic activity, to reduce market failure, to promote equity and to pay interest on the national debt.
- The aims of taxation are to raise revenue, redistribute income, discourage the consumption of demerit goods, raise the costs of firms that impose these costs on others, discourage the consumption of imports and influence economic activity.
- Direct taxes are levied on income and wealth and include income tax, corporation tax, capital gains tax and inheritance tax.
- Indirect taxes are levied on expenditure and include sales tax, excise duties, customs duties and licences.
- Local taxes include business rates and council tax.
- Progressive taxes take a higher percentage as income or wealth rises, a proportional tax takes the same percentage and a regressive tax takes a smaller percentage.
- If demand is inelastic, most of an indirect tax will be borne by the consumer whereas if demand is elastic, it will be borne mainly by the producer.
- A good tax is one which is fair, easy to understand, easy to pay, cheap to collect, flexible and efficient.
- Direct taxes may discourage effort, enterprise and saving, but they can help to redistribute income and wealth, act as automatic stabilisers and raise a significant amount of revenue.
- Indirect taxes tend to be regressive and may raise prices but these are relatively easy and cheap to collect, do not tend to act as a disincentive to effort, enterprise and saving and are harder to evade.
- Recently a number of countries have moved towards greater reliance on indirect taxes and some have introduced flat taxes.
- Fiscal policy influences aggregate demand in the economy by changing taxes and government expenditure.

Multiple choice questions

- What is meant by a regressive tax?
 - A tax that falls in line with inflation
 - A tax that reduces government revenue over time
 - A tax that places a greater burden on the poor than the rich
 - A tax that is replaced by one which generates more income
- A government wants to redistribute income from the rich to the poor. Which changes in taxation would help it to achieve this objective?
 - A cut in corporation tax and a rise in sales tax
 - A cut in VAT and a rise in income tax
 - A cut in capital gains tax and inheritance tax
 - A rise in customs duties and excise duties
- In which circumstance will the greatest amount of the tax be borne by the consumer?

PED	PES
A elastic	inelastic
B inelastic	inelastic
C inelastic	elastic
D elastic	inelastic
- The following diagram shows the effect of introducing a tax (TAX). What is now the producers' revenue?

Price

0 Q₁ Q Quantity

- | | |
|----------------------------|--|
| A OZXQ ₁ | C OP ₁ TQ ₁ |
| B OPAQ ₁ | D OPYQ |

Four-part question

- Define a *progressive tax*. **(2)**
- Explain the difference between a direct tax and an indirect tax, giving an example of each. **(4)**
- Analyse the reasons why governments impose taxes. **(6)**
- Discuss whether or not an increase in income tax rates will improve economic performance. **(8)**



Chapter 27

Monetary policy

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Learning objectives

By the end of this chapter you will be able to:

- define the money supply
- define monetary policy
- analyse monetary policy measures
- discuss the effects of monetary policy on government macroeconomic aims

Introducing the topic

In 2008 the world experienced a global financial crisis. A number of banks collapsed because they had lent unwisely and bought securities which turned out to have little value. This made the remaining banks reluctant to lend as much. The difficulty of getting loans and the loss of confidence resulted in a downturn in economic activity. Central banks received some of the blame for not regulating the banks effectively. They tried to improve economic performance by increasing the money supply. These events have increased the attention that monetary policy receives.

27.1 The money supply

The money supply consists of all the money in an economy at any one time. There are a number of measures of the money supply. One counts notes, coins and current accounts held at commercial banks and concentrates on money that is primarily used as a medium of exchange. This measure is known as a narrow measure. The best known broad measure includes not only notes, coins, current accounts but also deposit accounts. This measure includes money used for a number of purposes, primarily medium of exchange and store of value.

GROUP ACTIVITY 1

In India in November in 2016 the government instructed people to hand in 500 and 1000 rupee bank notes in a bid to reduce forgeries. They were told these notes would be exchanged for smaller denomination notes of the same value and for new 500 and 2000 rupee notes. There was, however, a delay in getting the new notes printed. This caused chaos in parts of India with long queues to exchange the notes and prices falling as people ran out of cash to buy goods and services and sellers were unable to give change. A fifth of transactions are made in cash in India, a higher percentage than in many countries.

- a Identify a function of money the information refers to.
- b Explain a characteristic of money the information refers to.
- c Explain a reason why some people may be reluctant to have a bank account.

27.2 Monetary policy

Monetary policy covers decisions on the money supply, the rate of interest and the exchange rate, although some economists treat changes in the exchange rate as a separate policy. Monetary policy influences the supply and/or price of money. The aim of monetary policy is to influence aggregate demand. In most countries monetary policy measures are carried out by central banks on behalf of governments.



KEY TERM

Monetary policy:

decisions on the money supply, the rate of interest and the exchange rate taken to influence aggregate demand.



The People's Bank of China

Changes in the money supply

A central bank can increase the money supply by printing more money, buying back government bonds or encouraging commercial banks to lend more. Printing more money is a straightforward way of increasing the money supply. It is sometimes referred to as 'resorting to the printing press'. Buying government bonds gives commercial banks more money to lend to their customers. Encouraging commercial banks to lend or removing any restrictions on bank lending may also result in more borrowing to spend on consumer and capital goods. So, if the money supply is increased, there is likely to be an increase in consumer spending and investment. Such a rise in aggregate demand is likely to increase output.



A printing press



TIP

Follow the monetary policy changes of the central bank of your country plus those of another central bank. Consider why their monetary policy measures may be similar and why they may be different.

INDIVIDUAL ACTIVITY 1

In 2016 the money supply in China increased by 11.2%. This was a higher rate than in the two previous years. Some economists expressed concern that this would increase aggregate demand too much.

- a What is meant by aggregate demand?
- b Why may the money supply increase by more than a central bank wants?

Changes in the rate of interest

The main monetary policy measure, currently used in most countries, is changes in the rate of interest. When a central bank alters the rate of interest it charges to commercial banks, those banks are likely to raise the rate they charge to their customers. Such a rise in the rate of interest is likely to reduce aggregate demand by lowering consumer expenditure and investment. It will do this in three main ways.

- One way is that any households or firms who have borrowed in the past will have to pay more interest on their loans. This will reduce the amount of money they have to spend.
- A second way is that it will make it more expensive for households and firms to borrow to finance their spending. Borrowers will now have to pay more for any new loans they take out.
- The third way is that a higher interest rate will increase the incentive to save. Households and firms will earn more than before from saving. This means that for households the opportunity cost of spending will have increased and for firms the opportunity cost of investment will have increased. Firms may also have less incentive to invest as they will expect consumption to be lower.

Some households and firms that are savers, will now earn more interest and so they may spend more. Those people who save are, however, less likely to spend any extra money than borrowers are, and so the net effect will probably be a reduction in consumer expenditure. A higher interest rate may also reduce aggregate demand by encouraging a rise in the **foreign exchange rate**. Such a rise may lower net exports by causing a rise in the price of exports and a fall in the price of imports.

There may be times when a central bank decides to keep the rate of interest unchanged for a relatively long period of time. It may do this to promote certainty which can make planning easier. This, in turn, may encourage investment.



KEY TERMS

Foreign exchange

rate: the price of one currency in terms of another currency or currencies.

Expansionary monetary policy:

increases in the money supply and/or the rate of interest designed to increase aggregate demand.

INDIVIDUAL ACTIVITY 2

In February 2017, the People's Bank of China unexpectedly raised the rate of interest from 2.25% to 2.35%. The central bank was concerned that commercial banks were lending too much.

- Why might a rise in the rate of interest slow down economic growth?
- Why might a central bank think that commercial banks are lending too much?



LINK

Chapter 38.3 The causes of exchange rate fluctuations



LINK

Chapter 29.4 The policies to promote economic growth

Chapter 30.7 The policies to reduce unemployment

Chapter 31.5 Policies available to control inflation

Changes in the exchange rate

A government may instruct its central bank to change directly the country's foreign exchange rate or to try to influence it to move in a particular direction. A government may want the price of the exchange rate to fall to, for example, encourage a rise in exports.

27.3 The effects of monetary policy on government macroeconomic aims

Monetary policy is used to increase aggregate demand. If a government wants to increase the economic growth rate and reduce unemployment, it may use **expansionary monetary policy**, reducing the rate of interest or increasing the money supply.

Monetary policy is often used to control changes in the price level in the economy. If it is thought that the price level is rising too quickly, the central bank may increase the rate of interest or reduce the growth in the money supply. The intention behind this **contractionary monetary policy** would be to reduce aggregate demand and the upward pressure on prices.

**KEY TERM**

Contractionary monetary policy: cuts in the money supply or growth of the money supply and/or rises in the rate of interest designed to reduce aggregate demand.

GROUP ACTIVITY 2

In March 2017, the Monetary Policy Committee (MPC) of the State Bank of Pakistan (SBP) stated that it was going to keep the policy (interest) rate unchanged at 5.75%. This was despite expectations that aggregate (total) demand and inflation would increase and despite rising imports which were increasing the deficit on the current account of the balance of payments.

- a What might have been the prime objective of the MPC of the SBP in March 2017?
- b Why might the MPC of the SBP's decision have encouraged investment?

Summary

You should know:

- The money supply consists of notes, coins and bank accounts.
- Monetary policy seeks to influence aggregate demand.
- Monetary policy measures are decisions on the money supply, the rate of interest and the exchange rate.
- An increase in the money supply would be expected to increase aggregate demand.
- A reduction in the rate of interest may increase aggregate demand as it reduces the cost of borrowing and reduces the reward for saving.
- A fall in the exchange rate is likely to increase net exports.
- To increase economic growth and reduce the unemployment rate, a central bank may reduce the rate of interest.
- A central bank may increase the rate of interest to reduce upward pressure on the price level.

Multiple choice questions

- 1 Which one of the following is a monetary policy measure?
 - A A decrease in government regulations on labour markets
 - B A decrease in government spending on education
 - C An increase in the rate of interest
 - D An increase in sales tax

- 2 What would increase the money supply?
 - A A decrease in consumer expenditure
 - B A decrease in investment
 - C An increase in bank lending
 - D An increase in the rate of interest

- 3** Which type of institution is responsible for conducting monetary policy?
- A** A central bank
 - B** A commercial bank
 - C** A multinational company
 - D** A trade union
- 4** Which of the following is most likely to increase demand in the economy?
- A** A reduction in government spending
 - B** A reduction in the rate of interest
 - C** A rise in a budget surplus
 - D** A rise in income tax

Four-part question

- a** Define *monetary policy*. **(2)**
- b** Explain **one** similarity and one difference between monetary policy and fiscal policy. **(4)**
- c** Analyse why trade unions are likely to welcome an increase in the money supply. **(6)**
- d** Discuss whether or not an increase in the rate of interest will reduce consumer expenditure. **(8)**



Chapter 28

Supply-side policies

Learning objectives

By the end of this chapter you will be able to:

- define supply-side policy
- analyse supply-side policy measures (education and training, labour market reforms, lower direct taxes, deregulation, improving incentives to work and invest, and privatisation)
- discuss the effects of supply-side policy on government macroeconomic aims

Introducing the topic

How do governments encourage firms and workers to produce more? How do they increase firms' and workers' ability to produce more? Do you know what policy measures your government is using to increase the actual and potential output of your economy?



KEY TERM

Supply-side policy: measures designed to increase aggregate supply.

28.1 Supply-side policy

Supply-side policy measures are designed to increase aggregate supply and hence increase productive potential. Such policy measures seek to increase the quantity and quality of resources, and raise the efficiency of product and factor markets. These policy measures include improving education and training, cutting direct taxes and benefits, reforming trade unions and privatisation.



TIP

Remember: supply-side policy measures always seek to increase aggregate supply. They never try to reduce it.



Improving education and training

Improving education and training is designed to increase the skills of workers. If successful, this would make workers more productive. Higher labour productivity can reduce costs of production and raise the quality of the products produced. Both effects can result in the country's firms being able to sell more and so is likely to encourage them to expand. More skilful workers are also likely to be more occupationally mobile. This should mean that supply would adjust more quickly to changes in demand.

There is, however, the possibility that the education and training may not be in the right areas. For example, devoting resources to teaching children flower arranging may be less useful than devoting more resources to teaching them mathematics. Training people to work as taxi drivers will also serve little purpose if driverless cars are about to be widely used.

Improved education can increase aggregate supply

INDIVIDUAL ACTIVITY 1

In 2016 the government of Mauritius announced that it would pay 4000 people a total of 5000 Mauritian rupees a month to train in technical skills which were in high demand. It also said that it would be training 1200 people for jobs with cruise ships and other shipping firms.

- Why is it important that people are trained in skills that are in high demand?
- Explain how training can affect potential economic growth.

Lowering direct taxes and increasing incentives

The intention behind cutting direct taxes is to increase the incentive to work and invest. Reducing income tax rates will increase the reward from working, especially if combined with a cut in unemployment benefit. Such measures may make the unemployed search for work more actively and may increase the labour force by encouraging more people to seek employment.

Of course, some workers may respond to lower income tax by working fewer hours. This may be because they were happy with their pay and may prefer to have more leisure rather than more pay. In addition, increasing the incentive to work will not be effective if there are not jobs available for the unemployed and those currently inactive to do. Indeed, cutting unemployment benefit and other benefits could make unemployment worse. This is because the unemployed and, for example, the disabled will have less income to spend. This may result in a fall in aggregate demand and so output and employment.

Cutting corporation tax may increase the incentive to invest. This is because it is likely to make firms more willing and able to invest. The greater willingness will come from them being able to keep more of any profits they earn. The greater ability will come from the rise in funds they will have to invest.

If, however, firms lack confidence in the future, they may not invest even with lower corporation tax. If firms do not think they will be able to sell more goods and services in the future, they will not want to expand. A firm when deciding whether to invest takes into account not just the rate of corporation tax. As well as confidence, it also takes into account, for example, advances in technology.

GROUP ACTIVITY 1

In 2015 the Malaysian government cut income tax rates. A year later it increased the number of income tax bands from twelve to fourteen. This change in 2016 made the tax system more progressive and meant that the tax system had more bands than most countries.

- a What is a possible disadvantage of cutting income tax rates?
- b Why may introducing more tax bands discourage work and effort?

Deregulation

Deregulation is the reduction, or elimination, of rules and regulations that have been enforced by laws. The intentions behind deregulation are to remove barriers to entry to markets and to reduce the costs of complying with the rules and regulations. It will also reduce the cost to the government of regulating the industries and occupations affected.

If deregulation does increase competition, it may increase efficiency and so lower costs of production and prices. Removing rules and regulations, however, does not guarantee that a monopoly will not develop. There are arguments for regulating monopolies, given their market power. Imposing restrictions on who can undertake particular occupations may also protect consumers. For example, most people would not want the government to remove the requirement that surgeons have to possess medical qualifications. There are, however, debates in some cases about what qualifications are needed to undertake particular occupations.

GROUP ACTIVITY 2

In 2016 the Indonesian government said it would continue with its policy of deregulation including reducing bureaucratic red tape. For example, the government was trying to reduce the time foreign multinational companies were having to spend on getting the permits and licences needed to produce in the country. The key aims of Indonesia's deregulation programme are to increase investment and promote economic growth.

- a Explain why reducing bureaucratic red tape is likely to increase private sector investment.
- b Explain one other way a government could increase private sector investment.

Privatisation

As with deregulation, privatisation seeks to increase competition and efficiency by increasing the role of market forces. Moving industries into the private sector may put more pressure on them and provide them with a greater incentive to respond to changes in consumer demand, and to provide them with high quality products at low prices. If they do not, they



KEY TERM

Deregulation: the removal of rules and regulations.

will go out of business, but, if they do, they could make high profits. Privatisation will increase productive capacity, if private sector firms invest more and work more efficiently than state-owned enterprises.

Again, as with deregulation, privatisation will not necessarily ensure greater competition. Especially over time, a monopoly may develop. A private sector firm may be less inclined to take into account social costs and social benefits than a state-owned enterprise and may be more willing to make workers redundant.

Labour market reforms

Labour market reforms are designed to make labour markets work more efficiently. The intention is to increase the quality, quantity and flexibility of labour. There is some overlap between labour market reforms and the measures mentioned above. For example, the reforms can include better training and the removal of barriers to entry, such as excessive qualifications, and barriers to exit from labour markets, such as long contracts.

Making it easier for employers to hire and fire workers, is one way that some governments seek to increase the efficiency of labour markets. This is likely to make it easier for firms to adjust their supply to changing market conditions. It may also encourage firms to employ more workers as they will know that they will not have to continue to pay them, should demand for their products fall. There is a risk, however, that firms may not spend as much on training their workers if they think the workers may not be with them for very long.

Another labour market reform is reform of trade unions. This may make labour more productive. If the power of trade unions is reduced, they may be less inclined to engage in industrial action. There may be less disruption to production and trade union members may be more willing to be flexible in what tasks they do and the hours they work. If trade unions have been intimidating their members into taking industrial action, there may be a case for reducing their power. In some cases, though, reducing trade union power may reduce the benefits that trade unions may provide not only for their members, but also for employers and the economy as a whole. It is also possible that trade union reforms may give too much power to employers which could lower the pay of workers and increase their working hours. Being paid less and working more hours may reduce the motivation of workers and make them tired which would be likely to reduce their productivity.



LINK

Chapter 15.3
Government measures
to address market
failure



LINK

Chapter 19 Trade
unions

INDIVIDUAL ACTIVITY 2

Employment laws set out to protect the rights of workers. They may cover, for example, the right to maternity leave, the maximum number of hours a week a worker can be made to work and the procedures that have to be followed when a worker is made redundant. On average, there are more regulations imposed on employers in sub-Saharan Africa than in other parts of the world. For example, in Niger employers have to give any workers they want to fire, a relatively long period of notice, financial compensation and the offer of retraining. In practice, however, employment laws may only affect a relatively small percentage of the labour force in some countries.

- a** Explain one argument for and one argument against removing employment laws.
- b** Explain why employment laws may only affect a small percentage of the labour force in some countries.

Subsidies

A government may provide subsidies to the firms in particular industries for a number of reasons connected to increasing the performance of markets. For example, new small firms might be subsidised in order to increase competition in markets. Firms may also be subsidised to encourage them to buy new capital equipment. Of course, consideration would have to be given as to whether this is the best use of government spending and there is the risk that the firms may become dependent on the subsidies.



Chapter 15.3
Government measures
to address market
failure

28.2 Effects of supply-side policy on government macroeconomic aims

In the long run, all the government's macroeconomic aims have the potential to benefit from supply-side policy. Increasing aggregate supply enables an economy to continue to grow in a non-inflationary way. Figure 28.1 shows aggregate supply rising in line with aggregate demand. Such a combination enables output and employment to increase without inflation.

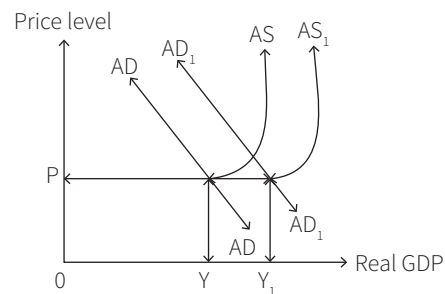


Fig. 28.1: Aggregate supply increasing with aggregate demand

Increasing productive potential and efficiency can improve an economy's balance of payments position. Producing better quality, and cheaper, products can increase exports and reduce imports.

In the case of some supply-side policy measures there is a time lag involved. For example, it can take some time before the effects of improved education and privatisation are experienced. In addition, some supply-side measures can be expensive.

Increasing the effectiveness of macroeconomic policies

Besides using supply-side policy measures in the long run to improve macroeconomic performance, there are a number of other ways through which a government can try to ensure that it achieves all its macroeconomic aims.

One is by using a number of policies. A Nobel Prize winning economist, Jan Tinbergen, suggested that a government needs to use one policy measure for each of its objectives. So, for example, if a government wants to stimulate economic growth and reduce imports, it may provide investment grants to firms and place a tax on imports.

Another way to try to ensure that all of its aims are achieved, is to have as much, and as accurate information, as possible. One vital piece of information is the size of the multiplier effect of any increase in aggregate demand. If aggregate demand is raised too much, for example, it will push up the price level.



TIP

You may find it useful to draw up a table comparing the effects of particular policy measures such as a cut in income tax on unemployment, inflation, economic growth and the balance of payments.

Governments also try to decide and implement their policies relatively quickly. If there is a delay in introducing policies, there is a danger that economic activity undergoes a change and the policy measures may actually harm the economy. For example, a period of high unemployment may lead the government to cut income tax, and to raise aggregate demand and employment. If, however, by the time the measure is introduced, aggregate demand is increasing anyway, it may increase inflationary pressure.

INDIVIDUAL ACTIVITY 3

The government of Pakistan is keen to encourage an increase in investment. Higher spending on capital goods may help the government to achieve its macroeconomic aims.

- a** Explain one supply-side policy measure that could be used to increase investment.
- b** Explain how investment could help a government achieve one of its macroeconomic aims.

Summary

You should know:

- Supply-side policy measures are designed to increase aggregate supply.
- Improved education and training can increase labour productivity and so the productive potential of the economy.
- Cutting income tax rates and unemployment benefits may be designed to make work more attractive to living off benefits.
- Lowering corporation tax may increase investment.
- Deregulation and privatisation may increase competition and efficiency.
- Labour market reforms may increase the efficiency of labour markets.
- Subsidies may allow small firms to grow and compete and may be used to encourage firms to invest.
- All government macroeconomic aims may be helped by supply-side policy measures in the long run.
- The effectiveness of macroeconomic policy measures can be increased by using a number of policies, accurate information and an absence of a time lag.

Multiple choice questions

- 1** Which of the following is a supply-side policy measure?
 - A** A decrease in government spending on education
 - B** A decrease in government spending on healthcare
 - C** An increase in corporation tax
 - D** An increase in the threshold at which people pay income tax

- 2** What is most likely to conflict with a government's aim of full employment?
 - A** Lower income tax
 - B** Lower spending on imports
 - C** Higher government expenditure
 - D** Higher interest rates

- 3** What combination of macroeconomic aims is most likely to benefit from a decrease in government spending?
- A** A fall in imports and price stability
 - B** Economic growth and full employment
 - C** Full employment and a fall in imports
 - D** Price stability and economic growth
- 4** Which of the following may reduce the effectiveness of a government policy measure?
- A** Accurate information
 - B** An absence of economic problems in other economies
 - C** An absence of policy conflicts
 - D** A time lag

Four-part question

- a** Define *deregulation*. **(2)**
- b** Explain whether a cut in income tax is a fiscal policy measure or supply-side policy measure. **(4)**
- c** Analyse, using a production possibility curve, the intended outcome of a supply-side policy measure. **(6)**
- d** Discuss whether or not supply-side policy measures always reduce unemployment. **(8)**



Chapter 29

Economic growth

250

Learning objectives

By the end of this chapter you will be able to:

- define economic growth
- analyse the causes of a recession
- discuss the consequences of a recession
- analyse the causes of economic growth
- discuss the consequences of economic growth
- discuss the effectiveness of the policies available to promote economic growth

Introducing the topic

Why do governments have economic growth as one of their macroeconomic aims? What benefits does it give to households, firms and the government? How is economic growth achieved and why, despite wanting to achieve economic growth, do some economies experience a fall in output?

29.1 Definition and measurement of economic growth

Gross domestic product (GDP)

Gross means total, domestic refers to the home country and product means output. So **gross domestic product (GDP)** means the total output produced in a country. There are three methods of measuring this output. These are – the output, income and expenditure methods. All three methods should give the same figure. This is because an output of \$20bn will give rise to an income of \$20bn which, in turn, will be spent on the output. This relationship is referred to as the **circular flow of income** and is illustrated in two diagrams in Figure 29.1.

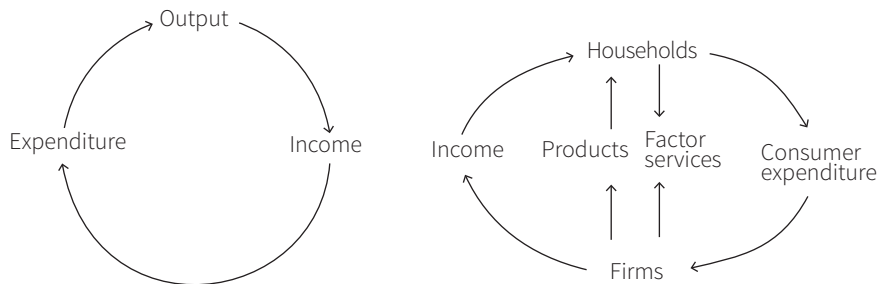


Fig. 29.1: The circular flow of income

The methods of calculating GDP

The output method measures GDP by adding up the output produced by all the industries in the country. Care has to be taken in using this method to ensure that output is not counted twice. For example, the value of the output of the car industry includes output produced by the steel and tyre industries also. To avoid this problem, economists include the **'value added'** by each firm at each stage of production.

The income method includes all the incomes which have been earned in producing the country's output. **Transfer payments**, such as pensions and unemployment benefit, are not included. This is because there is no corresponding output of goods and services.

The expenditure method calculates GDP by adding up all the expenditure on the country's finished output. Some of this comes from foreigners when they buy the country's *exports*. Some of the expenditure in the country goes on *imports* which are not produced in the country and which do not generate income for the country's citizens. So, in the expenditure method, it is necessary to add exports and deduct imports. Total expenditure on a country's output, and hence its GDP, includes consumption, investment, government expenditure and exports minus imports.

Nominal and real GDP

When governments calculate GDP, they usually first measure it in terms of **nominal GDP**, which is also referred to as money GDP or GDP at current prices. Nominal GDP is GDP valued in terms of the prices operative at that time. It has not been adjusted for inflation. For this reason, nominal GDP figures may give a misleading impression of what is happening to the output of a country, over time. For example, if prices rise by 20% in a year, there will be a 20% rise in nominal GDP even if output does not change.

To get the real picture of a country's output and assess its economic growth, economists adjust nominal GDP by taking out the effects of inflation. They do this by multiplying nominal



KEY TERMS

Gross domestic product (GDP): the total output of a country.

Circular flow of income: the movement of expenditure, income and output around the economy.

Value added: the difference between the sales revenue received and the cost of raw materials used.

Transfer payments: transfers of income from one group to another not in return for providing a good or service.

Nominal GDP: GDP at current market prices and so not adjusted for inflation.

GDP with the price index in the base year, divided by the price index in the current year. This gives a figure for GDP at constant prices referred to as real GDP. A rise in real GDP of 5% would mean that the country's output has increased by 5%.

For example, in 2016, the nominal GDP of a country may be \$800bn and its price index may be 100 (base year). In 2017, nominal GDP may increase to \$900bn, giving the impression that output has risen by $\$100\text{bn}/\$800\text{bn} \times 100 = 12.5\%$.

If, however, the price index rises to 110, the real GDP in 2017 will be $\$900\text{bn} \times 100/110 = \818.18bn .

So the increase in output is $\$18.18\text{bn}/\$800\text{bn} \times 100 = 2.27\%$, which is considerably below the 12.5% increase in nominal GDP.

Real GDP per head

A rise in **real GDP** means that more goods and services have been produced. Its impact on the goods and services available to people, will depend on the state of population. If real GDP increases by 5%, but the population increases by 8%, there will actually be fewer goods and services per head of the population and people's living standards may fall.

To find out what is happening to people's living standards, economists calculate real GDP per head, which is also referred to as real GDP per capita. It is found by dividing real GDP by population.

If, for example, real GDP is \$80bn and the population is 20m, real GDP per head is $\$80\text{bn}/20\text{m} = \4000 . If real GDP rises to \$90bn and population rises to 30m, real GDP per head will fall to $\$90\text{bn}/30\text{m} = \3000 . In most countries, however, real GDP grows more rapidly than population, causing real GDP per head to rise.

Changes in population size can make a significant contribution to changes in real GDP.

This has led some economists to suggest that a country's economic growth rate should be measured in terms of changes in real GDP per head. The international conventional measure, nevertheless, is currently changes in real GDP.



KEY TERM

Real GDP: GDP at constant prices and so adjusted for inflation.



LINK

Chapter 32.1 Indicators of living standards

INDIVIDUAL ACTIVITY 1

- In 2017, a country's nominal GDP is \$375bn. In 2018, it rises to \$500bn. Between the two years, the price index rises from 100 to 125. What was the percentage increase in real GDP?
- The table shows a country's real GDP and population over a period of three years, 2016–18. Calculate the real GDP per head in each year.

Year	Real GDP (\$bn)	Population (millions)
2016	100	20
2017	110	22
2018	90	15

The difficulty of measuring real GDP

GDP figures tend to understate the true level of output. This is because of the existence of unrecorded economic activity, both legal and illegal, and non-marketed goods and services.

There are a number of reasons why economic activity goes unrecorded.

One is that the activity is on a small scale and there are relatively high costs of registering a business. Another reason is that the activity is illegal, such as illegal drug dealing, and



Economic activity which may be formal or informal activity

that the official inflation rate overstates the rate at which the general price level is rising. This is because prices charged in undeclared economic activity tend to rise less quickly than in the formal economy.

There are also non-marketed goods and services. These are products which are not bought or sold. Family members who produce food for their own use including in **subsistence agriculture**, people who clean their own houses and repair their own cars, are all providing products, but these are not counted in GDP.



TIP

In economics, the word 'real' refers to something that has been adjusted for inflation. This includes real GDP, real wages and real disposable income.

GROUP ACTIVITY 1

Estimates of the size of Nigeria's informal economy vary from 35% to 70% of the country's GDP. Among the people who work in the country's informal economy are some taxi drivers, some street traders and some private educators. The informal economy can play a major role in employment creation, income, and production generation and innovation. Governments, however, try to encourage businesses to move into the formal sector as they believe that the businesses, their workers and themselves will gain benefits from such a move.

- a Identify two reasons why someone may want to work as a taxi driver in the informal economy.
- b Identify two benefits a business, a worker and the government may gain from the business moving from the informal economy into the formal economy.

work undertaken by immigrants who have not been given permission to work in the country. The activity may be legal, but the person undertaking it does not want to pay a tax on it. In the UK, it is thought that some workers in building, electrical installation, plumbing and car repairs do not declare all their earnings to the tax authorities. Some employers may want their businesses to be in the informal economy, so they can avoid government regulations such as having to pay the national minimum wage.

The size of undeclared economic activity is influenced by a number of factors. These include the number of activities that are declared to be illegal, tax rates, penalties for tax evasion and government regulations.

The existence of undeclared economic activity, besides understating the output produced through GDP figures, has a number of other effects on an economy. It means that tax revenue is below what could be collected. It can also mean



KEY TERM

Subsistence agriculture: the output of agricultural goods for farmers' personal use.

29.2 Recession

A **recession** occurs when real GDP declines over a period of six months or more. This time period is also sometimes referred to as two successive quarters. It is a period of negative output with less being produced than in the previous period.



KEY TERM

Recession: a reduction in real GDP over a period of six months or more.

Causes of a recession

Just as economic growth can be caused by an increase in aggregate demand and/or an increase in aggregate supply, a recession is caused by a decrease in aggregate demand and/or a decrease in aggregate supply.

There are a number of reasons why aggregate demand may fall. These reasons are sometimes referred to as negative demand-side shocks. For example, consumer expenditure and investment could decline due to a fall in business and consumer confidence arising from a global financial crisis or falling house prices in the domestic economy. The government may cut back its spending too much and net exports could fall as a result of a rise in the exchange rate.

A decrease in aggregate supply, a negative supply-side shock, could result from a rise in fuel or raw material costs. Such effects would increase firms' costs of production which may cause them to produce less.

Figure 29.2 shows a recession caused by a decrease in aggregate demand and a recession caused by a decrease in aggregate supply.

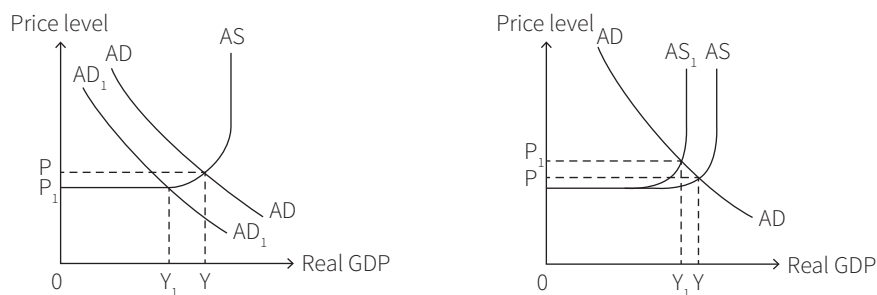


Fig. 29.2: (a) A recession caused by a decrease in aggregate demand

(b) A recession caused by a decrease in aggregate supply

The consequences of a recession

With lower output, unemployment is likely to rise. The reduction in output and incomes will be expected to lower living standards. Investment, including from foreign multinational companies, is likely to be discouraged which will endanger future economic growth.

Tax revenue will decline while government spending on benefits may be increased. This would increase any budget deficit or reduce any budget surplus.

The effect on the price level will depend on whether the recession has been caused by a decrease in aggregate demand or a decrease in aggregate supply. Figure 29.2 shows that if it is due to a decrease in aggregate demand, it would be expected that the price level would fall. If, on the other hand, it was caused by a decrease in aggregate supply, it would be anticipated that it would be accompanied by inflation.

29.3 Economic growth

Causes of economic growth

In the short run, an increase in aggregate demand may stimulate a rise in output if the economy has unused resources. For example, a rise in consumption resulting from



TIP

The causes and consequences of a recession are essentially the opposite of the causes and consequences of economic growth.



LINK

Chapter 31.3 The causes of inflation



LINK

25.1 Government's macroeconomic aims (Economic growth)

increased consumer confidence, or a cut in income tax, may encourage firms to increase their output. This would cause a movement from inside toward the production possibility curve. In the long run, an economy can continue to experience economic growth only if the quantity or quality of resources increases. The quantity of resources may rise as a result of, for example, an increase in net investment or the size of the labour force. The quality of resources may increase due to an improvement in education and training and advances in technology. In this case, there would be a shift to the right of the PPC.

Consequences of economic growth

An increase in output can improve living standards of people. Access to more goods and services can improve their living conditions and increase their life expectancy. In richer economies, people are likely to consume luxury products, have better healthcare, go for better education than in poor economies. In very poor countries, economic growth is essential to ensure that people have access to basic necessities.

Higher output and incomes increase government tax revenue, making it easier for governments to finance measures to reduce poverty, increase healthcare provision and raise educational standards, without having to raise tax rates. Poverty can be reduced in a number of ways. Some of the extra tax revenue raised can be used to increase benefits for the poor, to improve schools in poor areas and provide training to the unemployed.

As an economy grows, its political and economic standing and influence usually increases. Voting power at the **International Monetary Fund (IMF)**, for example, is influenced by the size of an economy's GDP. Economic growth, however, can involve costs. If the economy is working at full capacity, it may be necessary to shift resources from making consumer goods to capital goods, in order for it to grow. Such a shift will reduce living standards as fewer goods and services will be available for households. This is, however, only a short-term cost as in the longer term the extra capital goods will enable manufacture of more consumer goods. Figure 29.3 shows the output of consumer goods, initially falling due to the reallocation of resources but then increasing due to the resultant economic growth.



KEY TERM

International Monetary Fund (IMF): an international organisation which promotes international cooperation and helps countries with balance of payments problems.

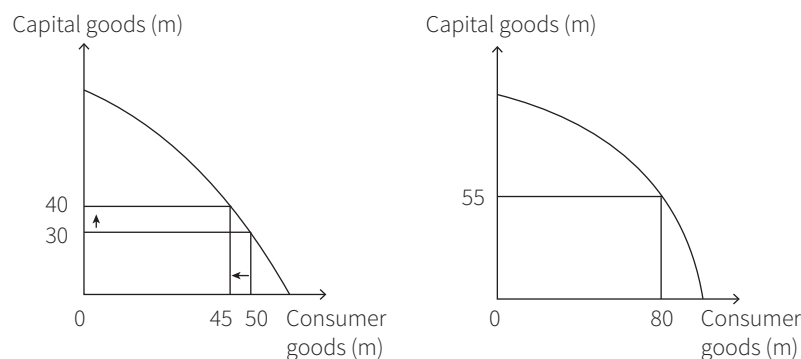


Fig. 29.3: The short-term and long-term effects of devoting more resources to capital goods

Higher output can increase pollution, lead to depletion of non-renewable resources and damage the natural environment. More factories and cars may increase carbon dioxide emissions. Rapid expansion of the furniture and fishing industries, for example, may result

**KEY TERM**

Sustainable economic growth: economic growth that does not endanger the country's ability to grow in the future.

in deforestation and depletion of fish stocks respectively. Construction of more factories, offices, roads and other infrastructure can also destroy wildlife habitats. Due to these risks, economists are increasingly emphasising the need for **sustainable economic growth**. Economic growth may also lead to greater stress on workers. An increase of output may require some people to work for longer hours, some to learn new skills and some to change their job.

The net impact of economic growth is influenced by its rate, means adopted to achieve it and distribution of its benefits. A very high rate of economic growth may not be sustainable. It may involve non-renewable resources being used up too quickly, before the development of alternative resources.

If productive capacity can be increased in line with increases in aggregate demand, more goods and services can be enjoyed without an increase in prices. Stable economic growth is better than a high economic growth rate, which fluctuates. This is because, it makes it easier for firms and households to plan for the future and hence encourages investment. Some of the extra resources which develop when productive potential increases, can also be used to reduce levels of pollution. Although there is indeed a risk, that economic growth can generate pollution and cause environmental damage, it can however lead to improved education and information, pressurise the government and society to care for the environment and provide the resources to do so. Economic growth has the potential to raise living standards, but the extent to which it does so is influenced by the type of products produced and the equality of distribution of extra income.

**LINK**

Chapter 32.2
Comparing living standards and income distribution

Economic growth rate

It is important to avoid the confusion between a fall in the economic growth rate and a fall in national output. If a country's economic growth rate falls from 5% to 3%, output will still be rising although it may be rising at a slower rate. If output reduces, the economic growth rate would be negative. For example, an economic growth rate of – 2% would mean that a country has produced 2% less this year than last year.

Table 29.1 shows the change in GDP of Pakistan over a five-year period.

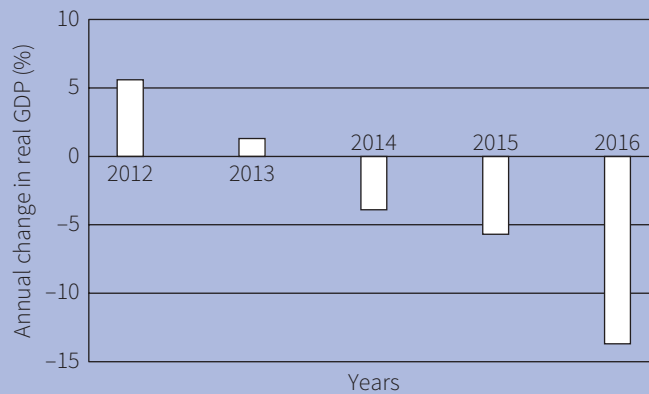
Year	Economic growth rate (percentage change in GDP on a year earlier)
2012	3.8
2013	3.7
2014	4.0
2015	4.2
2016	5.7

Table 29.1: Pakistan's economic growth rate, 2012–16

Between 2012 and 2016, Pakistan's output grew. Each year, it produced more than the previous year. Between 2012 and 2013, the rate at which its output was increasing slowed down, though it did produce more in 2013 than it did in 2012. Between 2014 and 2016 its economic growth rate accelerated.

INDIVIDUAL ACTIVITY 2

The diagram shows the economic growth rate of Venezuela between 2012 and 2016.



- Did Venezuela experience a period of stable economic growth between 2012 and 2016? Explain your answer.
- What happened to the output in 2013?

29.4 The policies to promote economic growth

If an economy is operating with spare capacity, a government may use expansionary fiscal and/or monetary policy to promote economic growth. A reduction in income tax rates or a cut in the rate of interest, for example, would be expected to increase consumer expenditure and investment. The resulting rise in aggregate demand is likely to encourage firms to increase their output. They will be able to do this as they will be able to take on unemployed workers and buy more capital equipment to expand their production.

The effectiveness of fiscal and monetary policy measures will be influenced by a number of factors. For example, households and firms may not spend more, despite a lower rate of interest and lower taxes, if they lack confidence. If the rate of interest is already very low, there may not be much room to cut it further and anyway a very small reduction may have little impact.

As aggregate demand tends to increase over time, it means that without any change in aggregate supply, the maximum level of output will be reached. So, in the long run, an economy can continue to increase the output it produces only if it gets more resources or higher quality resources. This means that to help achieve long run economic growth, a government needs to use both demand-side and supply-side policy measures. To increase productive potential, for example, a government may seek to improve education and training. If successful, this measure will raise labour productivity and so productive capacity. There is, of course, no guarantee that supply-side policy measures will work.



Chapter 26.8 The effects of fiscal policy on government macroeconomic aims

Chapter 27.3 The effects of monetary policy on government macroeconomic aims

Chapter 28.2 Effects of supply-side policy on government macroeconomic aims

GROUP ACTIVITY 2

Thailand's economic growth rate fell to 0.9% in 2014. In 2015 it rose to 2.4%, but the government was concerned that, without its intervention, it would decline again. As a result, in late 2015 the government and the Bank of Thailand both took measures to promote economic growth. The Bank of Thailand cut the rate of interest and encouraged the country's commercial banks to lend more to households, farmers and small firms. The government increased its spending by \$8.3bn. Some of its spending went on infrastructure projects, including building light railways, in a bid to extend the benefits of its stimulus programme.

- a** Identify a monetary policy measure mentioned in the information.
- b** Why might an increase in lending cause economic growth?
- c** Explain why spending on infrastructure projects may promote economic growth in the long run.

Summary

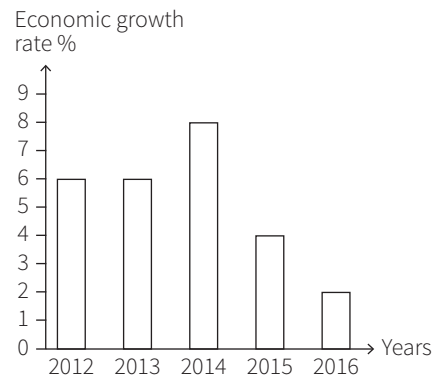
You should know:

- GDP is the total output produced in an economy.
- GDP can be measured by adding up all output produced, all incomes earned from producing that output or the total amount spent on the output.
- Nominal GDP is total output measured in the prices of the year in question.
- Real GDP is adjusted for inflation.
- Changes in real GDP show changes in output.
- If real GDP per head increases, there will be more goods and services available for people.
- The existence of the informal economy makes it difficult to obtain an accurate figure for GDP.
- In the short run, increases in aggregate demand can lead to an increase in output, but in the long run, aggregate supply must also increase for output to continue to rise.
- Economic growth can improve living standards, reduce poverty, raise government expenditure on healthcare and education and increase the influence of an economy.
- Economic growth may involve a short-run opportunity cost, can cause pollution and damage to the environment and may put stress on people.
- Countries aim for stable and sustainable economic growth.
- A recession involves a fall in real GDP over two quarters of a year or more.
- A recession is caused by a decrease in aggregate demand or a decrease in aggregate supply.
- A recession will be likely to cause unemployment and a decline in living standards.

Multiple choice questions

- 1** What is meant by economic growth?
 - A** An increase in exports
 - B** An increase in population
 - C** An increase in real GDP
 - D** An increase in the price level

- 2 The diagram shows a country's economic growth over the period 2012 to 2016.



- A Output was highest in 2012
 B Output was highest in 2016
 C Output fell from 2014 to 2016
 D Output was unchanged between 2012 and 2013
- 3 If consumer expenditure is \$30bn, government expenditure is \$10bn, investment is \$20bn, exports are \$16bn and imports are \$20bn, what is GDP?
- A \$56bn
 B \$76bn
 C \$80bn
 D \$96bn
- 4 What is most likely to cause economic growth?
- A An increase in capital depreciation
 B An increase in education and training of workers
 C An increase in taxation
 D An increase in unemployment

Four-part question

- a Define *real GDP*. (2)
 b Explain **two** consequences of a recession. (4)
 c Analyse the relationship between economic growth and the budget balance. (6)
 d Discuss whether or not an increase in government spending will lead to economic growth. (8)

Chapter 30

Employment and unemployment

Learning objectives

By the end of this chapter you will be able to:

- define employment, unemployment and full employment
- analyse the nature and causes of changes in the pattern of employment
- describe how unemployment is measured
- analyse the causes and types of unemployment (frictional, structural and cyclical)
- discuss the consequences of unemployment
- discuss the effectiveness of policies available to reduce unemployment

Introducing the topic

Most people would like to have more goods and services. So, why are people who could produce some of those products unemployed? Why are some machines and some factories lying idle? Leaving capital goods unused can cause them to become outdated and, in some cases, to rust and fall apart. Not employing workers can have even more significant costs for not only the unemployed workers, but also their families, firms and the economy as a whole.

30.1 Employment, unemployment and full employment

People are in employment if they are paid employees or self-employed. In contrast, people are unemployed if they are willing and able to work, but cannot find a job. The labour force consists of both the employed and the unemployed – these two groups make up the country's available workers. Full **employment** occurs when **unemployment** is at its lowest possible rate.



LINK

Chapter 25 .1
Governments'
macroeconomic aims

30.2 Changes in the patterns of employment

Over time, the pattern of employment in a country is likely to change. There can be alterations in the sectors in which people work, the hours they work for, who they work for and the type of work they do.

Industrial structure

As economies develop, employment moves from the primary to the secondary and then to the tertiary sector. In the Netherlands in 2017, for instance, most workers (82%) were employed in the tertiary sector, whereas in Vietnam, the highest proportion of workers (48%) were employed in the primary sector.

Within any country at any particular time, some industries will be expanding and some will be contracting. For instance, in India, employment in textiles is declining, whilst it is increasing in ICT and software. This change requires workers to be occupationally and geographically mobile.

Proportion of women in employment

The number and proportion of women in employment and in the labour force is increasing in most countries. This trend is occurring because social attitudes to women working is changing. Gender discrimination is declining, opening up job opportunities for women and raising their wages.

Proportion of workers in the private and public sectors

The proportion of workers employed in the public sector in a number of countries is declining while the proportion employed in the private sector is increasing. This is because the countries are moving closer to market economies. In Australia in 2000, 21% of workers were employed in the public sector, while 79% were employed in the private sector. By 2016 the proportions had changed to 15% in the public sector and 85% in the private sector.

Full-time and part-time work

Most workers work full-time. Some, however, work part-time. Some opt to work part-time, as it may fit in with their children's school hours, enable them to look after elderly relatives or pursue other interests. Other people are forced to work part-time because they are not able to find full-time jobs.

Employed and self-employed

In some countries, including the UK, USA and most of Europe, most people work for someone else, that is they are employees. The number of self-employed workers is, however, rising. In other countries, including India and Pakistan, a high proportion of people are already self-employed and many of them work in the informal economy.



KEY TERMS

Employment:

being involved in a productive activity for which a payment is received.

Unemployment:

being without a job while willing and able to work.

Informal and formal economies

People who work in the informal economy do not have the same access to the social security benefits, employment protection and rights as workers in the formal economy. For instance, whilst a country may operate a minimum wage, workers in the informal economy may be paid below it and they are very unlikely to receive a pension.

The informal economy does not include unions and so the workers cannot bargain collectively to improve their conditions. Some of those working in the informal economy are self-employed, some are migratory workers and some are casual workers. They tend to have lower productivity, lower levels of training and lower wages than workers in the formal economy. So a growth in the formal economy tends to raise the quality of employment and labour productivity.

High and low quality employment

High quality employment is skilled work which is interesting and which provides workers with the opportunity to progress, access to training, good working conditions and a relatively high degree of job security. In contrast, low quality employment is unskilled work, which often does not require or provide training, and does not provide good working conditions. As an economy develops the proportion of high quality jobs tends to increase.

Flexible employment

Global competition is putting pressure on firms to ensure that their labour force is flexible. A **flexible labour force** is one which adjusts quickly and smoothly to changes in market conditions. This flexibility can take a number of different forms.

One is in terms of the number of workers employed. The easier it is to hire and fire workers, the more able firms are in adjusting their output in line with consumer demand. Such flexibility, which can be called numerical flexibility, can increase workers' sense of job insecurity, but it can also raise employment. This is because firms may be more willing to take on more workers when demand for their products rises if they know they can let them go, should demand fall.

Other forms of flexibility are temporal flexibility (the ability to change the number of hours people work), locational flexibility (the ability to change the location where workers work), functional flexibility (the ability to change the tasks workers perform) and wage flexibility (the ability to raise or lower wages).



KEY TERM

Flexible labour

force: a labour force is one which adjusts quickly and smoothly to changes in market conditions.



Locational flexibility: working from home

GROUP ACTIVITY 1

In 2016 average pay for full-time employers in the private sector in the UK was \$26,884. It was \$30,888 in the public sector. The pay in the private sector had increased by 3.4% since 2015. This compared with a rise of 0.7% in the public sector. The gender pay gap across both sectors was 17%. It was 11% in the public sector, with women, on average, earning \$3,297 a year less than their male colleagues. The difference did, however, vary across public sector organisations. For instance, women working at the Bank of England, the UK's central bank, earned 26% less than men, while women at the Student Loans Company, a government organisation, earned 17% more than men.

- a What evidence is there in the information that the pay gap between private sector and public sector workers was narrowing in the UK?
- b Why may full-time female workers have earned less than male workers at the Bank of England in 2016?
- c Explain two reasons why women in the UK may prefer to work in the public sector.

30.3 Changes in the levels of employment

A rise in employment may reduce unemployment if it is the unemployed who fill at least some of the extra jobs. It is, however, possible that both employment and unemployment increase. This will occur if the labour force grows faster than the number of jobs available. It is also possible for unemployment to fall without an increase in employment. This is because, finding a job is not the only reason why people stop being unemployed. Some unemployed people may reach retirement age, some may go into full-time education, some may emigrate, while some may just stop searching for work.

**TIP**

Take care to note whether information on unemployment and employment shows numbers of people unemployed and employed, or percentages.

The labour force participation rate

The labour force may grow as a result of an increase in the population of working age, a rise in the labour force participation rate or a combination of the two. The working age population may increase due to a rise in the birth rate, a fall in the death rate or net immigration.

The labour force participation rate is the proportion of people who are of working age and belong to the labour force. In other words, it is those who are **economically active** and form the labour force. Some of those of working age are not in the labour force, they are **economically inactive**. This group includes those who have retired early, those in higher education, homemakers and the long-term sick.

Among the factors that influence the **labour market participation rate** are:

- **The wages on offer.** High wages will encourage more people to seek work and will persuade some to stay in the labour force, past the usual retirement age.
- **Social attitudes to working women.** In countries where it is acceptable for women to work, there will be a larger labour force and a greater participation rate.

**KEY TERMS**

Economically active: those in the labour force, both the employed and the unemployed.

Economically inactive: those not in the labour force.

Labour market participation rate: the proportion of the working-age population who are in the labour force.

- **Provision for the care of children and the elderly.** The greater the availability of nursery places and retirement homes, the higher is the labour participation rate.
- **Social attitudes and provision for the disabled to work.** The greater the number of people willing to accept disabled people working and the easier it is made for the disabled to work, for instance having ramps installed for wheelchair access, the more potential workers there will be.
- **The proportion of school leavers who go into higher education.** The more people there are in full-time education, the lower the participation rate. Although it reduces the size of the labour force, a high proportion of people in full-time education raises the quality of the labour force.

INDIVIDUAL ACTIVITY 1

In 2016 the labour force participation rate was 71% in New Zealand, 62.6% in the USA and 52% in Pakistan. The labour force participation rate in the USA had fallen from 67.3% in 2000.

- What is meant by a labour force participation rate of 71%?
- Explain one reason for the labour force participation rate of New Zealand being higher than that of Pakistan.



LINK

Chapter 25.1
Governments' macroeconomic aims (Low unemployment – calculation of unemployment rate)

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KEY TERM

Claimant count:

a measure of unemployment which counts as unemployed those in receipt of unemployment benefits.



TIP

Remember that the unemployed are included in the labour force and that the unemployment rate is the unemployed as a percentage of the labour force and **not** of the total population.

INDIVIDUAL ACTIVITY 2

In recent years, the Canadian government has cut income tax rates and tightened up the requirements people have to fulfil to receive unemployment benefit. The Canadian government is also keen to increase the quality of jobs and raise labour productivity. One way it is seeking to do this, is by increasing the number of school children progressing into higher education. Such a move reduces the labour force participation rate but raises the quality of labour.

- Explain how tax cuts and restrictions on claiming unemployment benefit could encourage the long-term unemployed to seek work more actively.
- How may more school children going for higher education raise labour productivity?

30.4 The measures of unemployment

Unemployment has costs both for the unemployed, for firms and for the economy. These costs are influenced by the extent of the unemployment, the duration of the unemployment and the cause of the unemployment.

The two major ways of measuring unemployment are to:

- count those in receipt of unemployment-related benefits and
- carry out labour force surveys.

The first method is known as the **claimant count**. This method has the advantage of being relatively cheap and quick, as the information is gathered anyway by the government to know the amount paid out in benefit and its recipients. Its disadvantage, however, is that it tends to understate unemployment. Whilst some people who are actually working fraudulently claim benefits, their number is less than those who are actively seeking employment, but not receiving unemployment benefits. People on government training schemes, those staying on at school and some who have been forced to retire early, may actually be searching for employment, but they won't be receiving unemployment benefits.

The second method is the **Labour Force Survey Measure** which is also sometimes called the ILO measure as it makes use of the International Labour Organisation's definition of unemployment. This involves conducting regular surveys of a proportion of households which ask adults about their employment status. It counts people as unemployed if they are without a job and have been actively searching for employment in the past month. This method has the advantage that it can be used to make international comparisons. It also tends to identify the unemployed population more accurately.

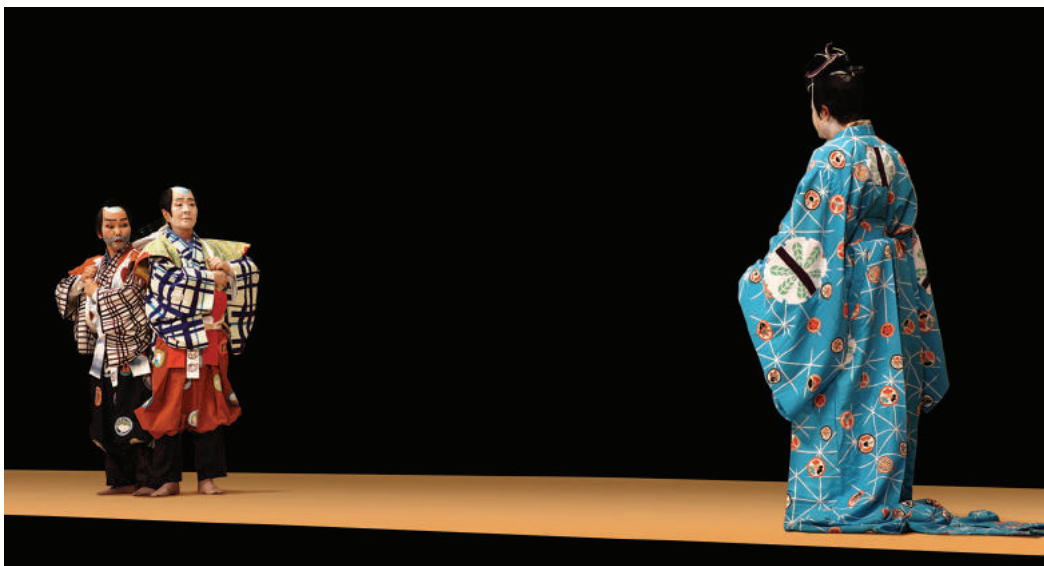
The accuracy, though, depends on how the questions are asked and interpreted, and whether the sample selected is representative of the labour force as a whole. This method also takes longer to gather the information than a claimant count. In addition, the information has to be examined carefully. For instance, it counts people as employed if they do any work, even just an hour's work. This means that a country may have a relatively low unemployment rate but a relatively high underemployment rate. This means that a relatively high proportion of workers may be working fewer hours than they wish or may, in some cases, be in jobs that do not make full use of their skills.

30.5 The causes and types of unemployment

The causes of unemployment can be put into three broad categories. These are **frictional unemployment**, **structural unemployment** and **cyclical unemployment**.

Frictional unemployment

Workers who have been fired or voluntarily left one job, may have to wait for some time before finding another job. This type of unemployment, when workers are in between jobs, is called frictional unemployment. One form of frictional unemployment is what is called **search unemployment**. This arises when workers do not accept the first job offered, but spend time looking around for what they regard as an 'acceptable job'. Two other forms of frictional unemployment are **casual** and **seasonal**. Casual unemployment occurs when people are out of work between periods of employment. Actors and migrant farm workers are particularly prone to casual unemployment. Seasonal unemployment affects workers, including those working in the building and tourist industries, whose labour is not in demand at certain periods of the year and during periods of bad weather.



Casual unemployment often affects actors



KEY TERM

Labour Force Survey (ILO) Measure:

a measure of unemployment which counts as unemployed people who identify as such in a survey.



KEY TERMS

Frictional unemployment:

temporary unemployment arising from workers being in between jobs.

Structural unemployment:

unemployment caused by long-term changes in the pattern of demand and methods of production.

Cyclical unemployment:

unemployment caused by a lack of aggregate demand.

Search

unemployment:

unemployment arising from workers who have lost their jobs looking for a job they are willing to accept.

Casual

unemployment:

unemployment arising from workers regularly being between periods of employment.

Seasonal

unemployment:

unemployment caused by a fall in demand at particular times of the year.

Structural unemployment

Structural unemployment is caused by the decline of industries and particular occupations arising from long-term changes in demand and supply. Industries and occupations can become smaller or cease to exist, as a result of another country (or countries) becoming better at producing the product, a substitute being found for the product or capital being substituted for labour. Structural unemployment, which is concentrated in one area, can cause particular problems. Such unemployment can be referred to as **regional unemployment**.

Another form of structural unemployment is **technological unemployment**. This occurs when workers are made redundant as a result of advances in ICT. For instance, airlines are currently reducing the number of backroom staff they employ, as more people are booking their flights on line.

Structural unemployment is more serious than frictional unemployment as it persists for longer periods and usually affects more workers. In both cases, however, labour immobility plays a key role. If workers are more geographically and occupationally immobile, frictional and structural unemployment will be greater and persist for a longer time. Measures to reduce frictional unemployment include those which seek to increase labour mobility (including education and training) and those which increase the incentive to work (including cutting income tax and benefits). Measures to reduce structural unemployment also include those which aim to increase labour mobility and encourage firms to move to areas of high unemployment.

Cyclical unemployment

Cyclical unemployment may be even more serious than structural unemployment as potentially it can affect more workers and it is spread throughout the country. It arises from a lack of aggregate demand. It can also be referred to as demand-deficient unemployment. If an economy goes through a recession, demand for labour is likely to fall and cyclical unemployment will occur. Figure 30.1 shows an economy operating below the full employment level of national output.

In such a situation, unemployment is likely to be high. To tackle such unemployment, a government will seek to raise aggregate demand by, for instance, reducing income tax or increasing its expenditure.

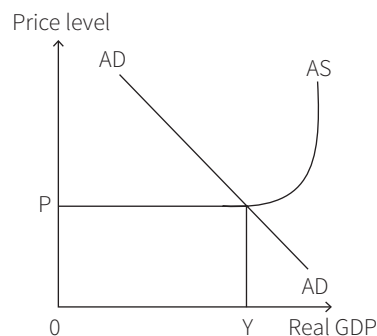


Fig. 30.1: An economy producing below full capacity

Stocks and flows of unemployment

The number of people unemployed at any one time is a *stock*. It is influenced by two factors – the rate of flow of people into unemployment and the time period for which they are



KEY TERMS

Regional unemployment: unemployment caused by a decline in job opportunities in a particular area of the country.

Technological unemployment: unemployment caused by workers being replaced by capital equipment.

unemployed. So the number of people unemployed may be higher than in a previous period in three circumstances:

- more workers have been dismissed from their jobs
- more people have entered the labour force without finding a job
- people have been unemployed for a longer period of time.

INDIVIDUAL ACTIVITY 3

In 2016, unemployment in Egypt was 12.5% and in Saudi Arabia, it was 5.7%.

- Explain one way unemployment may have been measured in the two countries.
- Why may the unemployment rate be higher in one country than another?
- Explain what should influence the measures that the Egyptian government should take to reduce unemployment in the country.

30.6 The consequences of unemployment

The existence of unemployed workers makes it easier for firms, wishing to expand, to recruit new workers. It can also keep down inflationary pressure by lowering wage rises. However, it is generally agreed that the costs of unemployment exceed any benefits.

The extent and seriousness of these costs are influenced by the numbers unemployed and the length of time for which they are unemployed. An unemployment rate of 9% with people being unemployed, on an average, for three months is less serious than an unemployment rate of 6% with the average length of unemployment being a year. Those who bear the main burden of unemployment are the unemployed themselves. But there are also costs for the wider economy.

The effects on the unemployed

Most people who are unemployed suffer a fall in income. In some countries the unemployed do not receive any financial assistance when they are out of work. In those where unemployment benefits are paid, these are usually noticeably lower than what most of the unemployed were previously earning. Having a job also provides a person with sense of worth. So losing a job can result in a loss of self-worth. Lower income and the stress of being unemployed can result in a decline in the mental and physical health of the unemployed and may also lead to marriage break-ups in some cases. Lower income may have an adverse effect on the education of the children of the unemployed and hence their employment chances. Those who are unemployed may not be able to afford the education of their children past the school leaving age.

Being unemployed can also reduce a person's chances of gaining another job. The longer people are unemployed, the more they lose out on training in new methods and technology. They may also lose the work habit and their confidence may dip.

The effects on firms

As mentioned above, firms may benefit from unemployment. They can employ unemployed workers in order to expand production. The existence of unemployment may put downward pressure on wage rises as workers may be more concerned that if they press for significant wage rises, they may be replaced by some of the unemployed. For the same reason, workers

may be prepared to be more flexible in terms of the tasks they perform and the hours they work. Greater flexibility of workers would enable firms to adjust more quickly to changes in market conditions.

Unemployment, however, may bring a significant disadvantage for firms. A high rate of unemployment is likely to mean a low demand for most firms' products. In such a situation, firms will be reducing rather than expanding production.

The effects on the economy

Unemployment imposes an opportunity cost on an economy. Having unemployed workers means that the economy is not using all of its resources. The economy will not be making as many goods and services as possible. Figure 30.2 shows that unemployment causes an economy to produce at point A. Producing at this point involves the economy forgoing the opportunity to produce more capital and consumer goods. Producing at point B would mean that the economy would be making more products and living standards would be potentially higher.

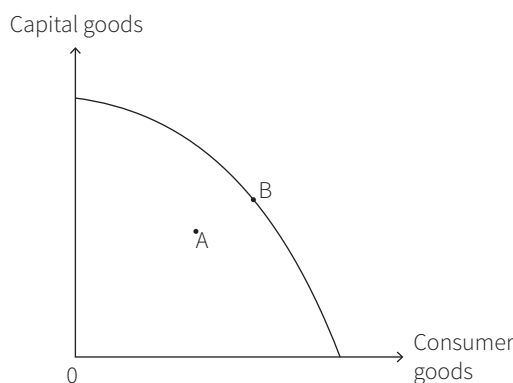


Fig. 30.2: The opportunity cost of unemployment

Unemployment also means that government tax revenue will be lower than possible. When people lose their jobs, their expenditure falls and as a result, indirect tax revenue declines. Income and firms' profits fall and, therefore, revenue from income tax and corporation tax decreases.

Besides lowering tax revenue, unemployment also puts pressure on government expenditure. Expenditure on unemployment benefits will automatically rise with unemployment. If the unemployed suffer from bad health, the government may have to spend more on healthcare. There is a risk that rising unemployment may lead to rising levels of crime, as some of the unemployed may resort to criminal activities to gain a higher income. If crime does rise, the government may have to spend more to tackle the problem and ensure the security of its citizens.

Higher government expenditure, resulting from unemployment, involves an 'opportunity cost'. The money spent on benefits, for instance, could have been spent on higher education. Spending on the treatment of unemployed people for depression might mean that the government has to spend less on treating people with cancer.

GROUP ACTIVITY 2

In 2005, the unemployment rate in South Africa was 27%. Eleven years later, the rate was still 27%. During this time, the South African government had tried a number of policy measures to try to boost aggregate demand in a bid to create jobs and reduce poverty. These measures included increased government spending on infrastructure.

- a** What type of unemployment did South Africa appear to be suffering from, in 2005 and 2016?
- b** Explain how expenditure on infrastructure may reduce unemployment.
- c** Explain how a decrease in unemployment may reduce poverty.

30.7 The policies to reduce unemployment

The policies a government will adopt to reduce unemployment will be determined by what it thinks are the cause or causes of unemployment. If it believes that most of the unemployment is frictional unemployment, it may seek to improve the working of the labour market by using supply-side policy measures. For instance, it may seek to increase the gap between pay and unemployment benefit by cutting income tax rates and reducing unemployment benefit. This may reduce the time that people spend searching for a new job. The government may also increase information on job vacancies so that people are made more aware of the jobs on offer.

To tackle structural unemployment a government would also use supply-side policy measures. In particular, it is likely to try to improve the quality of education and training. If workers are more skilled and qualified, they will be more occupationally mobile. A government may increase training in specific skills needed in particular industries. For example, if a country's coal industry is declining, while its tourism industry is increasing, it may offer special courses in, for example, hotel and catering. A government may also give subsidies to new industries in areas of high unemployment to speed up their expansion.

To reduce cyclical unemployment, a government will use expansionary fiscal and monetary policy. An increase in government spending, a reduction in tax rates and a cut in the rate of interest, for instance, may be used to raise aggregate demand. With higher aggregate demand, firms would expand and take on more workers.

How effective government policy measures are in tackling unemployment will be determined by a number of factors. One is whether the government has identified the cause of unemployment correctly. For example, increasing the skills of the unemployed will be no good if there is not the demand for goods and services they could produce. In the case of structural unemployment, a government would also have to be able to identify accurately which industries will expand in the future and what skills will be needed. A government may decide to use privatisation and deregulation in a bid to increase the efficiency and expansion of industries but there is no guarantee they will work. Indeed, privatisation may increase unemployment. Reducing cyclical unemployment requires a government to judge accurately the gap between the current level of real GDP and the full employment level. If it injects too much spending into the economy, it could cause inflation.

**LINK**

Chapter 26.8 The effects of fiscal policy on government macroeconomic aims

Chapter 27.3 The effects of monetary policy on government macroeconomic aims

Chapter 28.2 Effects of supply-side policy on government macroeconomic aims

Chapter 33.3 Possible government policy measures to reduce poverty

Summary

You should know:

- The pattern of employment can vary between sectors and industries over time.
- Some of those who work part-time do so because they want to work for fewer hours but some seek full-time employment.
- The rate of self-employment varies among countries.
- A growth in the formal economy usually increases the quality of employment and productivity.
- High quality employment provides better opportunities and conditions for workers than low quality employment.
- A flexible labour market is one which responds quickly and easily to changes in market conditions.
- A rise in employment may be accompanied by a rise or fall in unemployment.
- An increase in the population of working age or a rise in the labour force participation rate increases the size of the labour force.
- Factors affecting the labour force participation rate include the wages on offer, social attitudes to working women and the disabled, the provision for the care of children and the elderly and the proportion of school leavers going for higher education.
- Unemployment can be measured by counting those in receipt of unemployment benefits or undertaking a labour force survey.
- Frictional unemployment arises when workers are finding new jobs, after leaving the old one.
- Three examples of frictional unemployment are casual unemployment, seasonal unemployment and search unemployment.
- Structural unemployment is caused by long-term changes in demand and supply.
- Two types of structural unemployment are regional and technological unemployment.
- Cyclical unemployment results from a lack of aggregate demand.
- The unemployed suffer from lower income and possibly from lower self-esteem and bad health also.
- The longer people are out of work, the harder it can be for them to find employment.
- Unemployment is a waste of resources. It results in output and living standards being lower than possible, lower tax revenue and increased government expenditure on benefits and on other costs arising from unemployment.
- To reduce frictional and structural unemployment, a government will use supply-side policy measures. To reduce cyclical unemployment, a government will use demand-side policy measures.

Multiple choice questions

- 1 Which of the following are of working age, but do not form a part of the labour force?
 - A People past the age of retirement
 - B People who are in full-time education
 - C The self-employed
 - D The unemployed

- 2 A country's steel industry is closed down, as buyers switch their purchases of steel to another country. What type of unemployment will occur as a result of this?
- A Cyclical
 - B Frictional
 - C Seasonal
 - D Structural
- 3 What is a cost of unemployment?
- A Higher tax revenue
 - B Lost output
 - C Lower productivity
 - D Reduced inflationary pressure
- 4 Which policy is most likely to reduce cyclical unemployment?
- A A reduction in government expenditure
 - B A reduction in interest rates
 - C An increase in direct taxes
 - D An increase in indirect taxes

Four-part question

- a Define *cyclical unemployment*. (2)
- b Explain how the unemployment rate may fall while the number of people employed declines. (4)
- c Analyse how a cut in the rate of interest could reduce unemployment. (6)
- d Discuss whether or not unemployment is harmful. (8)



Chapter 31

Inflation and deflation

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Learning objectives

By the end of this chapter you will be able to:

- define inflation and deflation
- describe how inflation and deflation are measured
- analyse the causes of inflation
- discuss the consequences of inflation
- discuss the effectiveness of policies available to control inflation
- analyse the causes of deflation
- discuss the consequences of deflation
- discuss the effectiveness of policies available to counter deflation
- explain possible policy conflicts

Introducing the topic

Do you find that the money you are spending is buying you more goods and services or fewer goods and services? Do you know how the prices of the products you buy compare with the prices of those products ten, twenty, thirty years ago? For example, the price of a basket of foodstuffs in the UK was \$0.31 in 1914. The price of the same basket increased to \$1.12 in 1964, \$21.93 in 2017 and is forecast to rise to \$88.79 in 2064. What causes the prices of goods and services to change, what effect do changes have and can a government and/or a central bank control these changes?

31.1 The definition of inflation and deflation

While inflation is a rise in the prices of goods and services, deflation is a fall in the prices of goods and services. **Deflation** is, in effect, negative inflation. The rate at which the prices of goods and services rise or fall changes over time. An increase in the rate of inflation means that prices are increasing more rapidly. A fall in the inflation rate from, for example, 10% to 7%, can be described as **disinflation**.



TIP

Remember that if inflation falls, for example from 8% to 6%, the general price level is still rising.

31.2 Measurement of inflation and deflation

To measure rises and falls in the price level, governments construct price indices (also referred to as price indexes). These show the change in general price level in percentage terms over time. One of the main price indices used is the **consumer prices index (CPI)**.

Constructing a price index

There are a number of stages in constructing a price index. These include selecting a base year, finding out how households spend their money, attaching weights to items of expenditure, finding out price changes from a range of trade outlets and then constructing a weighted price index.

Selecting a base year

Government statisticians try to select a relatively standard year in which there were no dramatic changes, as a base year. The base year is then given a figure of 100 and the price levels in other years are compared to this figure. For example, if the base year is 2015, it would mean that if the price index in 2018 was 123, the general price level had risen by 23% between 2015 and 2018.

Finding out how households spend their money

In calculating the average rise in prices, it is important to know how people spend their money. This is because a price change in an item on which people spend a large proportion of their total expenditure will have more impact on the cost of living than an item on which they spend a relatively small proportion. If, for example, the price of water rose, it would hit the pockets of most of the population much more than a rise in the price of a trip in an air balloon, something most people will not buy and those who do, will buy infrequently.

To find out the spending patterns of people, government officials carry out surveys of household expenditure. In New Zealand, a sample of approximately 3000 households is used. These households are asked to keep a record of their expenditures. From the information collected, government officials work out the main commodities being bought by the households. This enables them to decide which items to include in the price index and what weights to attach to each of them. If people stop buying a product or their expenditure on it falls to a very small figure, it will be removed from the index. The weights reflect the proportion spent on the items. For example, if on an average, households spend \$120 of their total expenditure of \$600 on food – food will be given a weightage of 1/5 or 20%. Table 31.1 shows the categories of products in the UK's CPI and their respective weights with, for example, 10.3% of UK households' expenditure going on food and soft drinks.



KEY TERMS

Deflation: a sustained fall in the prices of goods and services.

Disinflation: a fall in the rate of inflation.



KEY TERM

Consumer prices index (CPI): a measure of the weighted average of the prices of a representative basket of goods and services.

	Category	Weight (%)
a	Food and non-alcoholic beverages	10.3
b	Alcohol and tobacco	4.2
c	Clothing and footwear	7.1
d	Housing and household services	12.0
e	Furniture and household goods	5.9
f	Health	2.8
g	Transport	15.3
h	Communication	3.2
i	Recreation and culture	14.8
j	Education	2.5
k	Restaurants and hotels	12.3
l	Miscellaneous goods and services	9.6

Table 31.1: The weights in the UK's CPI in 2016

Source: based on Office for National Statistics Consumer Price Inflation: 2016 Weights [https://www.ons.gov.uk/file3rd March](https://www.ons.gov.uk/file3rd%20March))

Household spending patterns are reviewed each year with new family expenditure surveys. If these reveal, for example, that people are spending a greater percentage on recreation and culture, and a lower percentage on food and non-alcoholic beverages, the weights of these items in price index will be altered to reflect these changes.

Finding out price changes

Each month government officials find out information about prices. In the UK, about 130 000 price quotations are found for 650 different items. These are obtained from shops, post offices, power companies, train companies and a range of other outlets. From this information, the government estimates the change in prices.

GROUP ACTIVITY 1

India's CPI covers 260 items. It draws on about 160 000 price quotes from more than 16 500 outlets and selected markets. Most price quotes are collected every week. In the case of products which experience a change in price less frequently, the price quotes are collected every month or every six months.

- What does a CPI measure?
- How will the Indian government select the 260 items included in its CPI?

Constructing a weighted price index

Having assigned weights to different items included in the index and measured the change in their prices over time, the final stage is to multiply the weights by the new price index for each category of products and to calculate the change in general price level. For example, consumers may spend \$40 on food, \$10 on housing, \$25 on transport and \$25 on entertainment. This gives a total expenditure of \$100. The price of food may have risen by 10%, the price of housing may have fallen by 5%, the price of transport may not have changed and entertainment may have risen in price by 8%. The information would then be used to perform the calculation shown in Table 31.2.

Category	Weight		Price index		Weighted price index
Food	4/10	×	110	=	44.0
Housing	1/10	×	95	=	9.5
Transport	1/4	×	100	=	25.0
Entertainment	1/4	×	108	=	27.0
					105.5

Table 31.2: Weighted price index

The price index has risen by 5.5%. The change in the price level could also have been calculated rather more directly, as shown in Table 31.3.

Category	Weight		Price change (%)		Weighted price change (%)
Food	4/10	×	10	=	4
Housing	1/10	×	-5	=	-0.5
Transport	1/4	×	0	=	0
Entertainment	1/4	×	8	=	2
					5.5

Table 31.3: Weighted price change

INDIVIDUAL ACTIVITY 1

In each case, calculate the inflation rate using the information given.

- Consumers spend \$20 on food, \$20 on clothing, \$10 on heating and \$50 on entertainment. The price of food rises by 5%, the price of clothing falls by 10%, the price of heating rises by 30% and the price of entertainment rises by 20%.
- Consumers spend \$50 on food, \$20 on clothing, \$60 on transport and \$70 on leisure goods and services. The price of food rises by 8%, the price of clothing rises by 10%, the price of transport falls by 10% and the price of leisure goods rises by 5%.



Different impact of price changes

A consumer prices index measures the price of goods and services consumed by the average household. Of course, the expenditure of particular households is likely to differ from the average, in some way. For example, families with young children will experience lower inflation than other households, due to lower bills for healthcare and no expenditure on university fees, if the price of healthcare and university fees increase at a greater rate than the inflation rate.



TIP

In explaining the idea of a consumer prices index, it is often useful to give a numerical example.

31.3 The causes of inflation

Inflation is not a one-off increase in the general price level. While examining the causes of inflation, therefore, it is necessary to consider the reasons for a rise in the price level over a period of time. Economists divide the causes into two main categories. These are **cost-push inflation** and **demand-pull inflation**.

Cost-push inflation

Cost-push inflation occurs when the price level is pushed up by increases in the costs of production. If firms face higher costs, they will usually raise their prices to maintain their profit margins.

There are a number of reasons for an increase in costs. One is wages increasing more than labour productivity. This will increase labour costs. As labour costs form the highest proportion of total costs in many firms, such a rise can have a significant impact on the price level. It will also not be a one-off increase. The initial rise in the price level is likely to cause workers to press for even higher wages, leading to a **wage-price spiral**.

Another important reason is increase in the cost of raw materials. Some raw materials, most notably oil, can change in price by large amounts. Other causes of cost-push inflation are increases in indirect taxes, higher cost of capital goods and increase in profit margins by firms.

Cost-push inflation can be illustrated on an aggregate demand and aggregate supply diagram. Higher costs of production shift the AS curve to the left and this movement forces up the price level, as shown in Figure 31.1.

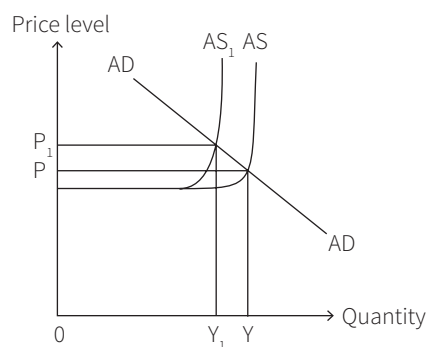


Fig. 31.1: Cost-push inflation



KEY TERMS

Cost-push inflation:

rises in the price level caused by higher costs of production.

Demand-pull inflation:

rises in the price level caused by excess demand.

Wage-price spiral:

wage rises leading to higher prices which, in turn, lead to further wage claims and price rises.

Demand-pull inflation

Demand-pull inflation occurs when the price level is pulled up by an excess demand. Aggregate demand can increase due to higher consumption, higher investment, higher government expenditure or higher net exports. Such an increase in aggregate demand will not necessarily cause inflation, if aggregate supply can extend to match it. When the economy has plenty of spare capacity, with unemployed workers and unused machines, higher aggregate demand will result in higher output but no increase in the price level. If, however, the economy is experiencing a shortage of some resources, for example skilled workers, then aggregate supply may not be able to rise in line with aggregate demand and inflation occurs. In a situation of full employment of resources it would not be possible to produce any more output. As a result, any rise in demand will be purely inflationary as shown in Figure 31.2.

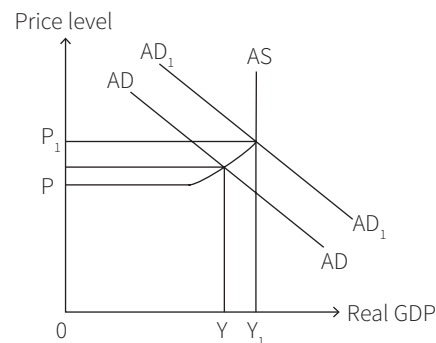


Fig. 31.2: Demand-pull inflation

Monetary inflation is a form of demand-pull inflation. In this case, excess demand is created by an excessive growth of the money supply. A group of economists, appropriately called **monetarists**, believe that the only cause of inflation is the money supply increasing faster than output. They argue that if the money supply increases, people will spend more and this will lead to an increase in prices.

INDIVIDUAL ACTIVITY 2

India's inflation rate fell in both 2015 and 2016. These falls were thought to have been caused by good harvests, smaller increases in the price of oil and appropriate monetary policy. Some economists were, however, predicting a more rapid rise in consumer expenditure in the next five years.

- What is meant by a fall in the rate of inflation?
- Explain how smaller increases in the price of oil rises may reduce inflation.
- Why may a rise in consumer expenditure cause inflation?



TIP

It is a common mistake to say that inflation is caused by a rise in prices. This shows confused thinking. Inflation is a rise in prices. So the reasons for the rise in the general price level need to be considered.



KEY TERMS

Monetary inflation:

rises in the price level caused by an excessive growth of the money supply.

Monetarists: a group of economists who think that inflation is caused by the money supply growing more rapidly than output.

31.4 The consequences of inflation

Most of the consequences of inflation are thought to be harmful but some may actually prove to be beneficial. The impact that inflation has, depends on a number of factors. The key ones are the rate of inflation, stability of this rate, its rate relative to the inflation rates of other countries and the reaction of the government.

The harmful effects of inflation

- **Inflation causes a fall in the value of money.** If prices are rising, each unit of money (for example, each dollar) will buy fewer products. The higher the inflation rate, the greater will be the fall in the purchasing power of money. In a situation of **hyperinflation**, the value of money may be falling so rapidly that people may lose confidence in using the country's currency as money. 50% is usually taken to be the minimum rate to qualify as hyperinflation.
- **Inflation redistributes income in an unplanned way.** Some people gain from it, while others lose. Workers with strong bargaining power tend to gain, as their income usually rises more than the inflation rate. Normally borrowers also benefit. If the rate of interest is below the inflation rate, borrowers pay back less in real terms than what they borrowed. For example, a woman may borrow \$100. If the inflation rate is 12%, she would have to repay \$112 for the lender to just gain back the same amount of purchasing power. If the rate of interest is 8%, she will repay only \$108, which has less purchasing power than what she borrowed. Whilst borrowers are likely to benefit, savers are likely to lose, as they may be repaid less in real terms than what they lent. Workers with low bargaining power and those with fixed incomes also suffer during a period of inflation. The government can seek to protect some vulnerable groups from inflation by **index-linking** state benefit payments and interest rates on government securities.
- **The existence of inflation imposes extra costs on firms.** Some additional staff time will be taken up, estimating future costs of raw material. There will also be **menu** and **shoe-leather costs**. Menu costs are the costs involved in changing prices in catalogues, price lists and slot machines etc. Shoe-leather costs arise because money paid to firms will be losing its value as soon as it is received. Even if the firms plan to pay out the money relatively soon, for example on wages or raw materials, it would need to protect its value by placing it in a bank or other financial institution, which will pay a rate of interest above the inflation rate. Seeking out good financial returns will involve the time and effort of firms.
- **Inflation creates uncertainty.** It can make it hard for households and firms to judge the right price to be paid for products now. It can also make it difficult to plan ahead, as households and firms will be uncertain about future prices. This is a particularly grave problem with a high, fluctuating inflation rate. In such an unstable situation, firms may be discouraged from investing which will be harmful for the economy.
- **Inflation can harm the country's balance of payments position.** If a country's inflation rate is above that of its rivals, its products will become less price competitive. This may result in a fall in export revenue and a rise in import expenditure. Such an effect would cause a deterioration in the current account balance. The fall in demand for the country's products may also result in a rise in unemployment.



KEY TERMS

Hyperinflation: a very rapid and large rise in the price level.

Index-linking: changing payments in line with changes in the inflation rate.

Menu costs: costs involved in having to change prices as a result of inflation.

Shoe-leather costs: costs involved in moving money around to gain high interest rates.

- **Inflation can cause fiscal drag.** This occurs when governments do not adjust tax brackets in line with inflation. As a result, people's incomes are dragged into higher tax brackets and they are left with lower real disposable income.

GROUP ACTIVITY 2

Explain in each case, which type of inflation is likely to impose more costs on an economy.

- a A high and fluctuating rate or a low and stable rate.
- b A 5% rate with other countries averaging 3%, or a 5.2% rate with other countries averaging 6%.

The beneficial effects of inflation

You might be surprised to learn that inflation can have beneficial effects also. These effects are more likely to occur if the inflation is of a demand-pull, low and stable nature and is below that of rival countries.

- Inflation may encourage firms to expand. A low and stable level of demand-pull inflation may make entrepreneurs optimistic about future sales.
- Inflation reduces the real burden of any debt that households and firms have built up. This may mean that some households and firms will avoid going bankrupt.
- Inflation can prevent some workers being made redundant in a declining industry or region. This is because whilst workers are likely to resist any cut in their money wages, they may accept their money wages rising by less than inflation. In such a case, firms' real wage costs will fall without resorting to a retrenchment of workers.

INDIVIDUAL ACTIVITY 3

China's inflation rose to 2% in 2016 from 1.4% in 2015. The price level was driven up mainly by rising energy prices, transport prices and wages. Economists were forecasting that wages would rise 4.7% points above inflation in 2017 and that if inflation were to rise even higher, it could have a harmful effect on the country's exports and savings.

- a Was China suffering mainly from cost-push or demand-pull inflation in 2016?
- b What effect may inflation have on the country's exports and imports?
- c Explain one other cost imposed by inflation on an economy.

INDIVIDUAL ACTIVITY 4

In 2008, Zimbabwe experienced an inflation rate of 23 million%. At the start of that year a loaf of bread was priced at Z\$10 million and a bunch of bananas was sold for Z\$100 million. A year later prices rose even higher. Supermarkets were changing the price of some products daily. With money having less worth each day, a bartering system was developing. For example, some farm workers were paid in food and people in cities swapped a range of goods for food. At this time, the Zimbabwean government was printing a huge number of extra bank notes to ensure that it could pay the soldiers, police and civil servants and meet other commitments of government spending. In 2014, the Zimbabwe central bank announced that a range of foreign currencies, including the US dollar, Pound Sterling and Indian rupee, would all be accepted as legal currency in the country.

- a What is meant by barter?
- b Explain one cost of inflation that has been touched on in the information.
- c From the information given, decide the cause of inflation in Zimbabwe, in 2006.



31.5 Policies available to control inflation

A measure that is becoming increasingly used throughout the world is the setting by a government of an inflation rate target for its central bank to achieve. The intentions behind an inflation rate target are to make the central bank accountable and to influence the behaviour of households and firms. If a central bank does not achieve its target, it has to explain why and what measures it is going to take to get the inflation rate back on target. If a central bank can convince households and firms that there will be price stability, they may behave in a way that reduces the chance of significant movements in the price level. Households will not rush to buy products expecting them to be much more expensive in the future and firms will not raise their prices just to cover expected increases in costs of production.

If the country is experiencing demand-pull inflation, the appropriate policy approach would be to use contractionary fiscal and/or monetary policy. Aggregate demand could be reduced by increasing tax rates, lowering government spending, raising the rate of interest and/or reducing the money supply. The effectiveness of such measures will be influenced by how households and firms react. If they are very confident about future economic prospects, they may continue to spend increasing amounts despite these measures. They may also react in a way that turns demand-pull inflation into cost-push inflation. For example, workers may respond to higher income rates by demanding higher wages or they may opt out of the labour force. Contracting fiscal and monetary policy measures can have a number of adverse side effects, including reducing economic growth and possibly causing unemployment.

To reduce cost-push inflation, a government will use supply-side policy measures such as improved education and training and privatisation. These measures may be effective but, as noted before, they make take some time. They may also be relatively costly and may, at least in the short run, add to aggregate demand. In addition, rises in firms' costs of production



Chapter 26.8 The effects of fiscal policy on government macroeconomic aims

Chapter 27.3 The effects of monetary policy on government macroeconomic aims

Chapter 28.2 Effects of supply-side policy on government macroeconomic aims

are not just influenced by what is happening in the domestic economy. Rises in the price of imported raw materials and fuel may put significant upward pressure on prices. In this case, a government may try to lower inflation by subsidising firms but this might need relatively large amounts of government revenue and so a high opportunity cost.

31.6 The causes of deflation

Deflation may result from the supply-side or the demand-side of the economy. The price level may be reduced as a result of advances in technology and increases in labour productivity. This is likely to be beneficial as it will mean that consumers can enjoy more goods and services and the economy may become more internationally competitive.

In contrast, deflation resulting from a decline in aggregate demand is likely to be harmful. This is because it can lead to a downward spiral in economic activity. Consumers expecting prices to be lower in the future, may postpone their purchase. With lower demand for their products, firms are likely to reduce their output and the number of workers they employ. The reduction in employment will push down aggregate demand further.

31.7 The consequences of deflation

The effect of deflation will be influenced by whether it is 'good' deflation (caused by an increase in aggregate supply) or 'bad' deflation (caused by a decrease in aggregate demand). Good deflation may reduce a current account deficit or increase a current account surplus if demand for exports and imports is elastic and if the fall in the price level is not offset by a rise in the exchange rate. Good deflation can be associated with increases in output and employment.

Bad deflation, however, is likely to cause a rise in unemployment and lower output. It is also likely to discourage investment which will reduce productive capacity and endanger future economic growth. Both bad and good deflation increase the purchasing power of those whose income remains unchanged. It does, however, raise the burden of debt. Any household or firm which has taken out a loan will have to pay back more in real terms. In this situation, borrowers will lose and lenders will gain.

31.8 Policies available to control deflation

A government will not be concerned about good deflation, but it will be anxious to avoid bad deflation or to correct it should it occur. If there is a risk of bad deflation or if it is occurring, it is likely that the government will use expansionary fiscal policy and a central bank will use expansionary monetary policy. Bad deflation, however, can be difficult to reverse. If it has lasted some time, interest rates may be very low and there may be little room to cut them further. Confidence may be very low and the burden of debt high, so that cuts in income and corporation tax rates, for example, may not encourage households to spend and firms to invest.

GROUP ACTIVITY 3

Greece experienced deflation over most of the period 2013–16. During this time, wages and pensions were cut and the economy experienced a recession. Some economists warned that the cut in wages could result in a long run deflation.

- a Does the information suggest Greece suffered from bad deflation or good deflation?
- b How may a reduction in wages result in a deflationary spiral?

31.9 Policy conflicts

Some of the policy measures designed to reduce unemployment may increase inflation. For example, an increase in government spending on pensions would raise consumer expenditure. This rise would encourage firms to expand their output and take on more workers. The higher aggregate demand may, however, raise the price level.

Policy measures to reduce expenditure on imports may reduce economic growth. A rise in income tax, designed to reduce households' expenditure on imports, would also reduce spending on domestically produced products. This fall in demand will reduce the country's output or at least slow down the economic growth.

Unemployment and economic growth both tend to benefit from expansionary fiscal and monetary policies. In contrast, contractionary fiscal and monetary policies are more likely to be used to reduce inflation and expenditure on imports.

Summary

You should know:

- The consumer prices index (CPI) is a weighted measure of consumer prices.
- A rise in a consumer prices index indicates inflation.
- Surveys are done of the products bought by households. On the basis of this information, weights are attached to products. The greater the percentage of an average household's total expenditure devoted to a product, the higher its weightage.
- Information on price changes is found from a range of outlets.
- A weighted price index is constructed by multiplying weights by a price index for each category.
- A weighted price change can be found by multiplying weights with price changes.
- Inflation may be caused by increases in the costs of production (cost-push), excess demand (demand-pull) or the faster growth of money supply relative to output (monetary).
- Among the causes of cost-push inflation are rises in wages and raw material costs.
- Demand-pull inflation is more likely to occur when the economy is at or approaching full employment.
- The effects of inflation will depend on its rate, stability of price rises, its rate relative to other countries and response of the government.
- Inflation will cause a fall in the purchasing power of money. Among the other possible harmful effects are an unplanned redistribution of income, menu costs, shoe leather costs, uncertainty and a worsened position of the balance of payments.
- The possible beneficial effects of inflation include a stimulus to production, a reduction in debt and reduction of unemployment.
- The effects of deflation are influenced by whether it is 'good' deflation or 'bad' deflation.
- Economic growth and employment are likely to benefit from measures designed to increase aggregate demand but these measures may result in higher inflation and a rise in imports.

Multiple choice questions

- 1 The price of a product rises by 8% in 2016 and its weighted price change is 2%. In 2017, its rise in price falls to 5%, but its weighted price change increases to 2½%. What was the weight of the product in 2016 and 2017?

	2016	2017
A	¼	½
B	½	¼
C	4	2
D	2	4

- 2 Who, among the following, is most likely to benefit during a period of rapid inflation?
- A** Borrowers
 - B** Pensioners
 - C** Savers
 - D** Workers in strong unions
- 3 Which of the following is a possible cause of demand-pull inflation?
- A** An increase in government expenditure, not matched by a rise in taxation
 - B** An increase in the price of oil, not matched by a fall in the price of other raw materials
 - C** A rise in wages, not matched by an increase in productivity
 - D** A rise in imports, not matched by a rise in exports
- 4 Which of the following must happen as a result of inflation?
- A** A decline in uncertainty
 - B** A fall in the value of money
 - C** An improvement in the balance of payments
 - D** An increase in savings

Four-part question

- a** Define *inflation*. (2)
- b** Explain how a consumer boom could cause inflation. (4)
- c** Analyse how inflation is measured. (6)
- d** Discuss whether or not workers suffer as a result of inflation. (8)

Exam-style questions

Multiple choice questions

- 1 In 2016, output in Indonesia rose by 5%. Which of the government objectives does this meet?
 - A balance of payments stability
 - B economic growth
 - C full employment
 - D price stability

- 2 Which government policy measure would be most likely to reduce unemployment?
 - A an increase in income tax
 - B an increase in interest rates
 - C a decrease in government expenditure
 - D a decrease in VAT

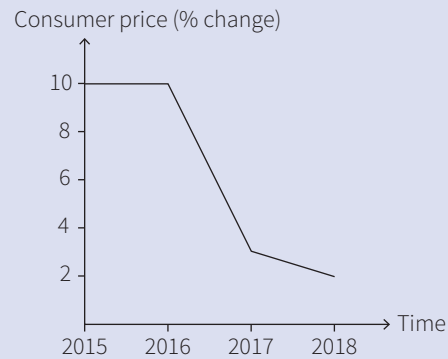
- 3 A government wants to redistribute income from the rich to the poor. Which combination of policy measures would achieve this?

Progressive taxes	Welfare payments
A increase	increase
B increase	reduce
C reduce	reduce
D reduce	increase

- 4 Which government policy measure is most likely to benefit people on a high income?
 - A increasing housing benefit
 - B increasing unemployment benefit
 - C reducing government expenditure on higher education
 - D reducing income tax

- 5 'A tax levied on the profit made on selling assets such as second homes and shares' – what type of tax is this?
 - A capital gains
 - B corporation
 - C income
 - D sales

- 6 The graph shows a change in consumer prices for a country.



What can be concluded from this information?

- A** Consumer prices remained unchanged between 2015 and 2016
- B** Consumer prices fell from 2016 to 2017
- C** Consumer prices were higher in 2017 than 2016
- D** Consumer prices were lower in 2016 than in 2015
- 7 India's economy grew by approximately 7% in 2016. What must have increased in India in 2016?
- A** gross domestic product
- B** labour productivity
- C** the government's budget deficit
- D** the rate of inflation
- 8 Which of the following is a cause of cost-push inflation?
- A** an increase in the money supply
- B** an increase in government expenditure on pensions
- C** a rise in the price of housing
- D** a rise in the cost of transporting goods
- 9 What is a possible disadvantage of economic growth?
- A** a depletion of non-renewable resources
- B** an increase in unemployment
- C** a reduction in the government's ability to reduce poverty
- D** a reduction in the productive capacity of the economy
- 10 The occupational mobility of labour increases. Which types of unemployment is this likely to reduce?
- A** cyclical and frictional
- B** frictional and structural
- C** structural and cyclical
- D** cyclical, frictional and structural

Data response questions

Carefully study the source material for each question and then answer Questions 1 and 2.

Source material: The Brazilian government seeks to reform the economy

Brazil, the world's seventh largest economy, experienced its second successive year of recession in 2016. Its GDP fell to \$1755 billion in 2015 and then fell by a further 3.5% in 2016. In 2015, with a budget deficit equivalent to 10% of GDP, the government had introduced spending cuts and tax increases amounting to \$16.9bn. There were, for example, cuts in government spending on healthcare, housing, infrastructure projects and the pay of public sector workers. In 2016, the government introduced another round of spending cuts and tax increases, this time amounting to \$15bn.

The country's central bank lowered the interest rate from 14.25% in 2015 to 14% in 2016. This was a relatively small change in an interest rate which remained high relative to other major economies. Although in historical terms (Brazil experienced hyperinflation in the 1990s), inflation was relatively low at 8.5% in 2016, this was high again compared to other major economies. Prices were being driven up due to higher electricity and raw material costs, largely resulting from a fall in the country's foreign exchange rate.

In 2016 the government increased the pay of high-ranking government officials, but in recent years the pay and employment of public sector workers has declined relative to those in the private sector. There have also been a number of other changes in the country's labour market. The proportion of informal workers has declined, while the proportion of workers employed in jobs requiring university degrees has changed. Proposed government reforms are likely to make further changes.

The reasons behind these reforms are to reduce unemployment, restore economic growth and to increase Brazil's exports compared to its imports. One of the influences on the value of goods and services that a country imports, is the size of the economy. The table shows the GDP and import expenditure of the seven largest economies in terms of output in 2015.

Country	GDP (\$bn)	Import expenditure (\$bn)
USA	18 560	2200
China	12 000	1440
Japan	4730	630
Germany	3500	990
UK	2650	582
France	2500	525
Brazil	1775	144

GDP and import expenditure of the seven largest economies 2015

- 1 Referring to the source material in your responses, complete all parts of Question 1.
 - a Calculate Brazil's budget deficit in US\$ in 2015. **(1)**
 - b Explain what type of fiscal policy was operating in Brazil in 2015 and 2016. **(2)**
 - c Explain the type of inflation experienced in Brazil in 2016. **(2)**
 - d Explain **two** ways in which the pattern of employment has changed in Brazil. **(4)**
 - e Analyse the likely effect of the supply-side policy measures taken by the Brazilian government on the country's output. **(5)**

- f Analyse the relationship between a country's GDP and import expenditure. (4)
- g Discuss whether or not an increase in the rate of income tax will reduce a budget deficit. (6)
- h Discuss whether or not all households suffer from inflation. (6)

Source material: The government of Bangladesh tackles inflation

Bangladesh's inflation rate fell from 6.4% in 2015 to 5.9% in 2016. The government of the country of 156m people had set an inflation rate target of 6.2%, an economic growth rate target of 7.2% and a money supply growth rate of 15.5%. Although there were pay rises for public sector workers, food prices rose more slowly largely due to good harvests. The weight given to food and non-alcoholic drinks varies from country to country as shown in the table.

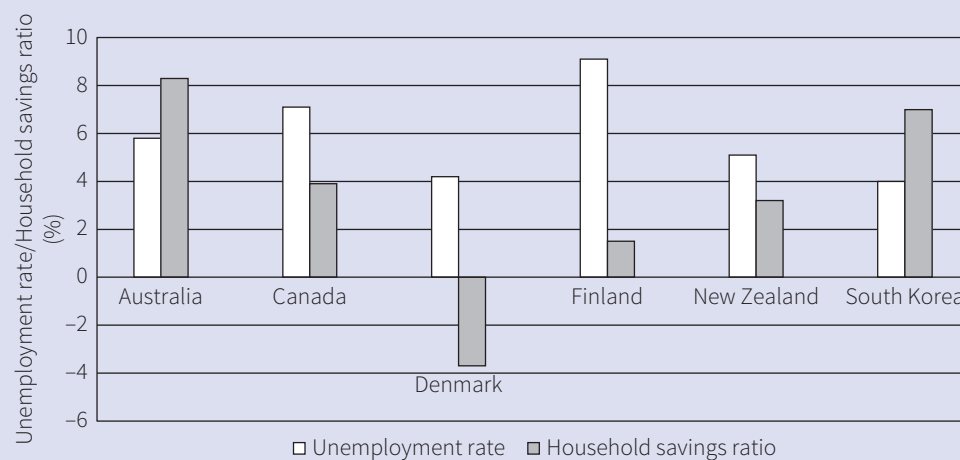
Country	Weight given to food and non-alcoholic drinks (%)	GDP per head (\$)
Bangladesh	56.0	3700
India	46.0	6300
South Africa	18.2	13400
Turkey	23.7	20700
UK	10.3	42000
USA	8.4	56800

The weight given to food and non-alcoholic drinks and GDP per head in selected countries in 2015

As well as falling inflation, Bangladesh experienced a falling unemployment rate in 2016. Youth unemployment nevertheless remained high and there was considerable underemployment. This was despite a high rate of job vacancies. Employers said they could not fill these because the job applicants lacked the appropriate skills.

To stimulate investment, the government cut the rate of corporation tax. The central bank of Bangladesh decided that it would keep the rate of interest stable, but some economists suggested that it too needed to be cut to stimulate investment.

Changes in the rate of interest also influence a country's household savings ratio. Another influence on saving is a country's unemployment rate. The chart shows the unemployment rate and household savings ratio for six countries.



Unemployment rate and household savings ratio for selected countries, 2016

- 2** Referring to the source material in your responses, answer all parts of Question 2.
- a** Identify **one** fiscal policy measure. **(1)**
 - b** Calculate Bangladesh's GDP in 2016. **(2)**
 - c** Explain what happened to the price level in Bangladesh in 2016. **(2)**
 - d** Explain what type of unemployment Bangladesh was experiencing in 2016. **(4)**
 - e** Analyse the relationship between the weight given to food and non-alcoholic drinks, and GDP per head. **(5)**
 - f** Analyse the relationship shown between the unemployment rate and the household savings ratio. **(4)**
 - g** Discuss whether or not setting an inflation rate target will reduce the inflation rate. **(6)**
 - h** Discuss whether or not a cut in the rate of interest will increase investment. **(6)**

Four-part questions

- 1** In 2016 the Greek economy returned to economic growth after experiencing a period of recession. It was hoped that the economic growth would reduce the country's high rate of unemployment, restore confidence in the country's economic prospects, and revenue from direct and indirect taxation.
- a** Define a *direct tax*. **(2)**
 - b** Explain how changes in resources affect economic growth. **(4)**
 - c** Analyse how a fall in confidence in the economic prospects of a country could cause that country to experience a recession. **(6)**
 - d** Discuss whether or not economic growth will always result in lower unemployment. **(8)**
- 2** The unemployment rate in Sri Lanka fell between 2015 and 2016 while its inflation rate rose. Government spending increased over the period and it introduced a number of policy measures designed to increase the incentive to work.
- a** Identify **two** measures of unemployment. **(2)**
 - b** Explain how a government could increase the incentive to work. **(4)**
 - c** Analyse why a fall in unemployment may be accompanied by a rise in inflation. **(6)**
 - d** Discuss whether or not an increase in government spending will cause inflation. **(8)**

SECTION 5

Economic development



Chapter 32

Living standards

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Learning objectives

By the end of this chapter you will be able to:

- describe indicators of living standards
- discuss the advantages and disadvantages of real GDP per head and HDI as indicators of living standards
- explain how income and wealth inequality are measured
- analyse the reasons for differences in living standards and income distribution within and between countries

Introducing the topic

One of the key roles of an economist can be seen to be to raise people's living standards. By helping to improve the performance of firms and advising governments on increasing macroeconomic performance, economists can make a significant difference to the quality of people's lives. Do you think you enjoy a higher living standard than people living in your country fifty years ago? What would you look at in making this comparison?



KEY TERMS

Human Development Index (HDI): a measure of living standards which takes into account income, education and life expectancy.

Genuine Progress Indicator (GPI): a measure of living standards which takes into account a variety of indicators including income, leisure time, distribution of income and environmental standards.

32.1 Indicators of living standards

There are a variety of indicators that can be used to assess the living standards in a country. These include the number of people or households that own a given consumer good, such as cars, laptops, mobile (cell) phones and TVs (see Table 32.1). The number of patients per doctor, enrolment in tertiary education, the adult literacy rate, the average food intake per person and conduct of free elections in the country can also be examined. A main measure of living standards, however, is still probably real GDP per head. There are also composite indicators such as the **Human Development Index (HDI)** and the **Genuine Progress Indicator (GPI)**.

Cars per 1000 population		Internet users per 100 population		Mobile phone subscriptions per 100 people	
Puerto Rico	805	Iceland	98.2	Macau	322.6
Luxembourg	746	Bermuda	96.8	Hong Kong	233.6
Iceland	720	Norway	96.3	Kuwait	218.4
Malta	665	Denmark	96.0	Saudi Arabia	179.6
Bahrain	662	Andorra	95.9	UAE	178.1
New Zealand	648	Liechtenstein	95.2	Bahrain	173.3
Lithuania	623	Luxembourg	94.7	Kazakhstan	172.2
Canada	612	Netherlands	93.2	Gabon	171.4
Italy	607	Sweden	92.5	Suriname	170.6
Finland	592	Finland	92.4	Botswana	167.3
		Monaco	92.4		

Table 32.1: The top ten countries in terms of highest car ownership, internet users and mobile phone subscriptions 2014

Source: Pocket World in Figures, 2017 edition, pages 76, 98 and 99, The Economist



Ownership of electronic goods is one indicator of living standards

Real GDP per head as an indicator of living standards

An increase in real GDP per head would suggest that living standards have risen, but it may not necessarily indicate the real situation for a number of reasons. One is that real GDP is an average. Not everyone may benefit from a rise in the average income level. The extra income may be unevenly spread with a few receiving much higher income and some not receiving any extra income.

Higher output will obviously mean that more goods and services are being produced, but not all of these may add to people's living standards. For example, an increase in the output and consumption of tobacco may actually reduce the quality of people's lives by affecting their health and life expectancy adversely. A rise in police services, due to a higher crime rate, is also unlikely to improve most people's living standards.

Increases in real GDP per head figures may understate the products available to people due to undeclared economic activity and non-marketed output. It may, however, overstate it if the quality of output is falling. Living standards are also influenced by other factors besides the material goods and services produced. If output rises but working conditions deteriorate, the number of working hours increases, or pollution increases, people may not feel better off.

Comparing living standards between countries

Again, one of the main measures is real GDP per head. This measure has the advantage that it takes into account differences in population size and also incorporates adjustments for inflation.

There are still a number of reasons why it cannot serve as a definite way of ascertaining the quality of living standards of people in a country. (In fact, some of the citizens of some countries enjoy a better quality of life than some of those in richer countries.) This is because there can be differences in the distribution of income, the size of the informal economy, working hours and conditions, the composition and quality of output and environmental conditions between countries.

There is also a potential problem in comparing different countries' real GDP per head because countries measure their output in terms of their own currency initially. The comparison, on the other hand, requires to be done in a common unit. There is a risk that if an unadjusted currency is used, the comparison may be distorted. This is because the value of a currency can change on an hour to hour basis. For example, US dollars may be used. If the real GDP of Kenya was KSh1200bn and the exchange rate was initially \$1 = 100 Kenyan Shillings (KSh), the GDP of Kenya would be valued at \$12bn. If the exchange rate changed to \$1 = KSh80 the next day, the value of its output in dollars would change to \$15bn, despite the fact that in that period Kenya would not have increased its output by 25%.

It is for this reason that economists make use of **purchasing power parity** (PPP) exchange rates when comparing countries' GDP. These use an exchange rate based on the buying power of currencies in their own countries. They compare the amount of a country's currency needed to buy the same basket of goods and services with that of another country or countries' currencies. If in the USA a given basket of products sells for \$5000 and in Kenya, it sells for KSh45 000, the exchange rate used would be \$1 = KSh9. This figure would not be affected by market changes in the price of currencies on the foreign exchange market.



KEY TERM

Purchasing power parity: an exchange rate based on the ratio of the price of a basket of products in different countries.

INDIVIDUAL ACTIVITY 1

One of the richest self-made women in the world is Cheung Yan in China. She runs one of Asia's largest packaging and paper production firms and has a personal fortune of \$1.46bn. She is one of a new breed of super-rich entrepreneurs in a country which, in 2016, had a real GDP per head of \$15 400 (PPP) in comparison with \$42 500 in the UK. In that year in China, the disposable income of the top 10% of richest households was more than nine times higher than that for the poorest 10%.

- a What is PPP?
- b Are people in China poorer than people in the UK?
- c Is income evenly distributed in China? Explain your answer.

The Human Development Index

The Human Development Index (HDI) was developed by a team of economists led by Dr Mahbub ul Haq, while he was working for the United Nations Development Programme (UNDP). It has been published every year since 1990.

The HDI is a wider measure than real GDP per head. Besides including GDP per head (see Note, right), the HDI considers two other indicators of living standards. One is the length of time for which people can enjoy life, measured as life expectancy at birth. The second is education. This is measured by mean years of schooling and expected years of schooling.

On the basis of their HDI values, countries are categorised into very high human development, high human development, medium human development and low human development. The HDI shows that economic growth and human progress may not always match. Some countries such as Namibia and South Africa have recently enjoyed a higher ranking in terms of GDP per head than HDI, whilst others including Costa Rica and Cuba usually score more highly in terms of HDI than GDP per head.

Although the HDI does take into account other factors that influence people's living standards, it has been criticised for what it leaves out. In fact, it has been stated that the index would be high for someone living for a long time in a prison who has been well educated. Among the factors it does not take into account are political freedom and the environment. It also does not consider differences in life expectancy, education and differences in income between males and females and between those living in rural and urban areas, among other groups. Table 32.2 shows the countries with the highest and lowest HDI rankings in 2014.

**NOTE**

The HDI now actually uses Gross National Income per head rather than GDP per head. This is very similar to GDP per head although it includes workers' remittances. For consistency, GDP per head is used here.

Ranking	Top ten countries	Ranking	Bottom ten countries
1	Norway	178	Mali
2	Australia	179	Mozambique
3	Switzerland	180	Sierra Leone
4	Denmark	181	Guinea
5	Netherlands	182	Burkina Faso
6	Germany	183	Burundi
6	Ireland	184	Chad
8	USA	185	Eritrea
9	Canada	186	Central African Republic
10	New Zealand	187	Niger

Table 32.2: HDI rankings in 2014

Table 1 page 208 Human Development Report 2015 UNDP

**TIP**

For understanding the measures of living standards, it might be useful to discuss (as a group) the change in living standards in your own country in the last five years. You might also want to carry out a survey, asking your friends and relatives whether they think that the living standards have risen and what leads them to think this (or vice versa).

**KEY TERMS****Gender Inequality Index (GII):**

a measure of gender inequalities in terms of reproductive health, empowerment and labour market participating.

Happy Life Expectancy Index (HLEI):

an index which multiplies life expectancy by a happiness index.

Gross National Happiness:

a measure of living standards which includes a wide number of indicators including income, psychological wellbeing, education and ecological diversity.

The Genuine Progress Indicator (GPI)

The Genuine Progress Indicator (GPI) is another composite measure containing a number of indicators. It was developed in 1995. It starts with GDP. It then adjusts for income distribution. As the poor receive more benefit from a rise in income than the rich, the GPI rises when the poor receive a higher proportion of income and it falls when income becomes more unevenly distributed. Then, it makes a number of deductions and additions. The items deducted are those which reduce living standards now or in the future. Examples of such items include the costs of crime, traffic accidents, carbon dioxide emissions, depletion of non-renewable resources and the loss of wetlands and forests. Items which are thought to make a positive contribution to current or future living standards are added. These include the value of housework and volunteer work and increases in leisure time.

Other measures

There is a wide range of other measures of living standards. Whilst the HDI is the UNDP's best known measure, it also produces several other measures. Another of the UNDP's measures is the **Gender Inequality Index (GII)** which considers gender-based disadvantage in terms of reproductive health, empowerment and the labour market. The health dimension is measured in terms of maternal mortality rate and adolescent fertility rate. There are two measures to the empowerment dimension which are the percentage of seats in the national parliament held by women and the relative percentage of men and women with at least a secondary education. Involvement in the labour market is assessed by comparing the labour force participation rates of men and women.

Economists also calculate the **Happy Life Expectancy Index (HLEI)**. This seeks to measure the degree to which people live long and happy lives. It is found by multiplying life expectancy at birth by a happiness index. Bhutan also measures **Gross National Happiness**. This is based on a survey which assesses people's happiness using thirty-three indicators in nine categories. One category is named living standard and this has the three indicators of income per head, assets and housing. The other eight categories are psychological wellbeing, health, time use, education, cultural diversity and resilience, good governance and community vitality, ecological diversity, and resilience.

GROUP ACTIVITY 1

In 2016, the Pakistani economy grew by 5.7% and the population, by 2.0%. Property prices rose in the country and sales of televisions, mobile phones and cars, including Porsches, increased. Nevertheless, most of the country's population of 202 million remained on a low income, barely able to afford a motorcycle. The rich/poor divide widened. The government increased its expenditure on education by 14% and on defence by 12%.

- Identify two different indicators which would indicate that living standards rose in Pakistan in 2016.
- Would all Pakistanis have enjoyed a 5.7% rise in living standards in 2016?
- Would all the extra government expenditure have increased living standards?

32.2 Comparing living standards and income distribution

Income is unevenly distributed between households in every country, but to different extents. Wealth is even more unevenly distributed. Wealth is a stock of assets which have a financial value. Some of these assets, such as shares and government bonds, give rise to income. Some people have a considerable amount of wealth, whilst others have none.

Measures of income and wealth inequality

To assess the distribution of income and wealth in a country, economists calculate the percentages of income earned and wealth owned by given proportions of the population. Two common proportions used are deciles (tenths) and quintiles (fifths).

The causes of differences in living standards and income and wealth inequality

Living standards vary between countries and between regions within a country for a large number of reasons. These include, for example, differences in income, wealth, education and healthcare systems, levels of pollution and working hours.

Income may be unevenly distributed between households within and between countries due to uneven holdings of wealth, differences in the composition of households and differences in the opportunity and ability to earn an income. Some wealthy households can live off the income their wealth generates. In more cases, the income from wealth adds to earned income.

Households with a number of workers are likely to have a higher income than those with one or no workers and a high number of dependants.

The wages received by workers are influenced by their skills, qualifications and the number of hours for which they work. High skilled workers with better qualifications are likely to be in high demand and hence are likely to receive high wages. Full-time workers usually earn more than part-time workers. Some people may be dependent on state benefits or help from relatives and their income is likely to be relatively low.

Wealth is unevenly distributed because there are differences in the assets inherited by people, their savings and entrepreneurial skills. In fact, inheritance is a major reason for some people being wealthy. The more a person can save, the wealthier they will become. Of course, in this sense wealth creates wealth. Wealthy people can afford to save more and this makes them wealthier. People with an entrepreneurial flair may be able to build up a business from scratch and become wealthy.



LINK

Chapter 29.3
Economic growth
(Consequences)

INDIVIDUAL ACTIVITY 2

More than half of the world's wealth is owned by 2% of adults, whilst the least wealthy 50% of the world's adults own only 1% of global wealth. Wealth is heavily concentrated in North America, Europe and affluent Asia-Pacific countries. People living in these countries, together hold almost 90% of total world wealth. Wealth is also unevenly distributed within countries. The USA has one of the highest levels of inequality and Japan one of the lowest.

- a How much of the world's wealth is owned by the wealthiest 50% of adults?
- b Explain what is meant by Japan having one of the lowest levels of wealth inequality.

Summary

You should know:

- There are a number of possible indicators of living standards, including consumer goods per head, real GDP per head, HDI, and the Genuine Progress Indicator.
- Real GDP per head gives an indication of material living standards, but a rise in average income does not translate into a benefit for everyone. The extra output may not add to the quality of people's lives. Official figures may not capture the total income and may fail to include other factors – like working conditions, working hours and environmental conditions, which affect living standards.
- One country can have a higher real GDP per head than another, but its citizens may still have lower living standards, if they have less leisure time, worse working conditions, lower quality products, worse environmental conditions and a smaller informal economy.
- International comparisons in real GDP per head are usually made in terms of purchasing power parity.
- The Human Development Index is based on life expectancy and education, as well as GDP per head.
- Some households are rich because they earn high incomes and own assets which generate income.
- The main reasons accounting for why some people are wealthy are inheritance of wealth, accumulated savings or money earned in business.

Multiple choice questions

- 1 What is the most popular measure of the difference in living standards between countries?
 - A Average price level
 - B Real gross domestic product per head
 - C The size of the population
 - D The value of the currency

- 2 What is most likely to cause an increase in a country's standard of living?
 - A A fall in the school leaving age
 - B A fall in the size of the labour force
 - C A rise in the level of pollution
 - D A rise in the number of doctors per head of the population

- 3 Under which circumstance would the standard of living of a country be most likely to fall?
 - A A fall of 3% in real GDP and a fall of 6% in population
 - B No change in real GDP and a fall of 3% in population
 - C A rise of 2% in real GDP and no change in population
 - D A rise of 5% in real GDP and a rise of 8% in population

- 4 In what circumstance would a fall in working hours be most likely to increase the standard of living?
- A The average income falls
 - B The level of output remains unchanged
 - C The rate of unemployment rises
 - D The standard of working conditions falls

Four-part question

- a Identify **two** influences on living standards. **(2)**
- b Explain why real GDP per head is a better measure of the standard of living in a country than nominal GDP. **(4)**
- c Analyse how a rise in labour productivity can increase living standards. **(6)**
- d Discuss whether or not HDI is a good measure of living standards. **(8)**



Chapter 33

Poverty

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Learning objectives

By the end of this chapter you will be able to:

- distinguish between absolute poverty and relative poverty
- analyse the causes of poverty
- discuss the policies to alleviate poverty and redistribute income
- measuring poverty

Introducing the topic

No one wants to be poor. We all want to have sufficient income to enable us to enjoy a good standard of living. So why are some people poor? Why do some people have so little, while other people have so much? Is there anything governments can do, to help the poor and redistribute from the rich to the poor?



KEY TERMS

Absolute poverty: a condition where people's income is too low to enable them to meet their basic needs.

Relative poverty: a condition where people are poor in comparison to others in the country. Their income is too low to enable them to enjoy the average standard of living in their country.

Vicious circle of poverty: a situation where people become trapped in poverty.

33.1 Absolute and relative poverty

Absolute poverty occurs when people do not have enough income to pay for their basic needs. They may lack access to, for example, adequate food, clothing, shelter, sanitation and healthcare. People experience **relative poverty**, when they are poor relative to other people in the country. People who are relatively poor are unable to participate fully in the normal activities of the society they live in. People who are regarded as relatively poor in a rich country may not be seen as such if they had the same income in a poor country.

33.2 The causes of poverty

There are a number of reasons why people are poor. These include being unemployed, being in low-paid work, falling ill and growing old. In all of these cases, people may lack the income to ensure that they do not experience poverty. Once in poverty, it can become difficult to get out of it. People can become trapped in a **vicious circle of poverty**. Those who are poor are likely to have worse than average education and healthcare. This will reduce their productivity, employment opportunities and income, and will also affect the prospects of their children.



Relatively poor housing

GROUP ACTIVITY 1

The following are circumstances people may experience. Identify which ones would indicate that they are living in absolute poverty.

- a high car ownership
- b high internet use
- c homelessness
- d longevity
- e low access to electricity
- f malnutrition



KEY TERM

Multidimensional Poverty Index (MPI):

a measure of poverty based on deprivations in education, health and standard of living.



LINK

Chapter 18 National minimum wage

The Multidimensional Poverty Index (MPI)

One measure of poverty is the **Multidimensional Poverty Index (MPI)**. This index is based on deprivations in education, health and standard of living. Household surveys are undertaken to find, for example, how many households have no member who has completed five years of schooling, someone who is malnourished, and who has no access to clean water and no electricity.

There are two indicators in the health category – child mortality and nutrition, each with a weighting of 1/6th. There are again two indicators in the education category with a weighting of 1/6th each. These are years of schooling and child school attendance. The total weighting given to standard of living is one-third, as it is with education and health. This time, however, the category is subdivided into six rather than two indicators. These are electricity, improved sanitation, safe drinking water, flooring, cooking fuel and assets. Each part has a weighting of 1/18th. A household is regarded as poor if it suffers deprivations on a third, or more, of the ten indicators (see Figure 33.1).

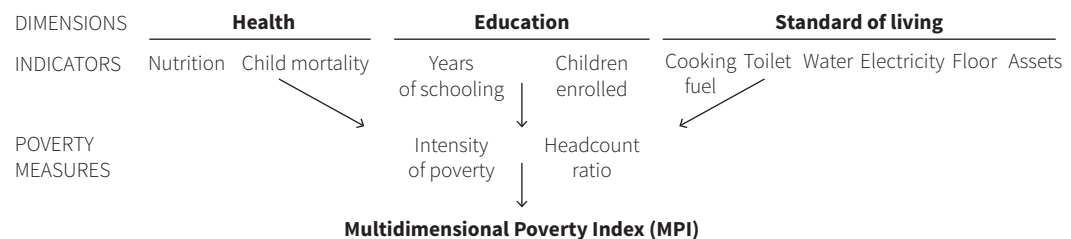


Fig. 33.1: The Multidimensional Poverty Index

Source: United Nations Development Programme, Human Development Reports, Multidimensional Poverty Index (MPI), 2016, hdr.undp.org/en/content/multidimensional-poverty-index-mpi

33.3 Possible government policy measures to reduce poverty

There are a number of measures a government may take in a bid to reduce poverty. Its choice of measures, however, can be restricted by the tax revenue it has raised to fund them. Among the possible measures are:

- **Improving the quantity and quality of education.** In the long term this can be a very effective policy, as it can increase the job prospects and earning potential of the poor and their children.
- **Promoting economic growth.** For example, increasing government expenditure or reducing the rate of interest, will increase aggregate demand. This can increase output and create jobs. Unemployment is a major cause of poverty. Having unemployed and underemployed workers not only lowers their living standards, but also the living standards of others since output will be below potential.
- **Introducing or raising a national minimum wage.** This is designed to tackle the problem of people experiencing low living standards due to low wages.
- **Encouraging more multinational companies to set up in the country.** The opening up of new firms in the country should create more employment opportunities.
- **Providing benefits or more generous state benefits.** The elderly, and some of the sick and disabled, may not be able to work and may not have any savings to support them. Giving them benefits, or raising the benefits they receive, may enable them to avoid absolute poverty. What is more debatable is the effect that raising unemployment benefit will have on poverty. If there is a lack of jobs, it may help in the short run, as it will not only raise the living

standards of the unemployed, but may also reduce unemployment by increasing aggregate demand. If, however, jobs are available, and the unemployed are not filling them because they receive a higher income on benefits, raising benefits will reduce the incentive to work.

- **Land reform.** In a number of countries, many agricultural workers work on land owned by a few rich land owners. Those who rent or lease land may be reluctant to improve the fertility of the land. In such circumstances, making ownership of land more equal may increase output and living standards.

GROUP ACTIVITY 2

A report published at the start of 2017 found that a third of people in the UK live in a household which is experiencing poverty. The measure used was a minimum income standard, defined as the income required to buy a basket of goods and services that allows households to be adequately fed, clothed and housed, as well as being able to participate in society by, for example, eating out occasionally in a restaurant and going on a low-cost holiday. A high proportion of lone parents and their children did not achieve this minimum income standard. In contrast, only a relatively low proportion of old age pensioners had an income below the minimum standard.

- Was this study focusing on absolute or relative poverty?
- What does the passage suggest about the level of income UK pensioners received in the period covered?
- Do you think it is easy to get agreement on what is 'the minimum income standard'?

Measures to raise living standards

Measures to reduce poverty should also raise general living standards. Improving education and training will enhance the knowledge and earning potential of the people, and their ability to participate in the political system of the country. Reducing unemployment, as already mentioned, also raises living standards by increasing the quantity of available goods and services.

Other ways of improving living standards include improving healthcare, increasing and improving the housing stock, improving the working conditions and reducing pollution.

Economists debate about the extent to which government intervention is needed to achieve these objectives. Some economists argue that government policies will be needed, such as legislation, to give workers holiday entitlement and government provision of housing. Other economists argue that the private sector is better at providing improved living standards. If this is the case, living standards might be increased by reducing government regulation and taxation. For example, if corporation tax is reduced, firms may be encouraged to expand taking on more workers and providing more training.

GROUP ACTIVITY 3

The 2016 the Global Hunger Index found that a third of India's children are malnourished. This problem was occurring despite the country's economic growth. The Indian government uses a number of policy measures to reduce poverty in the country. For example, it runs the Integrated Child Development Services scheme. The scheme offers nutritious food, pre-school education with links to primary healthcare services such as immunisation. Poverty can bring significant disadvantages to those experiencing it and can hinder economic growth.

- How may provision of nutritious food to the children of the poor increase their chance of escaping poverty?
- Identify two reasons why some households may not benefit from a country's economic growth.
- Explain how poverty may hinder economic growth.



LINK

Chapter 26.2
The reasons for
government spending

Chapter 26.3
The reasons for levying
taxation

Chapter 28.1
Supply-side policy
(Improved education
and training)

Chapter 29.3:
Economic growth
(Consequences)

Government policies on the distribution of income and wealth

Governments may decide to influence the distribution of income and wealth because of concerns that a very uneven distribution may be socially divisive. It may also want to ensure that everyone has access to a certain standard of living. In influencing the distribution, however, governments may be concerned that it does not reduce incentives to entrepreneurs and workers.

Governments can influence the distribution in a number of ways including:

- taxation
- the provision of cash benefits
- the provision of free state education and healthcare, and
- using labour and macroeconomic policies.

Progressive taxes make the distribution of income and wealth more even. The provision of unemployment and other cash benefits can help maintain a reasonable standard of living. Provision of free state education and healthcare can ensure that everyone has access to these essential services, and it may also offer the people an opportunity to improve their living standards. Other government policies that can affect distribution of income include minimum wage legislation, regional policy and measures to reduce unemployment.



TIP

Remember the difference between equity and equality. An equal distribution of income or wealth might be seen as unfair, if people have different needs.

Summary

You should know:

- Poverty is measured both in absolute and relative terms.
- The main reasons that account for poverty of people are unemployment and low-paid jobs.
- Among the measures a government may take to reduce poverty and raise living standards include improving education and training, raising aggregate demand, attracting multinational companies and improving healthcare.
- Governments influence the distribution of income and wealth through taxation, the provision of benefits and adoption of macroeconomic policies.

Multiple choice questions

- 1 What may cause a more uneven distribution of income?
 - A An increase in the national minimum wage
 - B An increase in state benefits
 - C A reduction in the top rates of tax
 - D A reduction in unemployment

- 2 Why does income inequality tend to be associated with wealth inequality?
 - A It is a disincentive for entrepreneurs and workers
 - B Those with high incomes have higher ability to save than the poor
 - C Those with high incomes spend a higher proportion of their income than the poor
 - D Those with low incomes often inherit wealth

- 3 What could cause a decrease in absolute poverty but a rise in relative poverty?
 - A The income of the rich rising by less than the income of the poor
 - B The income of the rich rising by more than the income of the poor
 - C The income of the rich falling by less than the income of the poor
 - D The income of the rich falling by more than the income of the poor

- 4 Which government measure may reduce absolute poverty?
 - A A cut in government expenditure on state education
 - B An increase in the rate of interest
 - C Granting subsidies to builders of low-cost housing
 - D The imposition of a tax on food

Four-part question

- a Define *absolute poverty*. (2)
- b Explain **two** reasons why the children of the poor are likely to be poor as adults. (4)
- c Analyse how fiscal policy could reduce income inequality. (6)
- d Discuss whether or not the introduction of a national minimum wage will reduce poverty. (8)



Chapter 34

Population

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Learning objectives

By the end of this chapter you will be able to:

- describe the factors that affect population growth
- analyse the reasons for different rates of population growth in different countries
- discuss the effects of changes in the size and structure of population on different countries

Introducing the topic

In 2017 the world population was 7.5 billion. It is predicted that it will increase to 9.7 billion by 2050 and to 11.2 billion by 2100. The number of people aged 60, or above, is expected to double by 2050 and more than triple by 2100.

Individual countries are facing a number of challenges connected with changes in the size and structure of their populations. For example, Japan is experiencing a decline in population, while Uganda is experiencing a rapid increase in population. The average age of population varies considerably between countries. For example, it is 52 years in Monaco, while it is only 15 years in Niger.

34.1 Factors that affect population growth

The size of a country's population can grow as a result of a natural increase or net **immigration**. A natural increase occurs when the birth rate exceeds the death rate. For example, the **birth rate** in Iran in 2016 was 15.6 per 1000 and the **death rate** was 4.6 per 1000, giving a natural rate of increase of 11 per 1000 or 1.1%.

The birth rate is influenced by the average age of the population, the number of women in the population and women's fertility rate (that is, the average number of children per woman).

The death rate is influenced by nutrition, housing conditions, medical care, lifestyles, working conditions, involvement or non-involvement in military action.

Net immigration occurs when more people come into the country to live (*immigrants*) than people who leave it to live elsewhere (*emigrants*).

34.2 The reasons for different rates of population growth

The birth rate is likely to be high when there is a young average aged population in which women marry young, **infant mortality rate** is high, women are not well-educated, most women do not work and it is cheap to bring up children. Other factors leading to a high birth rate are the lack or disapproval of family planning, government cash incentives to have children, but a lack of government help to care for the sick and elderly.

In contrast, in a country where it is expensive to have children (because there is a legal requirement to send children to school for a number of years and an expectation that some of them will go on to higher education), and well-paid jobs are open to women, the birth rate is likely to be low. If the government does provide state pensions, sickness and disability benefits, families may not feel that they have to have a large family in order to support them.

A country in which people have healthy diets, enjoy good housing facilities and access to high quality medical care, do not smoke or consume excess alcohol, exercise regularly, enjoy good working conditions and the country is at peace with other countries, is likely to have a relatively low death rate.

The rate and pattern of **net migration** is influenced by relative living standards at home and abroad, persecution of particular groups and extent of control on the movement of people. If living standards abroad are better (or perceived as better), there is persecution at home and no restriction to immigration by other countries, some people are likely to emigrate. Most migrants tend to be single people, of working age.

In deciding what is happening to a country's population size, the relationship between the birth rate, death rate and net migration have to be considered. A fall in the death rate, for example, will not necessarily lead to an increase in population if it is offset by a fall in the birth rate and/or net emigration. Latvia's population, for example, is declining because its birth rate has fallen at a greater rate than its death rate and it is currently experiencing net emigration.



KEY TERMS

Emigration: the act of leaving the country to live in another country.

Birth rate: the number of births in a year per 1000 population in a year.

Death rate: the number of deaths in a year per 1000 population in a year.

Net immigration: more people coming to live in the country than people leaving the country to live elsewhere.

Infant mortality rate: the number of deaths per 1000 live births in a year.

Net migration: the difference between immigration and emigration.



More children may increase the size of a country's population

**TIP**

Be careful not to confuse population growth with economic growth.

**TIP**

It is often thought that countries with low development have large populations. This is not always the case. What they tend to have is a high population growth rate.

**KEY TERM****Population pyramid:**

a diagram showing the age and gender structure of a country's population.

INDIVIDUAL ACTIVITY 1

Namibia is a high fertility country. It has been found that there is a strong correlation between education and fertility in the country. The more educated a woman is, the fewer children she will have.

- What is meant by a 'high fertility country'?
- Why would it be expected that more educated women would have fewer children?

34.3 The effects of changes in the size and structure of populations

Population structures

The gender distribution of a population indicates the number of males, compared to the number of females. In most countries, more boys are born than girls. However, in a number of countries females outnumber males. This is largely due to women, on an average, living longer than males and higher male infant mortality rates. In some countries, such as the United Arab Emirates (UAE) and China, there are more males in the population than females. This is because some families in China may favour males, while in the UAE more males than females from other countries come to work and live in the country.

The age distribution is the division of the population into different age groups. In broad terms, the categories are people under 16, those between 16–64 and those over 65.

Diagrams in the form of bar charts, referred to as **population pyramids**, show a more detailed breakdown of the different age groups. The traditional view of the population pyramid of a country with relatively low development is a pyramid shape such as that shown in Figure 34.1.

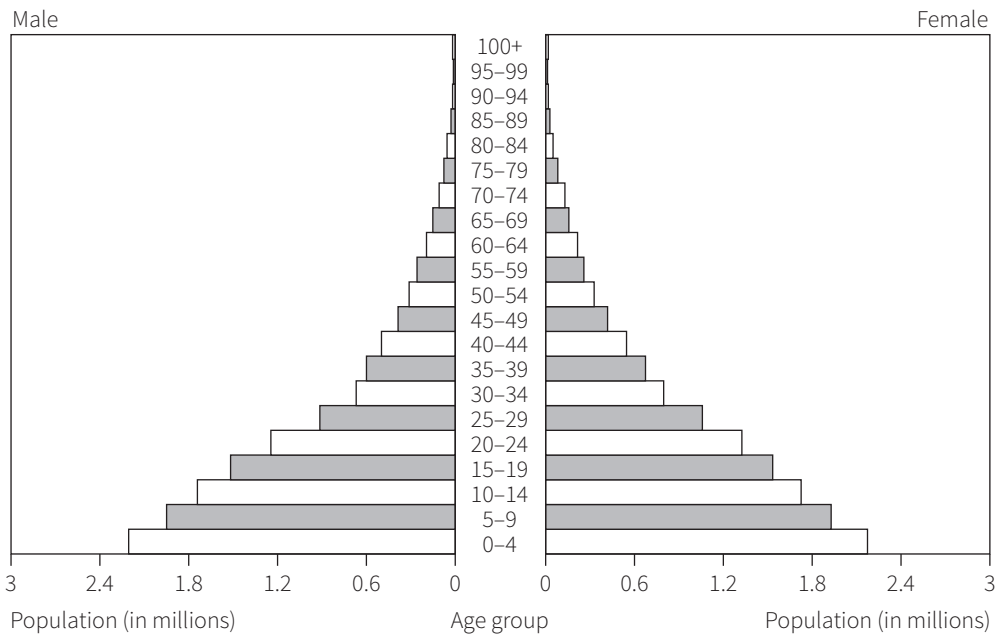


Fig. 34.1: Population pyramid, Mozambique, 2016

Source: CIA World Factbook

Such a pyramid reflects a high birth rate and a high death rate. It has a large proportion of young people in its population with only a small percentage of people reaching older age groups. Of course, not all countries with relatively low development fit this pattern of population structure.

The traditional view of the population pyramid of a country with high development is reflected in Figure 34.2. This is based on a lower birth rate and death rate with more people surviving till they enter old age.

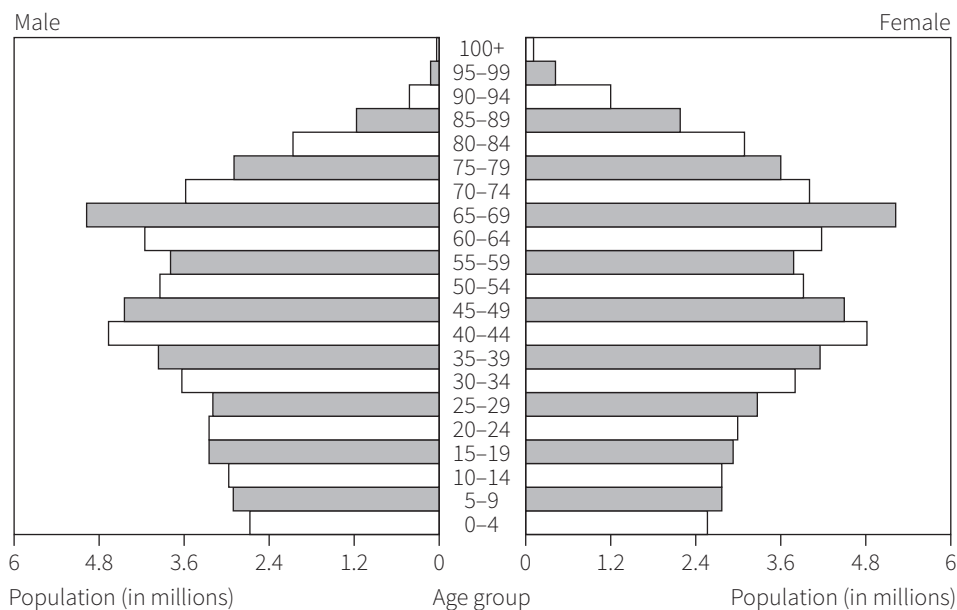


Fig. 34.2: Population pyramid, Japan, 2016

Source: CIA World Factbook



KEY TERMS

Dependency ratio: the proportion of the population that has to be supported by the labour force.

Optimum population: the size of population which maximises the country's output per head.

The age structure of a population influences its **dependency ratio**. This is the:

$$\frac{\text{Number in dependent age groups}}{\text{Number in the labour force}} \times 100$$

The dependant age groups are those below school leaving age and those above retirement age.

The optimum population

The term **optimum population** refers to the number of people which, when combined with the other resources of land, capital and existing technical knowledge, gives the maximum output of goods and services per head of the population.

The concept is not based just on the number of people in a country or per square kilometre. The balance between population and resources is of crucial importance. A country with a large geographical area and a small population may still be considered as overpopulated if there is a shortage of land, capital and technical knowledge, relative to the number of workers. In such a case, a government may seek to move towards its optimum population either by introducing measures to reduce its population size or by seeking to increase investment. A country is said to be under-populated if it does not have enough of human resources to make the best use of its resources. In such a case, its government may encourage immigration. Figure 34.3 illustrates the concept of optimum population.

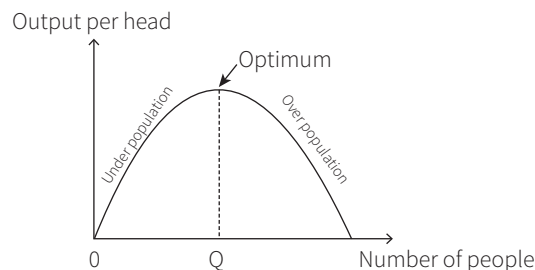


Fig. 34.3: The concept of optimum population

In practice, it is difficult to determine a country's optimum population and size of actual population relative to it. This is, in part, because the quantity and quality of resources are changing all the time.

INDIVIDUAL ACTIVITY 2

The Population Reference Bureau (PRB) forecast in 2016 that India's population will become the world's most populous nation in 2050. It projected that China's population will fall from 1.37 billion to 1.34 billion, whilst India's will increase from 1.27 billion to 1.71 billion. The projections were based on infant mortality rates, life expectancy, fertility rates, age structure, contraception and AIDS rates.

- Identify a factor influencing the population size, not mentioned in the passage.
- Explain why India's population may grow by less than the predicted figure.



Technological advances can increase the size of a country's optimum population

The effects of an increase in population

The consequences of a growth in a country's population depend on its cause, size of population relative to optimum population and the rate of population growth. Possible benefits of an increasing population are listed below:

- If the population is below the optimum size, the country will be able to make **better use of its resources**.
- The **size of markets will increase**. This should enable firms to take greater advantage of economies of scale.
- There may be an **increase in factor mobility** if the rise has resulted from an increase in the birth rate or immigration. Expanding industries can recruit new workers to the labour force. These people are likely to be familiar with new ideas and methods. If this is the case, firms' training costs will be reduced.
- Extra demand will be generated. This is likely to stimulate investment and this may lead to the introduction of new technology.
- A **rise in the labour force** now due to net immigration and in the future, caused by a rise in the birth rate. Net immigration will bring in more workers. More children being born will increase the dependency ratio in the short term but in the long term, will result in more workers.

Despite the possible advantages of an increasing population, there are a number of reasons for a government to be concerned about population growth. These include:

- **Concerns about famine**. If a country is currently overpopulated and agricultural productivity is low, there is a risk that the country may not be able to feed more dependants.

**TIP**

Remember that both a high rate of population growth and a low rate of population growth can cause problems for an economy, depending on their causes and the state of the economy in relation to its optimum population size.

- **Restrictions on improvements in living standards.** Resources which could have been used to improve living standards may have to be devoted to the provision of goods and services for the extra number of dependants in the population. There may be, for example, provision of more healthcare facilities but healthcare services per head may fall.
- **Overcrowding.** Increases in population may put pressure on housing and social capital and cause traffic congestion.
- **Environmental pressure.** More people in a country may result in damage to wildlife habitats, water shortages and the depletion of non-renewable resources.
- **Pressure on employment opportunities.** If there is an increase in the number of people of working age who lack appropriate skills, the government may have to devote more resources to education and training. It must be remembered, however, that immigration in itself does not cause unemployment. The number of jobs in existence is not fixed. Although immigration will increase the supply of labour, it will also result in an increase in aggregate demand.
- **Balance of payment pressures.** More dependants in the population may result in a rise in imports and some products may need to be diverted from the export to the home market.

Ways of reducing the birth rate

A country concerned that its population is growing too rapidly would not want to raise its death rate! It may however, seek to reduce immigration and try to reduce the country's birth rate. There are a number of ways it could do the latter. An effective way is thought to be improvement of the educational and employment opportunities for women. Educated women tend to be more aware of contraceptive methods, marry later and are likely to restrict their family size, in order to be able to combine raising children with work and also because they have higher hopes for their children's future. Better information and increased availability of family planning services will make it more likely that households will be able to limit their family sizes.

Improvement of healthcare and nutrition reduces infant mortality and, in turn, the birth rate. One reason which may explain a higher number of children in families is the apprehension and concern over their survival. Another reason for having a large family is the need for support in old age. Setting up pension and sickness insurance schemes will reduce the need for family support. A government can raise the cost of having children by raising the school leaving age. It can also reduce or stop any financial support it gives to families for each child they have and instead provide incentives for families who restrict the number of children. The most extreme measure is to make it illegal to have children above a specified number.

INDIVIDUAL ACTIVITY 3

In 2016 the Chinese government announced it was abolishing its one-child policy, which had been introduced in 1979. All married couples are now to be allowed to have two children. This change was made because of concerns about the country's ageing population and expectation that there would soon be a labour shortage. It is predicted that 35% of the country's population will be over the age of 65 by 2050. The country has nearly full employment and employers are experiencing difficulty recruiting workers in, for example, accountancy, engineering and IT. For many families in China, however, one child has become the norm. A number of Chinese workers are working long hours to progress their careers and to earn more to cope with rising prices, including education and childcare costs.

- Identify two possible advantages of the two-child policy referred to in the passage.
- Explain three reasons why, despite the two-child policy, some economists predict that the population of China is likely to fall by 2050.

The consequences of an ageing population

A number of countries, including Japan, the USA and many of those in the EU, are experiencing an ageing population. An ageing population is one in which, as its name suggests, the average age is rising. In Japan, for example, the average age of the population in 2016 was 43 and 26.3% of the population was aged over 60.

An ageing population can be caused by a fall in the birth rate, a fall in the death rate, net emigration or a combination of the three. There are a number of consequences of an ageing population including:

- **A rise in the dependency ratio.** If people are living longer and there are fewer workers because of net emigration, there will be a greater proportion of consumers to workers.
- **A change in the labour force.** Older workers may be geographically and occupationally less mobile. They may, however, be more experienced, reliable and patient.
- **Higher demand for healthcare.** The elderly place the greatest burden on a country's health service.
- **Greater need for welfare services,** such as caring for the elderly at home and in retirement homes.
- **Rise in cost of state and private pensions.**
- **Change in the pattern of demand.** For example, demand for housing for retired people will rise.

Ways of coping with an ageing population

Having a higher proportion of elderly workers will put pressure on governments to spend more. If they do so, it will involve an opportunity cost. The money used, for example, may have been spent on education instead. An ageing population may also raise the tax burden on workers. There are a number of ways a government may seek to reduce these effects. One is to raise the retirement age. This will reduce the cost of pensions and increase tax revenue without increasing tax rates. In a country in which life expectancy is rising, there is some justification for raising the retirement age. Working for a longer period can also increase a worker's lifetime income and, depending on the nature of their work, may keep them physically and mentally healthy for a longer period.



People in Japan are living longer

A government may also try to cope with the financial burden of an ageing population by encouraging or making it compulsory for workers to save for their retirement. It may try to raise the productivity of workers by means of education and training. This may involve an increase in government expenditure but, if successful, may generate more tax revenue. In addition, it may encourage the immigration of younger skilled workers by issuing more work permits. This will reduce the dependency ratio at least in the short term.

GROUP ACTIVITY 1

It has been estimated that, in India, the retirement age would have to be raised to 75 and to 85 in China, the UK and USA to maintain the ratio of working people to the retired citizens.

- a** Explain two reasons for an increase in life expectancy.
- b** Explain two benefits to workers due to a rise in the retirement age.

Internal migration

Workers tend to migrate from rural to urban areas in search of better jobs and higher incomes. Such migrants may supply growing industries and result in a better allocation of resources. Their movement may also raise living standards in rural areas if initially there had been underemployment and if they send back money to their relatives. There may, however, be some harmful effects also. If it is the most productive agricultural workers that leave, agricultural productivity may fall. There is also no guarantee that enough jobs will be available in urban areas and a number of external costs, including overcrowding, increased pressure on social capital and congestion may occur as a result of the rapid expansion of cities.

The effects of net emigration

There are a number of possible economic effects of net emigration. These are influenced by the size and the nature of the emigration. Some of these include:

- The size of the working population is likely to be reduced. Most emigrants tend to be of working age.
- The remaining labour force will have a greater burden of dependency.
- The average age of the labour force will increase. This may make it less mobile.
- The gender distribution of the population may be affected. In the case of some countries, more men emigrate than women.
- There may be a shortage of skilled workers. For example, doctors may emigrate in search of higher pay and better working conditions. The country they leave will experience a 'brain drain', while the country they go to will experience a 'brain gain'.
- There may be under-utilisation of resources. The country may become under-populated.
- Those who emigrate may send money home to help their relatives. This money is called workers' remittances.

Summary

You should know:

- A country's population can grow as a result of its birth rate exceeding its death rate and/or as a result of net immigration.
- The birth rate is influenced by the average age of the population, the number of women in the population and the number of children they have.
- The age distribution of a population can be illustrated in a population pyramid. The higher the birth rate and death rate, the more pyramid-shaped it will be.
- The death rate is influenced by social conditions, lifestyles, medical conditions and the existence or absence of military conflicts.
- People emigrate in search of better living standards and to escape persecution.
- A country is said to be over-populated, if there is an excess of labour relative to land, capital and technical knowledge.
- The effect of an increasing population will depend on its cause, size of the population in relation to the optimum population and the rate of population growth.
- An increase in the size of the population may increase the efficiency of firms, raise factor mobility, increase the demand and make better use of resources.
- A government may be concerned that an increasing population may result in famine, reduced living standards, overcrowding, depletion of resources, environmental problems and an unfavourable balance of payments position.
- Ways of controlling the population include raising the educational and employment opportunities for women, increasing availability of family planning services, increasing the cost of having children, providing support for the elderly and providing incentives for limiting the family size.
- An ageing population will raise the dependency ratio, change the labour force, burden the health and welfare services, raise the cost of pensions and alter the pattern of demand.
- Among the possible policies that can be used to cope with an ageing population are raising the retirement age, promoting workers to save for their pensions, raising productivity and encouraging immigration of skilled workers.
- Internal migration from rural to urban areas may make it easier for firms to recruit labour but may lead to farms losing their most productive workers. Some of those who move to urban areas may not find jobs and this leads to overcrowding in cities.
- Net emigration is likely to reduce the size of the labour force, increase the dependency ratio, alter sex distribution, reduce the size of the population and increase money sent home.

Multiple choice questions

- 1 In a country, more boys are born than girls and yet there are more women than men in the population. How can this be explained?
 - A A higher death rate for women than for men
 - B More women emigrating than men
 - C The infant mortality rate of females being higher than males
 - D Women living longer than men

- 2 Which of the following is most likely to cause a rise in the average age of a country's population?
 - A A fall in the death rate and birth rate
 - B A fall in the death rate and a rise in the birth rate
 - C A rise in the death rate and a fall in the birth rate
 - D A rise in the death rate and birth rate

- 3 What is meant by the gender distribution of a population?
 - A The proportion of females and males in the population
 - B The proportion of people over retirement age in the population
 - C Where females and males in the population live
 - D Where people over retirement age live

- 4 Why may a government want to reduce the growth of its population?
 - A Capital is not being fully utilised
 - B The population is below the optimum level
 - C There are worries about the risk of famine
 - D There is low population density

Four-part question

- a Identify **two** causes of a natural increase in population. **(2)**
- b Explain why a government may try to reduce the growth of the population of its country. **(4)**
- c Analyse how the rate of population growth in a low income country may differ from that of a high income country. **(6)**
- d Discuss whether or not an economy will benefit from net immigration. **(8)**



Chapter 35

Differences in economic development between countries

315

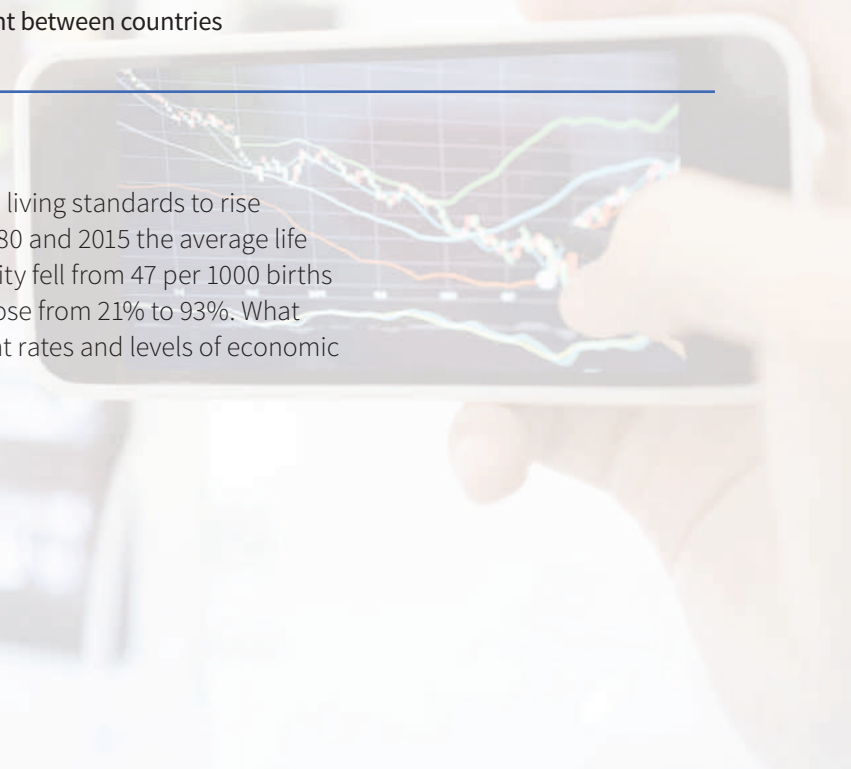
Learning objectives

By the end of this chapter you will be able to:

- describe the nature of economic development
- discuss the causes of differences in economic development between countries
- discuss the impacts of differences in economic development between countries

Introducing the topic

Over time most economies develop, allowing poverty to fall, living standards to rise and people to have more choices. For example, between 1980 and 2015 the average life expectancy in Thailand rose from 65 to 75, the infant mortality fell from 47 per 1000 births to 9 per 1000, and the percentage of households with a TV rose from 21% to 93%. What causes countries to develop? Why do countries have different rates and levels of economic development?



**KEY TERM**

Economic development: an improvement in economic welfare.

35.1 Economic development

Economic development is wider than economic growth. Besides improved living standards, it also involves reducing poverty, expanding the range of economic and social choices, and increasing freedom and self-esteem. As an economy develops, the economic welfare of its population increases. At first, the availability of basic life-sustaining products increases. Then consumption levels rise beyond those needed for survival, and people have more choice of what to consume, where to live and where to work.

The different stages of economic development

Most economies are developing, but their rate and level of development varies. Countries with high income per head also usually have relatively high economic development. They tend to have high living standards, a high proportion of workers employed in the tertiary sector, high levels of productivity and high levels of investment. Countries with lower income per head usually have lower economic development with lower living standards and a number of other characteristics, as explained below.

International organisations classify countries in a variety of ways. The United Nations, for instance, divides countries into four levels of development – very high human development, high human development, medium human development and low human development. The World Bank divides countries into high income, upper middle income, lower middle income and low income.

Measures of economic development

It is not easy to measure development, but a number of ways are used. A common one is real GDP per head. This does measure an important aspect of development, material living standards, but it does not measure all aspects of development.

A wider measure is the Human Development Index (HDI). As explained in Chapter 32, this measures the extent to which people in a country achieve a long and healthy life, knowledge and a good standard of living. A figure of 0–1 is calculated for each country. An index of:

- less than 0.550 indicates low development
- 0.550–0.699 medium development
- 0.700–0.799 high development
- above 0.800 very high development.

Some countries are ranked higher in terms of HDI than real GDP per head, for example, Costa Rica, Vietnam and Zaire. Others have a higher real GDP per head ranking than HDI ranking, such as Kuwait, Pakistan and Saudi Arabia.

INDIVIDUAL ACTIVITY 1

In 2016 10% of the world's population were living on less than \$1.90 a day. Half of the extreme poor were living in sub-Saharan Africa. Real GDP per head was, however, higher in some sub-Saharan African countries than some Asian countries. For instance, it was higher in South Africa, Botswana, Namibia and Gabon than in Bangladesh, India and Pakistan. Life expectancy, however, was on average 70 in Bangladesh, India and Pakistan, whereas it was only 63 on average in the four African countries.

- a** Identify an indicator of economic development, not referred to in the passage.
- b** Explain two possible reasons why, despite higher real GDP per head, life expectancy is lower in the African countries than the Asian countries.

35.2 Causes of differences in economic development between countries

There are a number of reasons why countries have different levels of economic development including:

- **Differences in incomes per head.** Economic development tends to be lower in countries with low real GDP per head. In such countries, some people may struggle to afford a good standard of living. However, this does not mean that all the people in such countries are poor. In fact, some can be very rich.
- **Differences in saving due to differences in income per head.** Poor people cannot afford to save and so the savings ratio (saving as a percentage of disposable income) of a country where the average income is low, is likely to be low. If savings are low, there will be a lack of finance for investment.
- **Differences in investment.** Countries with a low value of capital goods per worker will be likely to have low income per head.
- **Differences in population growth.** In countries with high population growth there is usually a high dependency ratio, with a high proportion of children being dependent on a small proportion of workers. This means that some of the resources which could have been used to improve the quality of life of the current population, have to be used to support the extra members of the population
- **Differences in education and healthcare.** A lack of access to, or poor quality of, education and healthcare will reduce the quality of people's lives and will result in low levels of productivity.
- **Differences in the size of the primary, secondary and tertiary sectors.** Economic growth and the quality of people's working conditions tend to be lower the greater the proportion of workers employed in the primary sector: Underemployment can be high in agriculture. For instance, ten persons may be doing the work of six. This, again, lowers productivity.



Good quality healthcare promotes economic development

- **Differences in the concentration on a narrow range of exports (most of which are primary products).** Countries that export a narrow range of products can be adversely affected by large decreases in demand or decreases in supply. The demand for manufactured goods and services tends to increase more than the demand for primary products as income increases.
- **Differences in productivity.** Countries with a low output per worker hour will tend to have low income per head and so may have, for instance, lower education and healthcare.

As suggested above, the causes of differences in economic development are inter-related. Indeed, countries can be subject to what is known as the under-development trap or the vicious circle of poverty. This is the problem, that a country with low incomes has a low saving rate. This means that most of their resources are used to produce consumer goods. The lack of capital goods keeps productivity and income low, as shown in Figure 35.1.

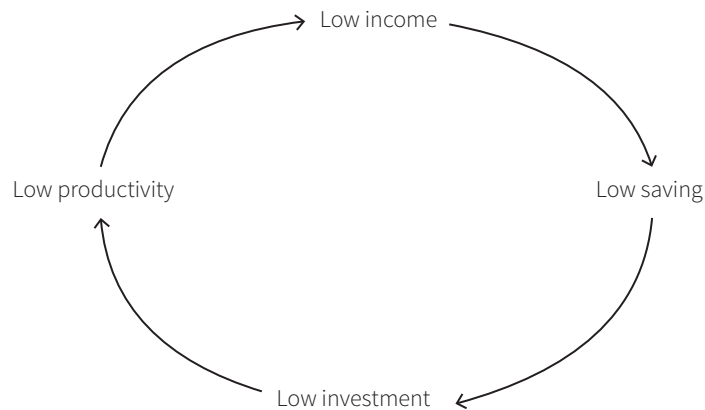


Fig. 35.1: The vicious circle of poverty

GROUP ACTIVITY 1

Discuss the extent to which the figures in the table suggest that Singapore had achieved a higher level of development than Egypt, in 2016.

A comparison of Egypt and Singapore in 2016

	Egypt	Singapore
Real GDP per head	\$1200	\$87 100
Population under the age of 15	33%	13%
Life expectancy	73	85
Workers employed in agriculture	29%	1%
Doctors per 1000 of the population	2.8	2.0
Adult literacy rate	74%	97%

Why governments seek to achieve economic development

Governments pursue economic development because they want higher real GDP, higher living standards for their citizens and expansion of the range of economic and social choices.

Economic growth has the potential to raise material living standards. If higher real GDP consists of both more consumer and capital goods the country's population should be

able to enjoy more goods and services, both now and in the future. Life expectancy may be increased and infant mortality rate may be reduced.

For economic development to be achieved, it is important that all people should have access to higher living standards. For this to occur, it is important that the distribution of income does not become too uneven and poverty is reduced.

A reduction in poverty brings benefits both to the poor and to the wider society. Lifting people out of poverty gives them access to (at least) basic necessities, improves their mental and physical health, and raises their expectations. People who enjoy better living standards are likely to be more productive, which in turn should lower the country's average costs and make the country more internationally competitive. A reduction in poverty may also reduce pollution. As people become better off, they are more likely to have access to sanitation and environmentally friendly forms of heating.

Expanding the range of economic and social choices, increasing freedom and self-esteem includes increasing access to education, healthcare and participation in the political process. This should improve the quality of people's lives and enhance future economic performance. Economic development can create a virtuous circle. As income, education and healthcare increase, saving and investment increase and workers become more productive. This raises international competitiveness, which can lead to even higher output and income.



TIP

It would be useful to consider the development of the economy of your country and the factors influencing its rate of development.

The conditions for economic development

Most economists agree that for economic development to occur, there needs to be an improvement in the quantity and quality of resources. More investment, improved education, training and healthcare can raise not only real GDP but also the quality of people's lives, their life expectancy and their choices.



Better education and healthcare improves the prospects of a country's children

35.3 The impacts of differences in economic development between countries

Countries develop at different rates at different times. These differences have implications for both them and for other countries.

The problems facing economies with relatively low economic development

Economies with relatively low economic development may face a number of difficulties in seeking to improve their economic performance and living standards. These include:

- **High growth of population.** A high birth rate can result in resources being used, for instance, to feed and educate children. These could instead have been used to increase the country's productive potential and living standards.
- **High levels of international debt.** Many poor countries have borrowed heavily in the past. In some cases, a large proportion of the country's income is taken up in repaying (and paying interest on) foreign loans. This means it cannot be used to spend on education, healthcare and investment. So the opportunity cost of repaying debt may be economic development.
- **Reliance on the export of primary products.** Over a period of time, the price of primary products tends to fall, relative to the price of manufactured goods and services. This means that some poor countries receive relatively less for their exports, whilst having to pay more for their imports. Over the last fifty years, a range of prices of primary products, including copper, coffee, cocoa and coal, have been falling. A number of primary markets are dominated by the consuming countries and these rich countries use their buying power to keep down the prices of primary products. There have also been significant fluctuations in the price of some primary products due to climate changes and other factors affecting natural resources.
- **Lack of investment in human capital and capital goods.** Lack of expenditure on education, training and capital goods holds back increases in productivity, introduction of new technology and international competitiveness.
- **Emigration of key workers.** Doctors, nurses, teachers, managers and other key workers may seek better-paid employment abroad. Since 1999, for instance, more medical staff have emigrated from Ghana than the country has been able to train. Most of these have emigrated to Canada, the UK and USA.
- **Trade restrictions on their products.** Tariffs, other restrictions and foreign government subsidies on their own products, make it difficult for developing countries to sell their products at home and abroad, on equal terms. The steepest tariffs tend to be imposed by rich economies on those products, which poorer economies concentrate on, including agricultural produce and labour-intensive manufactured goods. These tariffs also build up as the goods are processed into higher-value-added goods, so that poorer economies are discouraged from building up their industries.
- **Unbalanced economies.** Certain markets may be under-developed such as the financial sector. A lack of a developed financial sector is likely to discourage saving and investment.

INDIVIDUAL ACTIVITY 2

Guinea is a poor African country. In 2016 it had a GDP of \$7.2 billion and a population of 12 million. The country has large reserves of bauxite, gold and diamonds and very fertile land. It does, however, have poor transport, a lack of access to clean water, only 30% of the population are literate and the average household size is 8.9.

- a Calculate average income in Guinea.
- b Explain two changes which would increase economic development in Guinea.
- c Would a fall in the average household size in Guinea increase living standards in the country?

Measures to promote economic development

There is some disagreement about the best ways to promote economic development, for instance, whether it is better to rely on government intervention or market forces operating in the private sector, whether countries should rely on domestic or foreign sources of investment funds. One strategy, which involves government intervention, is what is called import substitution. This involves the protection of new domestic industries against foreign competition by the government.

This help is designed to allow the industries to grow and as they do so, imports can be replaced by domestic products. If successful, the strategy can increase domestic output, raise employment and improve the country's trade in goods and services balance. There are risks, however, with this strategy. In the short term, at least, it may raise prices and reduce choice and hence lower economic welfare. Other countries may also retaliate and the domestic industries may become reliant on protection without seeking to increase their efficiency and competitiveness.

An alternative strategy is to try to promote exports by exposing domestic firms to market forces. The idea is that, without government support, firms will be forced to become efficient. The success of this policy, however, depends on the firms being able to compete with foreign firms, some of which may have been established for some time (and as a result may have built up consumer loyalty) and may be taking advantage of economies of scale.

Another strategy is to improve the country's infrastructure, capital stock, education, training and healthcare systems. As the country may lack the tax revenue to do this, it may seek to attract multinational companies (MNCs), loans from abroad or foreign aid.

MNCs may promote development in their host countries. They can increase employment and wages, train and educate workers, bring in new technology and improve infrastructure, for example, by building roads and improving dock facilities. MNCs may pay workers in poor countries less than that in their home countries and may provide them with poorer working conditions. Nevertheless, as long as the wages are higher and the conditions are better than those generally operating in the host countries, the MNCs will be making a positive contribution to development. There are circumstances, however, when MNCs may harm development. MNCs may deplete non-renewable resources, cause pollution and put pressure on host governments to pursue policies which have a detrimental effect on development such as reducing health and safety regulations.



Chapter 37.2
Role of multinational
companies (MNCs)

Borrowing from abroad can work, if the funds are used in a way which raises productivity and generates enough income to repay the loans, and make a contribution to higher living standards. Interest charged on loans, however, can be high which makes some projects unviable. Also, there is the risk that projects may not be as successful as expected. If this is the case, the countries will accrue debt. Some of the money raised may be used for unprofitable prestigious projects, or on the military or may be lost due to corruption.

Foreign aid

Foreign aid, by its very nature, is on more generous terms than borrowing on commercial terms. It has the potential to increase development, but it can create economic and political dependency, postpone necessary reforms and bring in inappropriate technology. For example, a gift of complex capital equipment may not be that useful for a country with a high level of unemployed workers who lack education and training. Also, there is a risk that any financial foreign aid may be used for non-profitable projects and there may be corruption in its use.

Foreign aid may be given out of a desire to help people, win political support and gain commercial advantage. In the last case, the aid is likely to be in the form of tied aid. This means that conditions are placed on what the recipients can spend the aid on. Often the requirement is that it has to be spent on products produced by the donor countries. Foreign aid can be bilateral or multilateral. Bilateral aid is aid from one government to another, whereas multilateral aid is channelled through international organisations to developing countries. Such organisations include the United Nations, **the World Bank**, the International Monetary Fund (IMF), the EU and non-government organisations including charities such as Oxfam.

Foreign aid can come in a variety of forms including grants, which do not require repayment, loans charged on favourable terms and the supply of goods, services, technical assistance and guidance. **The IMF** and World Bank have been criticised for attaching conditions to some of the loans they make. They often require governments to follow what are known as structural adjustment programmes. These are designed to increase the quality and quantity of resources but they may, at least in the short term, reduce economic growth and development. For instance, a government may be required to cut its expenditure and this may reduce the provision of education and healthcare.

It is thought that foreign aid is more likely to promote development if it is more generous, multilateral, untied and is geared towards the needs of the recipients.



KEY TERMS

The World Bank:

an international organisation which provides long term loans on favourable terms, to promote development.

The IMF:

an international organisation that promotes international trade and global financial stability.

GROUP ACTIVITY 2

Nigeria faces a number of economic problems including poor infrastructure, emigration of key workers, a relatively high level of corruption and foreign debt. Power and water are not provided for most firms. Firms have to invest in generators. Many professionals, especially doctors, emigrate, taking their skills with them. The country was ranked 136th out of 178 countries in the Corruption Perception Index (with the ranked 1st being the least corrupt) in 2016. In that year, the country's GDP per head was \$6000. It had foreign debt of \$11 billion and a budget deficit of an equal amount.

- a Explain how one of the problems facing Nigeria could hinder its economic development.
- b Discuss how the problem you have identified could be overcome.

How the economic development in one country can promote economic development in another country

In an increasingly global market, the events in one economy have a greater impact on other economies. For instance, a buoyant UK economy would be likely to benefit Tanzania, while an improvement in the Tanzanian economy should bring some advantages to the UK. If the UK economy grows, the UK government will receive more tax revenue and this will enable it to increase its foreign aid, some of which may go to Tanzania. Incomes will be higher in the UK and its people and firms may buy more imports from Tanzania, including more UK people going on holiday to Tanzania. UK firms are likely to earn higher profits and this may encourage some of them to set up units abroad, especially if the UK economy is reaching full capacity.

The UK economy may also develop as a result of an improvement in education. A more educated UK population may be more concerned and interested in the dynamics of other economies. This may result in pressure on the UK government to give more foreign aid to Tanzania and more UK citizens visiting Tanzania as tourists.

The development of the Tanzanian economy can also benefit the UK. A more developed Tanzanian economy will need less aid, be able to buy more products from the UK and invest more in the UK.

Summary

You should know:

- Economic development is concerned with improvements in economic welfare. It involves higher real GDP per head, higher living standards, a wider range of choices, more freedom and more self-esteem.
- Economic development can be measured in terms of real GDP per head, although HDI gives a wider measure of development.
- Among the usual characteristics of countries with relatively low economic development are low real GDP per head, low savings ratio, low life expectancy, high rate of population growth, low levels of education, healthcare and investment, a relatively high number of workers employed in the primary sector and concentration on a narrow range of exports.
- Countries with relatively low economic development may experience a vicious circle of poverty that is difficult to break out of.
- Economic development can introduce a range of benefits to people and enhance a country's ability to develop in the future.
- Countries with low economic development may face a number of problems including population pressures, international debt, reliance on primary products, lack of investment in human capital and capital goods, emigration of key workers, trade restrictions on their products and unbalanced economies.
- Measures to promote development include import substitution, export promotion, attracting MNCs and applying for foreign aid.
- Foreign aid is more likely to promote economic development if it is multilateral, untied and takes into account the needs and economic conditions of the recipient.
- An improvement in the development of one economy can benefit another, through increased demand for its products, increased investment and, wherever appropriate, increased aid.

Multiple choice questions

- 1 The table provides information on four countries. Which country is likely to be the most developed?

	Population (m)	Real GDP (\$bn)	Life expectancy
A	100	600	58
B	200	2000	70
C	300	2100	58
D	400	3600	70

- 2 What is often found in a country with low real GDP per head?
- A** A high proportion of the population in higher education
 - B** A high savings ratio
 - C** A low infant mortality rate
 - D** A low investment rate
- 3 Why is a country's savings ratio likely to increase as it experiences economic development?
- A** Average income per head will rise
 - B** Interest rates tend to rise
 - C** Investment will decline
 - D** The range of saving institutions to choose from will decline
- 4 Which of the following would boost an economy's development?
- A** A rise in expenditure on the police to tackle a higher rate of crime
 - B** A rise in provision of healthcare per head of population
 - C** A fall in the average number of years of schooling received by children
 - D** A rise of 2% in nominal GDP and a rise of 8% in inflation

Four-part question

- a** Identify **two** indicators of economic development. **(2)**
- b** Explain a virtuous circle of economic development. **(4)**
- c** Analyse how economic growth could reduce economic development. **(6)**
- d** Discuss whether or not a government can successfully promote economic development. **(8)**

Exam-style questions

Multiple choice questions

- 1 What measure of living standards is included in HDI, but not in real GDP?
 - A education
 - B gender equality
 - C income
 - D leisure time

- 2 Why might real GDP per head rise and yet living standards fall?
 - A Income may be more evenly distributed
 - B Levels of pollution may have risen
 - C The size of the informal economy may have risen
 - D Working conditions may have improved

- 3 What is most likely to cause an immediate increase in the size of the working age population?
 - A a decrease in immigration
 - B a decrease in unemployment
 - C a rise in the retirement age
 - D a rise in the school leaving age

- 4 What effect is a rise in the birth rate most likely to have?
 - A an increase in the average age of the population
 - B an increase in the dependent population
 - C an increase in labour productivity
 - D an increase in the proportion of females in the population

- 5 What would reduce the size of the dependent population?
 - A a fall in the death rate
 - B a fall in the retirement age
 - C a fall in the average size of families
 - D net emigration

- 6 A country's population is expected to rise and its average age to fall in the future. Which of the following is likely to cause this?

Birth rate	Migration
A decreases	net emigration
B decreases	net immigration
C increases	net emigration
D increases	net immigration

- 7 Which policy measure would increase wealth inequality?
- A a cut in inheritance tax
 - B a reduction in the price of shares
 - C an increase in the tax on savings
 - D a rise in the top rates of income tax
- 8 For what reasons may a government of a country not welcome the presence of a multinational company in its country?
- A It will speed up the exploitation of non-renewable resources
 - B It will increase employment in the country
 - C It will improve the country's infrastructure
 - D It will bring in new ideas and technology
- 9 A country registers a rise in its living standards. What is likely to fall as a result?
- A adult literacy rate
 - B employment
 - C GDP per head
 - D infant mortality rate
- 10 Under what circumstance will a country register a fall in its population?
- A When the birth rate is lower than the death rate and there is net emigration
 - B When the birth rate is lower than the death rate and there is net immigration
 - C When the birth rate is greater than the death rate and there is net emigration
 - D When the birth rate is greater than the death rate and there is net immigration

Data response questions

Carefully study the source material provided and then answer Questions 1 and 2.

Source material: The dramatic reduction in poverty in China

Between 1980 and 2016, China moved 750 million people out of extreme poverty. The country accounted for three-quarters of the world's poverty reduction in this period. Real GDP per head was twenty-eight times greater in 2016 than in 1980. In comparison, the UK's real GDP was four times greater over the same period.

Although incomes have risen significantly and extreme poverty has fallen, income inequality has become an issue. For much of the period, income inequality increased. The Gini coefficient rose from 0.24 in 1980 to 0.49 in 2008. It did fall to 0.46 in 2016, but China still had one of the world's highest levels of income inequality.

The country's Human Development Index (HDI) value rose to 0.727 in 2014. The mean and expected years of education and life expectancy increased. The higher incomes gave people the opportunity to consume more goods and services. Car ownership, for instance, rose to 83 per 1000 in 2016 and is expected to rise much further in the future.

The rapid growth in the economy has been driven by the expansion of a number of industries including the aircraft industry, the machine production industry, the healthcare

industry and the education industry. At the same time, there has been a decline in the relative importance of agriculture as a source of employment despite the rise in agricultural output. The table shows the percentage of the labour force employed in agriculture and net migration in a number of countries.

Country	Percentage of labour force employed in agriculture	Net migration per 1000 population
Bangladesh	47	-3.1
China	30	-0.4
Japan	3	0
Laos	73	-1.1
Malaysia	32	-0.3
Singapore	1	13.6
Sri Lanka	28	-1.3

The percentage of the labour force employed in agriculture and net migration in selected countries 2016

The Chinese government has used a number of policy measures to accelerate the reduction in poverty. These include giving a subsidy to people in urban areas to bring their income levels up to a minimum standard, the introduction of a rural pension, better health and education services and improved access to safe drinking water in rural areas. These schemes have been funded by the country's progressive taxation system.

- 1** Referring to the source material in your responses, answer all parts of Question 1.
 - a** What level of development does China's HDI figure suggest it had achieved in 2014? **(2)**
 - b** Identify **two** industries operating in the secondary sector in China. **(2)**
 - c** Explain what type of poverty has been reduced in China. **(2)**
 - d** Explain **two** reasons why the percentage of workers employed in agriculture may fall while agricultural output increases. **(4)**
 - e** Analyse the relationship between the percentage of people employed in agriculture and net migration. **(4)**
 - f** Analyse how improved access to safe drinking water can increase economic development. **(4)**
 - g** Discuss whether or not taxation will reduce income inequality. **(6)**
 - h** Discuss whether or not an increase in car ownership will improve living standards in China. **(6)**

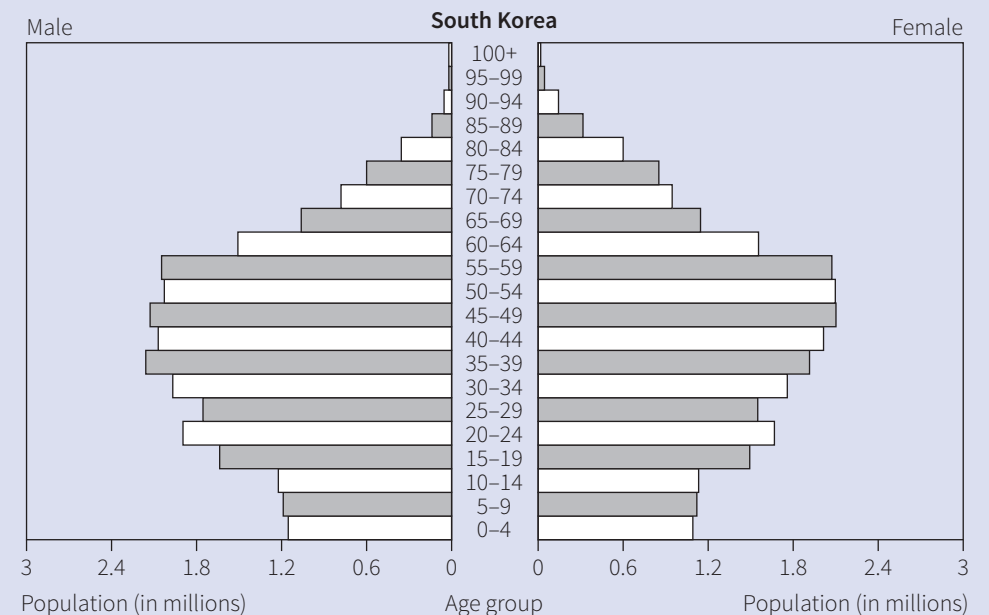
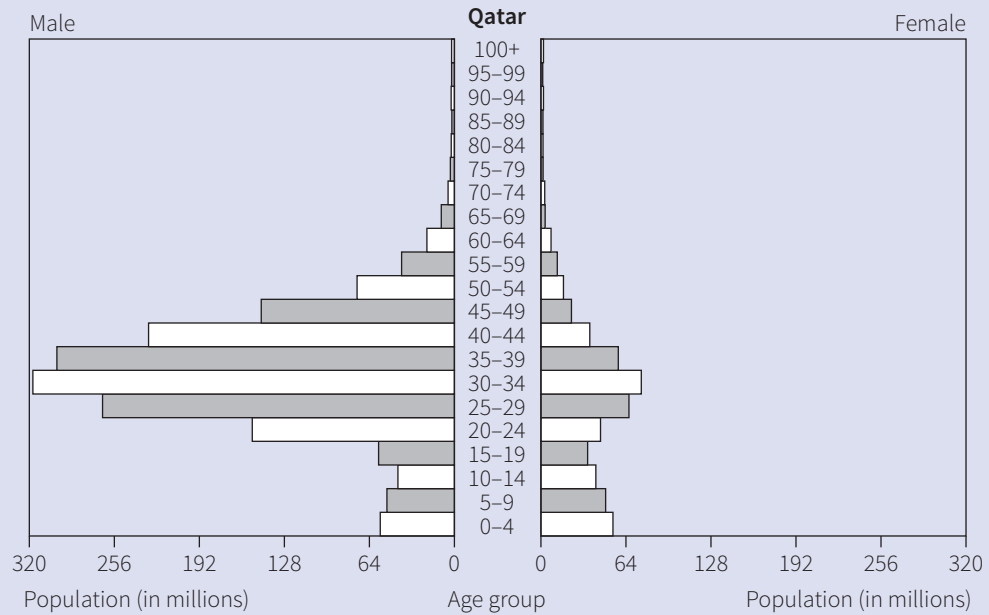
Source material: We are living longer

A study published in 2017 predicted that life expectancy will be highest for women in South Korea. It forecast that women born in South Korea in 2030 would, on average, live for 90.8 years. This compares with an average of 85.2 years for women born in 2016. The two countries it predicted would have the next longest life expectancy were France (88.6 years) and Japan (88.4 years). For men, it was predicted that South Korea would also have the longest life expectancy (84.1 years), followed by Australia and Switzerland (both 84 years).

There are thought to be a number of linked reasons why people in South Korea have, and will continue to have, a long life expectancy. These include good education, good nutrition

and widespread access to a good healthcare system. The country has a low level of obesity, a diet rich in vegetables and a relatively small proportion of the population who smoke. The country's economic growth rate averaged 1.7% between 1980 and 2016. The government is seeking to raise the rate in a range of ways including deregulation, increases in the money supply and making it easier for households to take out a mortgage to buy a house.

In 2016, South Korea had a birth rate of 8.4, a death rate of 5.8 and a net migration rate of 2.6. Its obesity rate was very low at 6.3%. This contrasts with Qatar which in 2016 had a very high, and increasing, obesity rate of 41%. The figure shows the population pyramids of Qatar and South Korea.



Population pyramids of Qatar and South Korea, 2016

Source: CIA World Factbook

One of the countries with a small predicted increase in life expectancy is the USA. The country has a high obesity rate (35% in 2016), a relatively high degree of income inequality

and differences in access to good healthcare. In contrast, Switzerland has a lower obesity rate and a more even distribution of income. A larger proportion of people of working age in Switzerland are in the labour force than in the USA. Switzerland, like the USA, is a high-income country. The Swiss, however, seem to have a better work–life balance. Real GDP per head is higher in Switzerland than the USA but the average Swiss worker works 155 hours less each year. The Swiss are among the happiest people in the world according to the Organisation for Economic Co-operation and Development (OECD).

- 2** Referring to the source material in your responses, answer all parts of Question 2.
- a** Identify **one** supply-side policy measure. **(1)**
 - b** Calculate the natural increase in South Korea’s population in 2016. **(2)**
 - c** Explain why healthcare costs may rise in Qatar. **(2)**
 - d** Explain what evidence there is that labour productivity is high in Switzerland. **(4)**
 - e** Analyse how large inequalities in income can result in a relatively low life expectancy. **(4)**
 - f** Analyse the differences in South Korea’s and Qatar’s population pyramids. **(5)**
 - g** Discuss whether or not a decrease in the average hours worked is likely to have an impact on a country’s HDI. **(6)**
 - h** Discuss whether or not an ageing population is a problem for an economy. **(6)**

Four-part questions

- 1** France’s HDI has been increasing and its value is above the world’s average. Its unemployment rate fell slightly from 10.4% in 2015 to 9.9% in 2016. There is a debate in the country about whether the government should cut or raise its unemployment benefit and other state benefits, including pensions. There is also a discussion about why, despite legislation, there is gender and racial discrimination in the country’s labour market.
- a** Identify **two** components of the HDI. **(2)**
 - b** Explain how discrimination can result in income inequality. **(4)**
 - c** Analyse how a fall in unemployment in one country can reduce poverty in another country. **(6)**
 - d** Discuss whether or not an increase in state benefits will reduce poverty. **(8)**
- 2** Between 1960 and 2016 Sri Lanka’s death rate nearly halved, falling from 12.3 to 6.2. Its birth rate also declined from 37.0 in 1960 to 15.5 in 2016. There were some years, however, when it rose. For example, it increased from 15.9 to 17.0 between 2010 and 2011. There were also changes in the relative importance of the stages of production in the country over this period. The country has a lack of university places but a high secondary school enrolment.
- a** Identify **two** causes of a decrease in a country’s death rate. **(2)**
 - b** Explain how the relative importance of different stages of production may change as an economy develops. **(4)**
 - c** Analyse how an increase in the provision of university education could promote development. **(6)**
 - d** Discuss whether or not an economy will benefit from a rise in the country’s birth rate. **(8)**

SECTION 6

International trade and globalisation



Chapter 36

International specialisation

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Learning objectives

By the end of this chapter you will be able to:

- analyse the basis for specialisation at a national level
- discuss the advantages and disadvantages of specialisation at a national level

Introducing the topic

Households in the UK drink more than 60 billion cups of tea a year. The country, however, produces very little tea. It imports most of the tea from Kenya and Uganda. Kenya imports the oil and most of the machinery it uses. Why do countries not just produce all the products they consume? Why do they buy goods and services from other countries and why do they sell some of what they produce to other countries?

36.1 Specialisation of countries at a national level

Countries usually concentrate on producing those products they are best at making and which are in high global demand. What countries are best at producing is influenced by the quantity and quality of their resources. For example, a country with an abundance of fertile land, good irrigation, moist climate and a large number of workers may decide to concentrate on producing rice. Its average cost of producing the rice is likely to be low. A country with a good climate, good beaches and a good supply of labour may decide to concentrate on tourism. In contrast, Hong Kong, which has a very limited supply of land and a highly skilled labour force, concentrates on financial services.



Hong Kong

INDIVIDUAL ACTIVITY 1

Textiles is a major industry in Bangladesh and, in 2016, it accounted for 70% of its exports. Nearly 15% of its exports go to the USA. Clothing is also an important industry in Turkey, but accounts for only 12% of its exports.

- a On the basis of information provided, decide which country is more specialised.
- b Identify the other piece of information that could help you decide the answer to (a).

36.2 Advantages and disadvantages of specialisation at a national level

The advantages and disadvantages for consumers

If countries specialise in what they are best at producing, the output should be higher. The higher output should enable consumers to enjoy more goods and services and hence have higher living standards. Specialisation can enable the firms in the country concentrating on producing the product to develop skills and techniques in its production. This would raise the quality of the product. Specialisation may also result in lower costs of production and the benefit of this may be passed on to consumers in the form of lower price.

There is a risk, however, that one country or a small number of countries may gain control of most of the global market for a product and may use its or their power to restrict supply and push up price. The Organisation of Petroleum Exporting Countries (OPEC), a group of the major oil producing countries, has pushed up the price of oil in the past.

If consumers are buying products from foreign specialists, those firms may not follow the same health and safety standards as in the home country. Any problems that may occur in the countries that are producing the product, including natural disasters, may mean that the products are unavailable, at least for some time.

The advantages and disadvantages for firms

If firms specialise, they can produce the product on a large scale and this may enable them to take advantage of economies of scale, such as buying and technical economies. Firms can also buy their raw materials from specialist firms, which are producing high quality raw materials at low costs.

Specialisation means that countries have to trade (see advantages and disadvantages for the economy below). Engaging in international trade can help firms in the exchange of new management ideas, information about new products and new technology.

There are, however, a number of potential disadvantages for firms. One is that if firms become more dependent on other countries for the markets of the products they produce and for the source of their raw materials, they can be adversely affected by events in those countries. For example, foreign governments could put a tax on imports and may restrict the export of raw materials.

Firms could experience a fall in demand. Tastes may change, firms in other countries may become more efficient at producing the product or a substitute product may be developed.

The advantages and disadvantages for the economy

Generally, it is thought that international specialisation and trade increases efficiency and economic welfare. By allowing an economy to concentrate on what it is most efficient at producing, its real GDP should be relatively high. Its output would also be higher than if it used its resources to produce products, the resources are not best suited to making. For example, the USA is a world leader in the development of aircraft technology, and has some of the most advanced capital equipment and skilled labour. This makes it one of the main manufacturers of aircraft. The USA is a major consumer of coffee, but it only produces a small amount of coffee, in Hawaii and California. This is because it does not have the right climate and its labour is more skilled in producing other products.

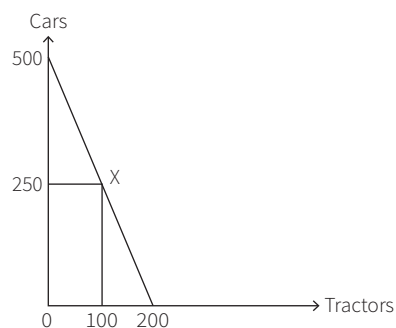


Fig. 36.1: Production possibility curve for tractors and cars before international trade

Combined with international trade, specialisation can allow an economy to consume outside its production possibility curve. For example, an economy may be able to produce either 500 cars or 200 tractors. It may initially not specialise and may produce 100 tractors and 250 cars as shown in Figure 36.1.

The opportunity cost of one tractor is two and a half cars. The economy's resources may be more suited to producing tractors. It may be possible for the economy to

export tractors and import cars at a ratio of one tractor for four cars. In this case, the economy could specialise in tractors. It could produce 200 tractors and export 70 tractors. This would enable it to import 280 cars. Figure 36.2 adds a trading possibility curve, which joins 200 tractors and 800 cars. It shows that the economy's consumption of tractors rises by 30 to 130 and its consumption of cars also by 30 to 280.

Being able to consume more goods and services can raise living standards and may reduce absolute poverty.

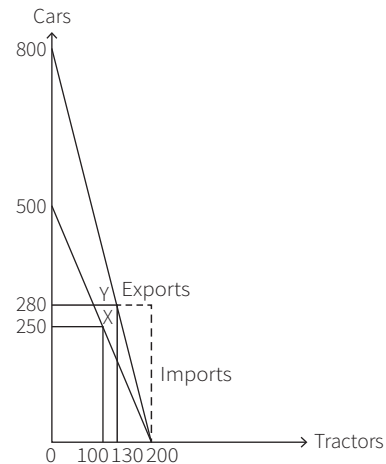


Fig. 36.2: Trading possibility curve for tractors and cars

If an economy specialises on the basis of the quality and quantity of its resources, this should mean its resources will not be lying idle. For example, an economy with a large supply of unskilled labour may specialise in industries that are labour-intensive and do not require high skills. This can mean that there is little unemployment of labour.

As specialisation is based on efficiency, it may also keep the inflation rate relatively low. The economy will be producing products at a relatively low cost and may have the opportunity to import from countries that are efficient at what they are producing.

Specialisation may also enable an economy to build up a reputation in producing a particular product. This could attract both more sales and ancillary industries to set up in the country. It would also boost its sales of exports. In practice, however, it can be difficult to determine what an economy is best at producing and what will be in demand in the future. Indeed, concentrating on a few products is fine if demand for these products remains high and costs of production do not rise. If, however, demand suddenly falls or costs rise, the country can run into difficulties. Structural unemployment may increase if labour is occupationally or geographically immobile. Producing a wider range of products would spread risks.

High transport costs may also offset any cost advantage a country has in producing a product. If the goods are heavy and have to be transported long distances, it may be more efficient for the importing economies to produce them themselves.

GROUP ACTIVITY 1

Match the following countries with, in each case, a product they specialise in:

Country	Product
Brazil	cocoa
Chile	coffee
China	copper
Ivory Coast	formula 1 cars
New Zealand	milk
Thailand	oil
UK	rare earths
Venezuela	rubber

Absolute advantage

It used to be thought that most international trade was based on what is called absolute advantage. This is not actually the case, although it does account for some of international trade.

A country has an absolute advantage in producing a product, if it can produce it using fewer resources than other countries. Table 36.1 shows that Kenya has an absolute advantage in producing horticultural products, while Hungary has an absolute advantage in producing machinery.

	Horticultural products (number of plants)	Machines
Kenya	200	1
Hungary	100	5

Table 36.1: Output per worker per day

If Kenya specialises in horticultural products and Hungary specialises in machinery, total output will increase, for example 400 horticultural products could be made instead of 300 and the output of machines could rise from 6 to 10. Kenya could then export horticultural products and import machinery, while Hungary could export machinery and import horticultural products. By specialising and trading, the countries improve the international allocation of resources.

Comparative advantage

It is on comparative advantage, rather than absolute advantage, that most of international trade is based. A country is said to have a comparative advantage in producing a product, if it can produce it at a lower opportunity cost.

Comparative advantage explains how two countries can mutually benefit from international trade, even if one is better at producing all products than the other country. Table 36.2 shows that Germany is better at producing both cars and chemicals than Italy.

	Cars	Chemicals (units)
Germany	4	400
Italy	1	200

Table 36.2: Output per worker per day

Germany can make four times as many cars as Italy, but only twice as many chemicals. The opportunity cost of producing one car is lower in Germany than in Italy. It is 100 chemicals in Germany, whereas in Italy it is 200 chemicals. So Germany's comparative advantage lies in cars. Whilst Italy has an absolute disadvantage in producing both products, it has a comparative advantage in making chemicals. Its opportunity cost of making one unit of chemicals is 1/200th of a car, whereas it is 1/100th of a car in Germany. So Germany should specialise in making cars and Italy should concentrate on producing chemicals. Germany should export cars and import chemicals and Italy should export chemicals and import cars.

INDIVIDUAL ACTIVITY 2

Using the information in the table, answer the following questions.

	Clothing (units)	Fish
Bangladesh	50	200
Vietnam	100	600

- Explain which country has the absolute advantage in producing clothing.
- Explain which country has the comparative advantage in producing clothing.
- What will Vietnam export to Bangladesh?

**TIP**

In explaining comparative advantage, it is useful to give a numerical example. Keep this simple and make sure that it does show comparative (rather than absolute) advantage.

Changes in comparative advantage

Comparative advantage changes over time. In the past, the USA and the UK had a comparative advantage in producing steel. Now the comparative advantage lies with Brazil, China and Malaysia.

Comparative advantages changes, as relative costs change. A country may gain a comparative advantage in a product because it discovers new sources of minerals, makes its land more fertile, adopts new technology or increases the productivity of its workers by improving education and training. India, with a labour force having good ICT skills and good command over English, has the comparative advantage in operating call centres. China is currently improving its performance in producing computers and may soon gain a comparative advantage.

INDIVIDUAL ACTIVITY 3

Mongolia specialises in mining. It mines coal, copper, gold and other minerals. It is the most China-dependent exporter in the world. It sells nearly 90% of its exports to China. The country grew rapidly between 2008 and 2014. Its economic growth then fell as a result of a drop in commodity prices and it had to borrow from the International Monetary Fund (IMF).

- Explain why Mongolia specialises in mining.
- How would the Mongolian economy be affected by a recession in China?

The link between countries specialising and international trade

Producing a relatively narrow range of products will mean that countries will have to export some of their output. This is necessary for them to gain revenue for spending on imports of products that their citizens want to buy, but their countries are not producing.

The difference between international and internal trade

Trade involves the exchange of goods and services. International trade, which can also be referred to as external trade, is the exchange of goods and services between countries. In contrast, internal trade is trade within a country. Any trade involves risk and effort. A firm based in one part of the country, selling goods to individuals or firms in another part of the country, has to arrange and pay for transport and may have to wait for the payment of goods. International trade enables firms to reach a wider market, take greater advantage of economies of scale, source their products from a wider area and earn higher profits. It may, however, provide additional challenges to those posed by internal trade.

Buying and selling products across national boundaries may involve the products travelling greater distances. Firms may have to deal with buyers and sellers speaking different languages. If, for example, a Japanese firm is selling cars to South Africa it will have to produce advertisements, manuals and insurance plans in English and Afrikaans. There may be differences in culture in different countries and these will have to be taken into account in the type of products firms seek to sell and the method of marketing adopted. For example, it is not appropriate to try to sell alcohol to Saudi Arabia where the drinking of alcohol is prohibited. Trade restrictions may also make it difficult for firms to sell their product abroad. If foreign governments place **tariffs** on imports, it will raise the price of the products sold by the firms and prevent consumers from buying them. Selling and buying in foreign markets exposes firms to more competition. Some may respond by becoming more efficient, but others may struggle to survive. Firms engaged in international trade also have to deal with foreign currencies. For example, an Indian firm which sells textiles to a US store may be paid in dollars. It is likely to sell these for rupees. If the value of the dollar falls by the time the Indian firm agrees to a price in dollars and receives the payment, it will earn fewer rupees.



KEY TERM

Tariff: a tax on imports.

Summary

You should know:

- Specialisation of countries can increase output, reduce costs and spread new ideas and technology.
- The risks of specialisation of countries include: rival countries' firms may start producing the product, substitute products might be developed, supply problems may be encountered, consumers may become reliant on firms in other countries and trade restrictions may be imposed on their products.
- International trade is the exchange of products across national boundaries.
- International trade may involve relatively long distances, may be with countries with different cultures and languages, may be in a different currency, may face trade restrictions and may involve more competition.

Multiple choice questions

- 1 Which of the following conditions promote international trade?
 - A Difficulties in communication between countries
 - B Differences in the quantity and quality of resources in countries
 - C High trade restrictions
 - D High transport costs

- 2 The table shows the output per worker for two products, in two countries. What can be concluded from this information?

	Tractors	Wheat (tonnes)
Country Y	50	500
Country Z	10	250

- A Country Z has the comparative advantage in producing tractors
 B Country Z has the absolute advantage in producing both products
 C Country Y will export tractors and import wheat
 D It will not be beneficial for the two countries to trade
- 3 A firm which previously had traded internally, decides to trade externally. What additional risk will it face?
- A Its costs of production may rise
 B The government may impose a sales tax on its products
 C There may be a change in demand for its products
 D Trade restrictions may be placed on its products

- 4 The table shows the main source of export earnings with respective products, for four countries. What can be concluded from this information?

Country	Product	Percentage of export earnings
W	cars	58
X	copper	63
Y	financial services	70
Z	oil	80

- A Countries X and Z specialise in the production of primary products
 B Country W and Y specialise in the production of tertiary products
 C Country Z earns most of its export revenue from the sale of secondary product
 D Country Z earns maximum export revenue

Four-part question

- a Define *international trade*. (2)
 b Explain **two** differences between international trade and internal trade. (4)
 c Analyse what determines which products countries specialise in. (6)
 d Discuss whether a country should specialise in tourism. (8)



Chapter 37

Free trade and protection

Learning objectives

By the end of this chapter you will be able to:

- define globalisation
- discuss the role of multinational companies
- discuss the benefits of free trade
- describe methods of protection
- discuss the reasons for and consequences of protection

Introducing the topic

We buy products from all over the world. We have more choice of goods and services than ever before. More products are being bought and sold between countries, and more firms are producing in other countries. Despite the advantages of international trade, governments put restrictions on what products firms and households can buy from other countries. Some governments also restrict which firms can set up in their countries. Why do they impose these restrictions and why might they want to stop foreign multinational companies setting up in their country?

37.1 Globalisation

Globalisation is the process by which the world is becoming one market. Barriers are being broken down in terms of where people buy products from and where firms produce. There are an increasing number of global brands and multinational companies. Among the reasons for the greater interconnection between countries are:

- **Reduced transport costs.** Containerisation and larger and more efficient ships, airplanes and trains have lowered the cost of moving goods.
- **Advances in communications.** Consumers can now purchase products online from anywhere in the world and are more in touch with trends in other countries. Executives of multinational companies (MNCs) can also keep in close contact with managers of foreign branches.
- **Removal of some trade restrictions.** The general trend has been for tariffs and quotas to be reduced.



KEY TERM

Globalisation:

the process by which the world is becoming increasingly interconnected through trade and other links.



Modern container ships move vast quantities of goods around the world

The consequences of globalisation

Globalisation has both advantages and disadvantages. It is increasing competition, with consumers being able to buy a greater range of products at relatively low prices. It is also encouraging firms to locate some of their production in the most efficient locations.

It is, however, making economies more susceptible to external shocks. The greater the integration of economies means that a recession in one economy can have a significant impact on other economies. Government policy is also, to some extent, constrained by globalisation. For example, a government may be reluctant to increase the rate of corporation tax for fear that some MNCs will relocate to other countries. The ability of MNCs to shift production from branches in one country to other countries can cause structural unemployment. Some workers may also lose their jobs because of the increased competition that is arising from the breaking down of barriers between national markets. This is increasing the importance of occupational mobility.

GROUP ACTIVITY 1

Decide which changes would increase globalisation and which would reduce globalisation:

- a** A decision by the US government to impose trade restrictions on Chinese products.
- b** More governments recognising qualifications awarded in other countries.
- c** The development of social media.
- d** An increase in foreign travel.
- e** A reduction in the number of different currencies.

37.2 Role of multinational companies (MNCs)

A multinational company (MNC) is a business organisation that produces in more than one country. For example, the US based McDonalds has outlets in many countries, the UK based Lloyds Bank has branches in a range of countries, the Japanese based Toyota has factories in a number of countries and the Indian based Tata Group produces in a high number of countries.

Most MNCs are public limited companies, but an increasing number of state-owned enterprises (SOEs) are now producing internationally. For example, the Chinese state-owned oil giant, the China National Offshore Oil Company (CNOOC) operates in a number of countries. There are a number of benefits MNCs hope to gain by spreading their operations to more than one country. Producing in countries where products are sold rather than exporting to those countries will reduce the MNCs' transport costs and enable them to keep in close contact with the market. It may also enable them to get around any restrictions on imports, to gain access to cheaper labour and raw materials. They may also receive grants from the governments of the countries in which they set up their franchises.

MNCs can have a number of effects on the countries in which they are located, that is their host countries, some beneficial and others harmful. They can increase employment, output and tax revenue, bring in new technology and management ideas and help in development of infrastructure. They may, however, be more prone to pollute and willing to close down plants in foreign countries. Their size and their ability to shift production may mean that they can put pressure on the governments of the host countries in which they have plants, to give them tax concessions and not to penalise them for poor safety standards. In addition, although MNCs may increase employment, there is a risk that they may drive domestic firms out of business. The profits they earn may be paid to shareholders in their home countries rather than being reinvested in the host country.

Recent years have seen the growing importance of MNCs. These companies are increasingly seeing countries, throughout the world, as their markets and possible locations for production. Besides setting up the operating plants abroad which produce the complete finished good, they are also spreading different parts of the production process to different countries. For example, an MNC producing cars may base its design in a country with a strong tradition in design, its assembly in a country with a skilled but low-cost labour force and its administration and marketing in other countries. In fact, the production process of some products is spread over more than fourteen countries.

GROUP ACTIVITY 2

Decide which of the following would attract an MNC to set up in a country.

- a** Low corporate taxes
- b** Government grants
- c** Strict employment laws
- d** A good educational system
- e** Cheap land

37.3 The benefits of free trade

Free international trade occurs when there are no restrictions on the products bought by firms and consumers from abroad or products sold by firms to other countries and no imposition of special taxes.

Such unrestricted trade should allow countries to concentrate on what they are best at producing and hence allow for an efficient allocation of resources. If countries are able to exploit their comparative advantage fully, then world output, employment and living standards should be higher than if resources were less efficiently allocated. Selling freely to a global market should enable firms to take greater advantage of economies of scale, raise competitive forces and give them access to more sources of raw materials and components. These effects should lower prices for consumers, raise the quality of products they buy and also gain from a greater choice of products.

37.4 Methods of protection

Despite the potential advantages of free trade, every country in the world engages in protection, also called protectionism, albeit to differing extents. Protection is the shielding of the country's industries from the competition posed by other countries' industries and hence involves restriction of free trade.

There are a number of methods that a government of a country or the governments of a group of countries may employ, to protect their industries. These include:

- **A tariff.** A tax can be imposed on imported products. Such a tax is also referred to as a customs duty or import duty. Sometimes tariffs are used to raise government revenue but most commonly, they are used to discourage the purchase of imports. Placing a tariff on an imported product raises its price. The tariff is likely to be set at a level which will mean that the imported products will sell at a higher price than domestically produced goods.
- **A quota.** A limit may be placed on the quantity of a good that can be imported. For instance, a country may limit the number of cars that can be imported into the country at 40 000.
- **Embargo.** The import of a product or trade with another country may be banned. A government may want to ban the import of demerit goods. A ban on a trade with a particular country is usually introduced for political reasons.
- **Exchange control.** A government may try to stop households and firms from buying imports, by restricting the availability of foreign currency. Those wanting to buy foreign products, travel or invest abroad will have to apply to buy foreign currency.
- **Quality standards.** A country may require imports to reach artificially high standards. This measure will either dissuade other countries from selling to the country or push up their costs and prices if they do try to sell to the country.

**KEY TERMS**

Quota: a limit placed on imports or exports.

Embargo: a ban on imports or exports.

Exchange control: a limit on the amount of foreign currency that can be obtained.

**KEY TERM****Voluntary export restraints (VERs):**

agreements with other governments to restrict their exports to the country.

- **Expensive paperwork.** Requiring foreign firms who wish to sell to the country to fill out a considerable amount of time-consuming paperwork may persuade them to switch over to other markets.
- **Voluntary export restraints (VERs).** A government may persuade the government of the exporting country to agree to restrict the number of units of a product sold by it. It may do this by agreeing to do the same or by threatening to impose tariffs or quotas, if they do not agree.
- **Subsidies.** A government may protect its domestic industries from cheaper imports by giving them subsidies. Such help may enable domestic firms to sell at lower prices, which may undercut the price of imports.

Besides placing restrictions on imports, a government may also impose restrictions on exports if it is concerned that selling the product abroad will lead to shortages at home. Between 2012 and 2016, for instance, the government of Tanzania imposed a ban on the export of maize. The export ban was introduced to stabilise domestic prices, and to ensure that there was enough maize to be sold on the home market.

**TIP**

Remember that whilst increasing a tariff increases protection, increasing a quota reduces protection.



International travellers may have to pay customs duty on certain goods

INDIVIDUAL ACTIVITY 1

The USA has been accused of hypocrisy by talking in favour of free trade whilst itself imposing trade restrictions and putting up barriers to foreign takeovers of US firms.

- What is meant by free trade?
- Identify two trade restrictions.

37.5 The reasons for and consequences of protection

A number of reasons are presented for protecting domestic industries. Some favour protection of particular domestic industries while some advocate protection of all domestic industries. The strength of the arguments varies.

- Protection of infant industries.** These industries are also called sunrise industries. The argument is that such new industries, which have the potential to grow, may be eliminated by foreign competition before they have really started. Giving them some protection may enable them to grow, take advantage of economies of scale and become internationally competitive. It can, however, be difficult to identify the new industries which indeed have such a potential. There is also the risk that the industries will not respond to the opportunity by becoming more efficient but may become dependent on the protection.
- Protection of declining industries.** These industries are also known as sunset industries. In a dynamic economy, some industries are likely to be declining. If other industries are expanding and labour is mobile, this may not be a problem. However, if labour is immobile and there is a shortage of job vacancies, the decline of a major industry may lead to a significant rise in unemployment. A government may decide to protect the industry to allow it to decline gradually, in order to avoid this. As workers retire and leave of their own accord, the protection can be removed. Owners of the industry, however, may resist the removal of the protection.
- Protection of strategic industries.** These are industries essential for the survival or development of the country. Most governments provide some protection to their agricultural and defence related industries, to ensure consistency of supplies. A country that is dependent on imports of food and weapons, runs the risk of its supplies being cut off due to wars or natural disasters. A government might also consider that protecting the growth of clean energy industries and next generation IT industries may promote the economic development of the country.
- Raising employment and improving the trade position.** Reducing imports can enable domestic firms to expand and take on more workers. This would raise employment and income. There is a high risk, however, of retaliation. If other countries do respond by imposing trade restrictions, the country will buy fewer imports but will also sell fewer exports. So employment, income and the trade position may not improve. Restricting imports of raw materials may be particularly harmful as it will raise domestic firms' costs of production.
- Protection of industries from low wage competition.** This is not a strong argument in favour of protection. Low wages do not necessarily mean low costs of production. A foreign industry may pay low wages but if the productivity of its workers is low, its average cost of production may be high. If both wages and costs are low, it may mean that a foreign industry has a comparative advantage. If this is the case, then under conditions of free trade, demand for the industry's products is likely to rise and this higher demand will probably push up wages.
- Protection of industries from dumping.** It is generally agreed that trade restrictions can be imposed to prevent dumping as this is seen as unfair competition. This occurs when foreign firms sell products at a price below the cost of production. Foreign firms may be engaging in what is sometimes called sporadic dumping. This is selling excess supplies in other countries, in order to keep the price high in the domestic market. A more damaging motive behind dumping is to drive domestic firms out of the market, gain a large market share and then raise prices. This form of



KEY TERMS

Infant industries: new industries with relatively low output and high cost.

Declining industries: old industries which are going out of business.

Strategic industries: industries that are considered important for the survival or development of the country.

Dumping: selling products in a foreign market at a price below the cost of production.

dumping, sometimes called predatory dumping, may benefit consumers in the short run. In the long run, however, it may result in a less efficient allocation of resources and the foreign firms gaining more market power, reducing choice and raising price. This is because it makes it very difficult for domestic firms to compete, even if their costs are lower.

- **Protecting industries from other forms of unfair foreign competition.** Another reason why foreign firms may be gaining an unfair competitive advantage is that they may be enjoying subsidies by their governments. This would again mean that there is not a level playing field.

The strongest arguments for protecting domestic industries are probably the infant industry, strategic industry, protection from dumping and protection from firms that are subsidised by foreign governments.

The key arguments against protection are that it can result in lower choice, higher prices, inefficiency and retaliation. These arguments are stronger against protecting declining industries, raising employment and improving the trade position and protecting industries from low wage competition.

INDIVIDUAL ACTIVITY 2

In 2016, the Indian government imposed anti-dumping taxes on some steel products from Brazil, China, Indonesia, Russia and South Korea. The motive behind this was not to raise revenue but to ensure that imports of steel products would compete on equal terms with Indian steel products.

- Explain what is meant by dumping.
- What impact may the imposition of anti-dumping duties on imported steel products have on their sales to India?
- What might happen to the Indian steel industry without protection?

Summary

You should know:

- Globalisation is occurring due to reduced transport costs, advances in communications and trade liberalisation.
- Globalisation is increasing competition and choice but also economies' susceptibility to external shocks and structural unemployment.
- MNCs are growing in importance. MNCs operate in other countries for a variety of reasons including reduced transport costs, getting round import restrictions, obtaining government grants and access to cheaper labour and raw materials.
- MNCs can have a number of effects on the countries in which they are based. They may raise output, employment and tax revenue and bring in new technology and management ideas but may generate pollution, drive out domestic producers, may shift production to other countries and unduly influence the government.
- Free international trade can raise output, reduce prices and increase choice.
- The most common method of protecting domestic industries is to place a tariff on imports.
- Other methods of protecting domestic industries include imposing a quota, imposing an embargo, and granting subsidies to domestic industries.

- The arguments for protecting domestic industries include protecting infant industries, protecting declining industries, protecting strategic industries and protecting industries from dumping.
- The strongest arguments for protectionism are probably the infant industry, strategic industry and protecting industries from dumping.

Multiple choice questions

- 1 Which of the following is an advantage to a country, of having a multinational company producing in that country?
 - A The company employs local people
 - B The company depletes non-renewable resources rapidly
 - C The company sends its profits back to the country in which its headquarters is based
 - D The company reduces its costs by lowering its health and safety standards

- 2 Which of the following would reduce trade restrictions in a country?
 - A An increase in tariffs
 - B An increase in quota limits
 - C The imposition of exchange control
 - D Tighter health and safety standards

- 3 A government has been allowing manufactured goods to enter its country, without any trade restrictions. It then decides to impose a 10% tariff on all imported manufactured goods. What effect will this change have on the cost of living and government revenue?

	Cost of living	Government revenue
A	increases	increases
B	increases	reduces
C	Reduces	reduces
D	Reduces	increases

- 4 Under what circumstances would the protection of infant industries be justified?
 - A If their long-term costs are higher than the revenue earned by them
 - B If they generate substantial external costs
 - C If they have the potential to grow and gain a comparative advantage
 - D If the number of workers they employ will decline over time

Four-part question

- a Define an *infant industry*. (2)
- b Explain **two** benefits of free trade for producers. (4)
- c Analyse how the imposition of a tariff could prevent dumping. (6)
- d Discuss whether or not the presence of a foreign multinational company will benefit a country. (8)

Chapter 38

Foreign exchange rates

Learning objectives

By the end of this chapter you will be able to:

- define a foreign exchange rate
- distinguish between a fixed and a floating exchange rate
- explain how a foreign exchange rate is determined in a foreign exchange market
- analyse the causes of foreign exchange fluctuations
- analyse the effects of foreign exchange rate fluctuations
- discuss the advantages and disadvantages of floating and fixed foreign exchange rates

Introducing the topic

Currencies are bought and sold like other goods and services. But why might someone choose to buy euros rather than Chinese renminbi (yuan) or Pakistani rupees? Why do the prices of currencies change over time and what are the consequences of these changes?

38.1 A foreign exchange rate

A **foreign exchange rate** is the price of one currency in terms of another currency (or currencies). It is also the value of the currency – that is, how much the currency is worth in terms of another currency (or currencies). For example, a foreign exchange rate of \$1 = 65 Indian rupees means that the price of \$1 is 65 Indian rupees and that one dollar is worth (would buy) 65 Indian rupees. A foreign exchange rate index is the price of one currency in terms of a basket of other currencies, weighted according to their importance in the country's international transactions. For example, the Japanese effective exchange rate measures the value of the Japanese yen against fifteen major currencies, including the US dollar, the Chinese renminbi, the Korean won and the Thai baht.



Foreign exchange rates



KEY TERM

Foreign exchange rate: the price of one currency in terms of another currency or currencies.

GROUP ACTIVITY 1

Match the following currencies with their countries:

Country	Currency
Cedi	Argentina
Dirham	Brazil
Dong	France
Euro	Ghana
Kip	Indonesia
Kwacha	Iran
Ougulya	Laos
Peso	Mauritania
Rand	Russia
Real	Saudi Arabia
Rial	South Africa
Riyal	South Korea
Rouble	Uganda
Rupiah	United Arab Emirates
Shilling	Vietnam
Won	Zambia



KEY TERMS

Fixed exchange rate: an exchange rate whose value is set at a particular level in terms of another currency or currencies.

Devaluation: a fall in the value of a fixed exchange rate.

Revaluation: a rise in the value of a fixed exchange rate.

Floating exchange rate: an exchange rate which can change frequently as it is determined by market forces.

Appreciation: a rise in the value of a floating exchange rate.

Depreciation: a fall in the value of a floating exchange rate.

A fixed exchange rate

A **fixed exchange rate** is one whose value is fixed against the value of another currency (or currencies) and is maintained by the government. The value may be set at a precise price or within a given margin. If market forces are pushing down the value of the currency, the central bank will step in and seek to increase its value, either by buying the currency or raising the rate of interest. In Figure 38.1, the price of one US dollar is initially two euros. Demand for the dollar rises and, if left to market forces, its price would rise to 2.3 euros. If, however, the central bank wants to keep the price of the dollar at two euros, it may ask its central bank to sell dollars. If it does so, the supply of dollars traded on the foreign exchange market will increase and price may stay at two euros.

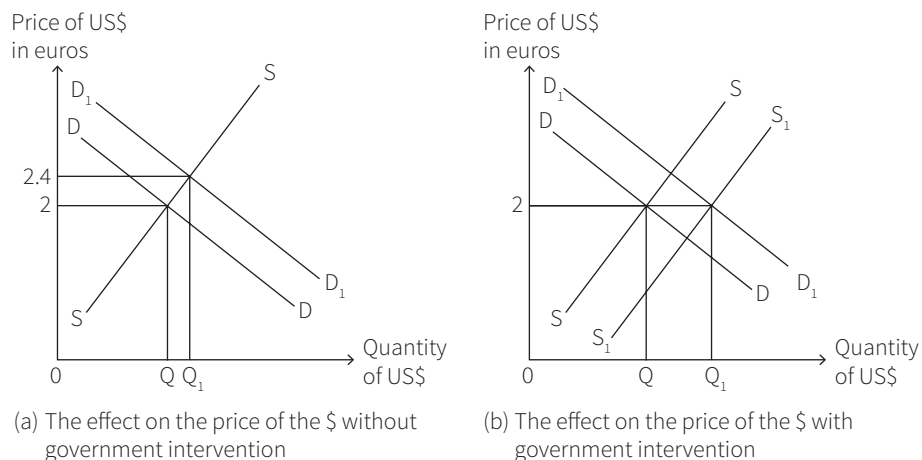


Fig. 38.1: Maintaining a fixed exchange rate

A change in the value of the currency from one exchange rate to a lower one is referred to as **devaluation**. A rise in a fixed exchange rate is called a **revaluation**.

A floating exchange rate

A **floating exchange rate** is one which is determined by market forces. If demand for the currency rises or the supply decreases, the price of the currency will rise. Such a rise is referred to as an **appreciation**. In contrast, a **depreciation** is a fall in the value of a floating exchange rate. It can be caused by a fall in demand for the currency or a rise in its supply. Figure 38.2 shows a decrease in demand for Bangladeshi taka, causing the price of the taka to fall.

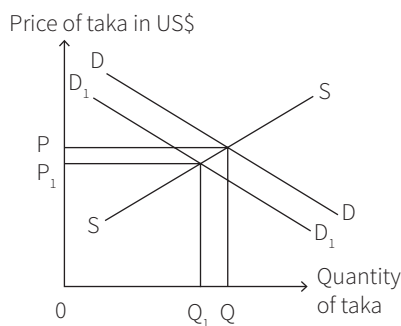


Fig. 38.2: A depreciation in the value of the taka



LINK

Chapter 15.2 Maximum and minimum prices

**TIP**

In explaining how a floating exchange rate is determined, it is useful to draw a diagram. Remember that on the vertical axis of an exchange rate diagram, you should express the price of the currency in terms of another currency.

38.2 The determination of a foreign exchange rate in a foreign exchange market

Currencies are bought and sold on foreign exchange markets. Individuals, firms and central banks may buy and sell foreign currencies. The main traders are, however, commercial banks. These buy currencies for their customers and to speculate on movements in the price of currencies.

The key reasons why currencies are bought and sold are linked to speculation, demand for exports and imports, the purchase and sale of financial assets and **foreign direct investment (FDI)** often carried out by multinational companies. These and other reasons are examined in more depth below.

**KEY TERM**

Foreign direct investment (FDI): setting up production units or buying existing production units in another country.



Foreign exchange traders

**TIP**

Follow what is happening to the price of the currency of your country.

The reasons for the demand and supply of currency in a foreign exchange market

As mentioned above, there are a number of reasons for individuals, banks, firms and governments to buy and sell a currency. These reasons can be examined in more depth by considering the specific example of demand and supply of Indian rupees, as shown in Table 38.1.

Demand for rupees will come from:	The supply of rupees will come from:
<ul style="list-style-type: none"> • Foreigners wishing to buy Indian goods and services. • Foreign-based branches of Indian multinational companies sending back profits to India. • Foreign banks buying currencies on behalf of their customers and paying interest on money held by Indian residents. • Foreign firms paying dividends on shares held by Indian residents. • Indians working abroad, wishing to send money back home to relatives. • Foreign firms wishing to buy Indian firms and setting up units in India. • Foreign firms and individuals wanting to buy shares in Indian companies, to save in Indian banks and lend to Indian firms or individuals. • Foreign governments wanting to hold rupees as reserves. • Speculators buying rupees in the expectation that the rupee will rise in value in the future. Significant sums of currency can be traded by speculators. 	<ul style="list-style-type: none"> • Indians wishing to buy foreign goods and services. • Foreign multinational companies based in India, sending profits home. • Indian banks selling currencies on behalf of their customers and paying interest on money held by foreign people living abroad. • Indian firms paying dividends on shares held by foreigners. • Foreigners working in India, sending money home to their relatives. • Indian firms wishing to buy foreign firms and setting up production units in other countries. • Indian firms and individuals wanting to buy shares in foreign companies, save in foreign banks and lend to foreign firms and individuals. • The Indian government wishing to hold foreign currencies in its reserves. • Speculators selling rupees because they expect the price of the rupee to fall.

Table 38.1: Demand and supply of Indian rupees

Figure 38.3 shows the effect of a rise in the Indian rate of interest on the market for Indian rupees. This will encourage foreigners to place money in Indian banks and hence, increase the demand for Indian rupees and raise its price.

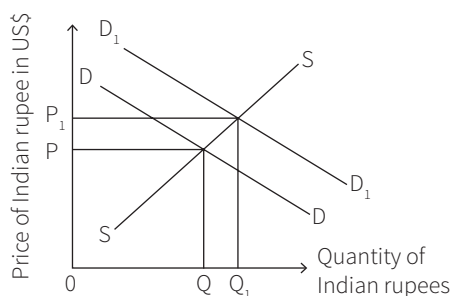


Fig. 38.3: The effect of a rise in the Indian rate of interest

TIP
Think carefully about which curve or curves will shift when there is a transaction involving foreign exchange. Remember, for example, that when we buy imports we sell our own currency and this purchase causes the supply curve to shift to the right.

INDIVIDUAL ACTIVITY 1

In each case draw a diagram to show the effect on the market for baht (the currency of Thailand) of:

- a** a Japanese multinational company opening up a branch in Thailand
- b** more tourists from Thailand going to India on holiday
- c** Thai banks lending to Ghanaian firms
- d** a reduction in demand for Thai exports.

38.3 The causes of exchange rate fluctuations

An exchange rate may change as a result of a change in export revenue and import expenditure, direct foreign investment, the sale and purchase of financial assets between the country and other countries, speculation and central bank action. An increase in a current account surplus would tend to cause the value of the currency to rise. For example, if export revenue rises relative to import expenditure, demand for the currency will rise. An increase in investment in the country arising from a foreign multinational company setting up a production plant can also cause the price of the currency to rise. If it is generally believed that the currency will rise in price, speculators will act in a way which will help in bringing about their expectation. They will buy the currency which, in the case of a floating exchange rate, will push up its price.

A government and its central bank can seek to influence the price of its currency in three main ways. One is by buying and selling the currency. If it wants to raise the exchange rate, it will instruct its central bank to buy the currency, using foreign currency to do so. Of course, there is a limit to which it can do this, as it will have a limited supply of foreign currency in its reserves. A central bank may also raise the rate of interest, in a bid to raise the value of the currency. A higher interest rate may attract what are called **hot money flows**. These are funds, which are moved around the financial markets of the world, to take advantage of differences in interest rates and exchange rates. If more people want to place money into the country's financial institutions, it will increase the demand for the currency. In addition, a government may try to raise the value of the currency by introducing measures to increase exports and reduce imports.

**KEY TERM****Hot money flows:**

the movement of money around the world to take advantage of differences in interest rates and exchange rates.

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38.4 The consequences of a change in the exchange rate

The effect of a change in the exchange rate on export and import prices

A rise in a country's exchange rate would raise the price of its exports and lower the price of its imports. More precisely, the price of exports rises in terms of foreign currency and the price of imports falls in terms of the domestic currency.

For example, initially 80 Indian rupees may equal £1. In this case, an Indian export valued at 800 rupees will sell in the UK at £10. A UK import valued at £20 will sell in India for 1600 rupees. If India experiences a rise in its exchange rate against the pound sterling, it means that rupees will buy more pounds now. The value of the rupee may rise so that 80 rupees equal £2. This significant rise would mean that the Indian export would now sell for £20 in the UK and the £20 import from the UK would sell for 800 rupees in India. If export prices rise, fewer exports will be sold. The effect on export revenue will depend on price elasticity of demand. If demand is elastic, the rise in price will cause a fall in revenue whereas if demand

**LINK**

Chapter 11.5
Determinants of price elasticity of demand (PED and total spending on a product and revenue gained)

is inelastic, revenue will rise. In practice, in many export markets there is considerable competition from firms throughout the world and hence the demand is elastic.

The effect of a change in the exchange rate on the macroeconomy

A change in the exchange rate, besides affecting exports and imports, may influence economic growth, employment and inflation. A fall in the exchange rate, by lowering export prices and raising import prices, is likely to increase demand for domestic products. This rise in aggregate demand can increase output and employment of the economy, if it is not operating at full capacity initially. Figure 38.4 shows real GDP rising from Y to Y_1 as a result of a rise in net exports.

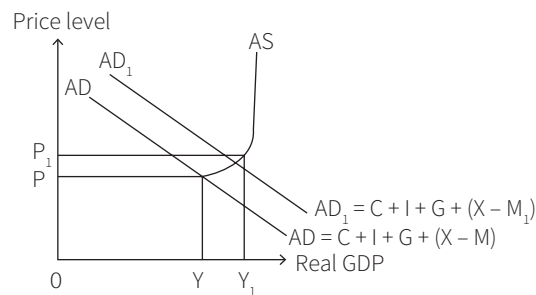


Fig. 38.4: The effect of a rise in net exports

A fall in the exchange rate can, however, increase inflationary pressure for a number of reasons. Imported raw materials will be more expensive, which will raise the costs of production. Finished imported products will also be more expensive. These appear in the country's consumer prices index and hence a rise in their price will directly boost inflation. It will also increase inflation indirectly, by reducing the pressure on domestic firms to keep price-rise to a minimum, in order to remain competitive.

38.5 The advantages and disadvantages of floating and fixed foreign exchange rates

The advantages and disadvantages of floating exchange rates

An advantage of a floating exchange rate is that it may help to eliminate a gap between export revenue and import expenditure. If demand for imports rises whilst demand for exports falls, supply of the currency will rise (as individuals and firms sell it to buy foreign currency) and demand for the currency will fall. This will lower the value of the currency and hence reduce export prices and raise import prices. These changes may make export revenue and import expenditure balance.

Even with a deficit between what the country has earned from exports and what it has spent on imports, however, demand for the currency may rise. Firms and individuals may still buy more of the currency to invest in the country, if they think that economic prospects are good. So, in practice, there is no guarantee that a floating exchange will eliminate a current account deficit. A floating exchange rate, nevertheless, does allow a government to concentrate on other objectives. It also means that a government does not have to keep reserves of foreign currency to influence the price of its currency.

The main disadvantage with a floating exchange rate is that it can fluctuate, making it difficult for firms to plan ahead. Speculation may cause significant changes in the price of a currency. A large depreciation may result in a rise in the country's inflation rate. This is why, on occasions, a central bank may still intervene despite usually leaving the exchange rate to be determined by market forces.

The advantages and disadvantages of fixed exchange rates

The main advantage of a fixed exchange rate is that it creates *certainty*. Firms that buy and sell products abroad will know the exact amount they will pay and receive in terms of their own currency, if the exchange rate does not change.

A fixed exchange rate, however, has a number of disadvantages. It can mean that a central bank has to use up a considerable amount of foreign currency to maintain its value. If the exchange rate is under downward or upward pressure, it may also have to implement policy measures which may conflict with its other government objectives. For example, a central bank may raise the rate of interest to reverse downward pressure on the value of the currency. A higher interest rate may cause unemployment and slow down economic growth as it may reduce aggregate demand. Finally, if a government cannot maintain an exchange rate at a given value, it may have to change its price and this may cause a loss of confidence in the economy.

GROUP ACTIVITY 2

The UK operates a floating exchange rate. Between 2010 and the first half of 2016, the value of the pound sterling was relatively stable. It was also relatively high, as foreigners wanted to invest in an economy perceived to be performing well. It fell dramatically, however, in June 2016 when people in the country voted in a referendum to leave the European Union.

- a** What is meant by a floating exchange rate?
- b** Identify one benefit of a stable exchange rate.
- c** Explain one advantage and one disadvantage of a high exchange rate.
- d** What did the change in the value of the pound indicate about the global view of the outcome of the referendum decision?

International competitiveness

A country might be called internationally competitive, if it provides the goods and services desired by consumers at a price acceptable to them. There are a number of indicators of a country's international competitiveness. These include its economic growth rate, its share of world trade, levels of expenditure on research and development, the quantity and quality of education and training and the state of the country's infrastructure. A competitive economy is likely to have a stable economic growth rate, a reasonable share of world trade, high levels of investment and expenditure on research and development, good quality education and training and developed infrastructure.

In the short term, changes in a country's exchange rate and inflation rate can influence its international competitiveness. A fall in both would be likely to make the country's products more attractive to buyers at home and abroad. Changes in productivity, however, will have long-lasting effects. Productivity can be raised by, for example, investment, education and training and improved working conditions.

INDIVIDUAL ACTIVITY 2

In 2013 and 2014 the Chinese government was criticised for maintaining a low price of its currency, in order to keep its products internationally competitive. It did this by selling its currency.

- a** Does it appear that China was operating a fixed or a floating exchange rate in 2013 and 2014? Explain your answer.
- b** How does a low value of its currency help to keep a country's products 'internationally competitive'?
- c** Explain how selling a currency can keep its value down.

Summary

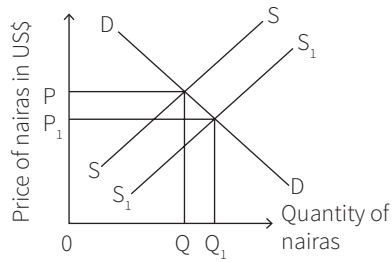
You should know:

- An exchange rate is the price of one currency in terms of another currency (or currencies).
- The price of a currency is influenced by demand for exports and imports, direct and financial investment, speculation and government action.
- Domestic currency may be bought by foreigners wanting to buy the country's products, to invest in the country and due to the expectation of a rise in the value of currency.
- Domestic currency is sold to buy foreign products, to invest in other currencies and for the fear of a decline in its value.
- A rise in the exchange rate will increase the price of exports in terms of foreign currency and lower the price of imports in the domestic currency.
- A fall in the exchange rate would be likely to increase export revenue, reduce import expenditure, boost economic growth and employment but may also tend to increase inflationary pressure.
- A floating exchange rate may automatically eliminate a gap between export revenue and import expenditure.
- A fixed exchange rate is maintained at a certain rate. Its main advantage is that it reduces uncertainty.
- A floating exchange rate is determined by market forces. If there is a current account deficit, the exchange rate may adjust automatically to make domestic products more competitive.

Multiple choice questions

- 1** What is meant by 'an appreciation of the currency'?
 - A** A fall in value caused by government intervention
 - B** A fall in value caused by market forces
 - C** A rise in value caused by government intervention
 - D** A rise in value caused by market forces

- 2 What might have caused the change in the value of the Nigerian currency shown in the diagram below?



- A Foreign firms investing in Nigeria
 B Foreigners placing more money in Nigerian banks
 C Nigerians buying more imports
 D Nigerians speculating that the value of the naira will rise
- 3 What combination of factors is most likely to cause a fall in the value of a floating currency?

	Demand for the currency	Supply of the currency
A	increase	increase
B	increase	decrease
C	decrease	decrease
D	decrease	increase

- 4 If the value of the pound sterling against the US dollar changes from £1 = \$2 to £1 = \$1.5, what effect will this have?
- A UK exports to the USA will rise in price
 B The USA will import more UK products
 C UK tourists will be able to buy more, for less money, in the USA
 D The value of the pound sterling has risen in price

Four-part question

- a Define *devaluation*. (2)
 b Explain **two** ways a central bank can prevent a rise in a fixed exchange rate. (4)
 c Analyse how a recession in Country X could affect Country Y's floating exchange rate. (6)
 d Discuss whether or not a country would benefit from switching from a fixed to a floating exchange rate. (8)

Chapter 39

Current account of balance of payments

Learning objectives

By the end of this chapter you will be able to:

- describe the components of the current account of the balance of payments
- calculate deficits and surpluses on the current account of the balance of payments
- analyse the causes of current account deficits and surpluses
- analyse the consequences of current account deficits and surpluses
- discuss the effectiveness of policy measures to achieve balance of payments stability

Introducing the topic

In 2016 the USA had the largest deficit on the current account of the balance of payments of any country while China had the largest surplus. What is a current account deficit and a current account surplus? What causes deficits and surpluses and is it better to have a surplus than a deficit?

39.1 Structure of the current account

The meaning of the balance of payments

The balance of payments is a record of all economic transactions between the residents of a country and the rest of the world in a particular period (over a quarter of a year or more commonly over a year). These transactions are made by individuals, firms and the government. Money coming into the country is recorded as credit items and money leaving the country as debit items. The first section of the balance of payments, and the best known, is the current account.

The components of the current account

The current account shows the income received by the country and the expenditure made by it in its dealings with other countries. It is usually divided into four components.

- **Trade in goods.** This covers exports and imports of goods including cars, food and machinery. Such goods are sometimes referred to as merchandise exports and imports and visible exports and imports. If revenue from the export of goods exceeds the expenditure from import of goods, the country is said to have a **trade in goods deficit**. This can also be referred to as a visible trade deficit. In contrast, a **trade in goods surplus** occurs when export revenue exceeds import expenditure.
- **Trade in services.** As its name suggests, this part records payments for services sold abroad and expenditure on services bought from foreign countries. Services are also sometimes called invisibles with sales of services abroad called invisible exports and the purchase of sales from abroad known as invisible imports. Among the items included are banking, construction services, financial services, travel and transportation of goods and passengers between countries. A **trade in service surplus** would mean that service receipts exceed payments for services.

Together the first two components give the balance on trade in goods and services.

- **Primary Income** (previously called income). This covers income earned by individuals and firms. It records two categories of income flow, which are compensation of employees and investment income. Compensation of employees includes wages, salaries and other benefits earned by residents working abroad minus that earned by foreigners working in the home economy. Investment income covers profit, dividends and interest receipts from abroad minus profit, dividends and interest paid abroad. Investment income is earned on foreign direct investment and financial investment including shares, government bonds and loans. If, for example, a multinational company sends profits out of the country back to its home country, it will appear as a debit item in this section. The receipt of dividends on shares in foreign companies and interest on loans made to foreign firms will be credit items.
- **Secondary Income** (previously called current transfers). This is transfers of money, goods or services which are sent out of the country or come into the country, not in return for anything else. It essentially covers gifts. Items include charitable donations, workers' remittances (money sent by migrant workers to relatives abroad and money received by relatives from migrant workers in other countries) and aid from one government to other governments. Workers' remittances are a large item in some countries' secondary income.



KEY TERMS

Trade in goods: the value of exported goods and the value of imported goods.

Trade in goods deficit: expenditure on imported goods exceeding revenue from exported goods.

Trade in goods surplus: revenue from exported goods exceeding expenditure on imports.

Trade in services: the value of exported services and the value of imported services.

Trade in service surplus: revenue from exported services exceeding expenditure on imported services.

Primary income: income earned by people working in different countries and investment income which comes into and goes out of the country.

Secondary income: transfers between residents and non-residents of money, goods or services, not in return for anything else.



KEY TERM

Current account balance: a record of the income received and expenditure made by a country in its dealings with other countries.

Calculation of deficits and surpluses on the current account of the balance of payments

The balances of the four components are summed up to give the **current account balance** (also sometimes just called the current balance). A current account surplus arises when the value of credit items exceeds the value of debit items. If the value of debit items is greater than the value of credit items, there is a current account deficit.

INDIVIDUAL ACTIVITY 1

- a** In the period July–December 2016, Bangladesh imported \$24 900m worth of goods and exported \$19 618m worth of goods. The value of its credit items on services was \$2121m and the value of its debit items was \$4074m. What was its balance of trade in goods and services?
- b** From the following information, calculate South Africa's current account balance in 2015.

	<i>Rand millions</i>
Exports of goods	1 041 438
Imports of goods	1 075 850
Exports of services	191 656
Imports of services	197 643
Primary income (net)	−100 366
Secondary income	−33 533

GROUP ACTIVITY 1

The Philippines had a current account surplus of \$8.3bn in 2015. It usually has a current account surplus mainly because of a large surplus on secondary income. There are many Filipino people who work abroad and who send money home to their relatives. There is also usually a trade in services surplus but a trade in goods deficit.

- a** What is meant by a current account surplus?
- b** Which section of the current account is not referred to in the passage?
- c** Do you think a reduction in the number of Filipino people working abroad would reduce the country's current account surplus?

Changes in exports and imports

There are a number of factors that influence the value of a country's exports and imports. These include:

- **The country's inflation rate.** If the country has a relatively high rate of inflation, domestic households and firms are likely to buy a significant number of imports. The country's firms are also likely to experience some difficulty in exporting. A fall in inflation, however, would increase the country's international competitiveness and would be likely to increase exports and reduce imports.
- **The country's exchange rate.** A fall in a country's exchange rate will lower export prices and raise import prices. This will be likely to increase the value of its exports and lower the amount spent on imports.

- **Productivity.** The more productive a country's workers are, the lower the labour costs per unit and the cheaper its products. A rise in productivity is likely to lead to a greater number of households and firms buying more of the country's products – so exports should rise and imports fall.
- **Quality.** A fall in the quality of a country's products, relative to other countries' products, would have an adverse effect on the country's balance of trade in goods and services.
- **Marketing.** The amount of exports sold is influenced not only by their quality and price but also by the effectiveness of domestic firms in marketing their products. Similarly, the quantity of imports purchased is affected by the effectiveness of the marketing undertaken by foreign firms.
- **Domestic GDP.** If incomes rise at home, more imports may be bought. Firms are likely to buy more raw materials and capital goods, and some of these will come from abroad. Households will buy more products, and some of these will be imported. The rise in domestic demand may also encourage some domestic firms to switch from the foreign to the domestic market. If this does occur, exports will fall.
- **Foreign GDP.** If incomes abroad rise, foreigners will buy more products. This may enable the country to export more.
- **Trade restrictions.** A relaxation in trade restrictions abroad will make it easier for domestic firms to sell their products to other countries.



LINK

Chapter 37.4 Methods of protection

INDIVIDUAL ACTIVITY 2

One-quarter of the UK's exports to China are services. The country sells a range of services including private medical insurance, financial services and banking, construction services and private medical insurance. It does particularly well in business and financial services.

- What is meant by an export of services?
- Is demand for construction services in China likely to increase or decrease in the future? Explain your answer.
- Why may the UK be particularly good in producing financial services?

39.2 The causes of a current account deficit

The factors influencing changes in exports and imports give an indication as to what can cause a current account deficit. One is incomes at home and abroad. A deficit arising from low incomes abroad and/or high incomes at home can be referred to as a cyclical deficit.

A high exchange rate can also cause a current account deficit. This is because it will mean high export prices and low import prices. There may also be, what can be called, structural problems. These can include a problem with the products manufactured by firms in the country, costs incurred to produce them, prices at which they are sold and strategies adopted for marketing them. These can give rise to what is called a structural deficit. A current account deficit may also be the result of a deficit on primary income and/or secondary income.

INDIVIDUAL ACTIVITY 3

The UK's current account deficit widened between 2012 and 2016. This was largely due to changes in its primary income balance. This went from a surplus in 2012 to a deficit in 2013 and the deficit increased to 2016. The change in the primary income balance was due to a fall in investment income which makes up the vast majority of primary income. Investment income declined because the stock of assets held by the UK abroad fell relative to the stock of assets held by foreigners in the UK and because the rate of return the UK received on its assets abroad declined.

- a** Identify:
 - i** the three forms of investment income
 - ii** three examples of assets the UK may hold abroad.
- b** Explain what may have happened to the loans UK banks made to foreign firms and individuals and the rate of interest received between 2012 and 2016.

39.3 The consequences of a current account deficit

A current account deficit may mean that a country is consuming more goods and services than what it is producing. This is sometimes referred to as a 'country living beyond its means'. A current account deficit can also mean a reduction in inflationary pressure, as there will be a fall in aggregate demand.

A current account deficit does, however, mean that output and employment is lower than possible. If more goods and services were to be produced at home, more workers would be employed.

The significance of a current account deficit depends on its size, duration and cause. A small deficit that lasts for only a short time is unlikely to cause any problem. A deficit that has been caused by the import of raw materials and capital goods, changes in income (domestic and foreign) or a high exchange rate, is likely to be self-correcting over time (irrespective of its size). Imported raw materials and capital goods will be used to produce goods and services, some of which will be exported. Recessions abroad will not last and with a rise in incomes, the country can export more to foreign countries. A deficit on the current account will put downward pressure on the exchange rate. If it does fall, exports will become cheaper and imports will become more expensive – as a result a deficit may be eliminated.

A deficit may also be the result of more primary and secondary income leaving the country than entering it. This may reflect a booming economy, with foreign MNCs making high profits in the country and sending the profits back to their economies and migrant workers earning high wages and sending some of them home to their relatives.

A deficit arising due to a lack of international competitiveness is more serious. This is because it will not be self-correcting. If firms' costs of production are higher due to lower productivity or the quality of the products produced are poor or the products made are not in high world demand, the deficit may persist. In this case, government may have to introduce policies, particularly supply-side policies, to improve the country's trade performance.



Bringing in goods from abroad

INDIVIDUAL ACTIVITY 4

The USA has had a large and growing current account deficit since the 1990s, despite having a surplus on its trade in services balance.

- a Identify:
 - i two possible causes of a current account deficit
 - ii a part of the current account other than trade in services.
- b Explain one reason for the growing concern for the USA about its current account deficit.

39.4 The causes of a current account surplus

A current account surplus may arise for a number of reasons including:

- **A low exchange rate.** This will make export prices cheap and import prices expensive.
- **High quality of domestically produced products.** This will encourage foreign and domestic citizens to purchase the country's output.
- **High incomes abroad.** This will enable foreigners to buy a high volume of the country's exports.
- **Low costs of production.** This may make an economy's products internationally competitive.
- **High investment income earned abroad.** The economy's banks, firms and individuals may be earning more profits, interest and dividends in other economies than is earned by foreigners' assets in this economy.
- **The receipt of high workers' remittances.** The economy's workers working abroad may be sending more money home to relatives than foreign migrant workers are sending to their relatives.

39.5 The consequences of a current account surplus

An increase in a current account surplus will increase an economy's aggregate demand and so may lead to a rise in real GDP and higher employment. More money will enter the economy than will leave it and the higher aggregate demand may cause demand-pull inflation if the economy is operating close to full capacity. It also means that the country is consuming fewer products than it is producing.

If an economy is operating a floating exchange rate, an increase in a current account surplus may result in an appreciation in the exchange rate. This is because demand for the economy's currency will exceed its supply.



TIP

Find out the major trading partners of your country and the reasons for their importance.

GROUP ACTIVITY 2

India exports a range of products including fruit, meat, minerals, spices, IT services and wheat. It imports, among other items, capital goods, edible oils, gold, and silver. The table shows India's main trading partners in 2015.

Main export destinations	Main source of imports
a USA	a China
b UAE	b Saudi Arabia
c Hong Kong	c UAE
d China	d USA

- What proportion of the main countries that India exports to, also forms its main sources of imports?
- Explain two reasons for countries to buy spices from India.

39.6 Policies to achieve balance of payments stability

Over time, a government is likely to want to achieve balance of payments stability. It will not want to see large and persistent current account deficits or large and persistent current account surpluses. As mentioned above, a current account deficit reduces total demand. A current account surplus means that the people of the country are not consuming as many products as they could afford. To avoid large and persistent current account deficits or surpluses there are a number of policy measures a government can use.

Measures to correct a current account deficit

A government will seek to reduce a current account deficit by using policy measures designed to reduce imports and/or increase exports. It may try to do this directly by imposing import restrictions, subsidising exports and reducing the country's foreign exchange rate. It may also try to reduce imports and increase exports by introducing measures that will lower spending by the country's consumers. Such measures may include increasing income tax, raising the rate of interest and pushing up rates of indirect taxes. These measures may reduce imports and may give domestic firms a greater incentive to export as they may find it harder to sell at home.

To reduce the chances of a long run current account deficit, however, a government may decide to use supply-side policy measures. For instance, education and training may result

in lower average costs of production and a rise in the quality of products produced. The government may find that supply-side policy is the most effective approach. This is because this policy has the potential to raise international competitiveness over a longer period of time. It may also avoid some of the disadvantages of the other measures including retaliation (import restrictions), inflation (a lower foreign exchange rate) and higher unemployment (an increase in income tax).

Measures to correct a current account surplus

If a government wants to reduce a current account surplus, there are a number of measures it could use. These are, essentially, the reverse of measures to reduce a current account deficit. It could revalue a fixed exchange rate or encourage an appreciation of a floating exchange rate. It could also enable households and firms to purchase more imports by making use of expansionary fiscal policy and monetary policy. For example, a cut in income tax would raise the disposable income of households. This would enable them to buy more goods and services, including imported goods and services.

Summary

You should know:

- The balance of payments is a record of a country's trade and investment with other countries.
- The current account covers trade in goods, trade in services, primary income and secondary income.
- A current account deficit means that expenditure on imports of goods and services, income and transfers received from abroad are greater than earnings from exports of goods and services, income and transfers received from abroad.
- International trade is the exchange of products across national boundaries.
- International trade may involve relatively long distances, may be with countries with different cultures and languages, may be in a different currency, may face trade restrictions and may involve more competition.
- Exports and imports are influenced by changes in the inflation rate, exchange rate, productivity, quality, marketing, income and trade restrictions.
- An increase in a current account deficit may be caused by a change in income at home or abroad, a change in the exchange rate or a change in international competitiveness.
- The significance of a current account deficit depends on its size, duration and cause. A deficit arising from a lack of international competitiveness is the most serious.
- A current account surplus may be caused by a low exchange rate, high quality of domestically produced products, high income abroad and low costs of production.
- An increase in a current account surplus will increase aggregate demand and may raise the exchange rate.
- A government can seek to improve the current account position by encouraging people to buy more domestic and fewer foreign products or by discouraging people from buying products in general. In the long run, supply-side policies are likely to be most effective.

Multiple choice questions

- 1 Which of the following is an import of a service into Indonesia?
 - A French firms selling insurance to Indonesian firms
 - B Indonesian citizens buying cars from the USA
 - C Indonesian firms buying land in Germany
 - D Tourists visiting Indonesia

- 2 Mexican firms sell more oil to the USA and buy more banking services from the UK. How do these changes affect the Mexican balance of payments?

	Trade in goods	Trade in services
A	improves	improves
B	improves	worsens
C	worsens	worsens
D	worsens	improves

- 3** Which of the following items is included in the current account of the balance of payments?
- A** The payment of interest on foreign loans
 - B** The purchase of shares in foreign companies
 - C** The sale of government bonds to foreign residents
 - D** The setting up of a branch of a bank in a foreign country
- 4** Which of the following is most likely to reduce a deficit on the current account of the balance of payments?
- A** A fall in government expenditure on benefits
 - B** A fall in income tax
 - C** A rise in consumer confidence
 - D** A rise in the value of the currency

Four-part question

- a** Define *primary income*. **(2)**
- b** Explain how a country could have a deficit on its primary income but a current account surplus. **(4)**
- c** Analyse how a rise in a country's inflation rate could move a current account surplus into a current account deficit. **(6)**
- d** Discuss whether or not an increase in a current account surplus will benefit an economy. **(8)**

Exam-style questions

Multiple choice questions

- 1 When does free trade occur?
 - A When exports are directly exchanged for imports without the use of money
 - B When exports are subsidised by governments
 - C When goods are transported free of any direct charge
 - D When there are no barriers placed on importing and exporting products

- 2 What is an advantage of international specialisation?
 - A Countries become more susceptible to external shocks
 - B Countries can spread their risks over a range of products
 - C There can be a more efficient use of resources
 - D Those countries with an absolute advantage can gain at the expense of those with an absolute disadvantage

- 3 What would increase a surplus on Namibia's balance of trade?
 - A European firms buying more food from Namibia
 - B European governments providing more foreign aid to Namibia
 - C Namibian firms selling more building materials in Namibia
 - D Namibian firms selling more insurance to other African countries

- 4 Which of the following is a credit item on Mexico's trade in services?
 - A earnings from the sale of Mexican food in Peru
 - B investment by Argentinean firms in Mexico
 - C revenue received from Mexican insurance policies sold in Chile
 - D the money Mexican tourists spend in the USA

- 5 What effect is the current account balance of a country, changing from a surplus to a deficit, likely to have on its exchange rate and its unemployment rate?

Exchange rate	Unemployment rate
A decreases	decreases
B decreases	increases
C increases	increases
D increases	decreases

- 6 Why might a fall in the exchange rate increase the rate of inflation?
 - A it will reduce employment
 - B it will reduce a current account surplus
 - C it will increase the cost of imported raw materials
 - D it will increase the price of exports

- 7 The table shows four economic indicators for four economies.
Which country appears to exhibit the best economic performance?

	Economic growth rate %	Inflation rate %	Unemployment rate %	Current account balance (\$m)
Country W	8	6	10	+5000
Country X	5	4	8	-50 000
Country Y	3	2	3	-100
Country Z	1	-2	1	+100

- A Country W
B Country X
C Country Y
D Country Z
- 8 A government increases tariffs on imports from its main trading partner. What is the likely consequence of this move?
A a fall in inflation
B a fall in trade barriers
C a rise in government revenue
D a rise in competitive pressures on domestic firms
- 9 Which of the following combinations of government measures would provide the maximum protection to the domestic car industry?

	Government subsidies to domestic producers	Tariffs on car imports
A	decrease	Increase
B	decrease	decrease
C	increase	decrease
D	increase	Increase

- 10 The table shows how a number of countries have altered tariffs and quotas on imports of TVs between 2009 and 2017. Which country had the greatest reduction in protection from TV imports in this period?

	Tariffs		Quotas	
	2009	2017	2009	2017
A	20%	15%	200 000	180 000
B	20%	25%	200 000	220 000
C	20%	25%	200 000	160 000
D	20%	15%	200 000	210 000

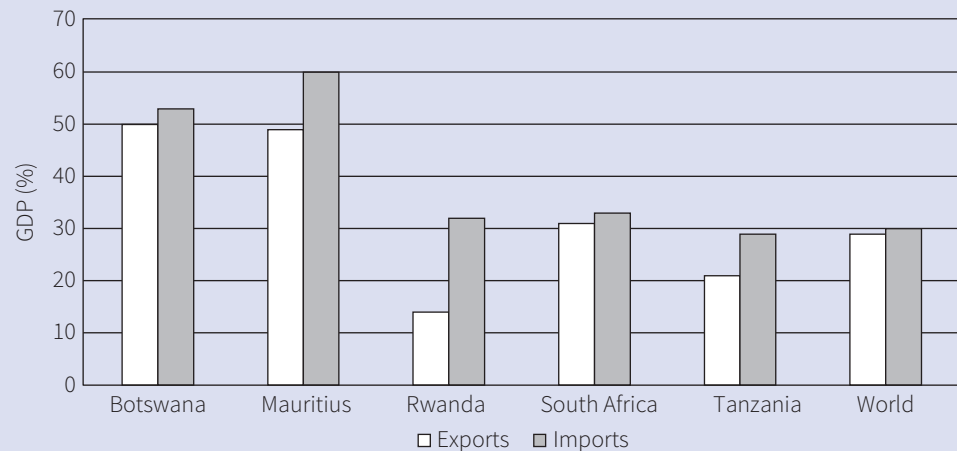
Data response questions

Carefully study the source material for each question, then answer Questions 1 and 2.

Source material: African countries become more open

African countries are becoming more open to international trade. Integration is increasing not only between the 54 countries of Africa, but with the wider world. Transport costs are decreasing, although they are still twice the global average. Tariffs and non-tariff barriers are also declining, but again, are higher than the global average.

The extent to which African countries are open to international trade and the extent to which their governments engage in protectionism varies. The chart shows five African countries' exports and imports as a percentage of GDP compared to the global average.



Exports and imports as a percentage of GDP of selected African countries and the world in 2015

The export of diamonds has been the main driver of Botswana's economic growth which has changed the country from one of the poorest countries in Africa to an upper-middle income country. Its heavy reliance on the export of diamonds makes it vulnerable to changes in the international market. In 2014 the economy grew by 3.2%, but in 2015 it contracted by 0.3%.

Mauritius and South Africa are also upper-middle income countries. Mauritius has a more diversified economy than Botswana. It produces a range of agricultural products, on a commercial basis, including sugar cane and potatoes and has growing financial and tourist industries. The government has reduced tariffs significantly, particularly those protecting inefficient industries, and now the country has one of the lowest average tariff rates in the world. South Africa is a relatively large economy which had a GDP of \$330 billion in 2015. It uses a range of measures to restrict imports into the economy. For example, it makes widespread use of anti-dumping tariffs as well as quotas, product standards and delays at customs. It is debatable how these measures have influenced the country's international trade.

In 2015, as shown in the chart above, the country's exports were equivalent to 31% of its GDP while its imports were equivalent to 33% of GDP.

Rwanda and Tanzania are low income countries which produce mainly agricultural products. In Tanzania agriculture accounts for 25% of its output, 85% of the country's exports and 80% of its employment. Tanzania's economic growth has increased in

recent years. Lower costs of production have increased the exports of a number of the country's products, including coffee. In Rwanda, a densely-populated country with poor infrastructure, 90% of the population are engaged in subsistence farming. They produce a number of agricultural products including potatoes and bananas.

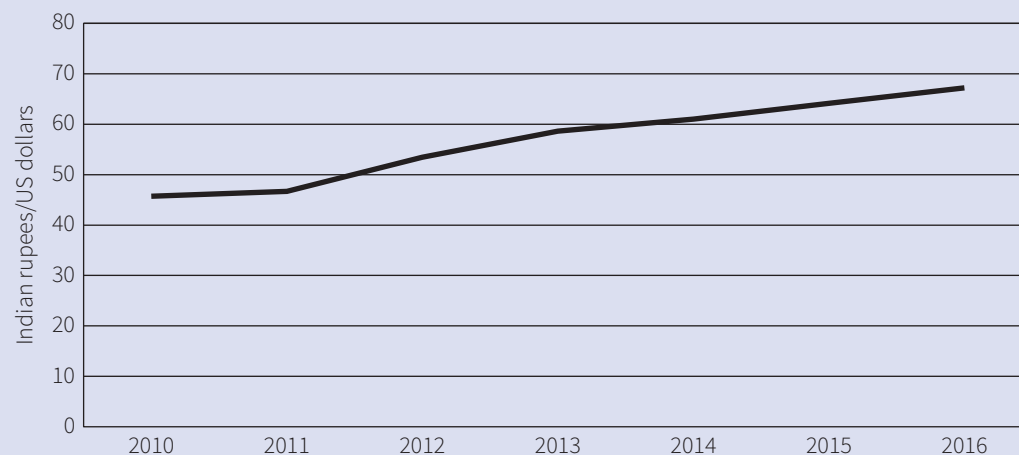
- 1 Referring to the source material in your responses, answer all parts of Question 1.
 - a Identify a non-tariff. **(1)**
 - b Calculate the value of South Africa's imports in 2015. **(2)**
 - c Explain **one** piece of evidence of globalisation. **(2)**
 - d Explain **one** possible disadvantage of specialisation. **(4)**
 - e Analyse which African countries are the most open. **(4)**
 - f Analyse whether Mauritius or Rwanda is likely to have exported more potatoes. **(5)**
 - g Discuss whether or not a reduction in its cost of producing coffee, will always result in Tanzania exporting more coffee. **(6)**
 - h Discuss whether or not the removal of a tariff protecting an inefficient industry would affect unemployment. **(6)**

Source material: Trade Links

Nigeria imports a vast range of products including food, freight transport, insurance and machinery. Its exports are dominated by oil. The product accounts for 10% of the country's output but 70% of government revenue and 75% of its export revenue. In 2015 the price of oil fell. This reduced government revenue. It also lowered the country's export revenue from N16 304bn in 2014 to N9729bn in 2015 and caused the current account to go into deficit. The country's imports of goods also fell but not by as much. They fell from N7374bn to N6698bn.

The change in the current account position had little impact on the country's exchange rate. This was because its central bank was preventing it changing from 315 naira to 1 dollar, a rate thought to be higher than the market price.

The fall in the price of Nigeria's oil had a beneficial impact on the Indian economy. India is the main destination of Nigeria's exports. While Nigeria's exchange rate was almost constant, India's exchange rate altered. The chart shows the exchange rate between the Indian rupee and the US dollar between 2010 and 2016.



Indian rupee/US dollar exchange rate, 2010–16

Although Nigeria normally has a current account surplus, India has had a current account deficit for some time. To reduce the current account deficit, the Indian government has been encouraging foreign MNCs to set up branches in the country. In 2014 the Indian prime minister urged foreign firms to ‘come and make in India’.

The Indian government also tried to increase economic activity by cutting the rate of interest in 2015 and 2016. A reduction in the rate of interest can reduce a country’s exchange rate and increase spending by consumers. These two changes can influence the current account balance in opposite directions.

- 2** Referring to the source material in your responses, answer all parts of Question 2.
- a** Identify an item that would have appeared in Nigeria’s trade in services. **(1)**
 - b** Calculate Nigeria’s merchandise trade balance in 2015. **(2)**
 - c** Explain whether demand for Nigerian oil was elastic or inelastic in 2015. **(2)**
 - d** Explain what type of foreign exchange rate Nigeria was operating in 2015. **(2)**
 - e** Analyse what effect the change in India’s foreign exchange rate would have had on the price of its exports to the USA and its imports from the USA. **(4)**
 - f** Analyse how a rise in consumer spending can cause a current account deficit. **(5)**
 - g** Discuss whether or not a fall in a country’s rate of interest will reduce its foreign exchange rate. **(6)**
 - h** Discuss whether or not more MNCs setting up branches in India would be likely to reduce India’s current account deficit. **(6)**

Four-part questions

- 1** Vietnam is becoming a more open economy. Its government is reducing the protection it gives to domestic industries and is signing more free trade deals. The economy is increasing the resources it devotes to making electrical and electronic products and these have become the country’s top export earner.
- a** Define *free trade*. **(2)**
 - b** Explain **two** methods of protection. **(4)**
 - c** Analyse how specialisation at national level can benefit the country’s firms. **(6)**
 - d** Discuss whether or not a government should protect its industries from foreign competition. **(8)**
- 2** The Mexican peso depreciated by 13% against the US dollar in November 2016. Changes in the country’s exchange rate can influence a country’s balance on the current account of its balance of payments. The Mexican government was planning to cut its spending on education and training. Some economists suggested that this would increase the country’s current account deficit.
- a** Define a *foreign exchange rate*. **(2)**
 - b** Explain **two** causes of a depreciation in a foreign exchange rate. **(4)**
 - c** Analyse how a cut in spending on training and education could increase a deficit on the current account of the balance of payments. **(6)**
 - d** Discuss whether or not a depreciation in its foreign exchange rate will reduce a country’s deficit on the current account of the balance of payments. **(8)**

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