# 25 ECONOMIC GROWTH

## LEARNING OBJECTIVES

- Understand macroeconomic objectives
- Understand how to define economic growth
- Understand how GDP is used to measure economic growth
- Understand the limitations of using GDP to measure economic growth
- Understand the economic cycle: boom, downturn, recession and recovery
- Understand the impact of economic growth on employment, standards of living, poverty, productive potential, inflation and the environment

## GETTING STARTED

In most countries, it is the government's job to manage the economy. This usually involves making sure that output grows, that prices do not rise too quickly and that people are in work. If the economy performs well, people's living standards will improve and a government might be re-elected. Look at the example below.

**SUBJECT VOCABULARY**

**budget deficit** amount by which government spending is greater than government revenue

## CASE STUDY: CANADA

In 2015, the Canadian Liberal party led by Justin Trudeau, made a number of economic promises before being elected with a significant majority. Prior to the election, the Canadian economy had been a little 'sluggish' with a mild recession and rising unemployment. However, Trudeau promised to change this. Some of the policies promised by the government included the following.

▲ Justin Trudeau at a political rally

- Raise taxes for the wealthiest 1 per cent of Canadians and redistribute income in favour of low-income families. For example, child benefit to support middle-class parents would be introduced. A typical family of four will get an extra CAD 2500 every year.
- Help low-income students to pay for university by increasing the maximum grant (to CAD 3000 per year for full-time students, and to CAD 1800 per year for part-time students). Also, students would not be required to repay student loans until they are earning at least CAD 25 000 per year.
- Cap the **budget deficit** at CAD 30 000 million over the first 3 years.
- Spend CAD 6000 mlion on 'green' infrastructure over 4 years.
- Double the spending on infrastructure to CAD 120 000 million over the next 10 years. This included CAD 3400 million for public transit and CAD 5000 million for water and wastewater facilities. A further CAD 3400 million would be spent on affordable housing, early learning and childcare, and cultural and leisure facilities.



Trudeau wanted to grow the economy by investing in public infrastructure projects. By the end of 2016, it was too early to say whether the economy was starting to benefit. However, it was clear that Canada's economy had not 'taken-off' under Trudeau. National income had grown by just 1.2 per cent in 2016 – up slightly from 0.9 per cent in 2015.

1 Discuss whether Trudeau's policies are working.
2 How might Trudeau's policies create jobs in Canada?
3 Describe how this case emphasises the importance of the economy to governments.
4 Involve yourself in a classroom discussion about the general state of the economy in your own country.

## WHAT IS MACROECONOMICS?

**SUBJECT VOCABULARY**

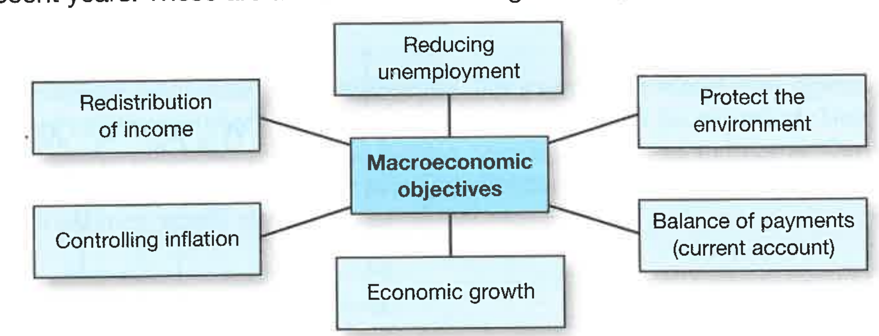
**macroeconomics** study of large economic systems such as those of a whole country or area of the world

**microeconomics** study of small economic systems that are part of national or international systems

The study of economics can be divided into two areas. One of these involves looking at the economy as a whole. It looks at the performance, structure and behaviour of the entire economy. For example, it involves analysing patterns of total income or spending, total employment, the general price level and the total value of all goods traded with other countries. This is **macroeconomics**. In contrast, **microeconomics** looks at individual parts of the economy. It looks at how individuals, households or firms make decisions when allocating resources. It often involves analysing specific markets, such as the markets for rail travel, teachers, oil, health care, package holidays or wheat.

## WHAT ARE MACROECONOMIC OBJECTIVES?

When managing the economy, the government has certain aims. These aims are called macroeconomic objectives. They focus on four key economic measures but include other aims that have become increasingly important in recent years. These are all summarised in Figure 25.1.




▲ Figure 25.1 Macroeconomic objectives

**SUBJECT VOCABULARY**

**economic growth** increase in the level output by a nation

One of the key aims is to promote **economic growth**. This means that the government introduces policies designed to help grow incomes, output and employment in the economy. However, at the same time as creating more jobs and improving living standards, the government must ensure that prices do not rise too quickly and that imports are not significantly greater than exports. Also, in recent years, governments have been under pressure to introduce measures that protect the environment and redistribute income in the economy. This chapter is about economic growth.

## WHAT IS ECONOMIC GROWTH?

**SUBJECT VOCABULARY**

**national income** value of income, output or expenditure over a period of time

Over a period of time, most economies will grow. This means that **national income** will rise. National income is the value of all incomes in the economy added together. It includes income from wages, profits, royalties, dividends, interest and income generated abroad. National income is also equal to the value of all output or production in the economy. It is also equal to the value of all spending in the economy.

If the economy is producing more, businesses are more profitable and share prices rise. This makes it easier for businesses to raise more capital and employ more workers. As more jobs are created, incomes rise. This means that consumers will have more money to spend on goods and services, which will drive economic growth even higher. Consequently, economic growth is desirable.

## MEASURING ECONOMIC GROWTH

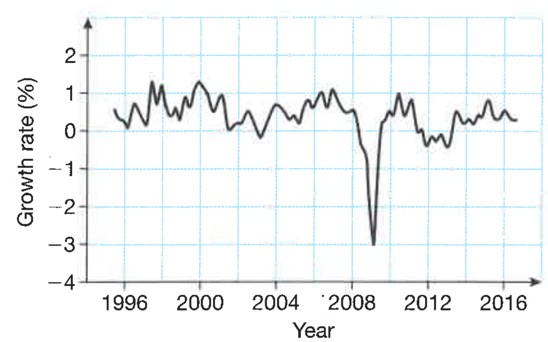
**SUBJECT VOCABULARY**

**gross domestic product (GDP)** market value of all final goods and services produced in a period (usually yearly), an internationally recognised measure of national income

The most common measure of national income is **gross domestic product (GDP)**. This measures a country's total output for the year. It measures the value of all goods and services that are produced in a country for sale. It includes both goods that are sold domestically (within a country) and those sold overseas. However, GDP only measures final production. The manufacture of parts and components used to make another product are not included. Exports are included because they are part of domestic production. However, imports are subtracted because they represent the output of another country.

GDP is used to measure economic growth all over the world. Using this standard definition means that meaningful comparisons can be made between the growth rates of different countries.

Figure 25.2 shows GDP growth in the EU between 1996 and 2016. For most of the period, economic growth was between zero and one per cent. This shows that many European economies have struggled to grow in the last 20 years. Also, just after 2008, the growth rate fell sharply and actually became negative. When the growth rate is negative, the value of GDP falls. In the last quarter of 2008, the EU growth rate was –3 per cent. This sharp decline was caused by the global recession.




▲ **Figure 25.2** Economic growth in the EU, 1996–2016

## LIMITATIONS OF GDP AS A MEASURE OF GROWTH

Although GDP is a common measure of economic growth, it does have some limitations.

### INFLATION

Price increases can mean growth rates are misleading. For example, if an economy grows by 2.6 per cent in a year and prices also rise by 2.6 per cent, the economy has not grown. It has remained the same because the 2.6 per cent increase in *money GDP* is matched by a 2.6 per cent increase in prices. However, this problem can be overcome by using real GDP to measure growth. This involves adjusting GDP for inflation. For example, if inflation is 2.3 per cent and money GDP grows by 4.4 per cent, real GDP has grown by 2.1 per cent (that is, 4.4 – 2.3).



### POPULATION CHANGES

Population growth must be taken into account when analysing growth patterns. For example, if GDP grows by 2.8 per cent in a year, and the population also rises, this increase in population will offset the growth in GDP. GDP will therefore be difficult to calculate. To overcome this problem, changes in *GDP per head or per capita* can be calculated. GDP per capita can be calculated by dividing GDP by the size of the population. In 2015, GDP per capita in the EU and in Kenya, for example, was US$35 079 and US$1133, respectively.

### STATISTICAL ERRORS

Gathering the data needed to calculate national income is a huge task. The government collects millions of documents from firms, individuals and other organisations. Unfortunately, errors are made because the information has been entered inaccurately or left out. Therefore, the true value of GDP is never really known.

### THE VALUE OF HOME PRODUCED GOODS

Some goods and services are not traded and therefore economic activity is not recorded. Examples might include people growing their own produce in gardens and the work done by DIY enthusiasts. In undeveloped countries, people rely almost entirely on their own produce to live. It is not traded and therefore not recorded. As a result, if such activities are not recorded, the value of national income is underreported.

### THE HIDDEN ECONOMY

Sometimes paid work goes unrecorded. For example, a friend may drive a family to an airport for US$25 cash. This US$25 will not be recorded. The transaction becomes part of the hidden, 'black' or informal economy. Certain paid services go unrecorded in this way. People may do a variety of jobs for cash and not record transactions.

### GDP AND LIVING STANDARDS

GDP is used to measure living standards. However, just because GDP rises, it does not automatically mean that living standards have also risen. Other factors have to be taken into account such as:

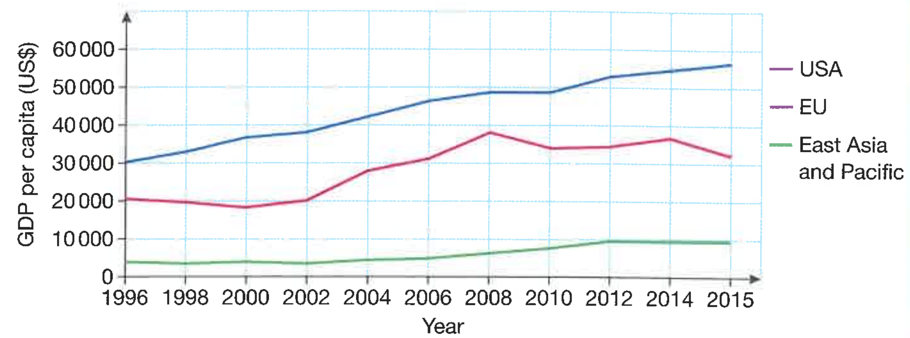
- the amount of leisure time people have
- the way extra income is shared between the population
- whether growth has resulted in pollution
- the quality of goods and services.

### EXTERNAL COSTS

GDP does not take into account external costs such as environmental costs. For example, the price of plastic is cheap because it does not include the cost of disposal. As a result, GDP does not measure how these costs impact on the well-being of society.

## ACTIVITY 1

### CASE STUDY: ECONOMIC GROWTH IN USA, EU AND EAST ASIA AND PACIFIC

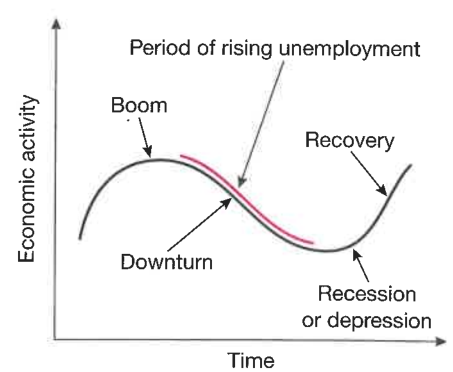



▲ **Figure 25.3** GDP per capita for the USA, EU and East Asia and Pacific, 1996–2015

1. What is meant by (a) GDP and (b) GDP per capita?
2. Which country/region has performed the best over the period? Explain your answer.
3. Which country/region had the lowest GDP per capita in 2015?
4. Which country/region had the most inconsistent economic growth over the period?

## THE ECONOMIC CYCLE

Over a period of time, GDP is expected to grow. However, the rate of growth is not likely to be smooth. There is likely to be some variation and it is also possible for GDP to fall. This variation is often referred to as the economic, trade or business cycle. Figure 25.4 shows these variations and identifies four different phases: boom, downturn, recession and recovery.




▲ **Figure 25.4** Economic, trade or business cycle

## THE IMPACT OF THE ECONOMIC CYCLE ON GROWTH, EMPLOYMENT AND INFLATION

**SUBJECT VOCABULARY**

**boom** peak of the economic cycle where GDP is growing at its fastest

### BOOM

The peak of the cycle is called a **boom**. During a boom, GDP is growing fast because the economy is performing well. Existing firms will be expanding and new firms will be entering the market. Demand will be rising, jobs will be created, wages will be rising and the profits made by firms will be rising. However, prices may also be rising.



### DOWNTURN

A boom will be followed by a **downturn**. The economy is still growing but at a slower rate. Demand for goods and services will stop increasing or begin to fall, unemployment will start to rise and wage increases will slow down. Many firms will stop expanding, profits may fall and some firms will leave the market. Prices will rise more slowly.

**SUBJECT VOCABULARY**

**depression** or **slump** bottom of the economic cycle where GDP starts to fall with significant increases in unemployment

**downturn** period in the economic cycle where GDP grows, but more slowly

**recession** period of temporary economic decline during which trade and industrial activity are reduced, generally identified by a fall in GDP in two successive quarters

### RECESSION OR DEPRESSION

At the bottom of the economic cycle, GDP may be flat. If GDP starts to fall, the bottom of the cycle may be referred to as a **depression** or **slump**. Such a period is often associated with widespread poverty. Demand will start to fall for many goods and services – particularly non-essentials. Unemployment rises sharply, business confidence is very low, bankruptcies rise and prices become flat. The prices of some things may even fall. A less severe version of a depression is a **recession**.

### RECOVERY

When GDP starts to rise again, there is a recovery or an upswing in the economy. Businesses and consumers regain their confidence and economic activity is on the increase. Demand starts to rise, unemployment begins to fall and prices start to rise again.

## THE IMPACT OF ECONOMIC GROWTH

Promoting growth is one of the government's key macroeconomic objectives. Generally economic growth is beneficial, but not always. The different impacts that economic growth can have are outlined below.

### EMPLOYMENT

Economic growth is the result of businesses generating more output. As businesses produce more, they need more workers. Consequently, economic growth raises employment levels, and thus reduces unemployment. Governments also tend to spend more during periods of economic growth. This will also help to create more jobs – in education, health care and infrastructure development, for example.

### STANDARDS OF LIVING

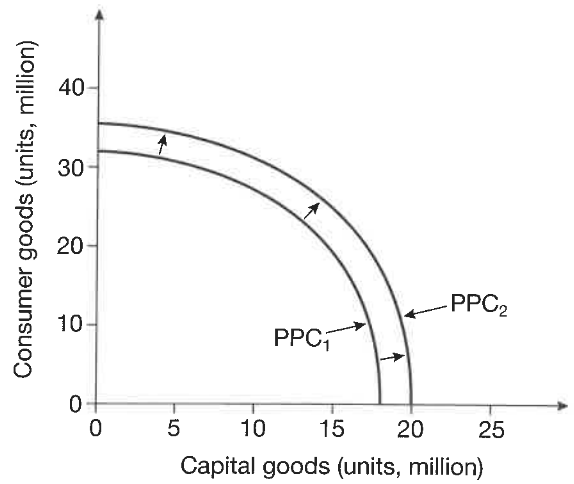
Increases in GDP mean that on average people have more income. With more disposable income, people can buy more goods and services. They can buy better quality food, improved housing and more leisure goods. Also, as the economy grows, it is possible to spend less time working. This is because there have been significant improvements in efficiency. Fifty years ago, many people worked a six-day week. Today most people work for 35 hours over just 5 days. People may also retire earlier. Finally, owing to economic growth, people are living longer. People can afford healthier diets and there have been advances in medical technology, which have all helped to increase life expectancy. Consequently, economic growth brings improved living standards.

### POVERTY

Rapid economic growth in some developing countries has helped to reduce poverty. The expansion of existing businesses and the development of new businesses create jobs, some of which will be taken by the poor. For example, in India after 1991, GDP per capita grew nearly two-and-a-half times faster than in the previous 35 years. During this time, the fall in poverty also accelerated. In addition, a growing economy means that the government is able to collect more tax revenue. Most tax revenues are linked to income and spending, which both increase when the economy grows. Therefore, the government can spend more on services such as health care, education and provision for the poor. Extra government spending is often targeted at the poor, which can help reduce poverty.

## PRODUCTIVE POTENTIAL

Economic growth can raise the productive potential of a country. This means that a country can produce more goods and services. This can be shown using production possibility curves (PPCs). Figure 25.5 shows that economic growth will shift the PPC out to the right from $PPC_1$ to $PPC_2$. In this example, it means the country can produce more of both capital goods and consumer goods.




▲ **Figure 25.5** Economic growth and the PPC

## INFLATION

If economic growth is too fast, the economy may **overheat**. This can cause inflation, which is bad for an economy (see Chapter 26, pages 203–210). In many parts of the world in the late 1990s and 2000s, there was a house price boom. House prices rose so sharply that many people could not afford to buy a house. In the last 10 years, inflation has not been a serious problem in many countries. This could be because of the relatively low levels of economic growth in most of these countries.

## THE ENVIRONMENT

Environmental groups believe that the benefits of growth are lower than the costs of generating that growth. For example, as economies grow, more cars are purchased and more flights are taken. Both car and air transport contribute to greenhouse gases which cause global warming. In some countries, such as China and India, very high levels of pollution have accompanied high levels of economic growth. Also, economic growth uses up non-renewable resources such as oil, gas, gold and iron ore. Once they have been used, they cannot be replaced. Economic growth means that future generations will have fewer resources. This is referred to as **unsustainable growth**.

**SUBJECT VOCABULARY**

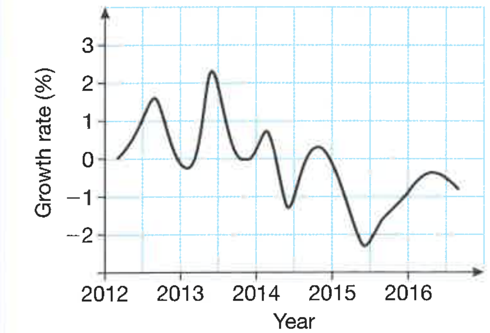
**overheat** if an economy overheats, demand rises too fast, causing prices and imports to rise, a situation that governments may try to correct by raising taxes and interest rates

**unsustainable growth** economic growth that it is not possible to sustain without causing environmental problems

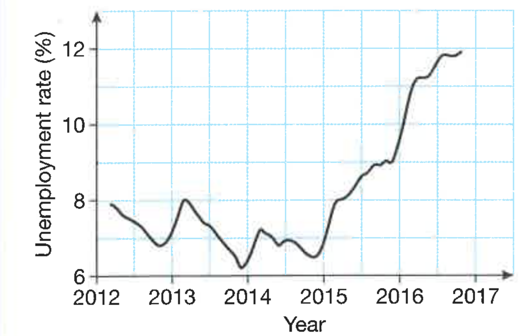


**ACTIVITY 2**

## CASE STUDY: ECONOMIC GROWTH AND UNEMPLOYMENT IN BRAZIL




▲ **Figure 25.6** Economic growth in Brazil, 2012–16




▲ **Figure 25.7** Unemployment in Brazil, 2012–16

Look at Figure 25.6 and Figure 25.7.

1 Describe the possible relationship between economic growth and unemployment in Brazil between 2012 and 2016.

2 What is the likely cause of the relationship identified in your anser to question (1)?

3 What happened in the Brazilian economy in 2015? Use a PPC diagram to support your answer.

## MULTIPLE-CHOICE QUESTIONS

▶ 1 The value of GDP for a country in 2015 was US$980 000 million. In 2016, the value was US$1 020 000 million. What is the rate of economic growth over these 2 years?

A 40.8 per cent
B US$1 020 000 million
C US$408 000 million
D 4.08 per cent

▶ 2 Which of the following is a benefit of economic growth?

A Higher cost of living
B Higher levels of employment
C Higher levels of taxation
D Lower government spending

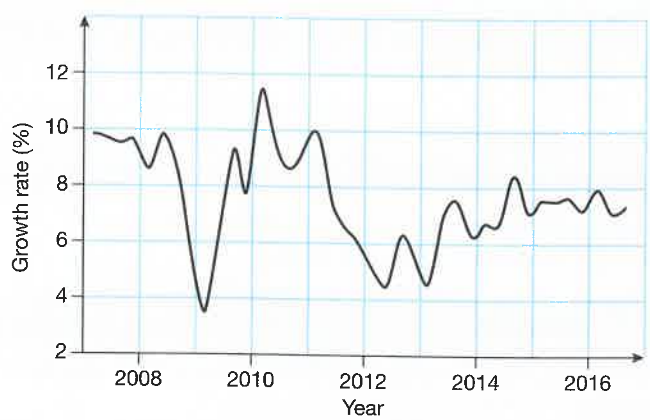
ECONOMICS IN PRACTICE

## CASE STUDY: ECONOMIC GROWTH IN INDIA

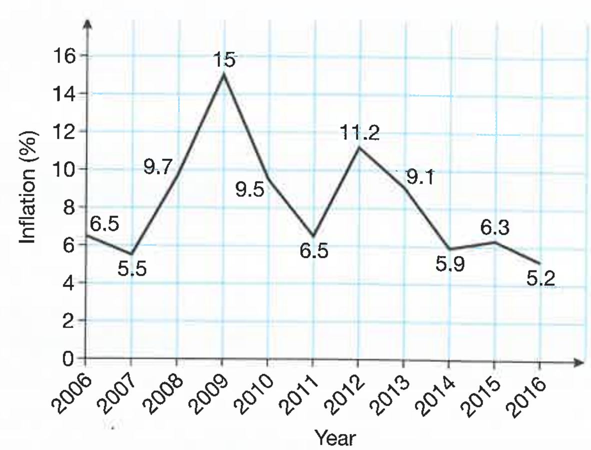
India has enjoyed some very high levels of economic growth in the last 10 years or so. For example, Figure 25.8 shows growth in GDP reached 11 per cent in 2010. During this period, it is clear that some of the benefits have helped the poor. For example, there has been an increase in the percentage of people who can read and write and a fall in the number of children under the age of one year who die throughout the country. Census data showed that literacy improved from 64.8 to 74.04 per cent of the population between 2001 and 2011. Also, the infant mortality rate (per 1000 live births) fell from 80 in 1991 to 50 in 2009. Life expectancy (the average period that a person may live) in India has also improved from 55.7 in 1981–85 to 64.2 in 2002–06.

With the high rates of economic growth, the government has enjoyed a significant boost in tax revenues. As a result, the Indian government has introduced policies to reduce poverty and generate employment. Two of the schemes include the Rural Health Mission and Mahatma Gandhi National Rural Employment Guarantee Scheme. The latter aims to provide at least 100 days of guaranteed wage employment each year to every Indian household including women. As a result, 52.6 million households were provided with jobs in 2009–10. Evidence also suggests that the poorest Indian states benefitted the most.

The government has also invested heavily in infrastructure development. For example, the government is committed to a huge road construction programme. The country's road network has expanded at rate of 4 per cent, which has added more than 4.8 million kilometres of additional roads since 1951. However, more is needed since the network is still underdeveloped. India now has the second-largest road network after the USA, with 5.23 million kilometres of roads, of which 3.17 million are surfaced.




▲ Figure 25.8 Economic growth in India, 2008–16




▲ Figure 25.9 Inflation in India, 2006–16

### CHAPTER QUESTIONS

1 How is economic growth measured?

2 Describe two limitations of using GDP as a measure of economic growth.

3 What was happening in the Indian economy over the period shown in Figure 25.8. Use a drawing of the economic cycle to support your answer.

4 Discuss the possible link between economic growth and inflation in India.

5 Consider the possible benefits of economic growth to India.



# 26 INFLATION

### LEARNING OBJECTIVES

- Understand how to define inflation and deflation
- Understand how inflation is measured
- Understand the different types of inflation: demand pull and cost push
- Understand the relationship between inflation and interest rates
- Understand the impact of inflation on: prices, wages, exports, unemployment, menu costs, shoe leather costs, uncertainty, business confidence, consumer confidence and investment

### GETTING STARTED

It is unlikely that the prices of the goods and services bought by households and firms will stay the same over a period of time. For example, over a period of one year, the prices of many items will probably rise. Look at the example below.

## CASE STUDY: THE SAMUELSEN HOUSEHOLD

Stefan and Omar Samuelsen and their two children live in Trondheim, Norway. In 2016, they noticed that the prices of certain goods and services had changed. For example, the annual gas bill had risen from NOK 8000 to NOK 8340. The weekly grocery bill for essentials had also increased. Two till receipts are shown in Table 26.1. Olga Thompson also noticed that the price of her annual gym membership had risen from NOK 2000 to NOK 2300. However, her brother Julian pointed out the price of petrol for his car had fallen from NOK 150 per litre to NOK 140 per litre.

1 Calculate the percentage change in (a) the gas bill and (b) the grocery bill.

2 Which of the bills in (1) have increased the most?

3 Describe **one** possible reason why the gas bill may have risen by so much.

4 Describe **one** possible reason for the change in the price of petrol for Julian's car.

| | 2015 KRONE |
|---|---|
| Bread (5 loaves) | 150 |
| Milk (7 l) | 120 |
| Fish (2 kg) | 210 |
| Chicken (2 free range) | 190 |
| Rice (1 kg) | 19 |
| Cheese (2 kg) | 220 |
| Butter (1 kg) | 20 |
| Coffee (250 g) | 44 |
| Bran Flakes (750 g) | 24 |
| Krumcakes (12) | 120 |
| Cola (4 l) | 80 |
| Chocolate | 60 |
| **Total** | **1257** |

| | 2016 KRONE |
|---|---|
| Bread (5 loaves) | 155 |
| Milk (7 l) | 115 |
| Fish (2 kg) | 220 |
| Chicken (2 free range) | 180 |
| Rice (1 kg) | 17 |
| Cheese (2 kg) | 230 |
| Butter (1 kg) | 21 |
| Coffee (250 g) | 48 |
| Bran Flakes (750 g) | 25 |
| Krumcakes (12) | 130 |
| Cola (4 l) | 83 |
| Chocolate | 64 |
| **Total** | **1288** |

▲ Table 26.1 A comparison of the Samuelsen family's grocery bills from 2015 and 2016

## WHAT IS INFLATION?

**SUBJECT VOCABULARY**

**aggregate demand** total demand in the economy including consumption, investment, government expenditure and exports minus imports

**deflation** period where the level of aggregate demand is falling

**inflation** rate at which prices rise, a general and continuing rise in prices

**Inflation** can be defined as a general and continuing rise in prices. If the prices of goods and services are going up generally in the economy over a period of time, inflation is said to exist. For example, according to Figure 26.1, in 2016, the inflation rate in Peru was 3.2 per cent. So prices rose on average by 3.2 per cent during the year. This means that PEN 4000 of goods purchased in 2015 would cost PEN 4128 (PEN 4000 + 4000 × 3.2 per cent) in 2016.

Sometimes prices fall over time. In 'Getting started', the price of petrol for Julian's car fell from NOK 150 per litre in 2015 to NOK 140 in 2016. However, falling prices are not as common as rising prices. **Deflation** is the term used to describe a fall in average prices. However, deflation may also be used to describe a slowdown in the economy – a period where **aggregate demand** is falling. Aggregate demand in the economy is total demand from consumers, businesses, the government and foreign buyers (but excludes demand for goods purchased from overseas). It includes consumption, investment, government expenditure and exports minus imports.

**SUBJECT VOCABULARY**

**consumer price index (CPI)** measure of the general price level (excluding housing costs)

**retail price index (RPI)** measure of the general price level, which includes house prices and council tax

Governments usually measure and monitor the rate of inflation. In the EU and many other counties, inflation is measured using the **consumer price index (CPI)**. The CPI is a measure of average prices calculated from the same price information. Every month, the government records the prices of about 600 goods and services purchased by over 7000 families. An average monthly price is then worked out from all the information gathered. This average price is then converted into an index number. This allows comparisons to be made between two different periods. The CPI is the measure used worldwide and is the measure used in Figure 26.1.


▲ **Figure 26.1** Inflation in Peru, 2007–16

## ACTIVITY 1

### CASE STUDY: EU INFLATION

Figure 26.2 shows the EU inflation rate between 2006 and 2016. The CPI increased by 1.1 per cent at the end of 2016. This was the highest inflation rate since September 2013. Inflation was boosted by the rising prices of fuel. The highest rate was in Estonia, where CPI rose by 2.4 per cent. In contrast, negative inflation rates were recorded in a number of countries – Bulgaria and Ireland, for example, where the rates were –0.5 per cent and –0.2 per cent, respectively.




▲ **Figure 26.2** EU inflation, 2007–16 (percentage change in the CPI)

1 Describe what has happened to the EU inflation rate over the time period.

2 When did the EU experience deflation?

3 How is the EU inflation rate measured in this case?

4 In pairs, find out the inflation rate in your country for the last 3 years. Compare this with inflation rates in three other countries of your choice. Present your findings on a poster to the rest of the class.

## TYPES OF INFLATION

Inflation may be caused by different factors and there is often some disagreement about the importance of each one. This is because different economists have different views about the causes of inflation.

### DEMAND-PULL INFLATION

**SUBJECT VOCABULARY**

**demand-pull inflation** inflation caused by too much demand in the economy relative to supply

Some economists argue that inflation can be caused by too much demand in the economy. This is called **demand-pull inflation**. Chapter 7 (see pages 41–48) explained that in any market, if demand increases, there would be an increase in price. This will be the same for the whole economy. If aggregate demand increases, there will be an increase in the general price level. Aggregate demand is the total demand in the economy. So, demand-pull inflation could be caused by:

- rising consumer spending encouraged by tax cuts or low interest rates
- sharp increases in government spending
- rising demand for resources by firms
- booming demand for exports.

**DID YOU KNOW?**

**Demand-pull inflation is most likely to occur if the economy is close to full employment. As consumers, businesses, foreigner visitors and the government increase their spending levels, total demand in the economy will begin to rise. If businesses are close to full capacity, they will find it difficult to produce the extra output to meet this demand. As a result, they are likely to respond by raising their prices. In sectors where businesses find it almost impossible to produce more, and where the increase in demand is at its greatest, prices are likely to rise more sharply.**

**SUBJECT VOCABULARY**

**cost-push inflation** inflation caused by rising business costs

## COST-PUSH INFLATION

Another theory is that inflation can be caused by rising costs. This is called **cost-push inflation**. When businesses are faced with rising costs, they put up their prices to protect their profit margins. As a result, inflation is caused.

For example, a retailer buys goods from a supplier for £10 per unit. The retailer then adds 10 per cent of the cost to get the selling price. This is £11 (£10 × 0.10). If the cost of this product from the supplier rises to £12, the new price will be £13.20 (£12 × 0.10). The retailer has increased the price of the product from £11 to £13.20 because costs have risen. This is cost-push inflation. If the retailer did not increase the price when the cost rose, profits would be reduced. Costs might rise for a number of reasons.

It has been suggested that cost-push inflation in the UK has been caused by the rising costs of imported goods, such as oil. For example, in the early 1970s, the price of imported oil went up by around 400 per cent. Shortly after, inflation in the UK reached heights of almost 25 per cent.

Wage increases might also cause cost-push inflation. For example, in the 1970s, trade unions became quite strong and were able to put pressure on employers to increase wages (see Chapter 23, pages 173–180). Employers recovered the extra money paid to workers by increasing prices.

Increases in taxation can also cause cost-push inflation. For example, in 2010, the Greek government increased VAT from 13 per cent to 23 per cent, and then again to 24 per cent in 2016. If entrepreneurs try to increase the amount of profit they make, this can also cause cost-push inflation. This is because raising the selling price can return higher profits.

## ACTIVITY 2

### CASE STUDY: DEMAND PULL INFLATION

The global demand for zinc has been rising since the beginning of 2016. One of the main contributors to the rising demand has been growth in the motorcar industry in China. The rising demand has resulted in higher prices for zinc. Figure 26.3 shows the price of zinc between 2016 and 2017. It has risen from around US$1500 per tonne in January 2016 to US$2600 per tonne in April 2017.


▲ **Figure 26.3** Changes in the price of zinc

1. Calculate the percentage increase in the price of zinc between January 2016 and April 2017.
2. What is meant by demand-pull inflation? Use this case as an example in your explanation.
3. Explain how zinc mining companies might respond to the rising price of zinc in the market.



## THE RELATIONSHIP BETWEEN INFLATION AND INTEREST RATES

**SUBJECT VOCABULARY**

**interest rates** price paid to lenders for borrowed money; it is the price of money
**monetarists** economists who believe there is a strong link between growth in the money supply and inflation

Another theory of inflation is held by a group of economists called **monetarists**. Monetarists believe there is a strong link between inflation and growth in the money supply. The money supply is the stock of notes and coins, bank deposits and other financial assets in the economy. This is explained in Chapter 32 (pages 259–265). Inflation may be caused when households, firms and the government borrow more money from banks to fund extra spending. This adds to the money supply because there are now more bank deposits (the borrowed money increases bank balances). The extra money lent by the banks creates more demand and prices are driven up. This type of inflation is more likely to happen if **interest rates** are low. This is because borrowing is likely to increase when interest rates are low.

In the past, some governments have raised interest rates to bring down the rate of inflation. If interest rates rise, borrowing will fall as it becomes more expensive, the money supply will grow less quickly and demand will fall. As a result, the pressure on prices is relieved so inflation will fall.

## THE IMPACT OF INFLATION

**SUBJECT VOCABULARY**

**purchasing power of money** amount of goods and services that can be bought with a fixed sum of money

### PRICES

One of the main problems of inflation is that prices are rising. As a result, inflation reduces the **purchasing power of money**. This means that people cannot buy as much with their income. Therefore, households will experience a fall in their living standards. However, if incomes are rising as fast, or faster than prices, this may not be a problem for individuals.

### WAGES

When prices are rising, workers need to increase their wages to compensate for the loss in purchasing power. If workers can negotiate higher wages with their employers, they will get more money. However, as a result of the higher wages, firms may need to raise their prices because costs have risen. If this pattern is repeated, a wages/prices spiral develops. This means that higher prices lead to higher wages, which then leads to higher prices and so on. Demands for higher wages when there is inflation can cause conflict between employers and trade unions. Such conflict could result in a strike and both workers and firms would lose out.

### EXPORTS

If inflation is higher at home than in other countries, firms may find it difficult to sell in overseas markets. This is because the prices of exports rise. As a result, demand for exports is likely to fall which means that the balance of payments (see Chapter 28, pages 220–227) is affected negatively. Falling demand for exports will also result in job losses for those people employed by businesses that sell goods abroad.

### UNEMPLOYMENT

High levels of inflation usually mean that aggregate demand is rising. As a result, firms will be keen to increase output since the prices of goods is increasing. This means that firms will need to recruit more workers, which reduces unemployment. It has been suggested in the past that a trade-off exists between inflation and unemployment. This means that if the government wants to reduce inflation, it will have to accept higher levels of unemployment. However, some economists suggest that this relationship is not always found. For example, in countries where inflation is very high indeed, such as Venezuela and Iran, unemployment has also risen sharply.

## MENU COSTS

If inflation is rapid, firms will have to increase their prices frequently. This will cost money because customers have to be told. New brochures will have to be printed, websites updated and sales staff informed. These are called **menu costs** because, for a restaurant, when prices are increased a new menu has to be printed.

**SUBJECT VOCABULARY**

**menu costs** costs to firms of having to make repeated price changes

**shoe leather costs** costs to firms and consumers of searching for new suppliers when inflation is high

## SHOE LEATHER COSTS

When prices are changing frequently consumers and firms will have to spend more time looking for the lowest prices or the best value for money. This involves 'shopping around', which is a cost because it takes time and wears out the leather on your shoes. Hence, these are called the **shoe leather costs** of inflation.

## UNCERTAINTY

If inflation is high and varying, firms do not know what prices will be in 3 or 6 months' time, and predicting years ahead becomes impossible. However, decisions have to be made now which will affect the business in the long term. Inflation creates uncertainty, which makes planning for the future very difficult. Making investment decisions is particularly difficult. This is discussed below. Another problem with uncertainty is linked to entering long-term contracts. A customer might approach a firm wanting to buy goods on a regular basis for the next 3 or 4 years. How can a supplier set a price for this contract if it does not know what the inflation rate will be over this time?

## BUSINESS AND CONSUMER CONFIDENCE

The uncertainty caused by inflation may have an effect on the confidence of consumers and businesses. For example, inflation might make consumers anxious. They may become more cautious – less willing to borrow money, for example. They may start to save more, so they have reserves for unforeseen circumstances. This behaviour will reduce demand, which may not be good for job security in the economy. Businesses may lose their confidence during periods of high inflation as well. They may postpone growth plans or reduce their spending on product development. When businesses lack confidence, they are less likely to take risks. As a result, economic growth rates tend to fall.

**SUBJECT VOCABULARY**

**hyperinflation** very high levels of inflation; rising prices get out of control

If **hyperinflation** exists, where price increases are out of control, rising at several hundred or thousand per cent a year, for example, money may not be accepted as a means of payment. As a result, both consumers and businesses become very worried indeed. Hyperinflation can destabilise a country.

## INVESTMENT

Inflation often results in a decline in business investment. This is because investment requires spending quite large amounts of money now in the hope of returns over a future period of time – perhaps up to 5, 10 or more years. Owing to the uncertainty about future prices created by inflation, and the lack of business confidence among decision makers, investment projects are likely to be postponed or cancelled. This will have a negative impact on economic growth and the future level of employment in the economy.



## MULTIPLE-CHOICE QUESTIONS

▶ 1 Inflation caused by firms raising prices owing to increased wages, for example, is called:

**A** Demand-pull inflation
**B** Hyperinflation
**C** Deflation
**D** Cost-push inflation

▶ 2 Which of the following is likely to cause demand-pull inflation?

**A** Falling consumer spending fuelled by higher taxes
**B** A substantial fall in exports
**C** Rapid increases in government spending
**D** A rise in interest rates

## ECONOMICS IN PRACTICE

## CASE STUDY: INFLATION IN VENEZUELA

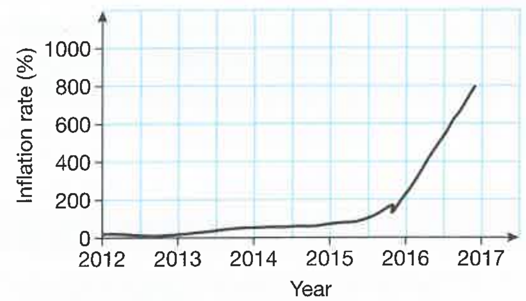
One of the government's macroeconomic objectives is to keep inflation down. This is because inflation can be harmful. Inflation can cause problems for consumers, firms and the economy. In recent years, Venezuela has seen some unbelievable price increases. Some economists predicted that inflation would reach 1600 per cent in 2017. Figure 26.4 shows the rate of inflation in Venezuela between 2012 and 2016.

Inflation at this level (hyperinflation) can have serious consequences. In Venezuela, the government declared a state of emergency. Venezuelans are dying of treatable illnesses caused by shortages of medical supplies. There are regular shortages of basic foods, such as milk, eggs and vegetables. Inflation has become so bad that the government ordered millions of pounds of provisions to be airdropped across the country. The army now controls food supplies and people have to queue up for hours in the hope that they can buy something. In December 2016, Venezuela's credit card and cash machine system froze. This meant that businesses could not process **transactions** and had to ask for cash or delay payment. Venezuela is now distributing new higher-value notes to deal with some of the practical problems of sky high inflation. For example, a backpack full of cash is often needed to pay supermarket bills. The central bank has now introduced six new bills ranging from VEF 500 to 20 000. Before this, the largest note was VEF 100 and worth about 2 US cents. One person interviewed by the media said, 'I still go to the open market to buy fruit but even there it is ridiculous. In April 2015, I bought some fruit and vegetables for 430 bolivars. Last Saturday the same items cost me 14 000 bolivars. Isn't that crazy?'

**SUBJECT VOCABULARY**

**transactions** payment, or the process of making one

The economy is now in a deep recession with rising unemployment and huge government debt. One of the problems is that the falling oil price in 2014 resulted in a loss of earnings for businesses and lower tax revenues for the government. Venezuela's economy relies very heavily on oil production. For example, oil sales account for nearly 90 per cent of the nation's exports. Many feel that the only hope now is to receive assistance from the International Monetary Fund (IMF). However, Venezuela cut links with the IMF many years ago.




▲ Figure 26.4 Inflation in Venezuela, 2012–16

▲ Shortages of produce in Venezuela

## CHAPTER QUESTIONS

In 2016, some goods purchased in Venezuela cost VEF 50 000.

1 Calculate how much these goods would cost a year later if inflation reached 1600 per cent.

2 Comment on the scale of inflation in Venezuela.

3 Describe two negative impacts that households in Venezuela have experienced as a result of inflation.

4 Describe the difference between the menu costs and the shoe leather costs of inflation.

5 Discuss the impact that inflation in Venezuela might have on business confidence and investment.



# 27 UNEMPLOYMENT

## LEARNING OBJECTIVES

- Understand how unemployment is measured
- Understand the different types of unemployment: cyclical, structural, seasonal, voluntary and frictional
- Understand the impact of unemployment on: output, use of scarce resources, poverty, government spending on benefits, tax revenue, consumer confidence, business confidence and society

## GETTING STARTED

It is important for a government to keep as many people as possible in work. If people do not work, they make no contribution to national production and their labour is wasted. Also, the living standards of those out of work are not as good as those with jobs. People can be without jobs for a number of reasons. Look at the examples below.

## CASE STUDY: KOSTAS MANTALOS

Kostas Mantalos is married with a one-year old son. He lives on the Greek island of Kos. He works at one of many tourist hotels on the island. He is employed as a waiter and works 12 hours a day, 6 days a week between April and October. Unfortunately, he is not required from November to March. He earns €12 000 a year (plus tips) and is used to this pattern of work. However, he struggles financially when not working.

▶ A hotel in Kos

## CASE STUDY: MAUREEN CONTE

Maureen was employed as a cost accountant by a construction company specialising in the building of oilrigs. However, in January 2015, she was made redundant as the company struggled to survive in an increasingly competitive market. Owing to a fall in the global oil price, there was a huge reduction in the number of oil-related construction projects being started. As a result, Maureen and four of her colleagues were laid off. Maureen hopes to get another job, but she is not confident because she has quite a specialised set of skills.


▶ An oilrig under construction

1 Why is Kostas Mantalos not employed after the end of October each year?

2 Why was Maureen was made redundant?

3 Why should a government be concerned about unemployment?

4 In pairs, find out the level of unemployment in your country and make comparisons with three other countries of your choice.

## WHAT IS UNEMPLOYMENT?

Unemployed people are defined as those who want a job but cannot find work. **Unemployment** is a waste of resources. If people are not working, they are not making any contribution to economic output in their country. Therefore, that country's GDP will be lower. Unemployment will also cause hardship to those who cannot find work. Their living standards will be very low compared to most of those in work. Economists might define unemployment as those without a job but who are actively seeking work at current wage rates.

**SUBJECT VOCABULARY**

**unemployment** when those actively seeking work are unable to find a job

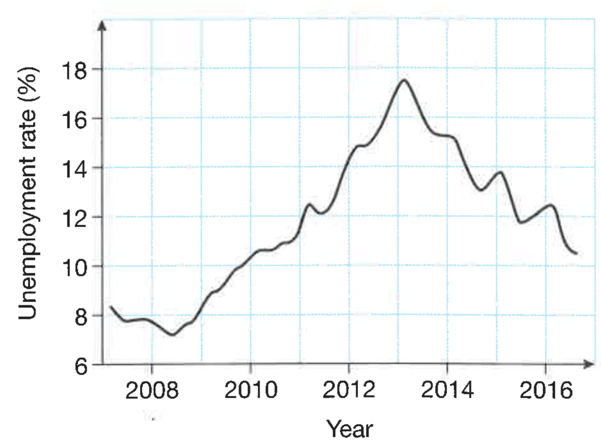
## HOW IS UNEMPLOYMENT MEASURED?

In 2016, Portugal had a population of just over 10 million. However, many of these people were not able to work – they were children or retired, for example. The number of people able to work was just over 5 million. But in November 2016, 549 000 of these were not in work. They were unemployed. This means they were actively seeking work but were not able to find a job.

One method used to measure unemployment in much of the world is to carry out a survey. The survey used (in the EU) is called the Labour Force Survey (LFS) and is carried out every month. In the survey, the International Labour Organisation (ILO) defines unemployment. This definition is used internationally so that comparisons can be made. Figure 27.1 shows unemployment in Portugal between 2006 and 2016. The rate is expressed as a percentage of the workforce. It was 10.5 per cent in the third quarter of 2016.

**KEY FACTS**

**Unemployed people**
The ILO defines unemployed people as:
- without a job, want a job, have actively sought work in the last 4 weeks and are available to start work in the next 2 weeks, or
- out of work, have found a job and are waiting to start it in the next 2 weeks.




▲ Figure 27.1 Unemployment in Portugal, 2006–16

In general, anyone who carries out at least one hour's paid work in a week, or who is temporarily away from a job (for example, on holiday), is in employment. Also counted as in employment are people on government-supported training schemes and people who do unpaid work for their family's business. Those who are out of work but do not meet the definition of unemployment are said to be *economically inactive*. Figure 27.2 shows examples of different individuals' employment status.



**Examples: Individuals' employment status**

| Example | ILO Classification |
|---|---|
| Mr A worked 36 hours last week as a lorry driver. | In employment |
| Mrs B lost her job as a secretary 3 months ago. Every week she visits an employment agency to try to find a new job, which she would be able to start immediately. | Unemployed (out of work, wants job, has actively sought work in the last 4 weeks and is available to start work within 2 weeks) |
| Ms C looks after her one-year-old son. She neither holds a job, nor wants a job. | Economically inactive – she does not want or have a job |
| Mr D has no job from which he receives any pay or profit. However, he helps in his parents' shop for around 20 hours per week. | In employment |
| Mrs E is currently receiving training at a local hairdresser. This is being partly paid for by the government. She works 28 hours a week and goes to college for one day. | In employment |
| Ms F is out of work, but stopped looking for new job a year ago as she does not believe any jobs are available. | Economically inactive |

▲ Figure 27.2 Examples of individual employment status

**DID YOU KNOW?**
In some countries, a second method is used to measure unemployment. This is the claimant count and includes all those people who claim Jobseeker's Allowance (as it is known in the UK), or some other form of state unemployment benefit. The claimant count will always be lower than the ILO count because it excludes some groups. For example, unemployed women who are actively seeking work but are not entitled to benefits are not included.

## TYPES OF UNEMPLOYMENT

People are unemployed for a number of reasons.

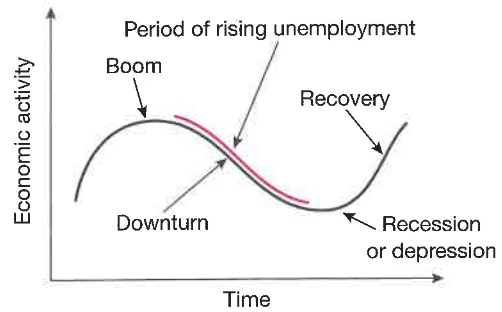
### CYCLICAL OR DEMAND DEFICIENT UNEMPLOYMENT

**Cyclical or demand deficient unemployment** is linked to the economic cycle. When an economy moves from a boom into a downturn, business activity slows down and people are laid off. This will continue and worsen if the economy goes into a recession or depression. People lose their jobs because demand for goods and services starts to fall. Firms often react to falling demand by **laying off** staff. Figure 27.3 shows the economic cycle and the position where cyclical unemployment starts to rise.

**SUBJECT VOCABULARY**

**cyclical or demand deficient unemployment** unemployment caused by falling demand as a result of a downturn in the economic cycle

**laying off** to stop employing someone because there is no work for them to do




▲ Figure 27.3 Economic cycle and unemployment

**SUBJECT VOCABULARY**

**structural unemployment** unemployment caused by changes in the structure of the economy such as the decline in an industry

## STRUCTURAL UNEMPLOYMENT

Over a period of time, the structure of an economy changes. For example, in most developed countries, over time, the manufacturing sector declines and the service sector grows. Changes in the structure of the economy can result in **structural unemployment**. There are three main types.

- **Sectorial unemployment** occurs when people are laid off because the industry they work in is in decline.
- **Technological unemployment** occurs when jobs that were previously done by people are now done by machines. The development and introduction of computers in the last 20 years or so has made a huge difference to production methods in many industries. These new methods usually involve replacing some labour with technology. For example, banks have cut their workforces because people can bank online and get their cash from automatic teller machines (ATMs).
- **Regional unemployment** Unemployment in a particular country is not likely to be the same in all regions. For example, in the UK, unemployment has tended to be much lower in the south-east of England than in the north-east of England. One reason for this is linked to the decline in certain industries. For example, the north-east has suffered owing to the decline in the shipbuilding and mining industries. At the same time, the south-east has benefited from the growth in financial services.

## SEASONAL UNEMPLOYMENT

Some types of workers are only required for certain times of the year. For example, in holiday resorts, hotels, restaurants and tourist attractions take on more staff during the holiday season. In most of Europe this would be the summer. People who do this work are seasonal workers and are unemployed when the season ends. There is little that can be done to reduce **seasonal unemployment** because it is usually linked to the climate.

**SUBJECT VOCABULARY**

**frictional unemployment** when workers are unemployed for a short period of time as they move from one job to another

**seasonal unemployment** unemployment caused when seasonal workers, such as those in the holiday industry, are laid off because the season has ended

**voluntary unemployment** unemployment resulting from people choosing not to work

## VOLUNTARY UNEMPLOYMENT

Most people are unemployed against their wishes. They are victims and want to work if they are given the opportunity. However, there are a minority of people in society who choose not to work. These people are said to be **voluntarily unemployed**. They may choose not to work because they are not prepared to work for the wages offered or perhaps because they do not like the idea of work in general.

## FRICTIONAL UNEMPLOYMENT

**Frictional unemployment** is short-term unemployment. It occurs when people are unemployed as they move from one job to another. Frictional unemployment will always exist in an economy but it is not considered to be a problem. For example, some people deliberately take an extended break between jobs, treating it like a holiday. Others have to wait a short while because their new employment is not due to start immediately. Unemployment for periods of up to 8 weeks is considered to be frictional.



**DID YOU KNOW?**

One of the problems with structural unemployment is that labour tends to be immobile. This means that people are slow to switch from one job (occupational mobility) or region (geographical mobility) to another. For example, it takes time to retrain having been laid off in a declining industry. Also, people living in a particular area do not want to break family ties by moving to another area, even if there are jobs available. Structural unemployment is likely to continue long term if the mobility of labour is poor.

**ACTIVITY 1**

### CASE STUDY: MARINE D'ARCY

'How unlucky can you get?' This is what Marine D'Arcy said when she was made redundant for the second time in 2 years. In 2015, Vent Plastique, a manufacturer of plastic household products based in Lyon, France, laid her off. Marine worked on the factory floor but the company was taken over and production was switched to the Far East. However, Marine managed to get another job in Lyon working in a warehouse for a mail order company. She helped to 'pick stock' and process customer orders. Unfortunately, after 18 months the company automated the warehouse resulting in 12 redundancies. Marine was one of the unlucky ones because she was a recent recruit.

▲ Warehouse work

1 What is the difference between sectorial and technological unemployment? Use the example in this case to support your explanation.

2 How might Marine improve her mobility in the labour market?

## IMPACT OF UNEMPLOYMENT

### OUTPUT

If people are unemployed, the productive potential of a country is not being fully exploited. As a result, levels of output are lower than they could be. This means that national income and living standards will be lower (on average). However, if most of the unemployment is a result of new technology being introduced, output might not fall. Output could actually increase if productivity rises.

### USE OF SCARCE RESOURCES

People who are out of work do not make any contribution to production. This is a waste of resources and results in lower levels of national income. If there is full employment in an economy, output will be higher and income per head will be higher. In some countries, youth unemployment is very high. Many consider that this is particularly wasteful.

## POVERTY

In some developing countries, many people have never worked in their lives. There have never been any employment opportunities for them. As a result, they have to live in poverty. They may try to support themselves at a minimum level by growing some food on a plot of land, for example.

Even in developed countries, most people who find themselves without a job have to suffer hardship. Their incomes fall because state benefits are generally lower than wages. In extreme cases, unemployed people lose their homes because they cannot afford mortgage payments. Sometimes the costs can extend to family break-ups and a lower self-confidence for those who are long-term unemployed.

## GOVERNMENT SPENDING ON BENEFITS

In most developed countries, when people are unemployed they are entitled to receive some financial benefit from the state. If unemployment levels rise, the government has to allocate more money to unemployment benefit. This extra expenditure will incur an opportunity cost. For example, the money could be better spent on education or health care, for example.

## TAX REVENUE

When unemployment rises, tax revenues will fall because most taxes are linked to income and spending. This means the government has less to spend and may have to cut public sector services. Alternatively, it may borrow more, which will increase national debt or it may have to increase tax rates. For example, taxes on incomes, corporate profits and spending may have to rise.

## CONSUMER CONFIDENCE

During periods of high unemployment, consumer confidence is likely to fall. Most people who find themselves without a job have to suffer hardship. Their incomes fall because state benefits are generally lower than wages. As a result, these people lose confidence and play a less significant role in the economy. Also, people who remain employed may start to worry about their own job security. Their confidence is also negatively affected. They become more cautious, which will result in lower levels of spending and probably more unemployment.

## BUSINESS CONFIDENCE

When firms lay off workers, they have to pay them redundancy money. Also, the remaining workers may be demotivated because they may fear that they will be the next to be made redundant. A firm will be left with spare capacity when laying people off and there is likely to be a fall in demand. Sales are likely to fall for most businesses when unemployment starts to rise in the economy. This is because people have less to spend. However, firms producing non-essential goods and services are likely to be hit harder. All these effects are likely to reduce the confidence of business decision makers. As a result, they are less likely to take risks and may postpone or cancel investment projects.

## SOCIETY

Sometimes unemployment can have an impact on local communities. For example, in some towns and villages, a large proportion of the population may be employed by the same business. If this business closes down, local



unemployment can be very high indeed. As a result, the spirit in many of these communities worsens. Such areas become run down. Smaller businesses start to struggle and fail because their customers are suffering hardship. Households do not have enough money to maintain their houses and gardens and the residential environment starts to look uncared for.

There may also be an impact on the wider society. For example, losing a job can be psychologically hard on workers. Individuals may doubt their value as a person. This can lead to stress within relationships. Unemployed people are less likely to get married and more likely to get divorced as their lack of work raises stress levels. Stress can also lead to poorer health. Finally, unemployment can potentially lead to crime. The unemployed still need the necessities of life. In some cases, they may turn to crime to meet their material needs.

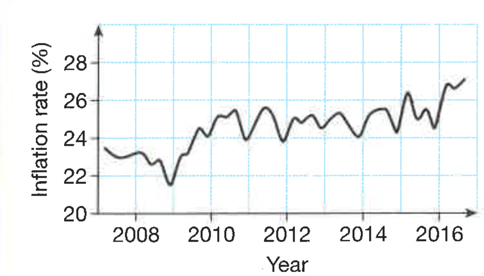
▲ Statue of South African leader Nelson Mandela in London, UK

## ACTIVITY 2

### CASE STUDY: UNEMPLOYMENT IN SOUTH AFRICA

Like many African states, South Africa suffers from very high levels of unemployment. Figure 27.4 shows the unemployment rates for the last 10 years. In 2016, unemployment reached 27 per cent. Many firms were laying off workers. For example, FNB, a South African bank, laid off 589 employees when it closed 34 branches. This was down to automation and the computerisation of some of its services. The volume of electronic transactions at FNB has increased by 14 per cent. In addition, online transactions rose by 15 per cent and the use of its app for banking services by 69 per cent. Another company, RCL Foods, laid off 1350 factory workers in the Kwazulu-Natal province. This was the result of rising cheap imports. Reports said that the chicken industry is battling for survival due to fierce competition from producers in Brazil, the EU and the USA. The long period of low rainfall in South Africa had also raised costs in food production.

Although the number of people living in poverty in South Africa fell during the Nelson Mandela government over 35 per cent of the population still live below the poverty line. The evidence is everywhere in the growing townships that surround Johannesburg, Cape Town and Durban, where millions live in extreme poverty. In one report, a taxi driver who lives in one of Cape Town's settlements, explained how dangerous it was when he returned home from work late at night. He has been robbed of his daily wages several times. However, he considers that he is lucky because he has a job. One problem in South Africa is the distribution of wealth. Between 60 and 65 per cent of the wealth belongs to the wealthiest 10 per cent of the nation.




▲ Figure 27.4 Unemployment in South Africa, 2006–16

One worrying issue is the scale of youth unemployment in the country. It has been greater than 50 per cent for most of the last 10 years. Employment for young people is very important. It is needed to help support career development. Young people in employment develop the skills such as confidence, discipline, work ethic, accountability and interpersonal skills. These are necessary to make a success of life and survive in the job market. Such high levels of youth unemployment is a dreadful waste of resources.

1 What might happen to business confidence in South Africa if the pattern of unemployment shown in Figure 27.4 continues?

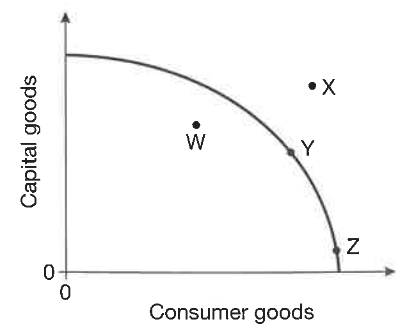
2 Discuss how unemployment has impacted on (a) poverty levels and (b) resource use in South Africa in recent years.

## MULTIPLE-CHOICE QUESTIONS

1 Which of the following refers to people out of work when moving between jobs?

A Seasonal unemployment
B Frictional unemployment
C Voluntary unemployment
D Structural unemployment

The diagram shows four positions, W, X, Y and Z, on and around a production possibility curve for a country.




2 Which of the positions illustrates that the country has unemployment?

A Position W
B Position X
C Position Y
D Position Z

## ECONOMICS IN PRACTICE

## CASE STUDY: UNEMPLOYMENT IN GREECE

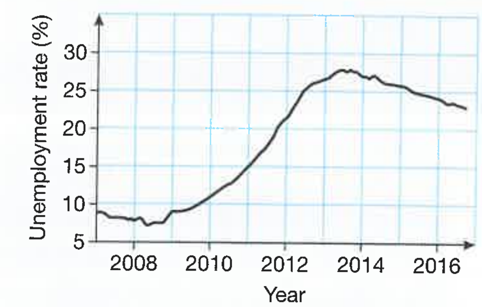
The global recession in 2008 hit many countries very hard. However, one of the hardest hit was Greece. In addition to falling demand resulting from the global recession, Greece had other economic problems. Both private sector and public sector debt was too high. From 1999 to 2008, private sector debt as a proportion of GDP more than doubled from 59 per cent to 126 per cent. The ratio of public sector debt to GDP was around 100 per cent over the same period. During this period, consumers, businesses and the government spent heavily. This was reflected in the booming level of imports. However, when the financial crisis hit the world in 2008, those with debt struggled to repay what they owed. In an effort to reduce debt, households and businesses cut their spending. This resulted in



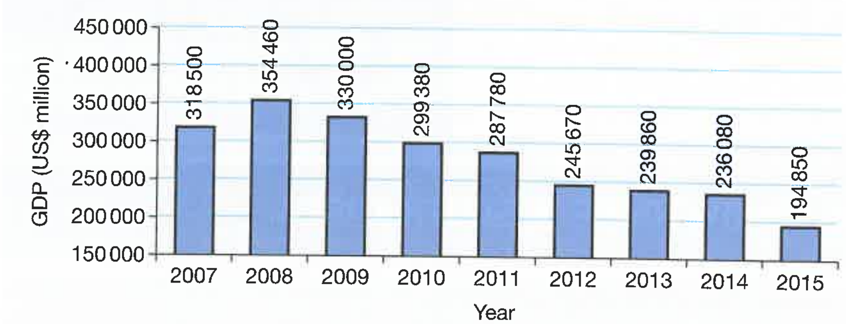
a huge increase in unemployment, which is shown in Figure 27.5. The government's debt also rose as they were faced with rising social security payments to the unemployed and lower tax revenues from falling spending and lower corporate profits.

Another problem in Greece was the nation's culture of early retirement and low tax collection. Historically, Greece spent around 17.5 per cent of its GDP on pension payments. This is the highest in the EU. The average Greek man retires at 63 and the average woman at 59. Also, some police and military workers have retired as early as age 40 or 45 in the past. The government has always struggled to collect taxes in the country. There have been reports of large-scale illegal underpayment and avoidance of tax.

The situation in Greece got so bad that the country was on the verge of bankruptcy. It was saved by large loans from the EU. However, the country was forced take a number of measures to reduce government debt. These included raising taxes, cutting government spending and selling off state assets. Also, in 2013, Greece's retirement age was raised to 67 in common with many other countries in the world.




▲ **Figure 27.5** Unemployment in Greece, 2006–16




▲ **Figure 27.6** GDP in Greece, 2006–16

## CHAPTER QUESTIONS

Look at Figure 27.5.

1 Describe the pattern of unemployment in Greece over the period shown.

2 How is unemployment measured?

3 What are the possible causes of unemployment in Greece. Give at least two reasons in your analysis.

4 Describe the effect on unemployment of the government raising the retirement age in Greece.

5 Consider the impact of high unemployment in Greece on (a) output and (b) the government.

# 28 BALANCE OF PAYMENTS ON THE CURRENT ACCOUNT

## LEARNING OBJECTIVES

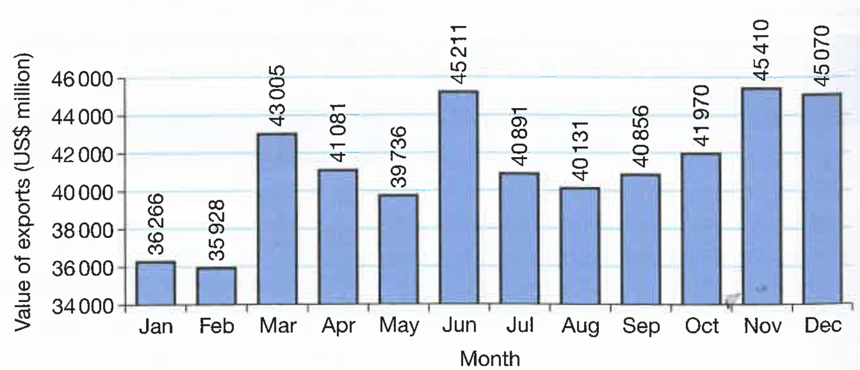
- Understand how to define the current account
- Understand current account deficits and surpluses
- Understand visible and invisible trade
- Understand the relationship between the current account and exchanges rates
- Understand examples of real-world exchange rates
- Understand the reasons for deficits and surpluses: quality of domestic and foreign goods, prices of domestic and foreign goods, and exchange rates between countries
- Understand the impact of a current account deficit on: leakages from the economy, inflation, demand for domestic exports and deficit funding

## GETTING STARTED

Most countries in the world have open economies. This means that they trade with each other. Details of the transactions between one country and all others are recorded so that the government can monitor the flows of trade. Over a period of time, it is desirable for the value of goods sold overseas to be roughly the same as the value of goods bought. Look at the example below.

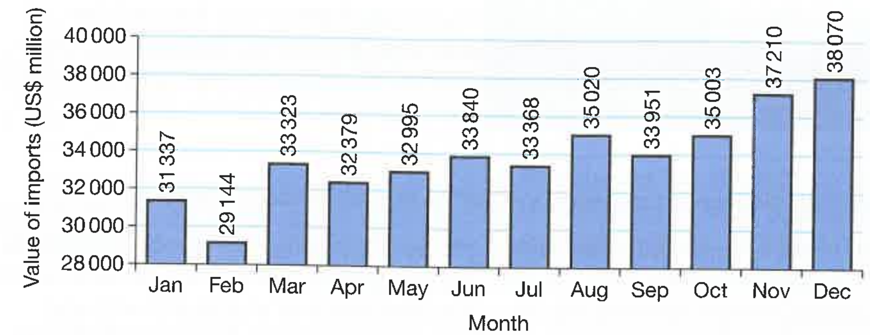
## CASE STUDY: TRADE IN SOUTH KOREA

South Korea is considered to be a highly industrialised country and has important trade links with many foreign countries. Examples of goods that it sells overseas include semiconductors, petrochemicals, automobile/auto parts, ships, flat display screens, steel, electronics, plastics and computers. The country also sells iron, steel and many products made using those metals. South Korea buys goods such as crude oil/petroleum products, semiconductors, natural gas, coal, steel, computers, automobiles, fine chemicals and textiles, from overseas. Its main trading partners include the EU, China, Japan and the USA.




▲ Figure 28.1 Value of goods sold abroad by South Korea, January–December 2016






▲ Figure 28.2 Value of goods bought by South Korea from abroad, January–December 2016

South Korea has an open economy.

1 What does this mean?

2 What is the difference between the value of goods bought and the value sold by South Korea in the last quarter of 2016?

Look at the difference between the value of goods sold (Figure 28.1) and the value bought (Figure 28.2) by South Korea over the whole period.

3 Do you think South Korea benefits from trading with other nations? Account for your answer.

4 In groups, make a list of the goods and services that your country buys and sells abroad. Compare your list with those of other groups in the class.

## THE CURRENT ACCOUNT ON THE BALANCE OF PAYMENTS

### SUBJECT VOCABULARY

**balance of payments** record of all transactions relating to international trade

**capital and financial account** that part of the balance of payments where flows of savings, investment and currencies are recorded

**current account** part of the balance of payments where all exports and imports are recorded

**exports** goods and services sold overseas

**imports** goods and services bought from overseas

Goods and services which are sold overseas are called **exports**. In 'Getting started', examples of South Korea's exports included semiconductors, petrochemicals, automobile/auto parts and ships. Those goods and services which are bought from other countries are called **imports**. In 'Getting started' examples of South Koreas' imports included crude oil/petroleum products, semiconductors, natural gas, coal, steel and computers. A country will keep a record of all transactions relating to international trade. This record is called the **balance of payments**. It is divided into two parts.

The **current account** shows the value of all imports and exports over a period of time. It includes both visible trade and invisible trade. (This is explained below.) It also includes income from interest, profits and dividends on assets owned overseas (exports). And income paid in the form of interest, profits and dividends to the foreign owners of assets at home (imports).

The **capital and financial accounts** record flows of money into and out of a country resulting from transactions relating to savings, investments and speculation, for example.

## CURRENT ACCOUNT DEFICITS AND SURPLUSES

### SUBJECT VOCABULARY

**current account deficit** when value of imports exceeds the value of exports

**current balance** difference between total exports and total imports (visible and invisible)

It is very unlikely that in any given period of time, the value of a countries exports will be exactly the same as the value of its imports. The difference between the two values is called the **current balance**. The current account balance can be in deficit or surplus.

A **current account deficit** occurs when the value of imports is greater than the value of exports. This means that the money flowing out of the economy resulting from international trade is greater than the money flowing in. The current balance will be negative.

**SUBJECT VOCABULARY**

**current account surplus** when value of exports exceeds the value of imports

A **current account surplus** is recorded if the value of exports is greater than the value of imports. This means that the money flowing into the country resulting from international trade is greater than the money flowing out. The current balance will be positive.

## VISIBLE AND INVISIBLE TRADE

**SUBJECT VOCABULARY**

**balance of trade or visible balance** difference between visible exports and visible imports

**invisible trade** trade in services

**primary income** money received from the loan of production factors abroad

**secondary income** government transfers to and from overseas agencies such as the EU

**visible trade** trade in physical goods

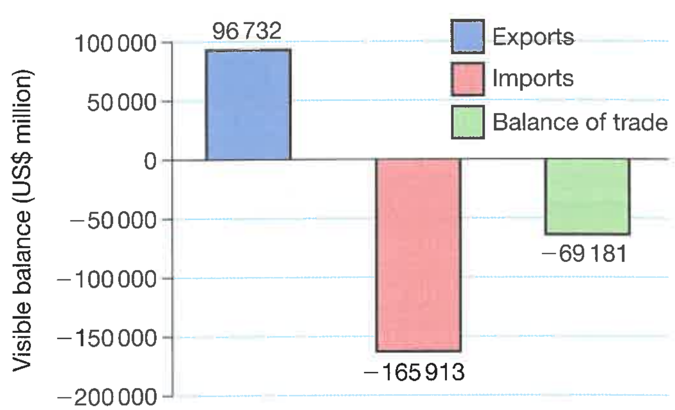
**GENERAL VOCABULARY**

**beneficiary** someone who gets advantages from an action or change

Economists distinguish between visible trade and invisible trade.

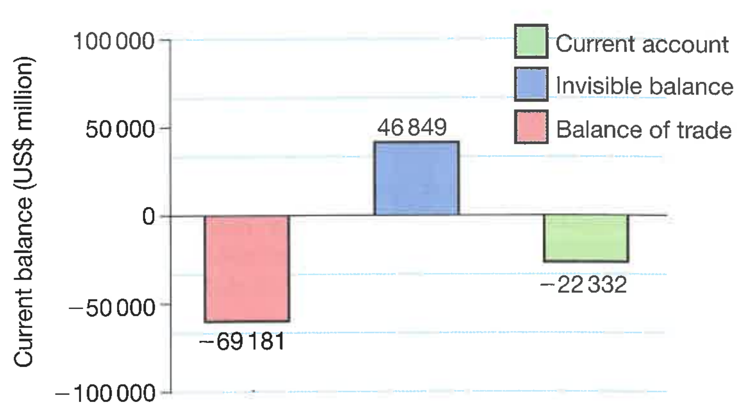
**Visible trade** is to do with the buying and selling of physical goods. Examples might include wheat, iron ore, textiles, leather goods, gems, cars, smartphones and jewellery. The difference between the total value of visible exports and imports is called the **balance of trade** or **visible balance**. Figure 28.3 shows the visible trade for a country in 2016. The balance of trade is –US$69 181 million (US$96 732 – US$165 913). It has imported more goods than it has exported.

**Invisible trade** involves the exchange of services. Examples include tourism, trade in financial services, transport such as shipping and business consultancy fees. Invisible trade also includes flows of money resulting from the ownership of assets overseas. Examples might include interest, rents and profits. This is called **primary income**. Finally, invisible trade also includes **secondary income**, which results mainly from government transactions. Examples might be the money flowing between a government and other organisations such as the EU.




▲ **Figure 28.3** Visible balance for a country, 2016

Figure 28.4 shows the balance on the current account for a country in 2016. The current balance is the balance of trade and the invisible balance added together. It is –US$22 332 million. This is a current account deficit.



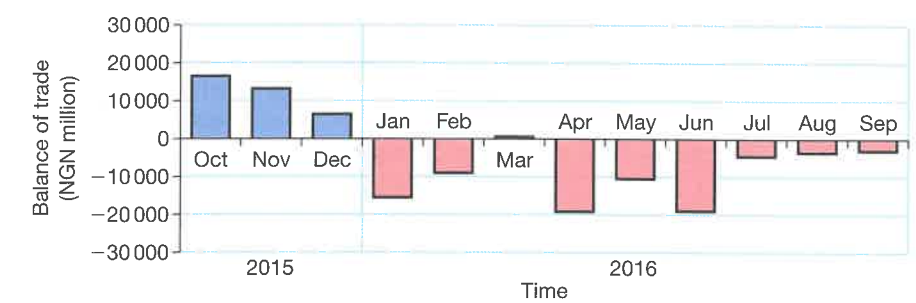

▲ **Figure 28.4** Current balance for a country, 2016



**ACTIVITY 1**

### CASE STUDY: NIGERIA'S BALANCE OF TRADE

Nigeria has the largest economy in Africa and an estimated population of 186 million. It has a range of trading partners including China, India, the Netherlands, Spain, Brazil and South Africa. Its main exports are petroleum, petroleum products, cocoa and rubber. However, about 95 per cent of Nigeria's exports are petroleum. The country was hit quite hard when the price of oil fell in 2014. In contrast, Nigeria's imports include machinery, chemicals, transport equipment, manufactured goods and food. The balance of trade for Nigeria in 2015/16 is shown in Figure 28.5.




▲ **Figure 28.5** Nigerian balance of trade, 2015/16

Most of Nigeria's trade is in visible items.

1 What is meant by visible trade?

2 What is meant by the balance of trade?

3 Describe what has happened to Nigeria's balance of trade over the time period.

4 Describe **one** possible reason for the pattern of trade shown in Figure 28.5.

## THE RELATIONSHIP BETWEEN THE CURRENT ACCOUNT AND EXCHANGE RATES

**SUBJECT VOCABULARY**

**exchange rate** price of one currency in terms of another

The pattern of international trade can be influenced by changes in the **exchange rate**. If a country's exchange rate gets stronger (which means that one unit of a currency can buy more units of another currency), exports become more expensive and imports become cheaper. This might result in fewer exports being sold and more imports being bought. This will have a negative impact on the current account. For example, if a country already has a current account deficit, the size of the deficit is likely to increase.

The balance on the current account may also have an impact on the exchange rate. For example, if a country has a surplus on the current account resulting from rising sales of goods abroad, demand for that country's currency will rise (foreigners will need to buy that country's currency to pay for the goods). This increase in demand for currency could drive up the exchange rate. Therefore that country's exchange rate gets stronger. Exchange rates, and the impact of changing exchange rates on the current account, are discussed in more detail in Chapters 41 (see pages 333–339) and 42 (see pages 340–346).

## EXAMPLES OF REAL-WORLD EXCHANGE RATES

Exchange rates rarely remain stable over a period of time. The rate at which one country's currency exchanges against that of another is determined by market forces. Therefore, when there is a disturbance in the market, the exchange rate is likely to change. For example, when the UK voted to leave the EU in June 2016, the value of the pound fell quite sharply. Figure 28.6 shows the value of the pound against the US dollar. Just before the Brexit vote the exchange rate was £1 = US$1.50, however, in January 2017 it was around £1 = US$1.24. This is a fall of about 17 per cent. Sharp changes like this can have an impact on international trade. This is discussed in detail in Chapter 42 (pages 340–346).


▲ **Figure 28.6** Pound : dollar exchange rate, 2016/17

## REASONS FOR DEFICITS AND SURPLUSES

Most governments would prefer to have a healthy current account on the balance of payments. This might mean that over a period of time a large deficit is avoided. Some countries, like China and Japan for example, have often enjoyed quite large current account surpluses. What are the reasons for deficits and surpluses?

### QUALITY OF DOMESTIC GOODS

If a country develops a reputation for high-quality goods, it is likely to enjoy rising sales from overseas buyers. This will drive up the demand for exports and help to improve a current account balance. For example, the UK has a reputation in China for the production of high-quality goods. Also, if the quality of domestic goods is high, demand from the home market will rise as consumers will prefer them to imports. This will also help to improve the current account.

### QUALITY OF FOREIGN GOODS

If goods and services from overseas are superior to those produced domestically, there will be an increase in demand for these imports. Clearly this will have a negative impact on the current balance. The size of a current account deficit, for example, would get bigger. There will also be less demand for home produced goods, which could result in lower domestic output and employment.



### PRICE OF DOMESTIC GOODS

Demand for goods and services is heavily influenced by the price. If domestic goods are expensive, owing to rapid inflation, for example, then demand from overseas buyers is likely to fall. This will see a progressive worsening of the current balance.

### PRICE OF FOREIGN GOODS

If foreign goods are cheaper than those produced at home, there will be a rapid in demand for imports. This will have a negative effect on the current account, reducing the size of a surplus, for example. In recent years, Chinese manufactured goods have been cheaper than those produced at home in many Western countries. The resulting high demand for them has had a negative effect on the current accounts of many of these countries.

### EXCHANGE RATES BETWEEN COUNTRIES

Since the exchange rate affects the prices of domestic goods and foreign goods, any changes in the exchange rate can have an impact on the current account. For example, when the value of the pound fell after the Brexit vote, there was an increase in demand for holidays in the UK. This helped to boost invisible exports and had a positive effect on the UK's current account.

## ACTIVITY 2

### CASE STUDY: FERRARI

Ferrari, the Italian car manufacturer, produces high performance luxury supercars. Although there are only a few people in the world who can afford to buy a Ferrari, it is a famous global brand name. In 2015, it produced 7664 cars and made a record profit. Few people buy Ferraris as a means of transport. Most Ferrari owners have several cars and as a brand Ferrari is a status symbol. Enthusiasts say that Ferrari is a special car because it has a soul. Red stands for passion and the horse logo represents aggression. For many, Ferrari symbolises power, strength, speed, confidence and boldness.

Ferrari is targeted at a niche market – the luxury segment of the car market where performance, quality and exclusivity are highly valued. Most Ferrari sales are in overseas markets. For example, in 2015, only 285 of the cars produced were sold in Italy. The other 7379 were exported to markets all over the world. Total revenue for Ferrari in 2015 was €2854 million.

▲ Ferrari 488

1 What impact will Ferrari sales have on Italy's current account?

2 Using this case as an example, discuss the importance of product quality in relation to a country's current account.

## THE IMPACT OF A CURRENT ACCOUNT DEFICIT

**GENERAL VOCABULARY**

**persistent** continuing to exist or happen, especially for longer than is usual or desirable

If a nation has a **persistent** current account deficit, it may experience a number of effects. For example, if consumers buy increasing quantities of imports, domestic output and employment may be negatively affected.

### LEAKAGES FROM THE ECONOMY

A persistent current account deficit suggests that a country is becoming increasingly dependent on imports. This means that consumers are buying goods produced outside the domestic economy. As a result, money flows out of the economy to overseas businesses. This represents a leakage from the economy. It means that output and employment levels in the domestic economy are under threat.

### INFLATION

A country running a high current account deficit might be exposed to inflationary pressures. If the prices of imports go up, this will be reflected in the general price level since many imported goods will be counted when the CPI is calculated. Consequently, rising import prices will result in higher domestic inflation levels. The greater the reliance on imports, the greater the threat of inflation when import prices rise.

### LOW DEMAND FOR EXPORTS

A country with a high current account deficit might be struggling to sell goods and services abroad. If demand for exports is low, it might mean that the quality of goods and services is poor or the price is too high. Unless the demand for exports can be reversed, a country may suffer a progressive decline in economic growth and a rise in unemployment. A current account deficit may reflect structural weaknesses in the economy. This means that domestic firms may struggle because they are not competitive in certain industries.

**DID YOU KNOW?**

In relation to the amount of international trade done by the UK, the size of the country's deficit is insignificant. It is like someone earning £25 000 a year and spending £25 005. The person has overspent by £5; it is very small in relation to the total amount spent.

### FUNDING THE DEFICIT

If a country has a continuing current account deficit, it will need foreign currency to pay for the rising quantity of imports that are being purchased. If the foreign currency reserves of a country run low, it may be necessary to borrow. However, persistent borrowing may cause long-term problems. Sometimes, a current account deficit can be financed by a capital account surplus. For example, flows of foreign currency can be attracted by a country if its interest rates are high.

## MULTIPLE-CHOICE QUESTIONS

1 Which of the following is an example of an invisible item of trade?

- **A** Machinery
- **B** Cars
- **C** Insurance
- **D** Confectionery

2 The sale of Renault cars from the Morocco factory to Spain, France and Germany result in which?

- **A** Increase imports
- **B** Reduce exports
- **C** Improve the current account
- **D** Improve the invisible balance

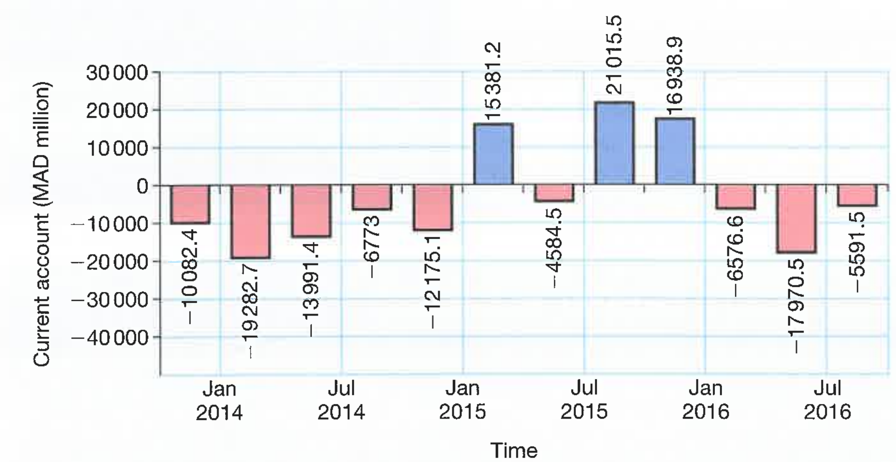


## ECONOMICS IN PRACTICE

## CASE STUDY: THE MOROCCAN CURRENT ACCOUNT BALANCE

The North African state of Morocco has taken advantage of its location close to Europe and cheap labour to develop a diverse and open market economy. In 2012, the French car company Renault opened a €1600 million factory in the north of the country. It employs over 7000 people and has a capacity to produce 340 000 vehicles. Most of the output is exported to Spain, Germany and France. The Renault plant is the biggest car production facility in Africa. However, despite this positive development in the economy, in the last few years Morocco has experienced several deficits on its current account. Figure 28.7 shows Morocco's current account balance from 2014 to 2016.

Morocco exports a wide range of goods such as clothing and textiles, automobiles, electrical components, inorganic chemicals, transistors, crude minerals, fertilisers, petroleum products, citrus fruits, vegetables and fish. Morocco also has a well-developed tourist industry with destinations such as the ancient cities of Marrakesh and Fez attracting thousands of overseas visitors every year. Morocco's imports include crude petroleum, textile fabric, telecommunications equipment, wheat, gas, electricity, transistors and plastics.




▲ Figure 28.7 Moroccan current account balance

## CHAPTER QUESTIONS

1 What is the difference between visible and invisible exports? Use examples from this case to support your answer.

In November 2016, Morocco's balance of trade was MAD −13 866 million.

2 Describe the difference between the balance of trade and the balance on the current account.

3 During which period did Morocco have a current account surplus?

4 Discuss how a current account deficit might affect the Moroccan exchange rate with other currencies.

5 Consider the possible impact on the Moroccan economy of a persistent current account deficit. Make a clear judgement in your evaluation.

# 29 PROTECTION OF THE ENVIRONMENT

## LEARNING OBJECTIVES

- Understand the business activity that damages the environment
- Understand the ways that businesses damage the environment
- Understand the government intervention to protect the environment

## GETTING STARTED

Unfortunately, some business activity may damage the environment. For example, chemical-processing plants may discharge dangerous emissions into the atmosphere and oil companies may spill crude oil into the seas and oceans. However, consumers are becoming increasingly aware of this and are changing their consumption. Two-thirds of consumers now avoid specific brands due to environmental concerns. One major concern is that the planet may be under threat. This threat comes from climate change and global warming. Look at the information below.

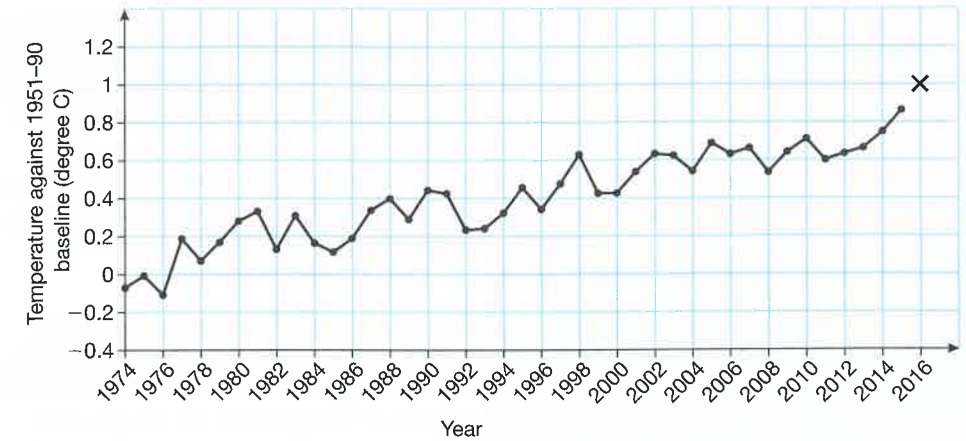
## CASE STUDY: GLOBAL WARMING

Global warming is the gradual warming up of the earth's surface. The year 2016 was the hottest year on Earth since records began 130 years ago. Most scientists believe that it is caused by the 'greenhouse effect'. This is where heat from the sun gets trapped between the surface of the Earth and a layer of greenhouse gases, such as carbon dioxide, methane and nitrous oxide. However, some scientists believe that over a long period of time, hundreds of millions of years, for example, the temperature of the Earth is subject to natural variations. So they conclude that the planet is getting warmer naturally.

Global warming is predicted to have some alarming effects on the planet.

- Sea levels will rise because the ice caps will melt, which will cause flooding in parts of the world.
- The amount and pattern of rain, snow and hail will change. Some areas will get more and others less.
- Insufficient rainfall in some areas will see the expansion of some deserts.
- Permafrost (the thick layer of soil that remains frozen throughout the year in the polar regions) will melt releasing trapped methane. This will add to the greenhouse gases in the atmosphere.
- The Amazon rainforest and boreal forests will be reduced.
- There will be more extreme weather systems such as storms and floods.
- Many species will become extinct.
- Agricultural yields will be affected.






▲ **Figure 29.1** Global temperatures, 1974–2016

1. What evidence is there to suggest that global warming is occurring?
2. Why do you think governments are becoming more concerned about the environment?
3. How might the agriculture industry be affected by global warming?
4. In groups, make a list of the reasons why it is important to protect the environment. Record your ideas on a poster and present them to the rest of the class.

## BUSINESS ACTIVITY THAT DAMAGES THE ENVIRONMENT

A wide range of business activity has the potential to damage the environment. However, heavy industry, such as chemical processing, oil refining, mining, power generation and steel production, in particular, can have a harmful impact on the environment. Some examples of the way certain business activity damages the environment are described below.

### MINING

Open-cast mining, where materials are extracted from a giant hole in the ground, is one of the most damaging mining activities of all. One problem is that many of the minerals and other useful materials that are mined are only available in very small quantities. This means that huge quantities of earth and rock have to be extracted from a site and then processed to recover the small fraction of valuable material. This often involves crushing rocks, which may release harmful materials, such as radioactive elements, asbestos-like minerals and metallic dust. During the separation process, something called **tailings** is produced. This is a mixture of crushed rock and liquid. It is possible for toxic and radioactive elements from tailings to leak slowly through the ground into water systems if not managed effectively. In addition to this, huge open-cast mines scar the countryside and destroy wildlife habitats. The mining of coal, iron ore, gold, diamonds, copper and many other minerals can have this effect. Another problem is that most modern mining techniques use large quantities of water. Wastewater from these activities may find its way into waterways and threaten the supply of fresh drinking water.

**GENERAL VOCABULARY**

**tailings** waste material left over once the useful content has been removed from an ore, can be toxic

### POWER GENERATION

The generation of electricity can be very damaging to the environment. This is particularly the case when it is produced by burning fossil fuels, such as coal and oil. A wide range of harmful environmental impacts can result from fossil fuel power plants, such as emissions, the release of hot water, climatic and visual impacts from cooling towers, solid waste disposal, ash disposal (for coal), and noise. Owing to the need for large amounts of steam, power plants need to use huge quantities of water and then return that water to its source. It the water is dirty and too warm, it can damage wildlife in water systems. However, most of the damage done by power stations is probably from emissions. The burning of fossil fuels produces potentially dangerous 'greenhouse gases', such as carbon monoxide, carbon dioxide and hydrocarbons, which contribute to global warming. Also, some of the gases released into the atmosphere produce acid, which is then spread over very wide areas as acid rain – often hundreds of miles away from the plant.

Other forms of power generation may also be harmful. For example, nuclear power stations pose two very serious threats. A leak of radioactive material from a nuclear power station could have a disastrous effect on people and the environment. Too much exposure to radioactive material can kill people and very large areas of land surrounding a plant could become unusable following a leak. There is also the problem of waste disposal. Radioactive waste has to be stored underground for thousands of years before it is safe.

## CHEMICAL PROCESSING

Chemicals are used to make the majority of synthetic materials and play an important role in everyday life. For example, chemicals are used in products to provide protection for crops and increase yields, prevent and cure disease, provide insulation to reduce energy use and provide countless other benefits that help improve living standards and the quality of life. However, chemicals can also create a negative impact on human health and the environment when their production and use are not managed responsibly. The range of chemical processes and applications in business is huge. The examples below are just two of the potential threats on the environment posed by the chemicals industry.

- Some refineries and chemical processing plants release hazardous air pollutants (HAPs). These can cause cancer and other health problems. For example, petrochemical plants use benzene, a chemical known to cause cancer in humans. People can breathe in benzene if they are close to industrial plants.
- Some chemical processes release volatile organic compounds (VOCs), such as ethylene and propylene, into the atmosphere. VOCs react with oxygen and nitrogen oxides, which are produced when burning fossil fuels, to form ozone. Contact with VOCs and ozone may result in increased rates of asthma, lung and respiratory infections and heart problems. The list of products from which VOCs may be produced includes fuels, paints, stains and lacquers, cleaning supplies, **pesticides**, plastics, glues, adhesives and refrigerants.

**GENERAL VOCABULARY**

**pesticides** chemical substances used to kill insects and small animals that destroy crops

## AGRICULTURE

Farming can have a variety of negative environmental effects. One of the main problems results from the use of pesticides and fertilisers. Although fertilisers can increase crop yields, after heavy rainfall some always ends up in rivers, lakes and the sea where it can kill aquatic life. For example, nitrogen (a key element in fertiliser) feeds an algal bloom, but when the algae die, rotting bacteria then consume most of the available oxygen, which kills aquatic life by preventing it from breathing. Also, some fertilisers can starve soil of organic matter. As a result, the soil cannot hold sufficient water and is subject to erosion. It is possible that pesticides can cause ill health. The long-term effects of exposure to pesticides on humans is still very much unknown. However, farmers who face regular exposure to pesticides have been found to suffer symptoms, such as headaches and hand tremors.



**GENERAL VOCABULARY**

**deforestation** cutting or burning down of all the trees in an area

Farming can also contribute to global warming. One reason is because factory farming, in particular, generates about 37 per cent of global methane emissions. This is a greenhouse gas and can impact on global warming. **Deforestation** also contributes to global warming. This is where areas of woodland or rainforest are cleared to grow crops. For example, clearing 100 million hectares of forest to grow soybeans in the Amazon rainforest is responsible for releasing enough carbon dioxide into the atmosphere to increase the rate of global warming by 50 per cent.

▲ Algal bloom caused by water pollution

## CONSTRUCTION

The construction industry produces more waste material than any other industry. For example, in the UK the construction industry produces 109 million tonnes of construction waste each year. Of this, about 24 per cent is total waste. The industry produces three times more waste than all households combined. About one-half of the waste is recycled but huge amounts still end up in landfill sites or other disposal points. Waste on this scale uses up resources and causes disposal problems.

Construction activities such as land clearing, operation of diesel engines, demolition, burning and working with toxic materials contribute to air pollution. Also, construction sites generate high levels of dust from materials such as concrete, cement, wood, stone and silica. The air can carry the dust for large distances and this can cause health problems including respiratory illness, asthma, bronchitis and cancer.

Water pollution can also result from construction. Diesel and oil, paint, solvents, cleaners and other harmful chemicals and construction waste and dirt can be washed into water systems. Also, when land is cleared it causes soil erosion. As a result, silt and soil runs into natural waterways, restricts sunlight and can destroy aquatic life.

Most business activity tends to have a negative impact on the environment. For example, most businesses use electricity. If this is generated by burning fossil fuel, environmental damage will be caused. Most businesses also produce waste. If it cannot be reused or recycled, it might be burnt, which will cause emissions. Alternatively, it might find its way into landfill sites, which cause other problems.

ACTIVITY 1

## CASE STUDY: ENVIRONMENTAL DAMAGE

▲ Environmental damage (scarring) caused by coal mining

▲ Pollution caused by burning fossil fuels

The generation of electricity by burning fossil fuels, such as coal, has a 'dual' negative impact on the environment.

1 Describe the dual environmental impacts of using coal to generate electricity.

2 Discuss how the construction industry might impact on the environment.

## WAYS BUSINESSES DAMAGE THE ENVIRONMENT

### VISUAL POLLUTION

Business activity may cause some visual pollution. This is where business activity results in something physical that looks very unattractive. For many people, the sight of smoke flowing from power stations might be regarded as visual pollution. Other examples might include giant office blocks, advertising hoardings, bright illuminated signs advertising products and businesses, wind farms, electricity pylons, slag heaps, overflowing skips next to construction sites, disused factories and smog. Finally, most people would also regard litter as visual pollution. Litter is a more serious problem in countries where there is no orderly collection system. In some countries, refuse is often left in piles on the street. Although visual pollution may not be as severe as other types of pollution, it is likely to have a negative impact on people's well-being and reduce living standards.

▲ Piles of uncollected refuse in an Indian street

### NOISE POLLUTION

If excessive noise results from a business activity, this could be regarded as noise pollution. If noise causes disturbance to everyday life, then it can be a problem for people and reduce their quality of life. Some common examples of business-related noise pollution may be caused by:

- jet engines, as aircraft fly over residential areas
- music and loud conversations in pubs, bars, night clubs and discos if located too near residential areas
- machinery, vehicles and power tools on construction sites
- heavy industrial machinery, such as compressors, generators, exhaust fans, presses and grinding mills, in factories
- the constant sound of commercial traffic on a road or motorway.

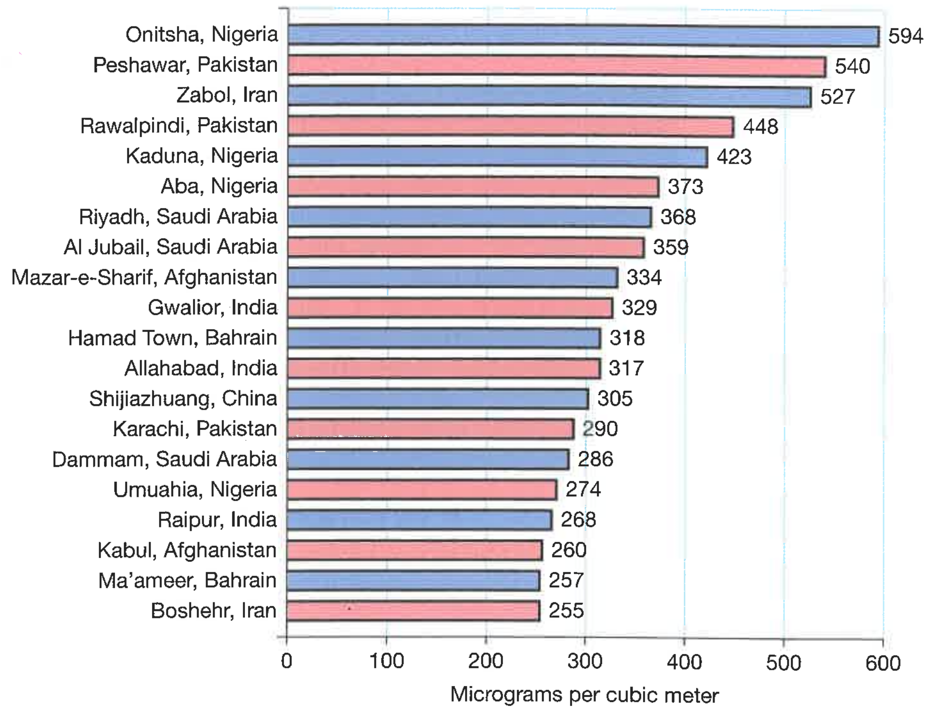
Constant exposure to loud noise can have a negative impact on people and wildlife. For example, noise can damage eardrums and lead to loss of hearing. Loud noise can also disrupt sleeping patterns and raise stress levels.

### AIR POLLUTION

Factories, machines and vehicles that discharge emissions into the atmosphere are responsible for most of the world's air pollution. Air pollution is dangerous. In 2012, the World Health Organization (WHO) estimated that, globally, toxic gases caused around 6.5 million deaths per year. The WHO also said that around 90 per cent of these deaths occur in low- to middle-income countries; two out of every three deaths occur in Southeast Asia and the Western Pacific. Figure 29.2 shows the levels of pollution in some of the world's most polluted cities. The most polluted city at the time of measurement was Onitsha in Nigeria. The air in Onitsha contained around 30 times more than the WHO's recommended levels of PM10 particles (particulate matter of less than 10 millionths of a metre in diameter).

The main causes of air pollution differ around the world. For example, in China, the main cause is particle emissions from coal burning. In India, a lot of the air pollution is indoors and comes from the burning of wood, dung, crop residues and other materials for cooking and heating. In other cities, it is the combination of industrial emissions and combustion gases from vehicles. A summary of the way businesses might cause pollution is given below.

- **Burning of fossil fuels:** Sulphur dioxide, which comes from burning fossil fuels, such as coal and petroleum, is one the major causes of air pollution. Emissions from vehicles, such as lorries, buses, cars, trains, auto rickshaws and aeroplanes, are responsible for a huge amount of pollution.
- **Emissions from factories and other business activities:** Manufacturing and processing businesses discharge carbon monoxide, hydrocarbons, organic compounds and chemicals into the air, which contribute to pollution. The burning of waste, heavy manufacturing, chemical processing, power generation and petroleum refining, which release high levels of carbon monoxide, organic compounds and chemicals into the air, are some of the worst causes.
- **Agricultural activities:** Ammonia is one of the most dangerous gases in the atmosphere. It is often a by-product from a range of agriculture activities. Crop dusting with insecticides, pesticides and fertilisers in farming is the main cause of air pollution in agriculture.




▲ **Figure 29.2** Selection of the most polluted cities in the world

**Note:** PM10 particular concentration, micrograms per cubic metre, annual mean

**GENERAL VOCABULARY**

**contamination** to make something dirty and dangerous, for example with chemicals or poison

## WATER POLLUTION

Around two-thirds of the planet is covered in water. However, only about 2.5 per cent of this water is drinkable. Unfortunately, in many countries the supply of safe drinking water is diminishing due to water pollution. Water pollution is the **contamination** of oceans, rivers, lakes, groundwater and other bodies of water by harmful substances. These substances often find their way into the waterways as a result of business activity. Some of the main causes of water pollution by businesses include the following.

- **Industrial waste:** Many industries, such as power generation, brewing and chemical processing, use very large quantities of water in their manufacturing processes. Often their plants are located right next to rivers where waste water is discharged directly into the waterways. In most countries, businesses are required to treat this waste to make it safe before it enters the river. However, some waste water still contains harmful substances such as lead, mercury, nitrates, sulphur, phosphates and petrochemicals. If these materials are discharged in high enough quantities, waterways will be polluted.
- **Marine and ocean dumping:** the dumping of waste materials into the sea causes this form of water pollution. It comes from the waste dumped by shipping, leaks from oil extraction and waste dumped from the land into the sea. In some countries, refuse collected from households containing paper, aluminium, rubber, glass, plastic and food is dumped directly into the sea. Some of the materials dumped can take many years to rot or break down. For example, foam and Styrofoam can take 50 and 80 years, respectively.
- **Sewerage:** Sometimes the businesses responsible for collecting and disposing of sewerage discharge large quantities into the sea. In most developed countries it is treated before it reaches the sea. However, in others, untreated sewerage may be released directly into the sea. Although most sewerage is 90 per cent water, it also contains other materials such as chemicals from pharmaceutical drugs, and paper, plastic, and other waste that is flushed down the toilet. Also, when people contract viruses, the sewage they produce transports those viruses into the environment. It is possible to catch illnesses such as hepatitis, typhoid and cholera from contaminated river and sea water.

The harm resulting from water pollution can be serious. All marine life, such as plants and fish, is threatened. Water pollution is responsible for loss of species and loss of habitat. Perhaps more importantly, at least 320 million people in China do not have access to clean drinking water; in Bangladesh about 85 per cent of the total area has groundwater contaminated with arsenic (arsenic is very toxic, an acute poison and known to cause cancer in humans) every year 250 million people worldwide contract diseases and 15 million young children die from causes related to water pollution.

## ACTIVITY 2

### CASE STUDY: The Hachiuma Steamship Co. Ltd

In 2015, The Hachiuma Steamship Co. Ltd., a Japanese shipping company, was fined £1.8 million for dumping waste into the ocean. The waste contained oil residue and waste water and was discharged into the ocean via a 'magic pipe', which was used to illegally avoid the ship's pollution control equipment and dump the oily waste into the sea.

A **whistle-blower** (a member of the crew) notified the coast guard of the violation when it boarded the ship in Baltimore, Maryland, USA. He received a US$250 000 reward for his part in the reporting of the crime. Another US$450 000 was given to the National Fish and Wildlife Foundation for projects benefiting the Chesapeake Bay. The shipping company was also put on probation for 3 years during which it was instructed to produce an environmental compliance programme.

At a later date, the chief engineer of the ship was jailed for 8 months when he pleaded guilty to obstruction of justice and violating the Act to Prevent Pollution from Ships. He tried to obstruct the coast guard's investigation and hide the illegal discharges by keeping false records, destroying documents, lying to the investigators and ordering crew members to lie.

**GENERAL VOCABULARY**

**whistle-blower** someone working for an organisation who tells the authorities that people in the organisation are doing something illegal, dishonest, or wrong

▲ Dumping waste at sea

1 What is meant by water pollution? Use the example in this case to support your answer.

2 Describe the role of a 'whistle-blower'.

3 Discuss some of the possible consequences of water pollution.

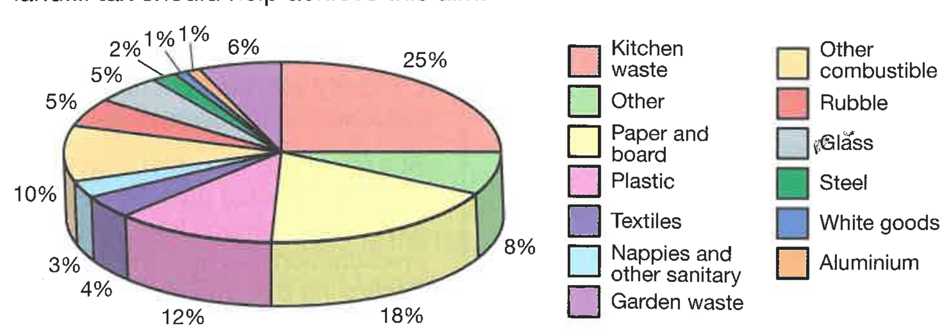
## GOVERNMENT INTERVENTION TO PROTECT THE ENVIRONMENT

A number of measures are used to help reduce environmental damage resulting from business activity.

### TAXATION

Many governments impose taxes on those that damage the environment. The aim of taxation is to ensure that those who cause social costs through business activity meet them. In 2016, Canadian Prime Minister Justin Trudeau announced a new carbon tax in Canada. The tax, which will come into effect in 2018, will help to raise the prices of energy sources that use fossil fuels. These will then be more expensive than clean energy, such as wind and solar power. The advantages of this tax are that emissions would be reduced, new jobs will be created in the production of clean energy and tax revenues will be boosted.

Another common tax designed to protect the environment is the landfill tax. This is imposed on the disposal of waste in landfill sites. The EU reckons that about 80 per cent of the solid waste produced by households is recyclable or compostable. Figure 29.3 shows the various components of solid waste produced in the EU. The EU aims to reduce landfill to almost zero by 2020. The landfill tax should help achieve this aim.




▲ **Figure 29.3** The components of EU refuse (solid waste)



**GENERAL VOCABULARY**

**tax allowances** amounts of money that firms are allowed by the government to offset against tax

### SUBSIDIES

The government can offer grants, **tax allowances** and other subsidies to firms as an incentive to reduce activities that damage the environment. For example, a firm might receive a subsidy if it builds a plastics recycling plant. This might encourage households and firms to recycle their plastic waste instead of dumping it. The government can also give subsidies to firms or activities that generate positive externalities. For example, one reason why rail companies are subsidised in many countries might be because they take traffic off the road and therefore help to reduce congestion and carbon emissions.

### REGULATION

A range of legislation, regulations, guidelines and codes of practice exist in many countries, which is designed to help protect the environment. For example, in 2016, the Chinese government demonstrated some commitment to dealing with businesses that damage the environment. It will ban industrial plants, paper mills and refineries that pollute the country's water supplies. This was part of a wider plan to improve water quality in rivers, lakes, coasts and aquifers. The government has already blocked some industrial projects, such as coal gasification plants, because they use up too much water or pollute water systems. The plan will focus on small-scale paper factories, leather, printing and dying, oil refineries, electronic plating, and pharmaceutical factories.

Many governments employ specialist agencies to help monitor pollution levels. Such agencies are responsible for taking action against those who break environmental laws. Other duties include giving advice to firms about protecting the environment, helping firms reduce waste, working with farmers, looking after wildlife and helping people get the most out of enjoying the environment.

**DID YOU KNOW?**

There is legislation to protect the environment in the UK.

- **Air legislation** controls emissions of gases, dark smoke and other airborne pollutants that harm the atmosphere. It includes systems of permits, authorisation and financial incentives to switch to less polluting ways of working. For example, the **Clean Air Act 1993** bans emission of dark smoke from chimneys and furnaces, sets minimum chimney heights, and creates smoke control zones.
- **Water legislation** aims to control water quality. It covers discharges to sewers, surface water and groundwater, water confinement and the protection of water against agricultural nitrate pollution. For example, the **Water Resources Act 1991** is designed to preserve, manage and control pollution of water resources.

### FINES

The use of fines for those who break environmental laws are common in many countries. Many firms are responsive to financial penalties when imposed. This is because fines will reduce their profits. Fines should therefore act as an incentive to comply with environmental laws. In 2016, Harley-Davidson, the famous motorcycle manufacturer, was fined US$18 million by a US court for selling motorbikes that exceeded emissions limits. The bikes were fitted with 'defeat devices' that avoided emissions controls. As a result, the bikes discharged higher levels of harmful air pollutants such as nitrogen oxide from their exhausts. The Environmental Protection Agency in the US said, 'Anyone else who manufactures, sells or installs these types of illegal products should take heed of Harley-Davidson's corrective actions and immediately stop violating the law.'

In some cases, those that cause environmental damage are forced by the law to pay compensation to the victims. For example, people living by airports may receive payments to pay for soundproof windows and other types of insulation.

### POLLUTION PERMITS

Governments can issue pollution permits. These documents give businesses the right to discharge a certain amount of polluting material – say 1 tonne per year. These permits are 'tradable'. This means that a business can sell its pollution permit to another business if it has found a way of reducing its own level of pollution. Therefore, a business that is struggling to control levels of pollution can buy them and discharge more polluting material legally. An incentive in the market exists to introduce new technology that reduces pollution because pollution permits can be sold for cash. This can also help to raise profits.

### PARK PROVISION

In many countries the government establishes national parks where business development and other commercial ventures are completely illegal. The parks, often very large areas of land, aim to preserve and protect areas of outstanding natural beauty. They may contain wildlife, historic sites, beautiful scenery and areas of special interest. They welcome visitors but there may be restrictions on their activities. For example, the lighting of fires may be prohibited and selected areas will be provided for camping and other accommodation. Examples of national parks around the world include Yellowstone Park in the USA, Kruger Park in South Africa and the Lake District in the UK. The largest national park in the world is the Northeast Greenland National Park, which was established in 1974.

## MULTIPLE-CHOICE QUESTIONS

1 Which of the following tax changes is most likely to help protect the environment?

A Decrease in income tax

B Increase in income tax

C Increase in carbon tax

D Decrease in excise duty on petrol

2 Which of the following might be an example of visual pollution caused by a business?

A Wind farm

B Cattle grazing

C Rain forest

D Coastal mist



ECONOMICS IN PRACTICE

## CASE STUDY: DEALING WITH ENVIRONMENTAL PROTECTION

### SUBSIDIES

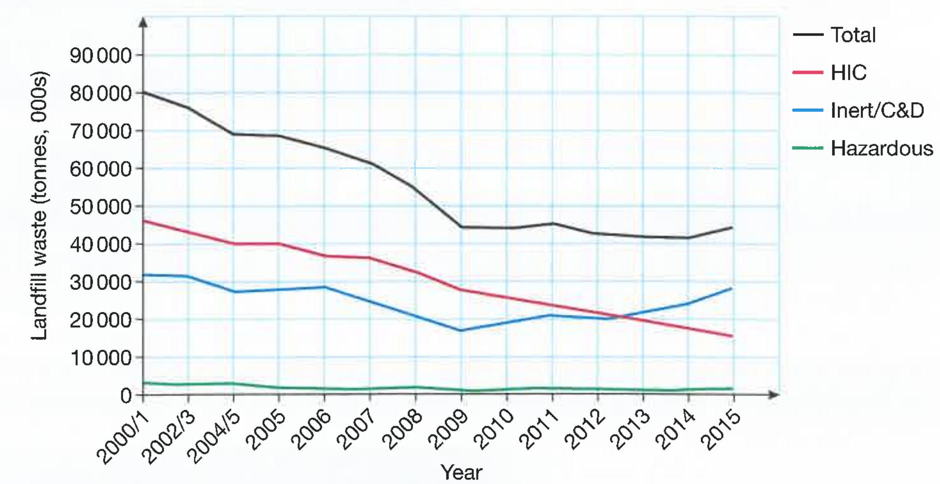
In some countries, subsidies are used to encourage businesses to produce renewable energy such as wind power and solar power. In 2014, a total of US$112 000 million was given in subsidies to businesses involved in renewable energy technologies worldwide. A further US$23 000 million was given to support biofuels. Germany provides more subsidies to producers of renewable energy than any other country in the world. However, in 2016, it announced that subsidies to the production of green energy would be cut sharply due to the strain that wind and solar power were placing on the nation's electricity grid. Unfortunately, Germany's wind and solar power generators have provided too much power at unpredictable times. This has damaged the national grid and caused power cuts. The government now plans to cap wind energy to 40–45 per cent of the national capacity. Despite the reduction in subsidies, the German government will still provide a massive €1.1 trillion in subsidies to support wind power.

### FINES

In 2016, Enter Air, a Polish airline, was fined €1.1 million by the French noise reduction authority. The airline was responsible for 83 noise violations between 2013 and 2014. However, there was some confusion when an aircraft belonging to Enter Air was held for five hours at Paris CDG airport for allegedly not paying the fines. It turned out that the fines had been paid and the plane was released for service very quickly. The French authorities said that fines for noise violations were owed by 159 different airlines and that it was not ruling out legal action to enforce payment.

### LANDFILL TAX

Landfill taxes are designed to reduce the amount of waste that is dumped in landfill sites. Disposing of waste in this way can damage the environment. For example, rotting waste at landfill sites produces the gases methane and carbon dioxide, which contribute to climate change. Also, much of the waste that goes into landfill can be recycled or reused. As a result, resource use could be reduced. This has an obvious environmental benefit where people are encouraged to recycle waste rather than throw it away. Finally, people do not like to live near landfills. They take up a lot of space, they are a source of visual pollution and can create unpleasant smells, water discharges and pests. Figure 29.4 shows the amount of waste going to landfill sites in the UK between 2000/01 and 2015.




▲ Figure 29.4 Waste going to landfill sites in the UK, 2000–15

## CHAPTER QUESTIONS

1 Describe how increased energy consumption might damage the environment.

2 Draw a supply and demand diagram to show the effect of granting a subsidy to renewable energy producers in the market for renewable energy.

3 Why is Germany planning to cut subsidies to producers of renewable energy?

4 How can fines be used to reduce noise pollution?

5 What is the purpose of a landfill tax?

6 Discuss whether the landfill tax in the UK has worked.

# 30 REDISTRIBUTION OF INCOME

## LEARNING OBJECTIVES

- Understand how to define income inequality, absolute poverty and relative poverty
- Understand the reasons for reducing poverty and inequality
- Understand the government intervention used to reduce inequality and poverty: progressive taxation, redistribution through benefits and investment in education and health care

## GETTING STARTED

In some countries, people enjoy a good standard of living. They may own a house, a car, lots of consumer durables, enjoy meals out and take regular holidays. In contrast, in many countries, people may own very little. They may live in a slum, eat very basic food, have very few clothes and have no access to safe drinking water. Many would describe the living standards of these people as desperate. In some countries, the government tries to help those with very poor living standards by redistributing income. However, even with government help, the gap between the rich and the poor is growing. Look at the examples below and overleaf.

## CASE STUDY: THE GWENGWE FAMILY

The Gwengwe family live in a mud hut in a small village in the poor African state of Malawi. They have no income and few possessions. Their food supply is irregular. They try to grow cereals but all too often the dry weather limits crop yields. They also gather food in the rural surroundings. Occasionally, they receive a food parcel from an aid agency – but these are increasingly rare. The four children receive no education and no health care. Last year, one of the Gwengwe children died from an infection thought to have originated from contaminated drinking water.

▲ The Gwengwe family in Malawi



## CASE STUDY: THE BIRNBAUM FAMILY

The Birnbaum family live in Florida, USA. They own a six-bedroom house with four bathrooms and a swimming pool. It cost US$4.1 million in 2012. Mrs Birnbaum is an investment banker and earns between US$1 million and US$1.6 million p.a. Mr Birnbaum is a partner in a firm of accountants and earns about US$700 000 p.a. Their two children go to private schools where the fees are US$40 000 per term. They also own four cars and a yacht, which is moored in a nearby marina.

▲ The Birnbaum family in Florida

1. Describe how these examples illustrate the inequality of income that exists in the world.
2. Describe two possible reasons why the Gwengwe family is so poor.
3. In groups, identify a number of measures that could be taken to close the gap between the very rich and the very poor. Record your ideas on a poster and present them to the rest of the class.

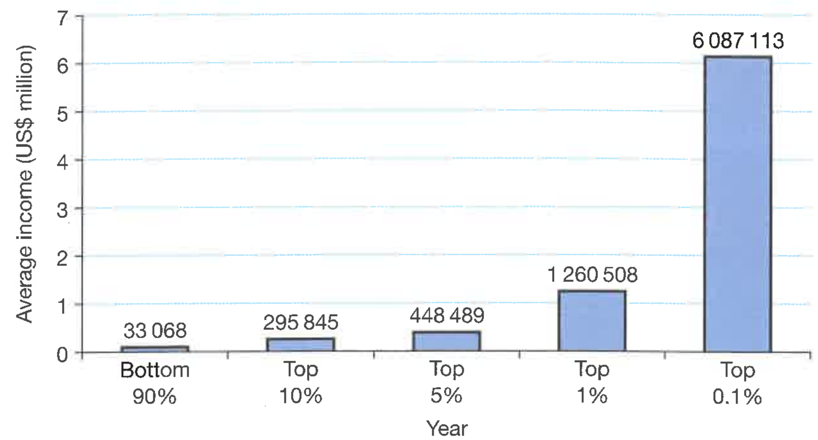
## INCOME INEQUALITY

In a market economy, individuals receive different levels of income. For example, in France, a shop assistant might earn €17 600 p.a. (equivalent to the national minimum wage), a teacher might earn €48 000 p.a. and a company director might receive €2.4 million p.a. The difference here between the company director, who is a high-income earner, and the shop assistant, who is a low-income earner, is considerable. Many would also argue that the difference between the teacher's income and that of the shop worker is also significant. However, what is clear is that income is distributed very unevenly in this example. In most countries in the world, the distribution of income is very unequal.

The USA is an example of a country where **income inequality** is severe. The information in Figure 30.1 supports this view. The graph shows that the top 0.1 per cent of the population enjoyed a massive average annual income of US$6 087 113 in 2014. In contrast, the bottom 90 per cent of the nation's population earned an average of just US$33 068 in that year. US earners at this top level earn over 184 times the income of the bottom 90 per cent.

### SUBJECT VOCABULARY

**income inequality** differences in income that exist between the different groups of earners in society, that is, the gap between the rich and the poor



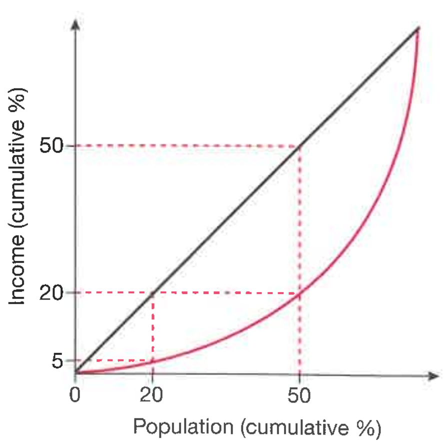

▲ **Figure 30.1** Income inequality in the USA (US$)

These huge differences in incomes may arise for a number of reasons.

- Workers with natural talent, a good education, valuable work experience or who can offer labour in a market where there is a shortage of qualified labour, will tend to earn more.
- People who do not work, such as pensioners, receive lower incomes than those in employment.
- The extent to which a government redistributes income through taxes and welfare payments is influential.
- People who own assets such as property, shares and capital will enjoy additional income such as rents, dividends and interest, respectively.

**SUBJECT VOCABULARY**

**Lorenz curve** graphical representation of the degree of income or wealth inequality in a country




▲ **Figure 30.2** Lorenz curve for a country

**DID YOU KNOW?**

**The income distribution in a country can be measured using a Lorenz curve. This shows the percentage of income earned by a certain percentage of the population. An example is shown in Figure 30.2. The 45° line shows the hypothetical, perfectly equal distribution of income. For example, if this line did represent the distribution of income in a country, it would show that 50 per cent of the population enjoyed 50 per cent of the income. However, the red Lorenz curve shows that 50 per cent of the population only enjoy 20 per cent of the income. This means that the other 50 per cent of the population enjoy a disproportionate 80 per cent of the income. The further the Lorenz curve is away from the 45° line, the greater the degree of inequality.**

## ABSOLUTE POVERTY

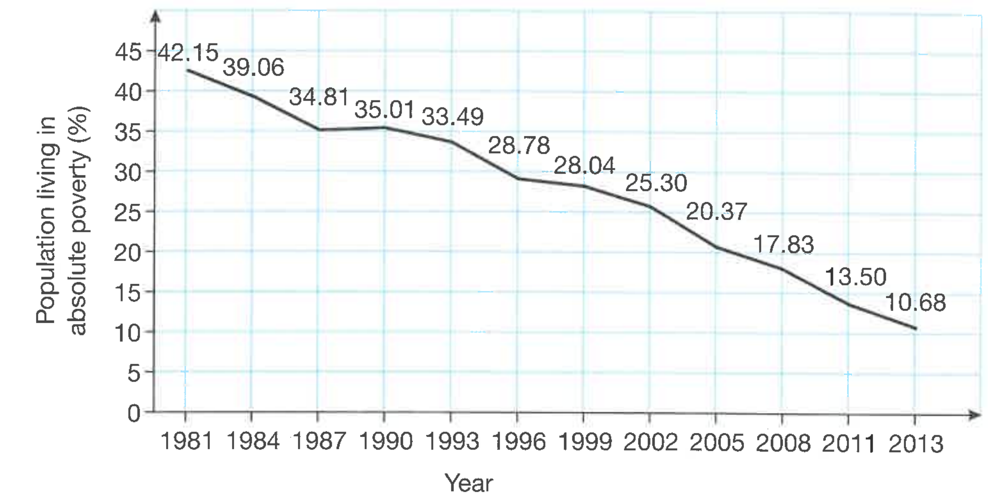
**SUBJECT VOCABULARY**

**absolute poverty** where people do not have enough resources to meet all of their basic human needs

The unequal distribution of income in countries often means that a proportion of the population live in poverty. This means that people are living in an environment where their needs are not fully met. However, there are two definitions of poverty. One of these is **absolute poverty**. This is where people try to survive in an environment where even their basic needs are not adequately met. People living in absolute poverty may be deprived of food, shelter, safe drinking water, sanitation facilities, education, basic health care and information. In 2015, the World Bank defined absolute poverty as those people who are required to survive on less than US$1.90 per day. The Gwengwe family in 'Getting started' are living in absolute poverty. They have no income and have to search in the countryside for much of their food. Their shelter is built from mud and straw.



In developed nations, levels of absolute poverty are very low. In most of these countries, the government provides welfare payments to those in need – the unemployed, sick, disabled and the elderly, for example. However, the World Bank estimated that 702 million people (9.6 per cent of the world's population) were living in absolute poverty in 2015. However, this was down from 902 million people (12.8 per cent of the global population) in 2012. Many of these people are to be found living in African and Asia. Figure 30.3 shows levels of absolute poverty between 1981 and 2013.




▲ **Figure 30.3** Percentage of the world's population living in absolute poverty

## RELATIVE POVERTY

**SUBJECT VOCABULARY**

**relative poverty** poverty that is defined relative to existing living standards for the average individual

A second definition of poverty is **relative poverty**. This is always present in society. Relatively poor people are to be found at the bottom end of a nation's income scales. Their incomes will fall short of the levels needed to provide an average living standard in their country where they live. There is no precise measurement of relative poverty. However, one approach is to measure the number of households whose total income is at a certain level below the median income for that country. This certain level will vary according to different definitions. In the EU, the level is 60 per cent. Therefore, if the median income in an EU country was €21 500, a household living on an income of €11 400 would be living in relative poverty. This is because 60 per cent of the median income in this country is €12 900 (60% × €21 500).

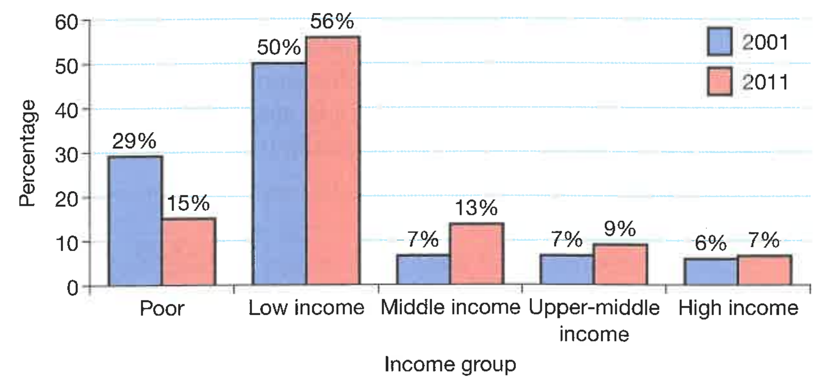
Relative poverty will vary between different countries. This is because the median income level in a particular country determines relative poverty. Each country is likely to have a different median income level. Richer countries will have higher median income levels than poorer countries. Generally, people are considered to be living in poverty if they are unable to attain the average living standard in their society.

Relative poverty will also change over time. This is because income levels change over time. They usually rise. Therefore, if an individual receives an increase in income that is higher than the average increase, that individual might move out of poverty altogether, or further away from the poverty line, for example.

## ACTIVITY 1

### CASE STUDY: GLOBAL INCOME INEQUALITY

Figure 30.4 shows the global population by income group. It illustrates the inequality of income in the world.




▲ **Figure 30.4** Global population by income group, 2001 and 2011

1. Calculate the proportion of the global population living on incomes below the middle-income group in 2001 and 2011.
2. What is meant by inequality of income? Use the information in Figure 30.4 to support your explanation.
3. Assess whether incomes have become more or less equal over the time period.

## REASONS TO REDUCE POVERTY AND INEQUALITY

### MEET BASIC NEEDS

Just under 10 per cent of the world's population still live in absolute poverty according to the World Bank. This means that around 700 million people struggle to survive. In some countries, many people are undernourished. For example, in Zambia and the Central African Republic, 47.8 per cent and 47.7 per cent of the population, respectively, do not have enough to eat. They are unable to consume enough calories per day to sustain an active and healthy life.

In some cases, people in absolute poverty are starving to death. Young children are particularly at risk. According to one study, 3.1 million children died of starvation in 2011. This was 45 per cent of the total number of child deaths in that year. Also, undernutrition worsens the effect of many diseases, such as measles and malaria. The estimated proportions of deaths in which undernutrition is a fundamental cause are 61 per cent for diarrhoea, 57 per cent for malaria, 52 per cent for pneumonia and 45 per cent for measles. It is also reckoned that, in 2013, 161 million children in the world under the age of five were unable to fully develop physically.

If absolute poverty can be completely eliminated, the basic needs of people will be met. This would avoid the loss of life from starvation and help children to grow up healthily.



### RAISE LIVING STANDARDS

If poverty can be reduced, living standards across the world would rise. If absolute poverty is eliminated, the basic needs of people would be met and clearly their living standards would improve. However, average living standards would also increase if relative poverty were reduced. Although relative poverty will always exist, it is still possible to bring people out of relative poverty. It is also possible to improve the living standards of those living in relative poverty. This is because as a nation's income rises, the median income will also rise. Therefore, many of those living on less than 60 per cent of the median income will still have a higher income and a better living standard.

Even with relative poverty, ill health and early death are still problems. Studies show that people living in relative poverty are more likely to get ill and have a lower life expectancy. This may be because those living in relative poverty have poorer housing, less nutritious diets and reduced access to health care. People living in relative poverty also consume fewer goods and services such as vehicles, consumer durables, entertainment services and education. They may also have low self-confidence, less control over their lives and less choice.

If reducing poverty can raise living standards, more people would be educated. This would help to boost global economic growth. As a result, there would be more employment, more income and more tax revenue for the government. This could be spent improving public services for everyone.

### ETHICAL REASONS

Many people think that poverty and income inequality should be reduced for ethical reasons. This means they believe it is the moral duty of both people and governments to help reduce poverty. It could be argued that the sacrifice needed by the relatively better off to reduce poverty is very small indeed. Take the two families in 'Getting started'. If the wealthy Birnbaum family gave US$2300 (just 0.01 per cent of their annual income) to the poverty-stricken Gwengwe family, it would be enough to lift them out of absolute poverty. Further, the Birnbaum family would probably not even miss their loss of income.

Many people are concerned by the vast inequalities of income around the world – some are even disgusted by it. In 2015, the GDP per head in Qatar, the USA and Germany, three of the richest countries in the world, was US$73 653, US$56 116 and US$41 318, respectively. In contrast, the GDP per head in three of the poorest countries in the world, Burundi, Central African Republic and Malawi, was US$227, US$323 and US$372, respectively. Also, in 2016, it was estimated that the 62 richest people in the world owned more wealth than one-half of the world's poorest people – that is over 3600 million other people.

Millions of ethically minded people do give money to charities, such as Oxfam and Save the Children, to help reduce poverty. It is also fair to say that some of the world's richest people donate large sums to help the poor. However, despite this there is still a need to reduce poverty and income inequalities in the world.

## GOVERNMENT INTERVENTION TO REDUCE POVERTY AND INCOME INEQUALITY

Generally, if a country enjoys more economic growth, the level of poverty in that country should fall. However, even if poverty did fall there is still likely to be considerable income inequality. According to a report by the OECD in 2014, the gap between rich and poor is now at its highest level in 30 years in most OECD countries. If a government is committed to reducing poverty and achieving a fairer distribution of income, a number of measures could be used.

GENERAL VOCABULARY

**burden** particular costs, such as taxes or interest payments, seen as a problem, especially when they are high

SUBJECT VOCABULARY

**progressive taxation** where the proportion of income paid in tax rises as the income of the taxpayer rises.

**regressive taxation** tax system that places the burden of the tax more heavily on the poor

## PROGRESSIVE TAXATION

A **progressive tax** system is one that places the **burden** of taxation more heavily on the rich – that is, those who can afford to pay. A progressive tax is a tax where the proportion of income paid in tax rises as the income of the taxpayer rises. For example, if a person earning US$10 000 paid US$600 in tax, the proportion of their income paid in tax is 6 per cent. In the same country, if a person earning US$100 000 pays US$30 000, the proportion paid in tax is 30 per cent. This is a progressive tax system. In many countries, taxes on personal income tend to be more progressive. This is often because people on very low incomes do not have to pay any tax at all. For example, in France people do not pay any tax at all on the first €9700 they earn.

In contrast, a **regressive tax** system places the burden of the tax more heavily on the poor. With such a system, the proportion of income paid in tax actually falls as income rises. Taxes on spending, such as VAT tend to be more regressive.

If a government uses a progressive tax system, the gap between the rich and the poor might be closed. This is because people on higher incomes will be paying more tax. However, if average incomes are rising rapidly, the people at the top of the income scales will benefit more so the gap might widen. The gap is also more likely to close if the government gives poorer sectors of society some of the tax it collects from those on higher incomes.

## REDISTRIBUTION THROUGH BENEFIT PAYMENTS

In most developed countries, governments have a welfare system, which is used to redistribute income in favour of the poor. Most systems involve using tax revenues to make direct payments to those on low incomes and those who cannot work at all. For example, in many European countries payments are made to the unemployed, the disabled, the sick, single-parent families, the elderly and those on very low incomes. These payments help to boost the incomes of some of the most at-risk people in society. Such payments help to reduce both absolute poverty and relative poverty. In countries where large numbers of people live in absolute poverty, there are rarely any systems that redistribute income in this way. This is mainly because the governments in these countries do not have enough money. GDPs are low so the tax revenues collected are also low.

In recent years, some developing countries have been able to reduce poverty and close the gap between the rich and the poor. For example, in 2000, about 20 per cent of the population in Ecuador were living in absolute poverty. By 2015, this had fallen to just 4 per cent. One of the reasons for the improvement was the government's commitment to highly redistributive social policies brought about by Rafael Correa when his party was elected in 2007. However, booming oil sales, lower unemployment, rising wages and investment in public services also helped.

## INVESTMENT IN EDUCATION AND HEALTH CARE

One route to reducing poverty is through education. Clearly, if people are educated and are able to develop a range of skills, such as reading and writing, numeracy, communication, analysis, problem solving, evaluation, critical thinking and language, they are more employable. However, according to UNICEF, schooling has other benefits. 'Education will give the next generation the tools to fight poverty and conquer disease. School also offers children a safe environment, with support, supervision and socialisation. Here they learn life skills that can help them prevent diseases, including how to avoid HIV/AIDS and malaria. Children may receive lifesaving vaccines, fresh water and nutrient supplementation at school.'



Unfortunately, investment in education is very expensive and the returns on the investment often take many years to realise. Consequently, funds for education in many developing countries are inadequate. For example, in most developing countries:

- public school is not free – the costs of books, uniforms and teachers are met by the students or their families
- 67 million 5–11 year olds receive no primary education
- more than 226 million children do not attend secondary school.

It is reckoned that in many developing countries, every additional year of education can increase a person's future income by an average of 10 per cent. It is easy to see that several years of education could help to reduce poverty.

Investment in health care will also help to reduce poverty. Health programmes can reduce child mortality rates, increase life expectancy and reduce suffering. These are some of the key indicators of poverty. If children are healthier, their attendance at school is higher. If people live longer, they are more likely to save for their retirement, which increases the flow of funds for investment. Finally, if people are healthy, they will be more productive in the workplace, which will help to increase economic growth.

## ACTIVITY 2

### CASE STUDY: PROGRESSIVE TAX IN FRANCE

France has few, if any, people living in absolute poverty. However, as in all societies, there are examples of relative poverty. To help redistribute income in the country, France has one of the most progressive tax systems in the world. Table 30.1 shows the tax rates on different bands of income in France in 2016.

| INCOME | TAX RATE (%) |
|---|---|
| Up to €9700 | 0 |
| Between €9701 and €26 791 | 14 |
| Between €26 792 and €71 826 | 30 |
| Between €71 827 and €152 108 | 41 |
| Above €151 108 | 45 |

▲ Table 30.1 Tax rates for income tax in France, 2016

1 Calculate the amount of tax payable on earnings of **(a)** €15 000 and **(b)** €50 000.

2 What is meant by a progressive tax system? Use your answers to question **(1)** to support your explanation.

3 Describe the main purpose of a progressive tax system.

4 What is meant by relative poverty?

## MULTIPLE-CHOICE QUESTIONS

1 The median income in an EU country is €19 400. Which of the following incomes is below the relative poverty line?

A €19 200

B €19 400

C €11 200

D €13 200

2 Which of the following might increase income inequality?

A A fall in regressive taxation

B A more progressive tax system

C A fall in GDP per capita

D A cut in state benefits

## ECONOMICS IN PRACTICE

## CASE STUDY: POVERTY IN INDIA

India has more people living in poverty than anywhere else in the world. In 2016, the World Bank reported that about 30 per cent of India's population were living in absolute poverty. This means that 224 million people in India do not have enough resources to meet their basic needs. This is more than one-quarter of the world's total. Many of them live in slums like the one shown in Figure 30.5. However, the number of people living in poverty in India has fallen.

▲ **Figure 30.5** An Indian slum

Figure 30.6 provides some evidence of the improvement in living standards in India. The graph shows that India's GDP per head has risen very sharply from about US$300 per capita in the 1960s to nearly US$1800 per capita in 2016. Life expectancy in India has also increased. In the last 16 years, it has risen from 62.3 years to 68.5 years. Literacy rates have also improved. In 1995, only 52 per cent of adults were literate. By 2016, the national literacy rate was 75 per cent. However, in some individual states it was as high as 90 per cent.

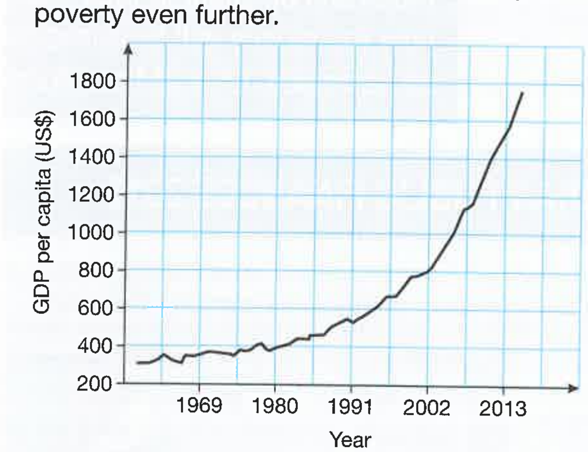
One reason for the fall in poverty is improved infrastructure. The World Bank said improved infrastructure, specifically the expansion of the electricity network into rural areas, has had extremely positive effects. The Bank argued that electrification had changed earnings, consumption and even encouraged schooling for girls. Nearly 96 per cent of villages in India are electrified but only 69 per cent of homes have electricity connections according to a report. However, there are variations across different states. For example, in Uttar Pradesh, 99 per cent of villages are electrified, but only 60 per cent of households have access to electricity.



Another possible reason why India is lifting many of its citizens out of poverty is because of the government's commitment to education. Although the data is incomplete there have been increases in government expenditure on education in recent years. For example, in 2016, the government announced an allocation of Rs72 394 crore compared with Rs68 963 crore for the previous year, which is a 4.9 per cent increase in the education budget. The government has also introduced a number of measures to increase the literacy rate in India. Some examples are listed below.

- It provides free education programmes to poor people living in villages and towns.
- It is setting up new schools and colleges at district and state levels.
- Committees check that funds allotted to improve literacy rate are spent appropriately.
- Door-to-door surveys are used to monitor literacy rates.

Finally, in November 2016, the government made some radical changes to the nation's monetary system. It withdrew all Rs500 and Rs1000 notes from use and replaced them with new Rs500 and Rs2000 notes. This caused chaos at the time but forced most of the population to open bank accounts. This was because people in possession of the old notes could only pay them into bank accounts. They could not be used as a medium of exchange. One of the reasons for the change was to improve accountability in the country. Before the changes, the overwhelming majority of transactions in India were conducted in cash. The government wanted to encourage more electronic transactions, which meant that people and businesses would have to declare their incomes. This meant the government would collect more tax and be able to invest more heavily in public services in the future. It was hoped that this would help to reduce poverty even further.




▲ **Figure 30.6** Indian GDP per capita, 1960–2013

## CHAPTER QUESTIONS

1 Describe what absolute poverty is.

2 Why has poverty in India fallen? Give two reasons in your analysis.

3 Discuss how investment in education might reduce poverty.

4 Why should poverty in India be reduced further? Give at least two reasons in your analysis.

# 31 FISCAL POLICY

## LEARNING OBJECTIVES

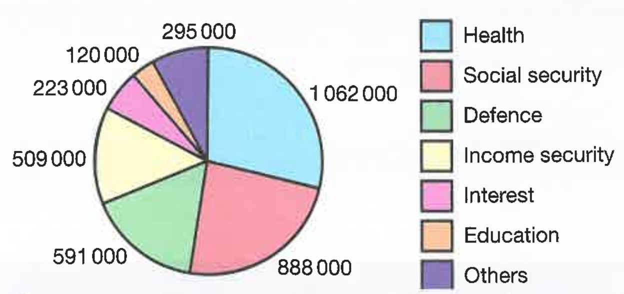
- Understand how to define fiscal policy
- Understand the nature of government revenue: direct and indirect taxes
- Understand the nature of government expenditure: main areas of focus
- Understand fiscal deficits and fiscal surpluses
- Understand the impact of a fiscal deficit and fiscal surplus
- Understand the impact of fiscal policy on macroeconomic objectives

## GETTING STARTED

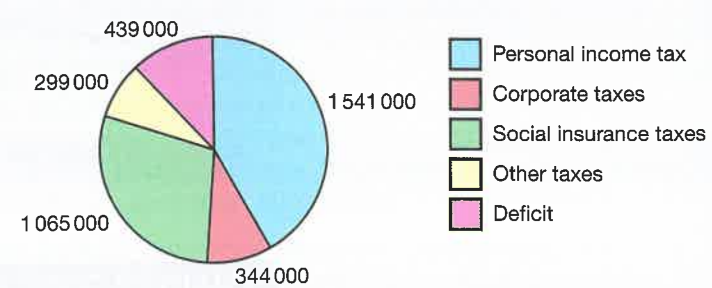
A government has a number of measures it can use to achieve its macroeconomic objectives. These measures might be used to control inflation, bring down unemployment or promote economic growth, for example. One of the measures it can use is to adjust levels of government expenditure on public services, such as defence, education and health care. Each year, the government has to decide how much will be spent on each service and how much will be spent in total. The government also has to decide how the money will be raised through taxation and how much will be borrowed. Look at the information below.

## CASE STUDY: CANADIAN PUBLIC FINANCES 2015

In 2015, the Canadian government planned to spend CAD3 688 000 million on a range of government services. Figures 31.1 and 31.2 show the spending and revenue plans for the year.




▲ **Figure 31.1** Canadian planned government expenditure 2015 (CAD million)




▲ **Figure 31.2** Canadian planned income 2015 (CAD million)

1 What is meant by government expenditure? Use examples from this case to support your answer.
2 Which item of government expenditure in Canada is the most expensive?
3 Which is the most important source of income for the Canadian government?



## POLICY INSTRUMENTS

The government can use a number of tools to help achieve its macroeconomic objectives. These are called **policy instruments**. Policy instruments are economic variables such as the rate of interest, rates of taxation and levels of government expenditure. The government can adjust them directly or indirectly. Changes in policy instruments can affect other variables in the economy, such as aggregate demand, inflation, unemployment and GDP. For example, if the government increases income tax rates, there is likely to be a fall in aggregate demand because people will have less disposable income to spend.

**SUBJECT VOCABULARY**

**policy instruments** tools governments use to implement their policies, such as interest rates, rates of taxation, levels of government spending

## FISCAL POLICY

One important policy instrument is **fiscal policy**. This involves adjusting levels of government expenditure and taxation to influence aggregate demand in the economy. Fiscal policy can be used to influence the behaviour of firms and individuals. For example, many governments place heavy taxes on cigarettes to discourage consumption of this harmful product.

Every year, the government plans how much it is going to spend on each category of expenditure. The government also shows how the money is going to be raised and states how much it plans to borrow. These plans are published in the government's **budget**. In 'Getting started', Figures 31.1 and 31.2 showed the spending and revenue plans for the Canadian government in 2015.

**SUBJECT VOCABULARY**

**budget** government's spending and revenue plans for the next year

**fiscal policy** decisions about government spending, taxation and levels of borrowing that affect aggregate demand in the economy

## GOVERNMENT REVENUE

The main source of revenue for a government is taxation. Governments all over the world impose taxation for the following reasons.

- To pay for public sector services.
- To discourage certain activities. For example, in some countries, taxes are imposed on cigarettes to discourage smoking because it is dangerous. There is also a tax on dumping rubbish in landfill sites. This is to encourage everyone to reduce waste.
- Taxes can be used to help to control aggregate demand in the economy. This is discussed in more detail later.
- The distribution of wealth in the economy can be made fairer. Taxing the wealthy more heavily than the poor achieves this. This is discussed in Chapter 30 (pages 240–249).

### DIRECT TAXES

Most government taxes fall into two categories. **Direct taxes** are taxes imposed on firms and individuals. They are usually linked to income and wealth. Some of the key direct taxes used around the world are outlined below.

- **Income tax** is a direct tax on the amount earned by an individual. It is a common and important tax worldwide. Both employed and self-employed people have to pay this tax.
- **Social insurance taxes** are like income tax. They are imposed on people's income. However, the money collected is used specifically for pensions, benefits and health care. In 'Getting Started', Canada planned to raise CAD1 065 000 million in social insurance taxes in 2015.
- **Corporation taxes** are levied on the profits made by limited companies. Other types of business, such as partnerships and sole traders, are likely to pay income tax.
- **Capital gains tax** is levied on any financial gains made when selling assets at a profit. Assets such as shares, businesses and properties attract capital gains tax.

**SUBJECT VOCABULARY**

**direct taxes** taxes levied on the income earned by firms and individuals

- **Inheritance tax** is paid on money that is inherited from people who die. However, in most countries where this tax is used, a certain amount of money can be passed on to relatives, friends and other benefactors before this tax applies.

## INDIRECT TAXES

Any tax on spending is an indirect tax. Some of the main **indirect taxes** used around the world are described briefly below.

- **Sales taxes** are taxes on spending. For example, EU countries use **value-added tax**. In Denmark, Belgium and Italy, the standard rates of VAT are 25 per cent, 21 per cent and 22 per cent, respectively. However, some goods such as food, books, drugs and medicines and public transport may be zero rated (VAT = 0 per cent). Also, firms with a small turnover do not have to charge VAT.
- **Duties** are often heavy taxes on a select range of goods. In some countries, goods such as petrol, cigarettes and alcohol attract quite heavy duties.
- **Customs duties** are taxes levied on imports. In the UK, goods coming in from a country that is not a member of the EU attract customs duties.
- **Council tax** is collected by local authorities to help pay for local services such as refuse collection. It is levied according to the value of residential property and is paid by the occupants.
- **Business rates** are also collected by local authorities and contribute to the provision of local community services. However, they are paid by businesses and are levied according to the value of business property.
- **Stamp duties** are paid when buying certain assets, such as houses and shares.

**SUBJECT VOCABULARY**

**indirect taxes** taxes levied on spending, such as VAT

**valued-added tax (VAT)** tax on some goods and services – businesses pay value-added tax on most goods and services they buy and if they are VAT registered, charge value-added tax on the goods and services they sell

## ENVIRONMENTAL TAXES

These are designed to protect the environment. Below are some examples.

- **Landfill tax** is imposed on the disposal of waste in landfill sites. The charge is usually linked to the weight of waste dumped in a landfill site.
- **Climate change levies are used to help countries** meet their commitment to reducing greenhouse gases. It is paid mainly by the suppliers of electricity, gas and coal, for example.
- **Aggregates levy** is a tax on sand, gravel and rock that is dug from the ground. The tax is designed to reduce the environmental damage caused by quarrying.

## ACTIVITY 1

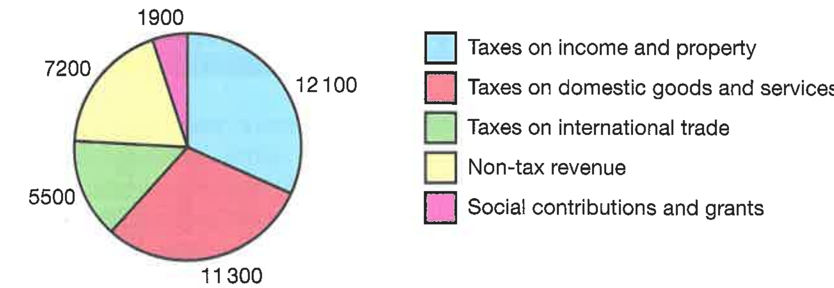
### CASE STUDY: TAXATION IN GHANA

In 2016, the government of Ghana planned to raise GHS 38 000 million to help fund its spending plans. Figure 31.3 shows the main sources of this revenue. Ghana uses both direct and indirect taxes to generate government revenue. Ghana's tax regime include the following features.

- A fairly progressive income tax system is used with tax rates of 0, 5, 10, 17.5 and 25 per cent on rising bands of income.
- Companies have to pay a standard rate of 25 per cent in corporation tax on their profits.



- Some business activities, such as mining and petroleum activities, are taxed more heavily at 35 per cent.
- Companies exporting non-traditional goods and those involved in waste management are taxed less at 8 per cent and 1 per cent, respectively.
- A standard rate of VAT is charged at 15 per cent. Some goods and services, such as food, water and education services, are exempt.
- A national health insurance levy (NHIL) of 2.5 per cent is also charged on spending.
- Other taxes used by Ghana include customs and excise duties, airport tax, and environmental taxes on the production of plastics and a special petroleum tax.




▲ **Figure 31.3** Planned sources of government revenue, Ghana, 2016 (GHS million)

1 What is the difference between direct taxes and indirect taxes?

2 What is meant by (a) VAT and (b) customs duties?

3 Discuss which of Ghana's taxes might help protect the environment.

## GOVERNMENT EXPENDITURE

Total planned expenditure and the amount to be spent on each category is announced every year in the budget. Figure 31.1 in 'Getting started' shows the amount of money the Canadian government planned to spend in 2015. Some countries divide government spending into *mandatory spending* and *discretionary spending*. The levels of mandatory spending are determined by current systems. For example, when someone is made redundant they are entitled to claim Jobseeker's Allowance. These payments are made automatically. The government is legally obliged to meet them. Discretionary spending is 'extra' or 'new' spending. An example would be money provided for a new motorway. The main areas of focus for government spending in most countries are outlined in Table 31.1.

| CATEGORIES | MAIN EXAMPLES |
|---|---|
| Social protection | State benefits, pensions, child benefits, jobseekers allowances and disability allowances |
| Health care | Salaries of nurses, doctors and admin staff; drugs and medicines; equipment and care programmes |
| Education | Teachers' salaries, equipment for schools and student grants |
| Defence | Maintenance of the armed forces (army, navy and air force) |
| Interest | The interest paid on government borrowings such as the national debt |
| Public order/safety | Spending on the police force, fire service, prison service, the justice system and health and safety |
| Social services | Spending on the care of children, the elderly and people with learning disabilities |
| Other | Transport, housing and the environment, industry, agriculture, training, and recreation |

▲ **Table 31.1** Government expenditure – main focus areas

## FISCAL DEFICITS AND FISCAL SURPLUSES

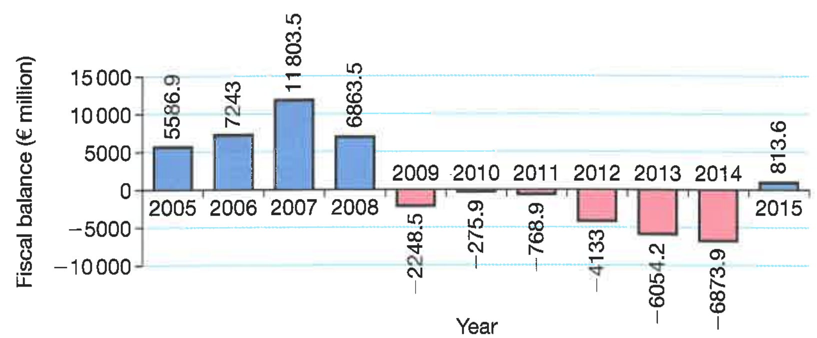
**SUBJECT VOCABULARY**

**fiscal deficit** amount by which government spending exceeds government revenue

**fiscal surplus** amount by which government revenue exceeds government spending

In most years, many governments plan to spend more than they receive in tax revenue. This results in a **fiscal deficit** and means that the government must borrow money to fund the deficit. For example, in 'Getting started', Figure 31.2 showed that Canada planned to borrow CAD439 000 million. This money might be borrowed from both domestic and foreign banks and possibly other governments.

If the government were to spend less than it received in tax revenues, there would be a **fiscal surplus**. This may be used to repay government debts. Figure 31.4 shows the pattern of fiscal deficits and surpluses for Sweden between 2008 and 2015. At the beginning of the period, Sweden enjoyed a number of fiscal surpluses. However, from 2009 to 2014, the government spent more than it received in revenues. Finally, in 2015, the Swedish government managed to generate another surplus.




▲ **Figure 31.4** Fiscal balances for Sweden, 2005–15 (€ million)

## IMPACT OF A FISCAL DEFICIT AND A FISCAL SURPLUS

**SUBJECT VOCABULARY**

**national debt** total amount of money owed by a country

### FISCAL DEFICITS

Over a long period of time, most governments would prefer to avoid running a fiscal deficit. In a year when the government plans to overspend, it will have to borrow money to fund the deficit. Consequently, if deficits build up over a period of time, the **national debt** gets bigger and bigger. This means that the government has to spend more and more of its revenue on paying off the debt. Many would argue that money spent on interest payments has a high opportunity cost. For example, the money could be spent on lower taxes or extra spending on social provision or infrastructure development.

Another problem with persistent fiscal deficits and rising national debt is that future generations may be burdened with the debt of 'today'. Many would argue that this is not really fair on those people that have not even been born yet. They will be paying for the excesses of previous generations.

### FISCAL SURPLUSES

The impact of a fiscal surplus is likely to be positive. If a government collects more revenue than it spends in a year, the surplus could be used in a number of ways. For example, it could be used to spend on the future provision of public services or used to lower taxes in the economy. However, most governments would use it to pay off some of the national debt. This would reduce future interest payments and strengthen the nation's finances.

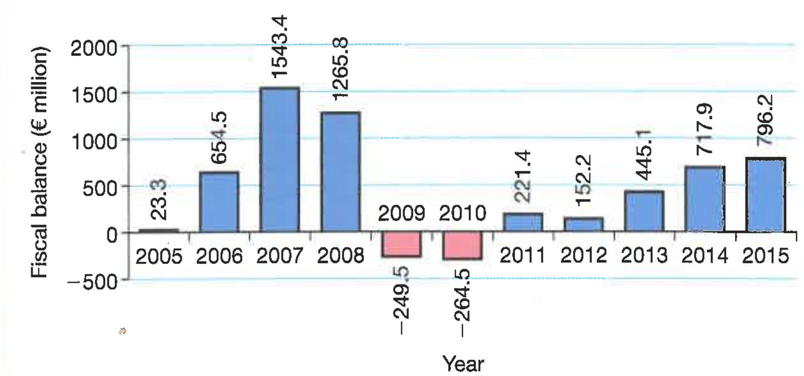
Finally, when analysing the size of fiscal deficits, it is more important to focus on the size of the deficit in relation to the nation's GDP. This is because the amount that needs to be borrowed to cover the deficit is only a serious problem if it is a large percentage of the GDP. It is like an individual taking out a loan. If an individual has an income of US$80 000, a US$5000 loan is fairly easy to pay back over a few years. However, someone earning just US$15 000 a year may struggle to meet the interest and loan repayments on US$5000. This is because the loan is equal to one-third of the person's annual income. It might be quite a burden. Therefore, when analysing fiscal deficits and making international comparisons, it is best to express the deficit as a percentage of GDP.



## ACTIVITY 2

### CASE STUDY: FISCAL BALANCES IN LUXEMBOURG

The small European state of Luxembourg has a population of just under 600 000. However, it has a high GDP per capita at just over €89 000 per head, a stable economy with low unemployment and sound economic growth. About one-third of Luxembourg's GDP is generated from banking services. The country had a reputation for banking secrecy until 2015 when the EU forced Luxembourg to reveal tax information on savings accounts held in Luxembourg's banks. Other EU rulings relating to the way Luxembourg collected tax revenues meant that the government had to raise additional levies and cut its expenditure by reducing some social benefits. Figure 31.5 shows the fiscal balances for Luxembourg between 2005 and 2015.




▲ **Figure 31.5** Fiscal balances for Luxembourg, 2005–15 (€ million)

1. In which years did the Luxembourg government overspend? Account for your answer.
2. Comment on the pattern of Luxembourg's fiscal balances over the period.
3. Describe the possible impact of the balances described in (2) on Luxembourg.

## THE IMPACT OF FISCAL POLICY ON MACROECONOMIC OBJECTIVES

**GENERAL VOCABULARY**

**stimulate** to encourage an activity to begin or develop further

Fiscal policy is also used to influence aggregate demand in the economy. In some years, a government may increase the size of a budget deficit (or reduce a surplus), by spending more or taxing less, to **stimulate** the economy. This is called **expansionary fiscal policy**. In contrast, it may be necessary to reduce aggregate demand. In this case, the government will plan to reduce the size of a deficit (or increase a surplus) by spending less or taking more in tax. This

**SUBJECT VOCABULARY**

**expansionary fiscal policy** fiscal measures designed to stimulate demand in the economy

**contractionary fiscal policy** fiscal measures designed to reduce demand in the economy

is called **contractionary fiscal policy**. Some examples of the impact of fiscal policy on macroeconomic objectives are outlined below.

### INFLATION

Contractionary fiscal policy can be used to reduce inflation. If it is thought that inflation is being caused by aggregate demand growing too quickly, measures can be taken to reduce demand. The government could cut its own spending levels or raise taxation. Increases in taxes will reduce disposable income and therefore reduce demand, relieving inflationary pressure.

### ECONOMIC GROWTH

Expansionary fiscal policy can be used to help stimulate economic growth. Increases in government expenditure will increase aggregate demand. For example, if more civil servants and council workers are employed, there will be more demand for most goods and services as people who were previously unemployed take up the new jobs. Cuts in taxes will also generate more demand because firms and households will have more money to spend. Economic growth is more likely to result from extra government expenditure on capital projects, such as new schools, transport links and airports. This is because money spent on investment is the key to economic growth.

### UNEMPLOYMENT

Expansionary fiscal policy can help to reduce unemployment. Again increases in government expenditure and tax cuts can help to stimulate demand. To meet this extra demand, firms will have to produce more. This means more staff will be taken on and unemployment will fall. The government could help by directing its extra spending on construction projects, such as building new hospitals, motorways and rail links. The construction industry is labour intensive, which means that job creation will be higher.

### CURRENT ACCOUNT DEFICIT

Fiscal policy might be used to help influence the balance on the current account. For example, if there is a large deficit on the current account, contractionary fiscal policy will help reduce aggregate demand. This will help to reduce the demand for imports.

### FISCAL POLICY AND THE ENVIRONMENT

More recently, governments have used fiscal policy to tackle environmental problems. For example, taxes such as landfill tax, the climate change levy and the aggregates levy, have been used to help reduce environmental damage. These are explained above. Some governments also use subsidies to encourage activities that are environmentally friendly. For example, in the USA, subsidies have been given to the producers of environmentally friendly fuels.

### MULTIPLE-CHOICE QUESTIONS

▶ 1 In 2016, a government spends €654.5 million and collects €631.6 million in revenue. As a result, the fiscal balance for the year would be which of the following?

**A** €654.5 million deficit

**B** €22.9 million surplus

**C** €1286.1 million surplus

**D** €22.9 million deficit



▶ 2 Which of the following fiscal measures is likely to increase a fiscal deficit?

**A** An increase in spending on education

**B** A rise in VAT

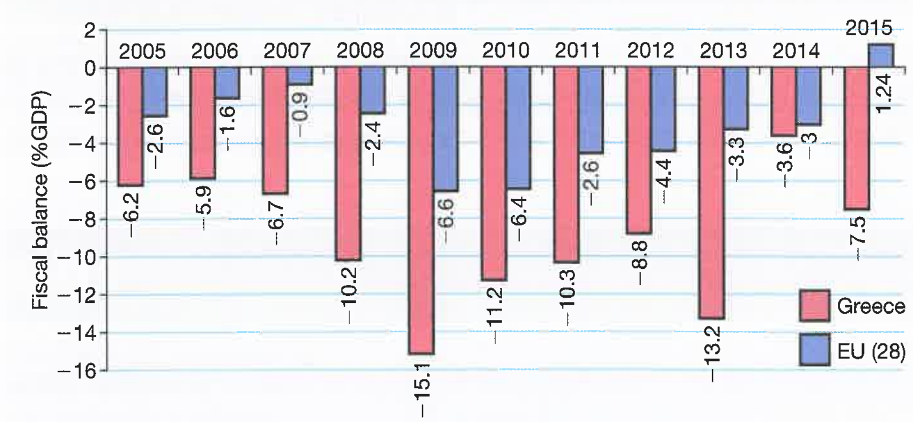
**C** A cut in pension payments

**D** A rise in corporation tax

### ECONOMICS IN PRACTICE

## CASE STUDY: RECENT FISCAL POLICY IN GREECE

In recent years, Greece has used contractionary fiscal policy in an effort to achieve a specific macroeconomic objective. The aim of Greek fiscal policy has not been to reduce aggregate demand to reduce inflation but to cut its huge fiscal deficit. The global recession in 2008 hit Greece very hard, however, Greece also had other problems. Both private sector and public sector debt was very high indeed. From 1999 to 2008, private sector debt as a proportion of GDP more than doubled from 59 per cent to 126 per cent. The ratio of public sector debt to GDP was around 100 per cent over the same period. During this period, consumers, businesses and the government spent heavily. This was reflected in the booming level of imports. However, when the financial crisis hit the world in 2008, those with debt struggled to repay what they owed. In an effort to reduce debt, households and businesses cut their spending and unemployment rose. Greece was forced to borrow from the EU and the IMF. Figure 31.6 shows the Greek and EU fiscal balances between 2005 and 2015.

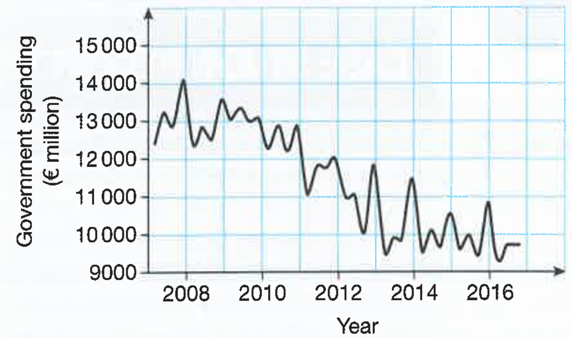



▲ **Figure 31.6** Greece and EU fiscal balances, 2005–15 (%GDP)

The loans granted to Greece came with conditions. The country had to raise revenues and cut government spending. Greece has raised many of its taxes many times in the last few years. Some examples are shown below.

- In 2013, corporation tax rates rose from 20 per cent to 26 per cent and a top rate of income tax of 42 per cent was to be imposed on incomes above €42 000.
- In 2016, corporation tax was increased again to 29 per cent.
- Rates of VAT increased from 19 per cent in 2010 to 24 per cent in 2016.
- New property taxes were introduced and existing ones increased.
- A range of other taxes and duties were increased.

The government also agreed to cut its spending. Figure 31.7 shows the levels of government spending in Greece between 2007 and 2016. Spending was reduced from around €14 000 million to just under €10 000 million over the period. This is quite a significant cut and was achieved by making cuts to most of the various government departments. For example, the government raised the retirement age to reduce pension payments and made big cuts in benefits, education, defence and many other areas.




▲ **Figure 31.7** Greek government spending, 2007–16 (€ million)

## CHAPTER QUESTIONS

1 Describe what fiscal deficit is.

2 Why is it important to express a fiscal deficit as a percentage of GDP?

3 Describe Greece's fiscal position between 2005 and 2015.

4 What is meant by contractionary fiscal policy? Use the example in this case to support your answer.

5 Consider the possible impact on Greece of a persistent fiscal deficit.



# 32 MONETARY POLICY

## LEARNING OBJECTIVES

- Understand how to define monetary policy and interest rates
- Understand the role of central banks in setting interest rates
- Understand the impact of changes in interest rates on macroeconomic objectives and how consumers and business are affected
- Understand the use of asset purchasing by central banks

## GETTING STARTED

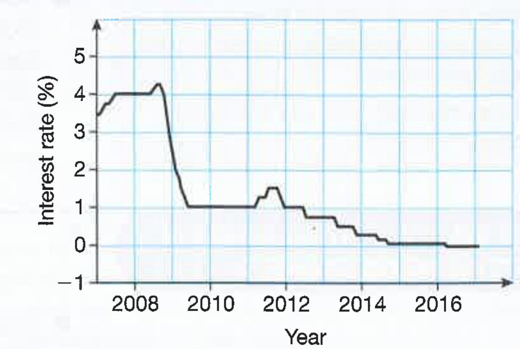
Interest rates are one policy instrument that governments can use to help control the economy. A lot of spending by firms and households is funded by borrowed money and is therefore influenced by interest rates. Look at the examples below.

## CASE STUDY: FRANCESCA PANICO

Francesca is employed in a museum in Naples. She is single and enjoys spending money. She relies heavily on credit cards to fund her spending. However, she was shocked when she found out that her credit card company had increased interest rates by nearly 2 per cent at a time when interest rates all over the world had fallen. She was going to write a letter of complaint but instead decided to cut her spending on credit cards from €500 per month to just €300.

## CASE STUDY: ANTON AUTOBRAKES

Anton Autobrakes manufactures braking systems for car makers based in northern Italy. In 2016, the company decided to invest in new tooling technology and upgrade its computer systems. Owing to the low interest rates in the EU, the firm's interest payments on current loans had fallen from €150 000 p.a. to around €87 000 p.a. The senior management team decided to take out new loans to fund the investment.




▲ **Figure 32.1** EU interest rate, 2007–16

1 What has happened to the EU interest rate since 2007?

2 What effect is the pattern in (1) likely to have on firms like Anton Autobrakes?

3 What relationship exists between interest rates and consumer spending? Use the Francesca Panico example to support your answer.

## MONETARY POLICY

Chapter 31 (pages 250–258) looked at how a government could influence aggregate demand by adjusting levels of taxation and government expenditure. Another way of controlling aggregate demand in the economy is to adjust interest rates or the money supply. This approach to demand management is called **monetary policy**.

Aggregate demand in the economy is affected by growth in the **money supply**. The money supply is the total amount of money that circulates in the economy. It is quite difficult to define the money supply. Economists use a number of methods. One simple way is to remember that the money supply includes all notes and coins in the economy plus any money held in bank accounts.

### SUBJECT VOCABULARY

**monetary policy** use of interest rates and the money supply to control aggregate demand in the economy
**money supply** amount of money circulating in the economy

## INTEREST RATES

Interest is the price paid to lenders for borrowed money. It is the price of money. For example, a firm borrowing US$100 000 from a bank to buy a new machine might pay interest of 7 per cent to the bank. This means that until the loan is completely repaid, the firm must pay 7 per cent on the amount owed. Interest rates can affect aggregate demand because some spending by households and firms is funded by borrowed money.

In most countries, there are many different rates of interest. There are a number of reasons for this.

- Different banks charge different rates as they compete with each other for business. For example, if a particular bank lowers rates on a particular loan product, it would expect to attract more customers because the loan becomes cheaper.
- Rates are higher if money is borrowed without security. For example, the rate charged on a **mortgage** to buy a house will be lower than the rate charged on an unsecured loan to pay for a holiday. This is because mortgages are secured loans. This means that the borrower gives permission to the lender to take control of the property if repayments cannot be met. With unsecured loans there is no such arrangement. Therefore, lenders might not get their money back if the borrower cannot meet the repayments. The interest rate charged is linked to the risk faced by lenders.
- The amount paid to borrowers is higher than the amount given to savers. This allows moneylenders such as banks to make a profit.
- Some of the highest rates of interest are charged to credit card users. For example, in February 2017, the **rate of interest** charged for one particular Barclays credit card product was 18.9 per cent (in the UK). In contrast, the rate charged by Barclays on some of its mortgage products was 3.4 per cent. All rates of interest in a country are affected by the **base rate**, which is set by the authorities. This is explained in the next section.

### SUBJECT VOCABULARY

**base rate** rate of interest set by government or regional central banks for lending to other banks, which in turn influences all other rates in the economy
**mortgage** legal arrangement where you borrow money from a financial institution in order to buy land or a house, and you pay back the money over a period of years; if you do not make your regular payments, the lender normally has the right to take the property and sell it in order to get back their money
**rate of interest** price of borrowing money

## THE ROLE OF CENTRAL BANKS IN SETTING INTEREST RATES

In many countries, interest rates are set by a central bank. Central banks play an important role in the economy by:

- implementing the government's monetary policy and regulating the banking system
- acting as a lender of last resort to commercial banks
- controlling inflation and stabilising a nation's currency
- setting interest rates.

For example, in the EU, interest rates are set by the European Central Bank (ECB), which is based in Brussels, Belgium. In the UK, the Monetary Policy



Committee (MPC) sets the interest rate. This is a group of nine experts in economics and monetary policy led by the governor of the Bank of England. The aim of the MPC is to set interest rates at a level that keeps inflation under control. In the UK, the government sets a target for the rate of inflation – this was 2 per cent in 2016. The MPC has to set an interest rate that prevents inflation from exceeding this target. However, a central bank may also consider other economic variables when setting rates. For example, the rate of economic growth and the level of unemployment might be considered.

The rate of interest set by central banks is called the base rate. This is the rate of interest charged by a central bank when it lends overnight to commercial banks. When the base rate is changed, most other interest rates in the economy also change. Table 32.1 shows the base rates in a selection of countries around the world.

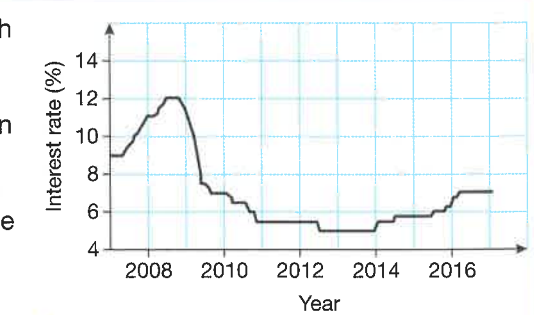
| CENTRAL BANK INTEREST RATE | REGION | PERCENTAGE |
|---|---|---|
| FED interest rate | USA | 0.75 |
| RBA interest rate | Australia | 1.50 |
| BACEN interest rate | Brazil | 13.00 |
| BoE interest rate | UK | 0.25 |
| BOC interest rate | Canada | 0.50 |
| PBC interest rate | China | 4.35 |
| ECB interest rate | Europe | 0.00 |
| BoJ interest rate | Japan | 0.00 |
| CBR interest rate | Russia | 10.0 |
| SARB interest rate | South Africa | 7.00 |

▲ **Table 32.1** Interest rates set by a selection of central banks around the world in 2016

### ACTIVITY 1

### CASE STUDY: INTEREST RATES IN SOUTH AFRICA

Despite weak economic growth in South Africa, the South African Reserve Bank (SARB) increased interest rates twice in 2016 (Figure 32.2). It is now 7 per cent. The role of the SARB is to achieve and maintain price stability to promote balanced and sustainable economic growth in South Africa. The SARB is required by the government to deliver a rate of inflation between 3 to 6 per cent. Despite the recent increases, interest rates were still considerably lower than they were in 2009 when the base rate reached 12 per cent.



▲ **Figure 32.2** South African interest rate, 2007–17

1 What is meant by the interest rate?
2 How are interest rates determined in South Africa?
3 What is meant by the 'base rate'?
4 Describe the effect that interest rate changes might have on aggregate demand in the South African economy.

## IMPACT OF INTEREST RATE CHANGES ON MACROECONOMIC OBJECTIVES

Changes in the level of interest rates can have an impact on a number of economic variables and help to achieve a government's macroeconomic objectives.

### INFLATION

Monetarists believe that inflation is caused by the money supply growing too quickly. They say that the way to reduce inflation is to slow down the speed at which the money supply is growing. This is likely to involve raising the rate of interest. When interest rates are higher, borrowing is likely to fall and the money supply grows less quickly. This will help to reduce aggregate demand in the economy and limit price increases.

### UNEMPLOYMENT

A government might use lower interest rates to reduce unemployment. If interest rates were cut, there would be an increase in demand for loans. As a result, spending by firms and households would increase. This would increase aggregate demand and firms would respond by producing more goods and services. This means they would need to recruit more staff and therefore unemployment would fall.

### ECONOMIC GROWTH

Monetary policy might be used to help smooth out the small variations in the economic cycle. For example, monetary policy might be used to help get an economy out of recession. In the last 10 years, interest rates in many countries around the world have been very low indeed. Table 32.1 shows that in some regions, such as the EU and Japan, two huge economic regions, the base rates set by central banks have been zero. The reason for this is to stimulate more economic growth. Since 2008, the global economy has been weak and many countries such as Japan and the EU have experienced low or negative growth rates.

### THE CURRENT BALANCE

A government could use monetary policy to adjust the balance on the current account. For example, to reduce a deficit, a government might decide to tighten monetary policy. This would lower aggregate demand and reduce spending on imports. However, if interest rates are raised, the exchange rate might also increase. This would make exports more expensive, imports cheaper and worsen the current balance. The overall effect on the current balance of higher interest rates depends on the following.

- **The income elasticity of imports:** If demand for imports were income elastic, higher interest rates would reduce demand for them. This would improve the current balance.
- **The strength of the link between interest rates and exchange rates:** If the link is strong, higher interest rates will raise exchange rates. Exports will become expensive and imports will become cheaper. The current balance would worsen.
- **The price elasticity of demand for imports and exports:** If they are both price elastic and the exchange rate does rise when interest rates rise, imports will be cheaper and exports will be dearer. This would worsen the current balance.



## THE MECHANISM BY WHICH INTEREST RATE CHANGES AFFECT CONSUMERS AND FIRMS

Changes in the interest rate can have an impact on aggregate demand. The impact occurs because of the way consumers and firms respond to changes in the interest rate.

### CONSUMERS

When interest rates fall, demand for loans from households will rise. Consumers are likely to borrow money to buy goods, such as cars, furniture and holidays, because borrowing is cheaper. Also, when interest rates fall, consumers with a mortgage may find that their mortgage payments fall. This means they have more money to spend, which will also increase aggregate demand. Finally, if interest rates are lower, the reward to savers is also lower as a result. This might encourage people to spend rather than save. In contrast, when interest rates rise, consumers try to reduce borrowing because it becomes expensive. As a result, demand for goods using borrowed money will fall. Also, mortgage payments will rise automatically. Therefore, households will have less disposable income to spend and will have to cut some of their expenditure or reduce their saving.

### FIRMS

Firms using borrowed money, such as mortgages, loans and overdrafts, to fund their business activity are likely to respond to changes in the interest rate. For example, when interest rates fall, the interest payments on current borrowings will also fall. This will help to boost their profits because costs will be lower. Lower interest rates are also likely to raise levels of business confidence and stimulate more investment. Since a large proportion of business investment is funded through borrowing, lower interest rates mean that the returns on investment are likely to be higher. Therefore, more investment is likely to be undertaken. In contrast, higher interest rates will raise costs, lower profits, reduce business confidence and make entrepreneurs more cautious. As a result, investment in the economy is likely to fall.

There is also a link between the interest rate and the exchange rate. When the interest rate falls, the exchange rate is also likely to fall (see Chapter 41, pages 333–339). If the exchange rate falls, the prices of exports become cheaper. This means that demand for them will rise. Firms will benefit because they will sell more goods and services. Also, the price of imports will rise, which means domestic consumers and firms will buy fewer. An increase in exports and a fall in imports will increase aggregate demand. This will also help to improve the balance on the current account

## THE USE OF ASSET PURCHASING BY CENTRAL BANKS

In recent years, many countries have tried to control the money supply using a method called **quantitative easing**. This involves central banks buying financial assets, such as government bonds, from commercial banks. This results in a flow of money from the central bank to commercial banks. This extra cash can be used by commercial banks as a basis for making new loans to consumers and businesses. When more loans are granted, aggregate demand will increase.

This approach was used in the USA, EU, UK and Japan when historically low interest rates failed to stimulate demand during the global recession. However, one possible problem with quantitative easing is that it can be inflationary. This is because the money used by the government does not exist – it is created electronically. The government buys financial assets from commercial banks and increases the cash balances in their accounts without actually giving them any cash. It is like printing money. Whether this approach has worked or not may not be determined for several years.

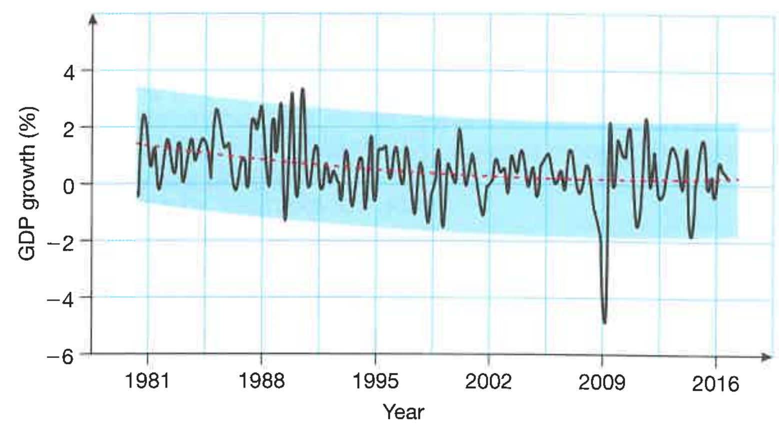
**SUBJECT VOCABULARY**

**quantitative easing** buying of financial assets, such as government bonds from commercial banks, which results in a flow of money from the central bank to commercial banks

## ACTIVITY 2

### CASE STUDY: MONETARY POLICY IN JAPAN

The Japanese economy has really struggled to grow in the last few decades. Figure 32.3 shows that growth has often been negative and has rarely risen above 2 per cent since 1981. For example, in 2009, GDP in Japan fell by around 5 per cent. In an effort to stimulate growth, interest rates have been reduced to –0.5 (base rate) and the Bank of Japan (Japan's central bank) has been buying JPY 80 trillion of government bonds per year for several years. The government wants to raise inflation in the economy, which has also been negative recently, to bring it up to its 2 per cent target.




▲ **Figure 32.3** Japanese economic growth, 1981–2016

1 What is meant by quantitative easing?
2 Why has Japan used quantitative easing?
3 Why might quantitative easing be inflationary?

## MULTIPLE-CHOICE QUESTIONS

▶ 1 Which of the following is most likely to rise if the money supply grows too quickly?
- **A** Inflation
- **B** Supply of labour
- **C** Voluntary unemployment
- **D** Current account surplus

▶ 2 An increase in interest rates is likely to bring about which of the following?
- **A** Increase inflation
- **B** Reduce unemployment
- **C** Increase the demand for imported cars
- **D** Increase savings



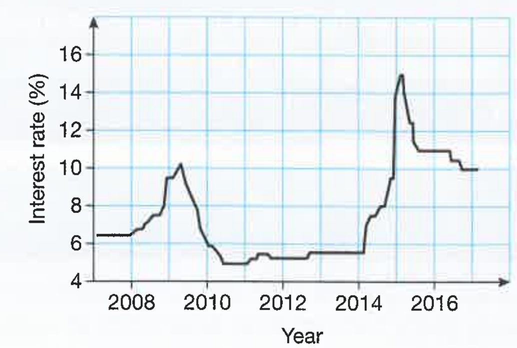
## ECONOMICS IN PRACTICE

### CASE STUDY: MONETARY POLICY IN RUSSIA

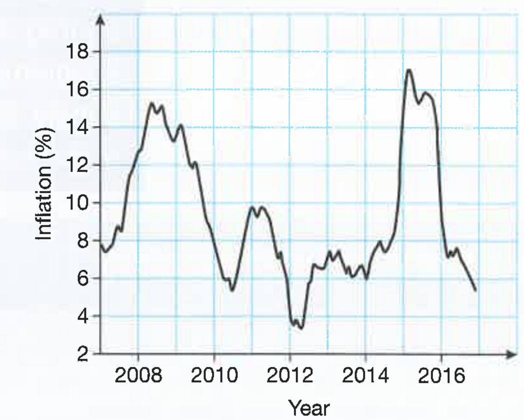
In Russia, monetary policy is an important part of the nation's overall economic policy. Current monetary policy is aimed at improving the well-being of Russian citizens. In common with many other countries in the world, the Bank of Russia uses monetary policy to maintain price stability – or currently to bring down inflation to its 2017 target of 4 per cent. In February 2017, the Bank of Russia decided to keep the interest rates fixed at 10 per cent. In 2015, rates were as high as 15 per cent so the current trend is downwards (Figure 32.4). It was expected that high interest rates in Russia would reduce inflation further and encourage savings (Figure 32.5). The central bank also says that it will maintain what it calls its 'moderately tight monetary policy' – a policy that is giving Russia the highest real interest rates of any major economy in the world.

However, Russia's economy is not in good health. Economic growth rates are low and the country is suffering from the low global oil price. A significant proportion of Russia's earnings is from the sale of oil overseas. Government revenue also relies heavily on oil proceeds and the fiscal deficits of the last 8 years are likely to be repeated. However, according to a report by the Bank of Russia, growth in industrial production is positive. Output in several industries is growing and business investment is gradually rising.

Finally, the governor of the Central Bank of Russia was critical of the policies used by other central banks around the world. Elvira Nabiullina said that quantitative easing activities had failed to increase investment in the **real economy**. 'Because of the continued easing of monetary policy in many countries there is also the possibility that a higher level of financial market volatility will persist,' Nabiullina warned. She also believed that many central banks were being cautious in an effort to keep financial markets stable.




▲ **Figure 32.4** Russian interest rate, 2007–16




▲ **Figure 32.5** Russian inflation rates 2007–16

**SUBJECT VOCABULARY**

**real economy** part of the economy that is concerned with actually producing goods and services, as opposed to the part of the economy that is concerned with buying and selling on the financial markets

## CHAPTER QUESTIONS

1 Describe what monetary policy is.
2 Why are there so many different rates of interest in an economy?
3 Describe the mechanism by which high interest rates in Russia affect consumers and firms.
4 Discuss the effect Russia's monetary policy might have on unemployment in the economy.
5 Consider whether Russia's monetary policy is working. Make a clear judgement in your evaluation.

# 33 SUPPLY SIDE POLICIES AND GOVERNMENT CONTROLS

## LEARNING OBJECTIVES

- Understand how to define supply side policies
- Understand the impact supply side policies have on productivity and total output
- Understand the impact supply side policies have on macroeconomic objectives: privatisation, deregulation, education and training, regions, infrastructure, business taxes and income taxes
- Understand the advantages and disadvantages of government controls such as regulation, legislation, fines and pollution permits

## GETTING STARTED

Fiscal policy and monetary policy is generally used to manage aggregate demand in the economy. For example, if a government wants to reduce inflation, it might raise interest rates to reduce aggregate demand. However, another approach to managing the economy is to introduce measures that help increase aggregate supply. Such measures may be targeted at small businesses. Look at the information below.

## CASE STUDY: ANDREI KARPOV

A newspaper reporter interviewed Andrei Karpov, the owner of a small Russian engineering company. Some extracts from the interview are given below.

**Reporter:** When did you start to feel good about your business?

**Andrei:** I suppose a few years ago. I got some financial help from the government. They gave me some money towards a new machine. The old machine was almost useless and I couldn't really afford a new one. After this, I was able to produce more efficiently and lower my prices. This, of course, led to more business.

**Reporter:** Did you get any other help from the government?

**Andrei:** Yes. Not financial help but highly valuable. As my business grew I needed more staff. I found that the new recruits were very capable. I did not have to spend so much time training them. They had been taught skills at college.

**Reporter:** Has the nation's privatisation programme helped you at all?

**Andrei:** Yes, it has. I sometimes make parts for automobiles. After privatisation, I was given the opportunity to supply parts to the newly privatised AutoCo. Before privatisation, the company would not have considered me. They just stuck with their old suppliers. They had no incentive to look around for cheaper and better quality parts.

**Reporter:** Do you think the new tax cuts will help your business?

**Andrei:** Oh, definitely yes. At the moment, I pay 35 per cent tax on my business profit. When it falls to 20 per cent I will have more profit to invest and grow my business.

1 What financial support has Andrei received from the government to help his business develop?
2 How has privatisation helped Andrei's business?
3 How do you think tax cuts help to increase aggregate supply?



## WHAT ARE SUPPLY SIDE POLICIES?

**SUBJECT VOCABULARY**

**aggregate supply** total amount of goods and services produced in a country at a given price level in a given time period

**supply side policies** government measures designed to increase aggregate supply in the economy

**GENERAL VOCABULARY**

**obstacle** something that makes it difficult to achieve something

**Supply side policies** are used to help increase **aggregate supply** in the economy. Aggregate supply is the total amount of goods and services produced in a country at a given price level in a given period of time. Supply side policies tend to be 'business friendly' and aim to increase economic growth. They can be targeted at the whole economy or at those parts where an **obstacle** exists that prevents economic growth. In many countries, supply side policies have aimed to:

- improve flexibility in labour markets by removing restrictions
- restore the incentive to work by lowering taxes on work and enterprise
- promote competition through privatisation, deregulation and helping small firms
- increase investment by improving the flow of capital in capital markets.

**DID YOU KNOW?**

- Supply side policies became popular in the 1980s because trying to control the economy using demand management policies was too difficult.
- It was thought that the economy would perform better if aggregate supply could be increased.
- With greater productive potential, the economy would grow, unemployment would be lower and inflationary pressures would ease.

## IMPACT OF SUPPLY SIDE POLICIES ON PRODUCTIVITY AND TOTAL OUTPUT

### PRODUCTIVITY

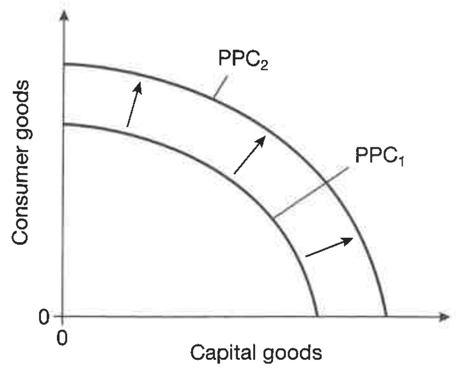
Supply side policies generally improve the productivity of production factors. This means that resources are used more effectively and the productive potential of the economy can be increased. A number of supply side policies have attempted to increase labour productivity using the following approaches.

**Improving flexibility:** In the past, many believed that labour markets were too inflexible. For example, trade unions were often criticised for forcing up wages and resisting the introduction of new working practices and new technology. This prevented labour productivity from improving. To deal with the problem in the UK, in the 1980s, the government introduced a range of anti-trade union legislation to weaken unions and help labour markets work more freely. For example, closed shops and secondary picketing were made illegal. As a result of these measures, and many others, there was less disruption when new working practices and new technology were introduced. There were also fewer strikes relating to wages.

**Training and education:** If people receive more education and training, the quality of the workforce will improve. This will help improve labour productivity and increase aggregate supply. This is discussed in more detail below.

Some supply side policies are designed to promote more competition. If a government can make markets more competitive, there will be pressure on firms to be more cost effective and innovative. This will help to raise productivity. Privatisation and deregulation can play a role in this aim.

Finally, productivity can be increased with more investment. If businesses purchase new technology and update their production facilities, efficiency will improve.




▲ **Figure 33.1** Impact of supply side policies on total output in the economy

## TOTAL OUTPUT

Supply side policies aim to increase the productive potential of the economy. With increased volumes of output, national income will rise and living standards will be improved. Also, if the government can increase supply, there is less chance of demand-pull inflation and more jobs would be created. Therefore unemployment will be lower.

The production possibility curve (PPC) can be used to show the impact of supply side policies on total output. Figure 33.1 shows the PPC shifting out from PPC$_1$ to PPC$_2$. This is the effect that supply side policies will have on the total output in the economy. In this example, the country will be able to produce greater quantities of both capital goods and consumer goods when supply side policies are used to increase aggregate supply.

### ACTIVITY 1

### CASE STUDY: SUPPLY SIDE POLICIES IN CHINA

In 2017, China announced plans to modernise its agriculture sector and switch focus away from basic grains, such as rice, towards meat, dairy and value-added products. The purpose of this was to meet the changing needs of China's population. The state said it would use supply side policies to help increase the output of soybeans, corn silage and alfalfa for livestock. It also said it wanted to improve the quality of agricultural products. The measures announced included:

- lower taxes for business start-ups in rural areas
- the development of innovation centres to support high-quality produce
- encouraging exports and supporting companies that set up overseas production bases
- using anti-dumping and other measures to protect domestic food producers (see Chapter 38, pages 312–318)
- increasing farmers' incomes (there were no specific details as to how this would be achieved).

The plans also emphasised the importance of making agriculture more environmentally sustainable. For example, it was stated that major water-saving programmes, such as drip irrigation, would be used. The overuse of pesticides would also be addressed as would the strict standards on handling manure. Finally, it was hoped that the increased use of technology, such as large-scale biogas digesters, would help to increase supply.

▲ **Chinese farmers**

1 What is meant by supply side policies?

2 Describe the main aim of supply side policies.

3 Discus how some of the supply side policies in this case might help to increase total output in China.



## IMPACT OF SUPPLY SIDE POLICIES ON MACROECONOMIC OBJECTIVES

Most governments use supply policies to increase economic growth. A wide range of supply side measures is available and they can have a variety of effects on the economy. Some examples of the policies used by governments, and the impact they might have, are outlined below.

### PRIVATISATION

Many governments have privatised state assets in recent years (see Chapter 12, pages 81–88). Privatisation breaks up state monopolies and promotes competition because once they are part of the private sector, businesses have to make a profit to survive. They cannot rely on public money, if they make a loss. In the private sector, if they fail to provide services that give customers value for money, they may go out of business. Competitive pressure should improve quality and reduce prices.

Also, some services that were once provided by the public sector have been **contracted out**. For example, private sector firms in some countries have been invited to bid for contracts to provide meals and cleaning services in schools, hospitals and government offices.

**GENERAL VOCABULARY**

**contracted out** to arrange to have a job done by a person or company outside your own organisation

One of the problems with privatisation is that state monopolies often become private monopolies. As a result, consumers might be exploited. This has led to price increases and poor quality services in some countries – particularly in industries like water supply and energy distribution.

### DEREGULATION

Regulation, often called 'red tape', involves government controls in markets. Deregulation in business generally means tackling problems such as:

- excessive of paperwork
- obtaining unnecessary licenses
- having lots of people or committees to approve a decision
- various 'trivial' rules that slow down business development.

Many governments have addressed these problems by relaxing regulations that restrict competition. However, inadequate or insufficient regulation may bring problems. For example, over recent years, the world financial system has been significantly deregulated. Many have argued that a lack of regulation in financial services caused the financial crisis in 2008 and the global recession that followed.

### ACTIVITY 2

### CASE STUDY: DEREGULATION IN THE USA

Before being elected in 2017, US President Trump said he would cut 75 per cent of business regulations in a 'bonfire' of red tape. After being elected, he signed an order that said that for every new regulation introduced, two must be cut. The main agencies affected were the Environmental Protection Agency and the Food and Drug Administration.

The system implemented by Trump is based on the one used in the UK. This started in 2010 as 'one in, one out', grew to 'one in, two out', and then became 'one in, three out'. The government reckoned that between 2010 and 2015, there were savings of £2200 million, and since May 2015 there have been annual savings to businesses of £800 million. As a result of this success in the UK, Australia and Canada plan to launch their own versions. Now the USA plans to do the same.

1 What is meant by deregulation?

2 How will deregulation help to increase aggregate supply in the US economy?

3 Describe one possible problem with deregulation.

## EDUCATION AND TRAINING

If the quality of human capital can be improved, workers will be more productive. Investment by governments and firms in education and training will help to improve the quality of human capital. Clearly, if people are educated and are able to develop a range of skills such as literacy, numeracy, communication, analysis, problem solving, evaluation, critical thinking and language, they are more employable. Improving the skills of a nation's workforce is a key element of supply side policies. Governments can help by investing more in schools, universities and colleges. They can also provide firms with incentives to invest in training. They could offset training costs against tax, for example – or perhaps by meeting some of the training costs.

Unfortunately, investment in education is very expensive and the returns on the investment are not seen for many years. Consequently, funds for education in many countries are often inadequate. In many developing countries, for example, state school is not free – the students or their families meet the costs of books, uniforms and teachers. Globally, more than 226 million children do not attend secondary school.

### DID YOU KNOW?

**In the UK, the following measures have been used over the past 30 years to improve the quality of labour.**

- **More young people were encouraged to stay in education until age 16.**
- **More people were encouraged to enter university.**
- **More vocational courses were introduced into schools and colleges. National Vocational Qualifications (NVQs) and more applied courses were offered in addition to academic courses.**
- **AS levels (a qualification taken after 1 year of study after 16 years of age) were introduced so that students studied more subjects between the ages of 16 and 18).**
- **Modern apprenticeships were introduced in 1994 (now called Apprenticeships). These are on-the-job training schemes partly funded by the government.**

## POLICIES TO BOOST REGIONS WITH HIGH UNEMPLOYMENT

One of the advantages of supply side policies is that they can be targeted or used selectively. In some countries, it is likely that certain regions will have far higher unemployment than others. For example, the unemployment rate in Spain in 2015 was 24.4 per cent. However, in some regions it was considerably higher. Andalusia had the worst rate at 34.8 per cent, followed by the Canary Islands (32.4 per cent), the north African Spanish territory of Ceuta (31.9 per cent) and Castilla-La Mancha (29 per cent). The Spanish government recognised these regional imbalances and introduced policies designed to reform labour markets. These helped to control wages and make it easier for firms to 'hire and fire' people. Spain also attracted EU funding for job creation projects in some of the worst hit regions. For example, a specialist technology park was built in Andalusia, which focused on the needs of the aeronautic and aerospace industries. The EU funding allocated to this project helped to create jobs, particularly in small businesses.



## INFRASTRUCTURE SPENDING

The productive potential of the economy will increase if the quality of the infrastructure is improved. The government can help by investing more in infrastructure, education and health care, for example. Investment in infrastructure will improve transport and communications systems. This will help private sector firms because people will be more geographically mobile and the distribution of goods will be easier. Investment in education and health care will improve the quality of human capital. This will also help private sector firms because workers will be better educated and healthier.

The Indian government has invested heavily in infrastructure development. For example, it is committed to a huge road construction programme. The country's road network has expanded at the rate of 4 per cent since 1951. India now has the second-largest road network after the USA. There are now 5.23 million kilometres of roads, of which 3.17 million kilometres are surfaced. However, more is needed since the network is still underdeveloped.

One important infrastructure development is the provision of superfast broadband networks. For example, in 2015, China said it would accelerate the development of its high-speed broadband network. China's internet connection rate was only 47.9 per cent in 2015, with especially low connectivity in smaller cities and rural areas. This compares with about 75 per cent of people in the USA and 73 per cent in the UK. It was estimated that around CNY 2 trillion would be spent on high-speed broadband by 2020.

## LOWER BUSINESS TAXES TO STIMULATE INVESTMENT

The pace of economic growth in a country can be accelerated if businesses can be encouraged to invest more. Supply side measures can help with this. Investment in the private sector can be increased if firms are confident about the future and there are funds available for investment. The government can also play a role by maintaining a stable economy and helping to increase the flow of investment funds to firms. Examples of measures that could be used include the following.

- About one-half of all private sector investment is funded from profits. Therefore by taxing profits less, more will be available for investment. In the last 20 years, many governments have reduced taxes paid by businesses. For example, in Ireland the rate of corporation tax has been cut to just 10 per cent. This is one of the lowest rates in the world.
- Firms can **offset** the cost of investment against tax. They can claim capital allowances when buying machines and equipment, for example.
- Tax incentives have been used to encourage people to save more and buy shares in companies. In some countries, tax relief may be given to individuals who invest in new companies or IT companies, for example.

### SUBJECT VOCABULARY

**offset** if something, such as a cost or sum of money, offsets another cost it has the effect of reducing or balancing it, so that the situation remains the same

### LOWER INCOME TAXES TO ENCOURAGE WORKING

Some people argue that high taxes on income and profit will reduce output in the economy. This is because high taxes reduce the incentive to work and discourage people from setting up or developing businesses. For example, some workers will take more holidays, retire earlier or refuse overtime. Also, entrepreneurs are less likely to undertake risky business opportunities. As a result, many countries have reduced taxes on personal earned income and business profits. For example, in the UK, the top rate of income tax was reduced from 83 per cent to 60 per cent in 1983 and then to 40 per cent in 1988. Corporation tax (tax on company profits) has also been reduced in the UK.

## GOVERNMENT CONTROLS

**GENERAL VOCABULARY**

**vulnerable** those in need of special care, support, or protection because of age, disability or risk of abuse or neglect

In addition to fiscal policy, monetary policy and supply side policies, governments can use other controls when managing the economy and trying to achieve its macroeconomic objectives. For example, it can pass new legislation to help protect the environment, impose fines on firms that exploit consumers and workers and introduce controls as means of maintaining standards in business conduct. On the one hand, these controls have advantages because they reduce the exploitation of **vulnerable** groups or sectors. However, they may impose costs on firms that might inhibit their growth and development. Such controls are discussed in detail in Chapter 13 (pages 89–96) and Chapter 24 (pages 181–189).

## MULTIPLE-CHOICE QUESTIONS

1 Which of the following is a supply side measure designed to help firms to increase investment?

A Privatisation
B Tax breaks for people who buy shares in businesses
C Deregulation
D An increase in the provision of vocational courses

2 Which of the following measures will help to improve occupational mobility?

A Investment in government training schemes
B Increase in unemployment benefit
C Lower rates of income tax
D Privatisation

## ECONOMICS IN PRACTICE

## CASE STUDY: SUPPLY SIDE POLICIES IN ARGENTINA

At the end of 2015, a new government was elected in Argentina. When it came to power, the economic position was highly uncertain. For example, inflation was over 20 per cent, government spending was out of control, economic growth was negative and unemployment was high. Faced with this difficult situation, the authorities began an attempt to repair the damage and develop better economic policy. Some of the measures introduced by the government were designed to increase supply in the economy to help reduce inflation.



The government began by removing a number of controls in the economy. For example, it removed foreign exchange controls so that Argentina's currency would fall in value. Further deregulation included:

- eliminating minimum interest rates for time deposits and maximum rates for consumer loans
- simplifying procedures for opening bank accounts
- eliminating bank transfer fees
- eliminating savings maintenance fees
- lifting restrictions on insurance companies that forced them to invest in infrastructure projects approved by a political committee
- lifting restrictions that limited foreign investment.

To help specific industries, the government gave subsidies to oil exporters to encourage more exploration and financial help to struggling dairy farmers. The government also made some changes to a range of taxes, for example:

- eliminating export taxes on most products
- cutting VAT
- raising personal tax allowances (this meant that people paid less income tax)
- reducing corporation tax
- phasing out the financial transaction tax.

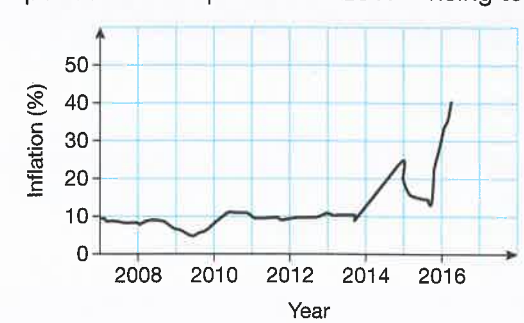
It also plans to simplify the tax system. There are over 35 different taxes that contribute only a very small amount to government revenues. However, some of them impose high compliance costs on businesses. Simplification will help to reduce business costs.

Measures were also introduced to promote competition, for example:

- trade barriers were lowered to raise competitiveness, encourage new investment, and increase productivity
- the National Competition Commission was given powers to carry out investigations, impose fines and bring cases to court
- whistle-blowing to reveal anti-competitive practices was encouraged.

In the last 15 years, investment in infrastructure has been lacking, particularly in transport and energy production. The government is aware of this but is currently limited by a lack of funds. However, it has outlined an ambitious plan to double the supply of electricity in the next 20 years. It also aims to do this using 25 per cent renewable sources.

It is too early to say whether these measures, and many others, are working yet. As showed in Figure 33.2, inflation has continued to rise – soaring to around 40 per cent. However, economic growth is forecast to increase from 1.8 per cent to 2.7 per cent in 2017 – rising to 3 per cent per annum in the medium term.




▲ **Figure 33.2** Argentina inflation, 2006–16

## CHAPTER QUESTIONS

1 How might supply side policies help to reduce inflation in Argentina?
2 Describe the possible effects of the planned tax changes on the economy.
3 Discuss how the government plans to promote competition in the economy.
4 Discuss how (a) education and training and (b) spending on infrastructure might help to increase supply in Argentina.

# 34 RELATIONSHIPS BETWEEN OBJECTIVES AND POLICIES

## LEARNING OBJECTIVE

- Understand the impact of policies and the trade-off between macroeconomic objectives:
  - unemployment and inflation
  - economic growth and inflation
  - economic growth and the environment
  - inflation and the current account on the balance of payments

## GETTING STARTED

Economic policies are designed to help achieve a government's macroeconomic objectives. However, when a particular policy instrument is used for a specific purpose, the effects might be both positive and negative. Look at the example below.

### SUBJECT VOCABULARY

**austerity** official action taken by a government in order to reduce the amount of money that it spends or the amount that people spend

## CASE STUDY: SAUDI ARABIA ECONOMIC POLICIES

The fall in the global oil price in 2014 hit Saudi Arabia quite hard. Both the residents and the government of Saudi Arabia rely very heavily on the oil industry for income. The government ran up a record fiscal deficit and the International Monetary Fund warned the government that it would run out of money within 5 years if it did not reduce its expenditure. As a result, a number of '**austerity** measures' were announced in the 2016 budget with the aim of reducing the fiscal deficit. The government ran a deficit of SAR 367 000 million in 2015. The 2016 budget plan aimed to cut that to SAR 326 000 million. This would help the government avoid borrowing more and selling off overseas assets to pay its bills. Examples of the fiscal measures the government planned to use included:

- cutting subsidies for water, electricity and petroleum products
- introducing a value-added tax in line with many other countries around the world
- raising taxes on soft drinks and tobacco
- raising money from the privatisation of some state assets
- cutting the government's spending projects from SAR 975 000 million to SAR 840 000 million.

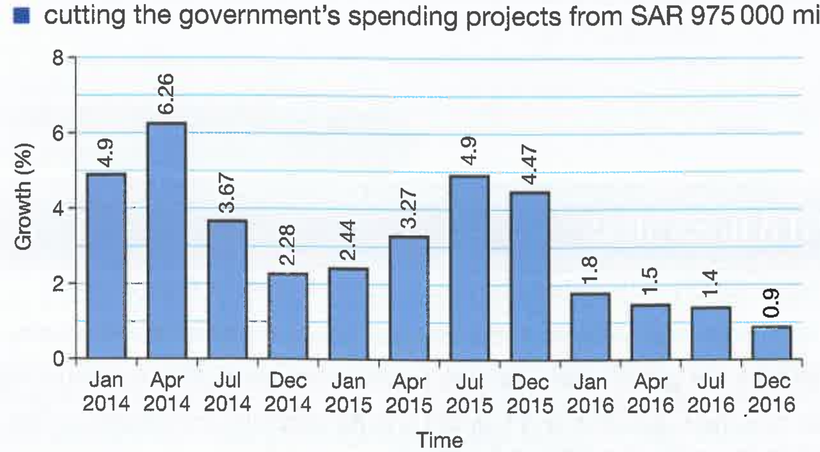



**Figure 34.1** Saudi Arabia economic growth, 2014–16



It was expected that economic growth would fall in Saudi Arabia from the current rate of 3.3 per cent. According to Monica Malik, chief economist at Abu Dhabi Commercial Bank, 'We see real GDP growth decelerating sharply in 2016, albeit remaining positive.'

1 Calculate the planned cut in the fiscal deficit of Saudi Arabia as a percentage.
2 What is the aim of Saudi Arabia's economic policies?
3 Describe one possible negative effect of Saudi Arabia's economic policies.
4 In pairs, find out the key macroeconomic objectives in your country.

## IMPACT OF POLICY MEASURES ON MACROECONOMIC OBJECTIVES

Governments use policy instruments to achieve their macroeconomic objectives. The policies used will depend on the economic circumstances at the time. Ideally, a government will want to promote economic growth, keep inflation and unemployment down, prevent a large deficit on the current account and protect the environment. The use of fiscal policy, monetary policy and supply side measures will have an impact on economic variables such as inflation and economic growth. However, because there are both positive and negative effects of using different policies, it is often difficult for the government to achieve its macroeconomic objectives. For example, the use of contractionary fiscal policy to reduce inflation in the economy may increase unemployment. If the government cuts expenditure on social care, for example, fewer social workers will be required. This suggests that governments may have to accept trade-offs between macroeconomic objectives. For example, a government may have to tolerate higher levels of inflation if it wants lower levels of unemployment.

## UNEMPLOYMENT AND INFLATION

### POLICIES TO REDUCE INFLATION

Inflation, particularly if it gets out of control, can be very harmful for an economy. Consequently, most governments are likely to take action to reduce inflationary pressures in the economy as soon as inflation threatens to become a problem. Governments often favour the use of monetary policy to reduce inflation. One reason for this is because a government can quickly raise interest rates to reduce demand. In many countries, central banks will automatically raise interest rates if they have been given an inflationary target to meet. When interest rates are high, there will be a decrease in aggregate demand. This will help to reduce inflation but there may be some serious negative effects, such as the following.

- Higher interest rates will discourage consumers and businesses from borrowing. As a result, there will be a fall in consumption and investment. This will reduce aggregate demand and lower economic growth. Unemployment is likely to rise.
- Higher interest rates will result in higher mortgage payments for many households. This will reduce their spending power and lead to a fall in aggregate demand. Firms will react by reducing capacity and laying off staff.
- Firms will incur higher interest charges. This will raise their costs and reduce their profits. They may invest less, which will reduce aggregate demand.
- Higher interest rates will also discourage firms from borrowing to invest in new technology and expansion. This will hamper their long-term development. They may also lose their competitive edge in foreign markets.

- If higher interest rates result in higher exchange rates it may be harder for firms to sell abroad. Exporters are likely to react by laying off staff.

Even if a government favours the use of fiscal policy to reduce inflation, there will still be some negative effects.

- Higher taxes and lower government spending could result in unemployment. For example, if consumption falls as a result of higher taxes, businesses will see a fall in demand for their products. They may react by cutting production and laying off workers. Lower government spending means that some services are likely to be cut. As a result, civil servants, teachers and nurses may be laid off.
- People may suffer as a result of poorer government services after the cuts in expenditure, for example, waiting times for NHS treatments may rise, university places may fall and repairs to the infrastructure may be reduced.

### POSSIBLE TRADE-OFF

It is clear from above that both anti-inflationary fiscal policy and anti-inflationary monetary policy can have some unwelcome effects on the economy. In the past, when governments have tried to reduce inflation, unemployment rises. This suggests that a trade-off exists between inflation and unemployment. Many economists recognise this trade-off and suggest that a government will have to accept higher levels of unemployment if it wishes to reduce inflation. Some economists also say that if a government tries to reduce inflation very quickly, levels of unemployment will be even higher.

However, the use of supply side measures to reduce inflation may avoid rising unemployment. This is because they are designed to increase the supply of output rather than decrease aggregate demand. Unfortunately, supply side measures are often very slow to have an impact on the economy. Consequently, governments are more likely to use them together with other measures to reduce inflation, rather than a sole measure.

## ECONOMIC GROWTH AND INFLATION

### POLICIES TO PROMOTE GROWTH

Governments around the world will be keen to see the economy grow when they are elected. This is because economic growth usually means that living standards will improve and therefore the voters will be satisfied. To promote economic growth, the government can use expansionary fiscal policy. This would involve lowering taxes or increasing government expenditure. If taxes on households are lowered, people will have more disposable income. If they spend this extra money, aggregate demand will rise and businesses will be encouraged to produce more. If businesses raise output levels, the economy will grow. Similarly, if the government spends more, by employing more teachers, social workers and health workers, for example, extra demand in the economy will be created. Again, firms should respond to this by producing more and national income will grow.

The government could also use expansionary monetary policy. If interest rates are lower, people will usually borrow more and spend more. Also, firms might decide to invest more. If the cost of investment funds is lower, this will encourage businesses to develop new products, expand their existing activities and set up new ventures. Extra investment will help to drive economic growth. A government might also use quantitative easing to stimulate growth. This will help to increase the money supply and therefore aggregate demand.



### POSSIBLE TRADE-OFF

One of the dangers of policies designed to increase economic growth is that they may be too expansionary. As a result, the economy might become 'overheated'. This means that firms will not be able to meet the rising aggregate demand and respond by raising their prices instead of producing more. This will cause demand-pull inflation in the economy. Therefore, governments need to be cautious. If they stimulate the economy too much, they will cause inflation. This suggests there is another trade-off between rapid economic growth and inflation.

Inflation is more likely to be caused if there is limited capacity in the economy or if factors of production are immobile. If firms are close to capacity and are finding it difficult to acquire resources, such as skilled labour, then inflation is more likely to occur. However, the use of supply side policies to promote growth might help to reduce inflationary pressures. This is because supply side measures are usually 'business friendly', which means that they will help firms increase supply. For example, more government training schemes might increase the supply of skilled labour to help businesses meet rising demand.

## ECONOMIC GROWTH AND ENVIRONMENTAL PROTECTION

### GROWTH AND THE ENVIRONMENT

Economic growth is often associated with environmental damage, especially if the growth is very rapid like that seen in China and India over the last 10–15 years. As businesses produce more output there are likely to be more emissions from power generators, chemical processers and other manufacturers. Also, the extra wealth and income that comes along with economic growth means that increasing numbers of people buy cars and other vehicles. This results in more emissions and increasing congestion on road networks around the world. Pollution resulting from rapid business expansion in places like China and other developing nations is especially dangerous to health. For example, according to a government report, more than 80 per cent of China's underground water drawn from wells used by farms, factories and mostly rural households is not safe to drink due to pollution.

Also, as more land is taken for business development, less is available for wildlife. The Earth's rainforests, swamps, plains, lakes and other habitats continue to disappear as they are cleared to make way for agriculture, housing, roads, pipelines and other industrial uses. For example, according to a report by the Australian Conservation Foundation, Bird Life Australia and Environmental Justice Australia successive governments have failed to protect the habitat of the country's most endangered creatures. The report said that 90 per cent of the 120 most endangered animals living in Australia have no safeguards to protect their habitat.

### POSSIBLE TRADE-OFF

In developing countries, it is unlikely that the majority of people would want to prevent economic growth that delivers less poverty, longer life expectancy, lower infant mortality and improved living standards. If the environment is damaged along the way, many people in these countries might argue that this is a price worth paying. Some evidence certainly suggests this is the case. However, in some of these developing countries, governments are beginning to recognise that environmental damage can be costly and that measures are needed to protect the environment even if it means limiting business development. For example, in 2015, India planned to introduce tougher measures to punish those polluting the environment. Currently, offences under the Environment Protection Act are punishable by a fine up to Rs100 000, up to 5 years imprisonment, or both. There were plans to increase the severity of these penalties.

In developed countries, where environmental issues are perhaps more pressing, many governments have used a range of measures, such as legislation, regulations, fines and pollution permits (see Chapter 29, pages 228-239) to protect the environment. However, many of these do restrict business development and governments have to ensure that measures do not discourage the entrepreneurial spirit too much. It is often difficult to find the right balance in this trade-off.

**KEY FACTS**

- Some environmental projects may be cancelled if government funds are short.
- New projects may be approved as part of a wider policy to increase government expenditure.
- Revenues collected from environmental taxes will add to government funds.
- Some environmental measures may constrain businesses and impose additional costs. This might result in business closures and job losses.

## ACTIVITY 1

### CASE STUDY: TRADE OFF BETWEEN ECONOMIC GROWTH AND ENVIRONMENTAL PROTECTION IN AUSTRALIA

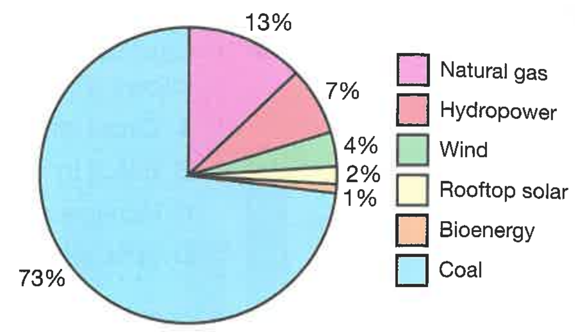
Most governments recognise that rapid economic growth can have a negative impact on the environment. Most governments have also agreed that there is a need to reduce emissions to slow down or reverse the effect of global warming. In light of this, a number of measures have been introduced around the world to generate more power using 'green' energy. As global economic growth becomes stronger, more energy is needed. This is because businesses need more energy to fuel their operations. Also, consumers become wealthier and can afford to burn more energy heating (or cooling) their homes and fuelling their vehicles.

Australia generates most of its electricity by burning fossil fuels. However, the government is committed to reducing this. By 2020, it hopes that Australia will produce 22.5 per cent of its power from renewable sources, rising to 51 per cent by 2050. Also, the burning of brown coal and oil to generate electricity is set to end completely by 2050.

Australia's policy to increase power production using renewable energy is called the Renewable Energy Target (RET). The government plans to invest AUD40 400 million (Australian dollar) between now and 2030. Between 30 and 50 major projects are likely to be developed in the next few years to help boost the production of 'green' energy. This will be supported by numerous smaller-scale solar projects from businesses looking to manage their own electricity production and consumption. This should create over 15 000 jobs.

The coal mining industry in Australia has been in decline. In 2014, it employed 57 800. However, 5 years before that, total employment was over 80 000. The switch to 'greener' energy is likely to add to the decline.






▲ **Figure 34.2** Sources of electricity generation in Australia, 2015

1 Describe the possible trade-off between economic growth and environmental protection.

2 To what extent do you think Australia needs to switch to 'green' energy?

3 Assess the possible impact on the Australian economy of switching to the production of 'greener' energy.

## INFLATION AND THE CURRENT ACCOUNT ON THE BALANCE OF PAYMENTS

### MEASURES TO REDUCE INFLATION

There is a possible link between inflation and the current account on the balance of payments. When inflation is high and persistent, governments will try to reduce it because of the harmful effects associated with high levels of inflation. If prices are rising, the price of exports will also be rising. This will reduce demand for exports creating pressure on the current account balance. It is also possible that consumers might switch from expensive domestic goods to relatively cheap imports. This would make the current account balance even worse. Consequently, high inflation rates have a damaging effect on a country's current account balance.

If a government uses monetary policy to reduce inflation, the balance of payments situation could actually become worse This is because monetary policy that uses higher interest rates to reduce inflation might strengthen the exchange rate. When interest rates are high, the demand for a domestic currency might rise and drive up the exchange rate (see Chapter 41, pages 333–339). If this happens exports become dearer and imports cheaper. This would create further pressure on the current account balance.

### POSSIBLE TRADE OFF

A government trying to reduce inflation by raising interest rates may have to accept that the current account will worsen for a period of time. Although, the impact of price changes on the demand for exports and imports will depend on the elasticity of demand for imports and exports (see Chapter 42, pages 340–346). However, if the government uses fiscal policy alone to reduce inflation, a worsening of the current account might be avoided. For example, if the government cuts spending and/or raises taxes, there will be a fall in demand in the economy with no real direct effect on the exchange rate. Therefore, the prices of exports and imports will be fairly stable and the current account relatively unaffected. The use of supply side policies to reduce inflation will also avoid a negative impact on the current account. Supply side policies are not likely to affect the exchange rate and are also 'business friendly'. As a result, businesses might be able to produce more output at lower prices. This would help to boost exports and therefore benefit the current account.

## MULTIPLE-CHOICE QUESTIONS

1 Low interest rates to promote economic growth might do which of the following?
- **A** Cause inflation
- **B** Result in higher levels of unemployment
- **C** Increase a current account deficit
- **D** Stifle private sector investment

2 More environmental protection is likely to be needed if the government follow which cause of action?
- **A** Drives inflation down too quickly
- **B** Stimulates the economy to grow faster
- **C** Tries to cut inflation
- **D** Tries to cut a current account deficit

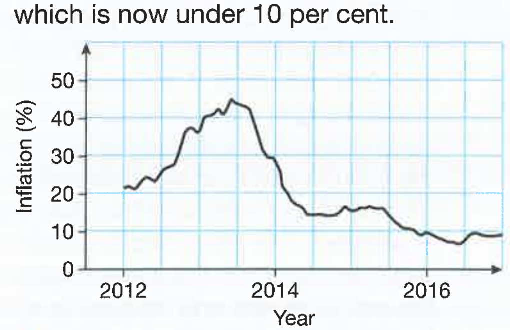
## ECONOMICS IN PRACTICE

## CASE STUDY: ANTI-INFLATIONARY POLICIES IN IRAN

In 2013, when the Rouhani administration took power in Iran, a clear commitment was made by the government to reduce inflation. Figure 34.3 shows that the inflation rate in 2013, at around 40 per cent, was unacceptably high. The Central Bank of Iran (CBI) and other authorities created a clear strategy to bring price increases down. A key element of the plan was very tight monetary policy. It aimed to keep a very strict control on the money supply. As a result, interest rates were increased from around 15 per cent in 2013 to 22 per cent in 2014. In 2017, interest rates were still high at 20 per cent.

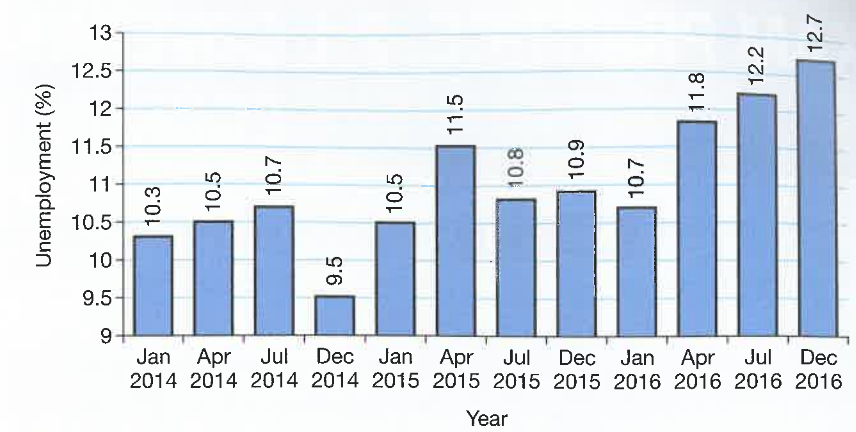
The government also reversed some of the policies introduced by the previous administration. For example, several years ago, Mahmoud Ahmadinejad (Iranian President from 2005 to 2013), introduced a subsidy reform plan that handed out cash to people without considering their financial means. This money was spent in the economy, which drove up demand and caused inflation. However, the new administration identified those that did not really need the handouts and redirected the money into the production sector.

Finally, the government also aimed to reduce the fiscal deficit. The authorities put together a carefully considered spending plan that avoided the need to go heavily into debt. This also helped to bring down inflation, which is now under 10 per cent.




▲ **Figure 34.3** Iranian inflation, 2012–16






▲ **Figure 34.4** Iran unemployment rate, 2014–16

## CHAPTER QUESTIONS

1 Describe the possible trade off that might exist between inflation and unemployment.

Look at Figures 34.3 and 34.4.

2 Is there any evidence to suggest that a trade-off between inflation and unemployment exists in Iran?

3 Discuss how Iran's use of anti-inflationary policies might affect its current account balance.

4 Discuss how the need for environmental protection might be affected by Iran's use of anti-inflationary policies.