THE MARKET SYSTEM

This section looks at the basic economic problem. This is to do with the allocation of scarce resources. It focuses on the way consumers, firms and the government make choices between different alternatives when faced with a limited budget. It also studies the underlying assumptions behind the behaviour of producers and consumers and the possible reasons why they may fail to maximise their profit or benefit respectively.

Microeconomics is the study of individual markets. Therefore, this section looks at the way prices are determined in markets by the forces of supply and demand. It covers the factors which might influence supply and demand and how supply and demand responds to changes in prices. Finally, the chapter addresses the ways in which market forces help to allocate resources in an economy, and what happens when markets fail.
THE ECONOMIC PROBLEM

LEARNING OBJECTIVES

- Understand the problem of scarcity
- Understand opportunity cost
- Understand production possibility curves
- Understand causes of positive and negative economic growth

GETTING STARTED

The planet we live on contains many resources that are used to produce goods we like to consume. However, there is a problem. Look at the images below.

CASE STUDY: RESOURCES AND NEEDS

1. Describe the resources in Figure 1.1.
2. Are there enough of these resources in the world? Explain your answer with reference to the images in Figure 1.2.

THE PROBLEM OF SCARCITY

FINITE RESOURCES

All countries have resources such as water, minerals, soil, plants, animals and people. However, in any country there is a finite quantity of these resources – this means that the quantity available is limited. Because there is only a limited quantity, economists say that resources are scarce. These resources are often referred to as the four factors of production: land, labour, capital and enterprise (see chapter 15).
Resources are more scarce in some countries than others. For example, in some African countries there are serious shortages of fertile soil and water. This means that food production is inadequate. Even where resources exist, a country may not be capable of exploiting them. For example, Ethiopia struggles to produce enough food for its population because only about 4 per cent of its fertile land is irrigated. The problem is not a shortage of water but the failure to exploit some of its huge rivers such as the Awash and the Blue Nile. The country does not have the financial resources to invest in irrigation projects that would make use of the water for agriculture.

UNLIMITED WANTS

Economists distinguish between needs and wants. Needs are the basic requirements for human survival. Some of these needs are physical and include water, food, warmth, shelter and clothing. If these needs cannot be satisfied, eventually humans would cease to exist. In some countries in the world, people do die because such needs cannot be met.

In addition to basic needs, humans also have other desires. These are called wants and may include more holidays abroad, a better house, more meals out, a bigger car, new golf clubs, a better education, improved healthcare and a cleaner environment. These wants are unlimited or infinite. People always want more, whatever their current circumstances; it is human nature. The problem is made worse because many of the things that people want have to be replaced. For example, cars, computers, shoes, clothes and furniture, are regularly replaced by consumers either because they are no longer functional or because better versions have become available.

ACTIVITY 1

1. How do the two images in Figure 1.3 illustrate the differences between needs and wants?
2. Why are resources finite?
Infinite Wants > Finite or Scarce Resources

Demand > Supply

Basic Economic Problem

What to produce?
How to produce?
For whom to produce?

DIFFERENT COUNTRIES PRODUCE DIFFERENT THINGS

For example, should resources be used to provide more libraries, build more schools, expand the armed forces, make more cars, build more houses, construct more roads, make more toys, print more books, increase state pensions or train more doctors?

How to produce?
Goods can be produced using a variety of different production methods. The four factors of production can be organised in different ways to produce the same goods.

Who to produce for?
Once goods have been produced, there has to be a method of distribution. This means that the goods have to be shared in some way between members of the population. For example, should everyone get exactly the same quantities or should some receive more than others?

There are different solutions to the basic economic problem. This is because different courses of action can be taken when making the decisions outlined above. The way in which they are made depends on what sort of economic system a country has. This is explained in chapter 12.

**OPPORTUNITY COST**

Whichever approach is used to solve the basic economic problem, all decision-makers are faced with choices, as in deciding between alternative uses of scarce resources. Resources often have a number of alternative uses; as a result people have to make a choice about which way to use them. This choice is faced by individuals, producers and the government.

- Individuals have to choose how to spend their limited budgets. For example, after all living costs have been met, a university student in Spain may have 50€ left at the end of the week. This student would like to buy some new books (20€), get the train home for the weekend (30€), go out for a meal with friends (30€), buy some new computer software (20€) or buy a new pair of designer jeans (50€). Clearly, a choice has to be made because if the student bought all of these goods, the total cost would be 150€.
- Producers may have to choose between spending £100,000 on an advertising campaign, training its employees or buying a new machine.
- A government may have to decide whether to spend $5 billion on increasing welfare benefits, building new hospitals, providing better care for the mentally ill or building a new motorway.

When making such choices, individuals, firms and governments will face a cost once their choice has been made. This is called the **opportunity cost**.
In 2016, according to the Stockholm International Peace Research Institute (SIPRI), the value of global military spending was $1 686 billion. This was about 2.2 per cent of the world’s Gross Domestic Product (GDP – a measure of world income). This level of spending on military goods often causes concern about the possible opportunity costs it incurs. In some regions, more is spent on the military than on healthcare – Figure 1.5 identifies three of these regions. Figure 1.5 also shows that in Western and Central Europe spending on healthcare is far higher than spending on military goods. Some political campaigners say that government expenditure on the military is a waste of resources. They recommend spending at least some of this money on meeting human needs. For example, the Global Campaign on Military Spending called for a 10 per cent cut in worldwide military spending. It said the money saved should be used for development purposes. In support of this campaign, Kazakhstan’s President Nursultan Nazarbayev said that all nations should give 1 per cent of their military spending to the United Nations Special Fund for Global Development. In 2015, the UN Food and Agriculture Organisation said that extreme poverty and hunger in the world could be eliminated if just 13 per cent of the global military budget was used for this purpose instead.

1 Suggest one reason why spending on healthcare in Western and Central Europe is far higher than spending on military goods, compared to the other regions shown.

2 Using this case as an example, explain what is meant by opportunity cost.

This cost arises because a sacrifice has to be made when making a choice. If the government in the example above can place its spending desires in order of preference, the opportunity cost can be identified. Once the government has chosen the best alternative, the opportunity cost will be the benefit lost from the next best alternative. Assume that the government’s spending desires are placed in order of preference as below:

1 new motorway
2 new hospital
3 increase welfare benefit
4 improve care for the mentally ill

In this example, the new motorway is the government’s preferred choice. Therefore the $5 billion will be allocated to this project. The opportunity cost in this case is the benefit lost from not building the new hospital, i.e. the benefit lost from the next best alternative.

ACTIVITY 2

In 2016, according to the Stockholm International Peace Research Institute (SIPRI), the value of global military spending was $1 686 billion. This was about 2.2 per cent of the world’s Gross Domestic Product (GDP – a measure of world income). This level of spending on military goods often causes concern about the possible opportunity costs it incurs. In some regions, more is spent on the military than on healthcare – Figure 1.5 identifies three of these regions. Figure 1.5 also shows that in Western and Central Europe spending on healthcare is far higher than spending on military goods. Some political campaigners say that government expenditure on the military is a waste of resources. They recommend spending at least some of this money on meeting human needs. For example, the Global Campaign on Military Spending called for a 10 per cent cut in worldwide military spending. It said the money saved should be used for development purposes. In support of this campaign, Kazakhstan’s President Nursultan Nazarbayev said that all nations should give 1 per cent of their military spending to the United Nations Special Fund for Global Development. In 2015, the UN Food and Agriculture Organisation said that extreme poverty and hunger in the world could be eliminated if just 13 per cent of the global military budget was used for this purpose instead.

1 Suggest one reason why spending on healthcare in Western and Central Europe is far higher than spending on military goods, compared to the other regions shown.

2 Using this case as an example, explain what is meant by opportunity cost.
Deciding which goods to produce and the concept of opportunity cost can be illustrated using production possibility curves (PPCs). A PPC shows the different combinations of goods that can be produced if all resources in a country are fully used. It shows the maximum quantities of goods that can be produced. A PPC for a country is shown in Figure 1.6. It is assumed that the country can produce consumer goods or capital goods. What does the PPC show?

- At point A, 16 million units of consumer goods are produced and zero capital goods.
- At point D, 8 million units of capital goods can be produced and zero consumer goods.
- At point B, a combination of 14 million units of consumer goods and 4 million units of capital goods can be produced.
- At point C, a combination of 8 million units of consumer goods and 7 million units of capital goods can be produced.
- At point F, a combination of 8 million units of consumer goods and 4 million units of capital goods can be produced. At this point, not all resources in the country are being used. This is because point F is inside the PPC. A country should aim to push production so that it is on the PPC.
- The combination of goods represented by point E is not possible. This is because it is outside the PPC. The country does not have the resources to produce 12 million units of consumer goods and 7 million units of capital goods.

### MOVING ON THE PPC

What happens when an economy moves from one point on the PPC to another?

For example, what happens if the economy in Figure 1.6 moves from B to C? By moving along the PPC, an opportunity cost is incurred. At point B, 14 million units of consumer goods are being produced and 4 million units of capital goods. By moving to C, the production of capital goods rises to 7 million units but production of consumer goods falls to 8 million units. To gain another 3 million units of capital goods, 6 million units of consumer goods are being sacrificed. The lost production of consumer goods (6 million units) is the opportunity cost.

The choice between different combinations of consumer goods and capital goods is an important one for a country. If a country produces more capital goods, it will probably be able to produce more consumer goods in the future. This is because capital goods are used to produce consumer goods. However, by doing so, there will be fewer consumer goods today and some people will have less in the short term.
At a particular point in time, a country cannot produce combinations of goods that lie to the right of the PPC. However, over a long period of time, an economy would expect to raise the production of all goods. This is called economic growth. There are several reasons for this.

- **New technology**: As time passes, new technology is developed and this benefits businesses. For example, new machines such as robots, computers, telecommunications and the internet have been used by businesses to help increase productive potential. New technology is usually faster and more reliable in production and therefore more output can be produced.

- **Improved efficiency**: Over time, resources are used more efficiently. For example, new production methods, such as kaizen and lean production have been developed and adopted. These more efficient methods replace the old ones and more output can be produced with fewer resources.

- **Education and training**: An economy can boost the productive potential of a nation by educating and training the population. A country's economy becomes more productive as the proportion of educated workers increases. This is because educated workers can carry out tasks that require literacy, analysis, evaluation, communication and critical thinking more efficiently. However, a country has to find the satisfactory balance between academic and vocational education.

- **New resources**: Some countries find new resources which enable them to produce more. For example, in recent years the US has raised its productive potential by producing more oil through fracking. Fracking involves shooting a mixture of mostly water and sand under high pressure against a rock until it fractures or breaks. The sand fills the fracture, forcing crude oil out of the rock formation. Fracking now provides the US with around half of its oil needs. In 2000 it was only 2%.

If countries can produce more, the PPC will shift outwards. This is shown in Figure 1.7. PPC1 represents an original PPC while PPC2 shows a new PPC resulting from improved efficiency, for example. Combinations of goods not previously possible can now be enjoyed. To generate economic growth in this way, a government needs to ensure that investment levels are adequate. Economic growth is discussed in more detail in Chapter 25.

Finally, it is possible for the PPC to shift inwards. This would represent negative economic growth, meaning when a country’s productive potential actually falls. It may be caused by resource depletion where a country runs out of a natural resource such as oil or coal. The productive potential of a country can also be reduced by weather patterns. For example, very dry weather might prevent some nations from meeting their agricultural production targets. Economic growth in a particular country might also be negative if large numbers of highly qualified, skilled and experienced workers emigrated. This might happen if these workers could earn more money employed in another country.
MULTIPLE CHOICE QUESTIONS

1 Which of the following decisions is not associated with the basic economic problem?
A How to produce?
B For whom to produce?
C When to produce?
D What to produce?

2 Which of the following might be considered a need rather than a want?
A Shelter
B A holiday
C A smartphone
D A pet dog

ECONOMICS IN PRACTICE

CASE STUDY: PRODUCTION POSSIBILITY CURVES

A country is able to produce agricultural and non-agricultural goods. It is currently at point X on the production possibility curve, as shown in Figure 1.8.

Figure 1.8 The PPC of a country producing agricultural and non-agricultural goods

CHAPTER QUESTIONS

1 Using this case as an example, explain what is meant by a production possibility curve.
2 According to the PPC, what key choice must be made by the decision-makers in this country?
3 Why is point T on the diagram currently unobtainable?
4 The country is considering a movement from X to Y. What will be the opportunity cost of such a movement?
5 Using a diagram, assess the effect that the discovery of fresh oil reserves might have on the PPC of this country.
Edexcel International GCSE (9–1) Economics prepares students for the new 2017 International GCSE (9–1) Economics specification. This resource provides comprehensive coverage of the new specification. This book, which includes access to the eBook, is designed to provide students with the best preparation possible for the examination:

- Written by a highly experienced International GCSE Economics author
- Content is mapped to the specification to provide comprehensive coverage
- Exam practice throughout, with differentiated revision exercises and exam-style practice
- Signposted transferable skills
- Reviewed by a language specialist to ensure the book is written in a clear and accessible style
- Glossary of key Economics terminology, along with full answers included on the eBook
- eBook included
- Online Teacher Resource Pack also available, providing further planning, teaching, and assessment support

For Pearson Edexcel International GCSE Economics specification (4EC1) for first teaching 2017.