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Chapter 1

The economic problem

1.1 Scarcity and opportunity cost

Human beings have always wanted things beyond their basic needs (which are essential requirements to sustain life, such as water, food and shelter). However, as even young children soon find out, our wants might be unlimited but the resources available are finite and limited! The **economic problem** arises from the basic fact that resources are finite but wants are unlimited; this is also called the problem of **scarcity**. As all people's wants cannot be satisfied at the same time, there is a need for individuals, businesses and governments to make choices among them; the subject of **Economics** involves the study of how resources are allocated in an economy to satisfy needs and wants.

Exam tip

Don't define scarcity as either finite resources or unlimited wants. *Both* conditions must be satisfied.

When a choice is made, it results in an alternative choice given up. For example, when a student uses one hour to study, then he/she is giving up the time (and leisure) to watch TV. This trade-off is called the **opportunity cost** of the choice – the value (or benefit) foregone of the next best alternative.

Making choices by definition always incurs opportunity costs; and this affects how **economic agents** (consumers, producers and the government) behave. A consumer tries to maximise his/her welfare from consuming goods and services due to a limited budget (i.e. his/her income) – spending £20 on a meal means £20 less money available to buy other goods. A producer also has to choose – purchasing some expensive machinery now to increase production but not opening a new store; and it has to decide what goods to produce. The government has to decide where and how to spend its budget – investing £10 million on healthcare services means £10 million less financing available to spend on education or infrastructure such as roads.

Exam tip

Opportunity costs of the same situation are different to different economic agents. Pay attention to the economic agents (consumers, producers and government) that the question is focusing on.

Figure 1.1 Government spending on healthcare means less spending elsewhere

1.2 Production possibility curves

In Economics, diagrams are often used to illustrate and explain key ideas. Frequently, economists will use them together with idealised **economic models** in order to allow them to understand more clearly what is happening in a given situation. They can then check the model's predictions with real-world data and decide if the model is working well or whether it needs refining. A **production possibility curve** (PPC) is a curve that shows the maximum output combinations of two goods or services that can be produced in an economy, when resources are used fully and efficiently (the PPC can also be called a **production possibility frontier – PPF**). So the PPC is showing the maximum productive potential of an economy focusing on just two goods.

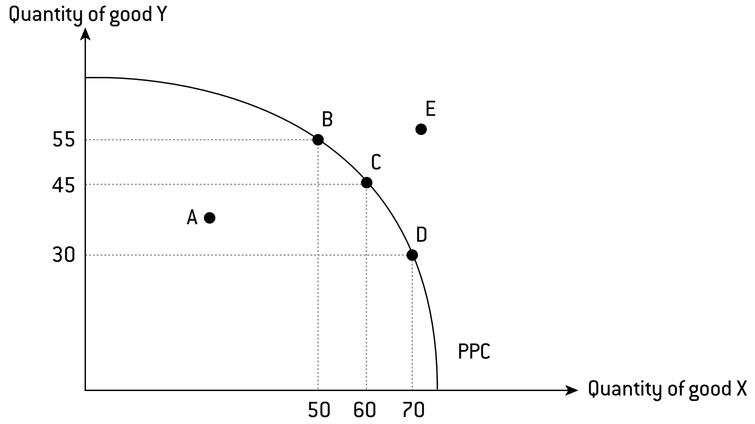

Figure 1.2 Production possibility curve

Exam tip

If the PPC is a straight line, then it shows *constant opportunity cost* between the two goods. This means that resources are not specialised and can be substituted for each other.

Figure 1.2 shows a typical PPC. One axis measures the amount produced of a good called 'X' and the other axis measures the amount produced of a good called 'Y'. The PPC bends concave down to the *x*-axis and each point on the curve indicates a unique output combination of good X and good Y. For instance, point D shows that 70 units of good X and 30 units of good Y are being produced.

The PPC can be used to illustrate the following concepts:

Fully employed or unemployed resources

As the PPC indicates the maximum possible output of an economy, any point on the PPC shows that resources are fully employed. Any point within the PPC (such as point A) means that there are **unemployed** or underutilised resources; as resources are not being used effectively this gives rise to **inefficiency**.

Possible and unobtainable production

Since resources available for production are scarce, the economy cannot produce at a point outside of the PPC; point E in Figure 1.2 represents an **unobtainable production** combination and illustrates the concept of scarcity. On the other hand, any point on the PPC or within the PPC (i.e. points A, B, C and D in Figure 1.2) are all possible output combinations.

Figure 1.3 Output is produced using resources

Summary

- The economic problem arises because resources are finite but wants are unlimited.
- The opportunity cost of a choice is the value (or benefit) foregone of the next best alternative.
- A production possibility curve (PPC) is a curve that shows the maximum output combinations of two goods or services that can be produced in an economy when resources are used fully and efficiently.
- A PPC can be used to explain different economic concepts: fully employed or unemployed resources; possible and unobtainable production; opportunity cost; positive or negative economic growth.
- Economic growth can be caused by: an increase in the quantity of available resources; an increase in the quality of available resources; technological advancements.

Exercise 1

1 Which of the following combinations of resources and wants leads to scarcity? **(1)**

- **A** Finite resources and finite wants
- **B** Unlimited resources and finite wants
- **C** Finite resources and unlimited wants
- **D** Unlimited resources and unlimited wants

2 Choices have to be made in a scarce economy because **(1)**

- **A** incomes are not equally distributed.
- **B** wants increase with wealth.
- **C** finite resources have alternative uses.
- **D** human beings have unlimited wants.

Answer Questions 3 and 4 using the information below.

The government of a certain country has provided a subsidy of $200 million to build a railway system in order to improve the country's transport network.

3 The opportunity cost to the government of building the railway is **(1)**

- **A** the wages of the railway construction workers.
- **B** the subsidy which could be spent on providing unemployment benefits.
- **C** the pollution caused by the railway construction which harms residents nearby.
- **D** the time given up by the architect to design the railway system.

4 The opportunity cost of building the railway system to the company is **(1)**

- **A** the profits earned if the company built a tram system instead.
- **B** the pollution of the railway construction which harms the residents nearby.
- **C** the time given up by the architect to design the railway system.
- **D** the cost of operating the railway system.

5 The production possibility curve **CANNOT** indicate **(1)**

- **A** the inefficient allocation of resources.
- **B** the maximum productive potential of an economy.
- **C** the opportunity cost of producing one good in terms of another.
- **D** the combination of resources required to produce different output quantities.