



IB Diploma Economics: www.IBDeconomics.com

0.1 SCARCITY, CHOICE AND OPPORTUNITY COST

LEARNING OUTCOMES

- Explain that scarcity exists because factors of production are finite and wants infinite.
- Explain that as a result of scarcity, choices have to be made.
- Explain that every economic choice has an associated opportunity cost.
- Explain that the three basic economic questions that must be answered by any economic system are: 'What to produce?', 'How to produce?' and 'For whom to produce?'
- Explain that economics studies the ways in which resources are allocated to meet needs and wants.

SCARCITY EXISTS BECAUSE FACTORS OF PRODUCTION ARE FINITE AND WANTS INFINITE

What is the study of economics all about? The central purpose of economic activity is to combine resources in order to produce output that will meet our needs and wants. You will learn that resources are scarce, and wants are infinite. So we have a problem – the basic economic problem.

Needs, wants and resources.

Our needs and wants are very different. We need some things just to stay alive – including water, food and warmth. But our wants are never-ending (infinite). We may want a PlayStation 4 for Christmas. Do we actually need it to stay alive? Most people would say no – it is simply a luxury that would be nice to have. Imagine you get a PlayStation for Christmas – what will you want for your birthday? An iPhone, perhaps. The cycle of wants continues, once you get one thing, you move straight on to wanting another.

In contrast, the resources used to produce these goods and services are in limited supply (finite). Collectively, resources are called factors of production. Resources can be divided into four groups:

- **Land.** Land is the natural resources available for production. Some nations have a large amount of a particular natural resource, and so are able to specialise in the extraction and production of it – for example North Sea oil and gas in Britain and Norway.

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- **Labour.** Labour is the human input into the production process. Not all labour is of the same quality. Every person has different skills and qualifications – we call this human capital. When people have more human capital, they are likely to be more productive. This means they can produce more in the same period of time.
- **Capital.** The term capital means investment in goods that are used to produce other goods in the future. Examples include machinery, plant and equipment, new technology, factories and buildings.
- **Enterprise.** Enterprise is the idea of having ideas and taking risks in setting up or running a business. An entrepreneur is someone involved in taking those risks, perhaps by putting in their money, or having the ideas and the drive to set up or run the business. The reward for being an entrepreneur is profit.

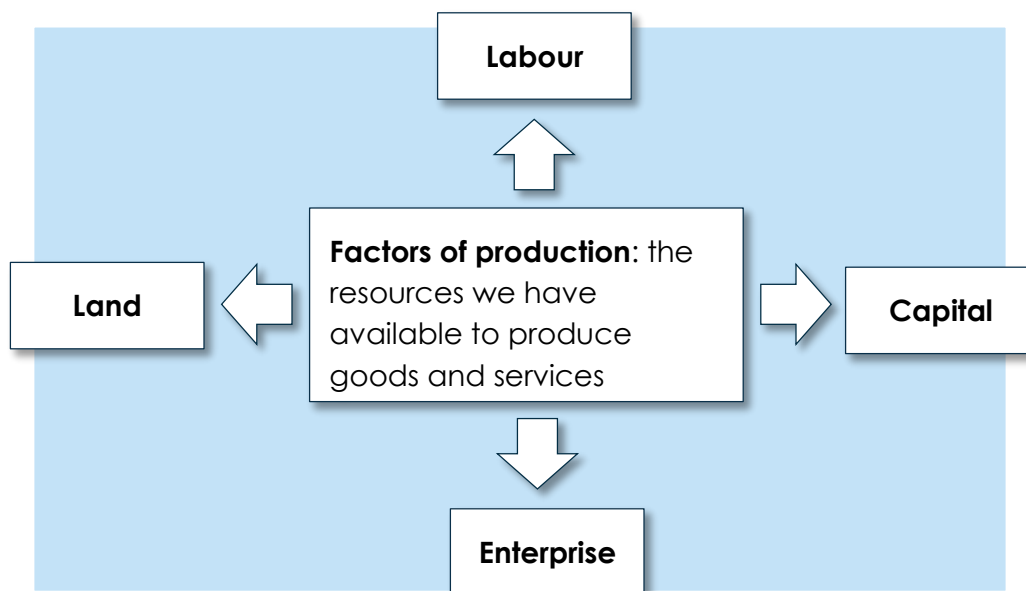


Figure 1. The factors of production

The main purpose of economic activity is to produce goods and services to satisfy consumers' needs and wants. This means that firms produce to satisfy people's need for consumption, both as a means of survival, and also to meet their growing demands for an improved lifestyle or standard of living.

Production of goods and services.

Goods are items that you can touch (tangible) – you can take them home and use them. An example of a good is a pen or a packet of crisps. A service is something that someone provides for you; you cannot touch it (intangible). Examples include tourism and banking.

The production of nearly all goods and services uses up scarce resources. Production takes place in one of three sectors, as shown in the table.

Table 1: Sectors of the economy

Sector	Description	Examples
Primary	Where the extraction of raw materials takes place	Mining, farming, fishing, oil extraction
Secondary	Where raw materials are manufactured into goods	Car manufacturing, furniture manufacturing, manufacture of electronic goods e.g. computers, mobile phones
Tertiary	The service sector	Banking, tourism, education

AS A RESULT OF SCARCITY, CHOICES HAVE TO BE MADE

The basic economic problem.

The basic economic problem occurs because resources are scarce – but our wants are infinite. As resources are scarce and our wants are never-ending, we have to allocate resources. When we allocate resources, we ask the following questions:

- What goods and services should we produce?
- How should the economy use its resources to operate schools or hospitals?
- What mix of goods will it produce?
- What is the best way to produce goods and services?
- What is the best use of scarce resources?
- Who is to receive goods and services?

When allocating resources, individuals, firms and governments must all make decisions about what, how, and for whom.

EVERY ECONOMIC CHOICE HAS AN ASSOCIATED OPPORTUNITY COST

Opportunity costs and choices.

Opportunity cost – the next best alternative foregone when making a choice – what we give up when we make a choice.

We already know that resources are scarce and we have infinite wants. This creates a problem; if we cannot have everything we want, we have to make choices. I really want to go on holiday and I would like a new car. I do not have the money to do both, so I must decide which I would like to do the most. If I choose to go on holiday, it means I cannot buy a new car. I can therefore say that the opportunity cost of going on holiday is buying a car. This means that when I have chosen the holiday, the next best

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alternative is the car. Thus, because we cannot have everything we want as a result of scarcity, every choice that must be made between two or more options has an opportunity cost.

BASIC ECONOMIC QUESTIONS THAT MUST BE ANSWERED BY ANY ECONOMIC SYSTEM

Scarcity makes every economy in the world, regardless of how it is organised, to answer three basic questions – **What** to produce? **How** to produce? **For whom** to produce? The first two questions are about **resource allocation**.

1. **What to produce?** All economies must choose the combinations and quantities of the particular goods and services that they produce.
2. **How to produce?** All economies must choose how to use the resources they have to produce goods and services. Different combinations of the factors of production can be used to produce goods and services (for example, relatively more human labour with fewer machines, or relatively more machines with less labour), by using different skill levels of labour, and by using different technologies.

Resource allocation refers to assigning an economy's available resources, i.e., the factors of production, to certain uses which have to be chosen among the many possible alternatives available.

For example, if 'a what to produce?' choice involves choosing a certain amount of education services (schools, universities, etc.) and a certain amount of health care (medical centres, hospitals, etc.), this means a decision is made to allocate some resources to the production of education and some to the production of health services. At the same time, a choice needs to be made about how to produce these services. Which factors of production (e.g., labour – doctors, nurses, dentists, teachers, professors, and capital – buildings, information systems, equipment) and in what quantities (for example, how much labour, how much capital equipment and what type of capital equipment, etc.) should be used to deliver health care and how much to deliver education services.

Bearing in mind that resources are scarce relative to needs and wants, if a decision is made to change the amounts of services produced, such as more education and less health care, this involves a **reallocation** of resources. Sometimes, economies do not produce the best amount of goods and services relative to what is socially desirable. For example, if too many cigarettes or alcohol are being produced, then there is an **overallocation** of resources in production of cigarettes or alcohol. If too few socially desirable goods or services are being produced, such as health care or education, then there is an **underallocation** of resources in producing these services.

The third and final question, 'for whom to produce' is about the distribution of output, i.e., how much output different individuals or different groups in the economy receive.

3. **For whom to produce?** All economies must choose how goods and services are to be distributed among the population. Some may argue that everyone get an equal amount of these, while others would argue that some people should get more than others. Further arguments can be made that

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some goods and services such as healthcare and education should be distributed more equally among the population than other goods and services such as handguns and assault rifles.

Here the **distribution of income** among individuals and groups in an economy becomes an important consideration. To a large extent the amount of output different people receive depends on how much of it they can buy, which is dependent on how much income they receive. When the distribution of income or output changes so that different social groups now receive more, or less, income and output than previously (e.g., taxing the rich to provide education for the poor), this is referred to as redistribution of income.

ECONOMICS EXAMINES HOW RESOURCES ARE ALLOCATED TO MEET NEEDS AND WANTS

The economic problem – sometimes called the basic, central, or fundamental economic problem – is one of the fundamental economic theoretical principles in the operation of any economy. It asserts that there is scarcity; that is, that the finite resources available are insufficient to satisfy all human wants and needs. The question then becomes how to determine what is to be produced, and how the factors of production (such as capital and labour) are to be allocated. Economics revolves around methods and possibilities of solving this fundamental economic problem.

The economic problem can be divided into different parts:

1. Problem of allocation of resources

The problem of allocation of resources arises due to the scarcity of resources, and refers to the question of which wants should be satisfied and which should be left unsatisfied; in other words, what to produce and how much to produce. More production of a good implies more resources required for the production of that good, and resources are scarce. These two facts together mean that, if a society decides to increase production of some good, it has to withdraw some resources from the production of other goods; in other words, more production of a desired commodity can be made possible only by reducing the quantity of resources used in the production of other goods.

The problem of allocation deals with the question of whether to produce capital goods or consumer goods. If the community decides to produce capital goods, resources will have to be withdrawn from the production of consumer goods. However, in the long run, the investment on capital goods will increase the ability to produce consumer goods. Thus, both capital and consumer goods are important. The problem is determining what the optimal ratio of production between the two types of goods is. It is a social science that studies human behaviour as a relationship between ends and scarce means that have alternative uses.

2. The problem of all economic efficiency

Resources are scarce and it is important to use them as efficiently as possible. Thus, it is essential to know if the production and distribution of national product made by an economy is maximally efficient. The production becomes efficient only if the productive resources are used in such a way that any reallocation does not produce more of one good without reducing the output of any other good; in

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other words, 'efficient distribution' means that any redistribution of goods cannot make anyone better off without making someone else worse off.

The inefficiencies of production and distribution exist in all types of economies. The welfare of the people can be increased if these inefficiencies are ruled out. Some cost will have to be incurred to remove these inefficiencies. If the cost of removing these inefficiencies of production and distribution is more than the gain, then it is not worthwhile to remove them.

3. The problem of full-employment of resources

In view of the scarce resources, the question of whether all available resources are being fully employed is an important one. An economy should achieve maximum satisfaction by using the scarce resources in the best possible manner; resources should not be wasted or used inefficiently.

However, in capitalist economies, the available resources are not fully utilised. In times of depression, there are many people willing and wanting to work who go without employment. It supposes that the scarce resources are not fully utilised in a capitalist economy.

4. The problem of economic growth

If the productive capacity of the economy grows, it will be able to produce progressively more goods, which will result in a rise in the standard of living of the people in that economy. The increase in productive capacity of an economy is called economic growth. There are various factors affecting economic growth including the allocation of resources to capital goods, investment in technology and skills and education training to raise the productivity of labour. This part of economic problem is studied in the economies of development.

KEY TERMS

- **Needs** – something essential to survival – food, water, warmth, clothing and shelter.
- **Wants** – something you would like to have, but is not essential to survival – for example cars, mobile phones and chocolate.
- **Resources** – something used to produce output.
- **Factors of production** – the resources we have available to produce goods and services (land, labour, capital and entrepreneurship).
- **Scarcity** – is the situation in which available resources, or factors of production, are finite, whereas wants are infinite. There are not enough resources to produce everything that we need and want.
- **Economics** – is the study of choices leading to the best possible use of scarce resources in order to best satisfy unlimited human needs and wants.
- **Scarcity** – the basic economic problem that arises because people have unlimited wants but resources are limited. Because of scarcity, various economic decisions must be made to allocate resources efficiently.
- **Goods** – are items that you can touch (tangible) – you can take them home and use them. An example of a good is a pen or a packet of crisps.

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- **Services** – a service is something that someone provides for you; you cannot touch it (intangible). Examples include tourism and banking.
- **Opportunity cost** – the next best alternative foregone when making a choice – what we give up when we make a choice.
- **Resource allocation** – assigning an economy's available resources, i.e., the factors of production, to certain uses which have to be chosen among the many possible alternatives available.