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# CHAPTER 1

# WHAT IS ECONOMICS?

## 1.1 *The economic problem*

The fundamental economic problem is one of ***relative scarcity***. There is an insatiable desire for goods and services in society but only a finite quantity of ***economic resources*** available to satisfy these desires.

Some societies may suffer from ***absolute scarcity*** due to underdevelopment, famine, etc. However even those societies with the most highly developed economies, such as the USA and Japan, are subject to the fundamental problem of relative scarcity.

Relative scarcity means that ***choices*** have to be made. For example, if at budget time the government decides to increase teachers' pay the cost might be measured in terms of poorer facilities in schools, or poorer hospital care, etc. Or, an individual taking a foreign holiday may do so at the expense of a new car or some other desired item.

Making choices implies the existence of a ***scale of preferences*** on the part of the decision-taker. Typically the choices made will represent a ***trade-off***: extra units of good *X* at a cost of fewer units of good *Y*. Having made the choice the next best alternative in the scale of preferences must be forgone. The ***opportunity cost*** of a particular use of scarce resources is the forgone alternative.

*Examples:*

- an individual with €10 to spend is faced with the choice of either buying a book or going to the cinema;
- the government with €50m to spend is faced with the choice of purchasing military equipment for the defence forces or improving the roads.

For the individual, the opportunity cost of the book is going to the cinema and vice versa; for the government the opportunity cost of the military equipment is the improved roads and vice versa.

Adam and Eve in their Garden of Eden with all its abundance might conceivably have studied physics, biology, ethics, etc., but economics would never have occurred to them.

Economics as an intellectual discipline results from this basic problem of relative scarcity. Economics can be defined as: **the study of human behaviour regarding the optimum use of scarce resources which have alternative uses**.

***Optimum*** is here defined in terms of the achievement of the goals of those with control over the scarce resources.

## 1.2 *Economic resources and production possibilities*

A society's economic resources can be grouped under four broad headings (sometimes referred to as the ***factors of production***):

- Land;
- Labour;
- Capital;
- Enterprise.

Land is broadly defined as the natural resources (the 'gifts of nature') available such as minerals, the soil, the climate, etc. The labour available can be measured in terms of the quantity and quality of the society's labour force. The stock of capital refers to the plant and equipment (tools, machinery, factories, offices, etc.) available for use in the production of goods and services. Enterprise is the function, essential to a deregulated market economy (Section 1.3), of co-ordinating and activating the other resources with a view to producing goods and services.

At any given point in time a society will have a given quantity of economic resources and this 'endowment' will set an upper limit to what can be produced. However, over time the resources available can be changed in terms of both quantity and quality. Expenditure on education can improve the quality of the labour force and thereby increase the **productivity of labour**. The educational system can also influence the level of enterprise in a society by the degree of emphasis it places on an enterprise culture. Investment expenditure (Section 8.6) can alter the quantity and quality of the capital stock. Over time, therefore, a society's capacity to produce goods and services can be enhanced resulting in improved living standards.

A **production possibility curve** (PPC) is a means of illustrating the capacity of an economy to produce goods and services, given its available resources. The PPC indicates the choices available by representing the **feasible** combinations of output. For diagrammatic purposes (two-dimensional) it is assumed that a society wishes to use its resources to produce two distinct goods, $X$ and $Y$ (Figure 1.1).

If all resources are allocated to the $Y$ industry $y_0$ is the maximum quantity of $Y$ that can be produced. Likewise $x_0$ is the maximum output of good $X$ that can be produced. If all resources are allocated between both industries the PPC represents the maximum achievable output of one good given the level of output of the other. For example if $x_1$ of $X$ is being produced then $y_1$ of $Y$ is the maximum achievable output of $Y$.

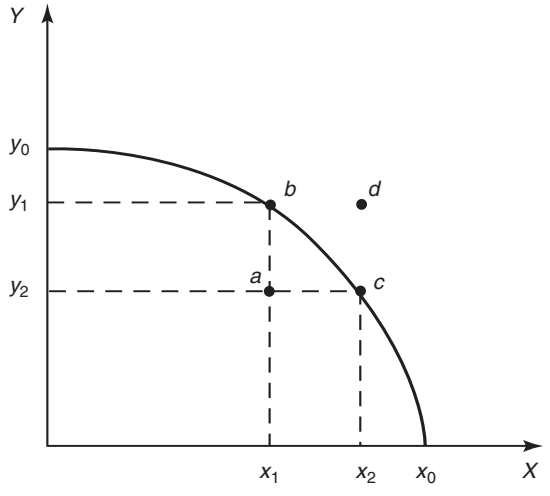


**Figure 1.1:** *Production possibility curve*

Combinations inside the curve (or frontier) are feasible but not efficient. Inefficient combinations are ones such that output of one good can be increased without reducing the output of the other. For example at point *a* more output of *X* can be produced for the given output of *Y* (move to point *c*) or for the given level of *X* more *Y* can be produced (move to point *b*). Combinations on the PPC such as *b* or *c* are both feasible and efficient. An efficient utilization of resources implies that output of one good cannot be increased without reducing the output of the other.

Combinations outside the curve such as point *d* are not feasible given the existing resources. While $y_1$ of *Y* or $x_2$ of *X* could be produced separately they cannot be produced in combination. However, an increase in the quantity or quality of resources (e.g. technological progress) ***shifts*** the PPC outward so that points such as *d* may be feasible in the future.

The concept of opportunity cost can be illustrated with the PPC. Assume starting at point *b* more *X* is required and resources are reallocated so that *c* is the new combination of output. *X* output has increased by $x_2 - x_1$ but *Y* output has been reduced by $y_1 - y_2$ in order to achieve the increased output of *X*. The forgone output of *Y* represents the opportunity cost of the extra output of *X*.

The slope of the PPC at any point represents the rate at which one good can be ***transformed*** into the other at that point. The ***concave*** shape of the PPC reflects the assumption that as, say, more and more *X* is produced then larger amounts of *Y* will have to be sacrificed to get even further units of *X* (a ***diminishing marginal rate of transformation***) and vice versa. Not all resources are deemed to be equally productive in both sectors (if they were a straight line PPC would be appropriate).

## 1.3 *Economic systems: what, how and for whom*

A society's economy has limited resources. However society has a limitless capacity for the goods and services that these resources produce. The society therefore needs some mechanism for determining the allocation of resources so that the following key issues can be resolved:

- What goods are actually to be produced?
- How are these goods to be produced?
- For whom are they to be produced?

What actual combination of goods and services is to be produced by the economy (e.g. balance between luxuries and necessities, etc)? Irrespective of the composition of output there are typically alternative **techniques of production** with which to produce particular goods (e.g. capital intensive or labour intensive methods). So which technique is to be adopted? Finally how are the goods and services to be distributed among the population?

Many types of economic system have existed throughout history, such as slave-ownership, feudalism etc. However, in modern societies the choice is typically between decentralized free markets or some form of central planning by governments.

In a pure **laissez-faire** system the allocation of resources is completely determined by the unregulated interplay of the forces of supply and demand. The ***price mechanism*** indicates to firms the goods and services it is most profitable to produce and the most profitable techniques to employ. When determining the goods and services they wish to purchase consumers will consider the prices to be paid. Furthermore, their ability to buy the goods and services will largely depend on the wages they can earn supplying their labour to labour markets.

The price mechanism plays a co-ordinating role regarding the countless decisions being taken by firms, consumers and workers. The price mechanism also acts as a ***rationing*** device: items whose supply is low relative to demand will tend to have high or rising prices, whereas items whose supply is high relative to demand will tend to have low or falling prices.

While the price mechanism operates like an ***invisible hand,*** the method of the centrally planned economy is more intrusive. What to produce and how to produce them is decided by a central planning agency. Firms are given output targets in conformity with the plan and the necessary resources to meet the targets. Distribution might in principle be determined communally, however in practice consumers may exercise some personal preferences as they spend their incomes.

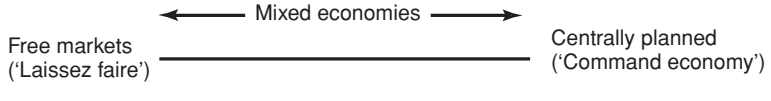


**Figure 1.2:** *Economic systems*

Although prices may exist, they are purely for accounting purposes rather than indicators of relative scarcity.

In practice all modern economies are a mixture (see Figure 1.2) of relatively free markets with some element of state regulation to influence resource allocation. Economies differ according to the balance that is struck. The provision of, for example, education, health care and public transport is, to a greater or lesser degree, centrally planned in all societies. Governments may, to a greater or lesser extent, place restrictions on the operation of free market forces both for internal and international trade. Some societies like Hong Kong or the USA have economies firmly tipped in favour of free markets, while others such as Ireland or France traditionally reserve a greater role for the state.

Evaluation of the strengths and weaknesses of alternative systems raises important issues. Ideally all societies wish to have efficient economies, i.e. an economy operating on or at least close to its production possibility frontier (Figure 1.1). However, some societies may wish to forgo a degree of efficiency if this means achieving a greater degree of equality.

In recent times the trend globally has been for countries to move away from the centrally planned model by introducing greater scope for market forces. The centrally planned economy has proven itself prone to inefficiencies due to inflexibility and inertia. Russia and China are examples of major economies previously committed to the command economy but now undergoing major restructuring in the direction of free markets. Cuba is an example of a country still committed to central planning with very limited scope for private enterprise.

A free market system has the advantage of being highly flexible and therefore less wasteful of resources. The trend since the 1990s has been to shift economies closer to the free market end of the spectrum (Figure 1.2). **Privatization** – the practice of transferring resources from the state sector to the private sector – is gaining in popularity (Section 18.3). However free markets are efficient because they operate on the principle of ***the pursuit of self-interest***. Gains in efficiency may be at the expense of greater social inequality and insecurity.

## 1.4 *The methodology of economics*

Economics is an intellectual discipline which attempts to discover and understand the laws governing the behaviour of modern economies. However, unlike many of the natural sciences, economics does not provide opportunities for ***controlled experiments*** in laboratories. The ability to undertake a controlled experiment, and for others to be able to duplicate it, has enabled the natural sciences to choose between competing theories and thereby continue to progress.

The economy is continuously evolving and changing, refusing to stand still for the economists' benefit. It follows that the economy is never quite the same from one period to another. Contrast this with the solar system. Planetary motion is repetitive and once the astronomer discovers the laws of motion of the planets this knowledge holds good indefinitely. But a theory which explained some aspect of the

economy of the 1930s may be of little relevance to the early twenty-first century.

The absence of controlled experiments is of particular significance for ***macroeconomics*** which looks at the behaviour of the economy as a whole. ***Microeconomics*** studies the behaviour of individual ***economic agents*** (the firm, the consumer, the worker) and the strategies they pursue in particular markets. The big issues about which economists continue to disagree are mainly in the area of macroeconomics.

Economics aims to discover ***causal relationships*** of the form: 'if event A occurs then event B will follow as a consequence'. For example a simple prediction would be: if the price of a good rises the quantity purchased will fall. Controlled experiments enable the natural scientist to isolate the causal relationship between particular variables. In the absence of this the economist must rely heavily on the ***ceteris paribus*** (or 'all else being equal') assumption. For example, the price of foreign holidays might be rising, but if disposable incomes are also rising this latter event may result in ***increased purchases*** despite the rising price.

Because of the difficulty regarding the (non) use of experiments economics relies heavily on abstract reasoning. According to our definition economics is simply a particular intellectual approach to a certain set of problems. The aim is to formulate general assumptions regarding the behaviour of economic agents which enable testable predictions to be made. For example the general assumption that firms seek to maximize profits enables predictions to be made regarding the response of firms to events such as the imposition of taxes (Section 3.2) etc. Economic analysis relies heavily on the construction of **economic models** which attempt to replicate key features of particular markets, the whole economy or some aspect of economic behaviour.

## *Normative and positive*

Economics concerns itself with **positive** rather than **normative** propositions. A positive proposition entails some empirical content the truth of which can be tested. For example, the proposition: 'it is raining outside' may be true or false but its accuracy can be tested enabling the proposition to be clearly accepted or rejected. On the other hand a normative proposition reflects the value judgement of the person concerned and regarding which the best that might be achieved is an agreement to disagree. 'Mozart is better than Beethoven' is such a proposition.

There are issues in economics such as poverty, unemployment, etc that can give rise to strongly held value judgements. Propositions of the form: 'governments should always treat unemployment as a greater evil than inflation' are normative rather than positive. Economists may have various personal views on such issues but economics as an intellectual discipline cannot resolve them. The best that economics can hope to achieve is to be able to explain the cause(s) of unemployment, inflation, etc. Understanding the cause may lead to prescriptions regarding remedies. But policy makers, such as elected politicians, rather than economists must be left to resolve the normative issues.

The analysis in the following text is referred to as 'comparative static' analysis. It focuses on equilibrium situations and considers the nature of a new equilibrium following a specified disturbance to some initial equilibrium. The actual process of adjustment – the dynamics of adjustment – are not primarily the focus of the analysis. Comparative statics facilitates the use of diagrams which, because of their two-dimensional nature, often require a high degree of simplification (or focus) on the part of the analysis.

## *REVISION FOCUS CHAPTER 1*

### *Key Areas*

- Fundamental economic problem
  ➞ relative scarcity ➞ choices ➞ scale of preferences
- Economic resources
  ➞ land, labour, capital, enterprise ➞ production possibilities
  ➞ feasible and efficient combinations of output ➞ opportunity cost
- Allocation of resources
  ➞ what, how, for whom ➞ the price mechanism ➞ central planning
- Normative and positive statements
  Microeconomics and macroeconomics

### *Self Test*

| | | |
|---|---|---|
| (1) | Increasing prosperity will remove the fundamental economic problem. | T/F |
| (2) | Opportunity cost and price are the same thing. | T/F |
| (3) | The production possibility curve indicates what combinations of output are possible, given existing resources. | T/F |
| (4) | Only if the economy is operating outside its production possibility curve can it be operating efficiently. | T/F |
| (5) | Positive statements must be true. | T/F |
| (6) | Normative statements reflect value judgements. | T/F |
| (7) | If economic resources have no alternative use then the opportunity cost of using them for a given purpose is zero. | T/F |
| (8) | The price mechanism is a means of rationing resources according to ability and willingness to pay. | T/F |

### *Discussion Topics*

- Explain why the production possibility curve is likely to shift outwards over time.
- The price mechanism allocates resources like an ***invisible hand***. Explain.
- If an economy is operating inside its production possibility curve (Figure 1.1) resources are not being used efficiently. Explain why.