

1 THE ECONOMIC PROBLEM: INTRODUCTION TO BASIC ECONOMIC CONCEPTS

1.1 The Nature and Purpose of Economic Activity

The central purpose of economic activity is the production of goods and services to satisfy needs and wants. In other words, the main purpose of production is to satisfy people's need for consumption both as a means of survival but also to meet their growing demands for an improved lifestyle or standard of living.

Production of goods and services involves in nearly all cases, using up scarce resources. Production can take place at various levels – ranging from primary industries in which basic resources are extracted through manufacturing and construction (secondary industries) to tertiary and quaternary industries (the service sector).

1.2 What is the Economic Problem?

The economic problem is about scarcity and choice: there are only a limited amount of resources available to produce the unlimited amount of goods and services we desire. All societies face the economic problem of having to decide:

- ▶ **What goods and services to produce:** does the economy use its resources to operate hospitals or hotels?
- ▶ **How best to produce goods and services:** what is the best use of scarce resources of land, labour and capital?
- ▶ **Who is to receive goods and services:** what is the best method of distributing (sharing) products to ensure the highest level of wants and needs are met? Who will get expensive hospital treatment - and who not?

1.3 Scarcity and Opportunity Cost

Let us start with a basic rule of economics! If something is scarce - it will have a market value.

If the supply of a good or service is low, the **market price** will rise, providing there is sufficient demand from **consumers**.

[Top class soccer players](#) and other sports stars are also in **scarce supply** – forcing up their **market value**. The battle between the top Premiership clubs to sign star players from home and overseas and also retain existing players on long-term contracts has caused rampant inflation in football transfer fees threatening the long term financial stability of many clubs.

More recently, the collapse of ITV Digital and their contract with the Football League has seen a [sharp decline in transfer activity](#) among clubs in the lower leagues, they simply do not have the money to be **willing and able** to finance big money signings and many footballers have had their contracts cancelled leading to an increase in the supply of players on the market and a fall in transfer fees.

Goods and services that are in plentiful supply will have a lower market value because supply can meet the demand from consumers. Whenever there is **excess supply** in a market, we expect to see prices falling. For example, the [prices of new cars in the UK](#) have been falling for several years. Another example is the global market for oil. When oil production runs ahead of demand, the stock of oil available in the market rises and so the average price per barrel starts to fall.

1.4 Finite Economic Resources and Sustainability Issues

There are only a **finite** number of workers, machines, acres of land and reserves of oil and other natural resources on the earth. Because **economic resources are finite**, we cannot produce an infinite number of goods and services.

By producing more for an ever-increasing population, we are in danger of **destroying the natural resources of the planet**. This will have serious consequences for the **long-term sustainability** of economies throughout the world and potentially enormous implications for living standards and the quality of life.

Common resources: Has the cod industry had its chips?

A collapse in cod and herring fish stocks in the North Sea has forced up the market price of cod and herring. In the spring of 2001, the British government decided to ban cod fishing in the North Sea for a period of three months in a desperate attempt to curb the decline in fish stocks. The situation remains serious despite drastic measures – according to some estimates the number of young North Sea cod in early 2003 was the lowest for 20 years threatening the sustainability of the British fishing industry in the years ahead.

Adapted from BBC online and newspaper reports (2003)

Organisations such as the [New Economics Foundation](#) and [Friends of the Earth](#) seek to highlight the permanent damage to the stock of natural resources available throughout the world and the dangers from rapid economic development and [global warming](#). One such issue is the huge threat posed by the [global shortage of water](#)

Threat to water supplies

“From disappearing lakes and dwindling rivers to military threats over shared resources, water is a cause for deep concern in many parts of the world. Supplies are threatened by overuse, bad management and changing weather patterns. The pressure will only increase as populations grow”

Adapted from BBC Online

At the heart of improving resource sustainability is the idea of **de-coupling** – i.e. increasing the efficiency with which resources are used in producing goods and services and trying to break the link between ever-increasing output and resource depletion.

If you would like to do some independent research on the issue of **sustainable economic development** try [Sustainable Development International](#) and also the [UK Government's own web site](#) promoting its policies on this topic

1.5 Infinite Wants and Basic Needs

Human beings want better food; housing; transport, education and health services. They demand the latest digital technology, more meals out at restaurants, overseas travel, more holidays and cosmetic health care treatments.

Opinion polls consistently show that the majority of the electorate expects government policies to deliver improvements in the standard of education, the National Health Service and our transport system. (Whether voters are prepared to pay for these services through higher taxes is another question!)

Whilst our economic resources are limited, human **needs** and **wants** are **infinite**. The development of society can be described as the **uncovering of new wants and needs** - which producers attempt to supply by using the available factors of production.

Human Development

For a perspective on the achievements of countries in meeting people's basic needs, the [Human Development Index](#) produced annually by the United Nations is well worth reading. Data for each country can be accessed and cross-country comparisons can be made.

1.6 Making Economic Choices – Trade-offs

Because of scarcity, **economic choices** have to be made on a daily basis by individual consumers, firms and governments. Making a choice made involves a **trade-off** - in simple terms, choosing more of one thing means giving up something in exchange. Because wants are unlimited but resources are finite, choice is an unavoidable issue in economics.

- ▶ Choices about whether to rent or buy a home – a huge decision to make and one full of uncertainty given the recent [volatility in the British housing market!](#)
- ▶ Choosing whether to move into full-time or part-time work, or take a course in higher education lasting for at least three years – how have these choices and commitments been affected by the [introduction of tuition fees?](#)
- ▶ The choice between using [Euro-Tunnel](#) or a ferry or an airline when traveling to Europe

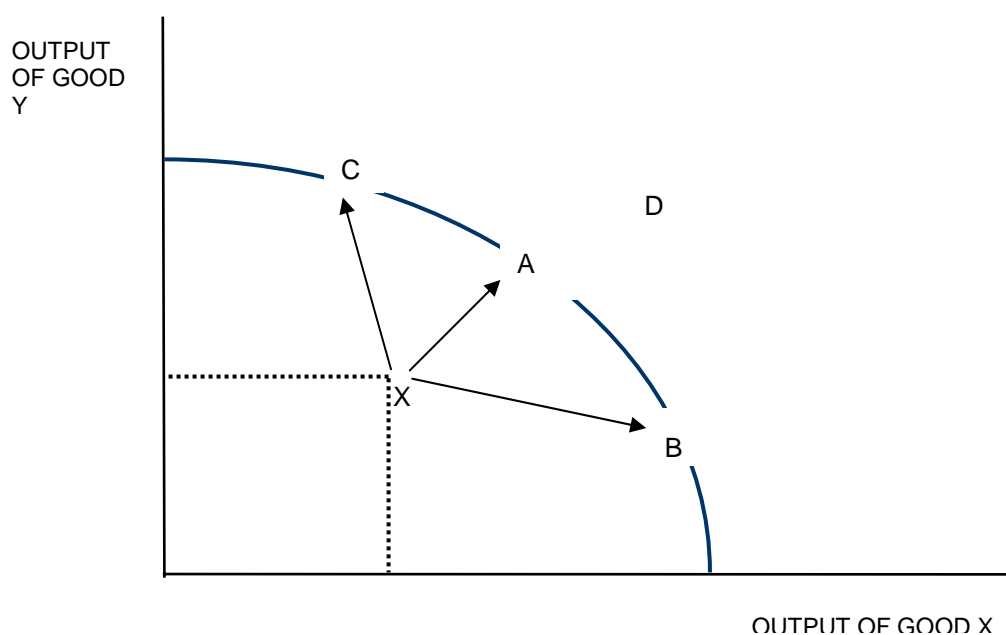
Our working assumption is that consumers make choices about what to consume based on the objective of **maximising their own welfare**. They have a limited income and seek to allocate their funds in a way that improves their own standard of living.

Of course in reality consumers rarely operate in a perfectly informed and rational way. We will see later on when we discuss market failure that very often decisions about which products to purchase and consume are based on **imperfect information** which can lead to a loss of welfare not only for consumers themselves but society as a whole.

1.7 The Production Possibility Frontier

A production possibility frontier (PPF) or boundary shows the combinations of two or more goods and services that can be produced using all available factor resources efficiently.

A PPF is normally drawn as concave to the origin because the extra output resulting from allocating more resources to one particular good may fall. I.e. as we move down the PPF, as more resources are allocated towards Good Y, the extra output gets smaller – and more of Good X has to be given up in order to produce the extra output of Good Y. This is known as the **law of diminishing returns**.



- ▶ The diagram above shows a **production possibility frontier** for two goods X and Y.
- ▶ Combinations of output of goods X and Y lying inside the PPF occur when there are **unemployed resources** or when the economy uses resources **inefficiently**. Point X is an example of this. We could increase total output by moving towards the production possibility frontier and reaching any of points C, A or B.
- ▶ Point D is unattainable at the moment because it lies beyond the PPF.
- ▶ A country would require an **increase in resources**, or an **increase in the efficiency (productivity) of our factor resources** or an **improvement in productive technology** to reach this combination of Good X and Good Y. If we achieve this then output combination D may become attainable.
- ▶ Producing more of both goods would represent an improvement in overall **economic welfare** and therefore an improvement in **allocative efficiency**

1.7.1 Opportunity Cost and the PPF

Reallocating scarce resources from one product to another involves an **opportunity cost**.

If we increase our output of Good X (i.e. a movement along the PPF from point A to point B) then fewer resources are available to produce good Y. Because of the shape of the PPF the **opportunity cost** of switching resources increases – i.e. we have to give up more of Good Y to achieve gains in the output of good X.

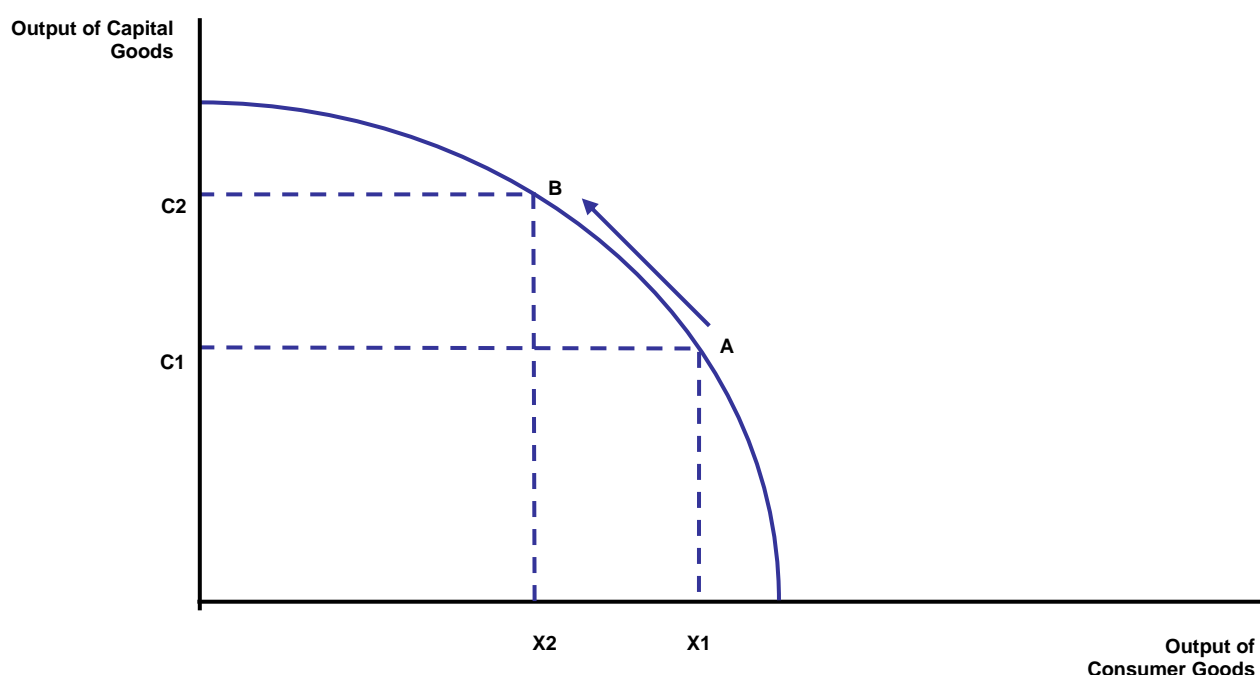
1.7.2 Free Goods

Not all goods have an opportunity cost. **Free goods** are not scarce and no cost is involved when consuming them.

Is fresh air an example of a free good? Ordinarily the answer is yes – but we know that air can become contaminated by pollutants. And, in thousands of offices, shops and schools, air-conditioning systems cool the air before it is “consumed”. In the case of air pollution, there is an **external cost** to society arising from the contamination of our air supplies.

External costs are costs faced by a third party for which no appropriate compensation is forthcoming. Identifying and then estimating a monetary value for air pollution is a very difficult exercise – but one that is important for economists. We will consider this issue in more detail when we move onto the broad topic of **market failure**.

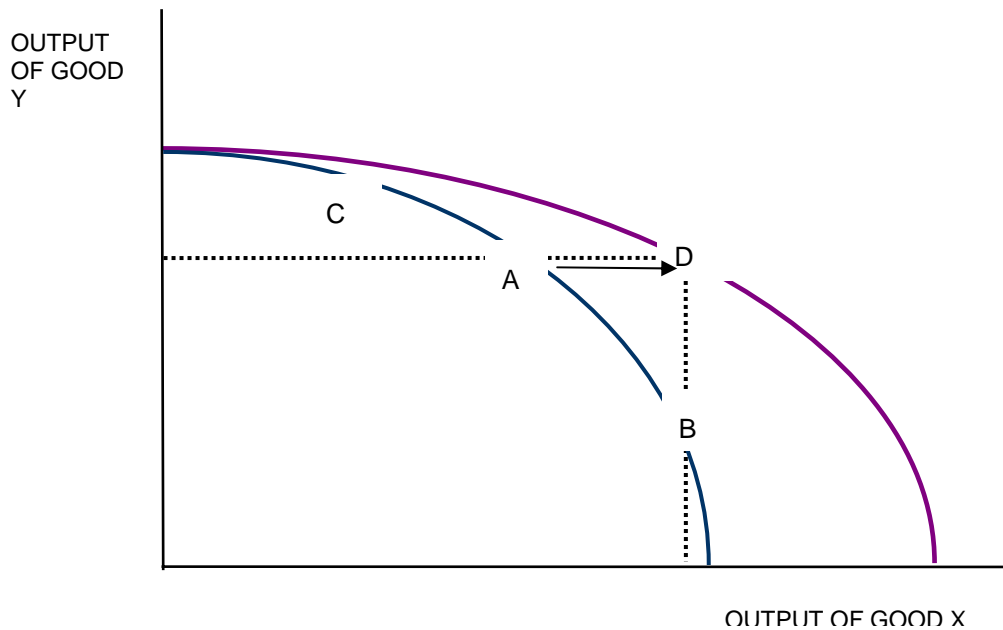
With air conditioning, scarce resources are used up in providing the “product” – for example the capital machinery and technology that goes into manufacturing the air conditioning equipment; the labour involved in its design, production, distribution and maintenance and the energy used up in powering the system. Cool air might appear to be free – but in fact it is often an expensive product to supply.



1.7.3 Explaining Shifts in the Production Possibility Frontier

The production possibility frontier will shift when:

- ▶ There are **improvements in productivity and efficiency** (perhaps because of the introduction of new technology or advances in the techniques of production)
- ▶ **More factor resources are exploited** (perhaps due to an increase in the available workforce or a rise in the amount of capital equipment available for businesses to use)



In the diagram above, there is an improvement in the state of technology which shifts the PPF outwards and means that more of good X can be produced for a given output of good Y.

As a result of this, output possibilities have increased and we can conclude (providing the good provides positive satisfaction to consumers) that there is an improvement in economic welfare.

1.7.4 Technology, Prices and Consumer welfare

Improved technology should bring the market price down and make a product more affordable to the average consumer. This has certainly been the case in the market for personal computers.

The exploitation of [economies of scale](#) and improvements in technology has brought prices down for consumers and businesses making PCs much more affordable. [A price war between leading PC suppliers](#) has also driven prices down.

1.8 Choices and Opportunity Cost – No ‘Free Lunches’

There is a well known saying in economics that “**there is no such thing as a free lunch**”. Even if we are not asked to pay a price for consuming a good or a service, economic resources are used up in the production of it and there must be an opportunity cost involved – i.e. the next best alternative that might have been produced using those resources.

Opportunity cost measures the cost of any choice in terms of the **next best alternative foregone**. Many examples exist for individuals, firms and the government.

- ▶ The opportunity cost of deciding not to work is the lost wages foregone
- ▶ The opportunity cost of spending money on a foreign holiday is the lost opportunity to buy a new dishwasher or the chance to enjoy a couple of weekend breaks in the UK
- ▶ The opportunity cost of the government spending nearly £20 billion on interest payments each year on the national debt is the extra money that might have allocated to the National Health Service, education or to improving the UK transport network.
- ▶ The opportunity cost of an economy investing resources in new capital goods is the current production of consumer goods given up. We may have to accept lower living standards now, to accumulate increased capital equipment so that long run living standards can improve.
- ▶ The opportunity cost of using arable farmland to produce wheat is that the land cannot be used in that production period to harvest potatoes

1.9 Positive and Normative Economics

1.9.1 Positive Statements

Positive statements are **objective statements** that can be tested or rejected by referring to the available evidence. Positive economics deals with **objective explanation**.

For example: A rise in consumer incomes will lead to a rise in the demand for new cars. Or, a fall in the exchange rate will lead to an increase in exports overseas. Or if the government decides to raise the tax (duty) on beer, this will lead to a fall in profits of the major brewers.

1.9.2 Normative Statements

Normative statements express an **opinion** about what **ought** to be. They are **subjective statements** rather than objective statements – i.e. they carry value judgments.

For example, the level of duty on petrol is too unfair and unfairly penalizes motorists. Or the government should increase the national minimum wage to £6 per hour in order to reduce relative poverty. A third example – the UK government should join the Single European Currency as soon as possible.

When you are reading articles on economics, it is important to be able to distinguish where possible between objective and subjective statement and also to be able to evaluate the relevance of what is being said.

1.10 Factors of Production

Factors of production are simply the resources we have available to produce goods and services. We can distinguish between three main groups of **factor inputs**:

1.10.1 Land

Land is the **natural resources** available for production. Some nations are endowed with natural resources and specialise in the extraction and production of these resources – for example – [the development of the North Sea Oil and Gas in Britain](#) and Norway.

1.10.2 Labour

Labour is our **human input** into the production process. To get a feel for the size of the UK labour market, consider these figures averaged over the year 2001:

- ▶ In 2001, there were 28.1 million people in employment working an average of 37.8 hours per week and earning an average of £428 per week
- ▶ 74.8% of the population of working age is in some form of paid employment (the highest employment rate in the European Union)
- ▶ In 2001 1.4 million people were unemployed (4.8% of the labour force)

A housewife, a keen gardener and a DIY enthusiast all produce goods and services, but they do not get paid for their economic activity. The final output of these people is not included directly in Gross Domestic Product although many of the resources they buy to do their “work” are included in our national income and spending statistics.

Another important point is that not all labour is of the same quality. Some workers are more productive than others because of the education, training and experience they have received. An increase in both the size and the quality of the labour force is vital if a country wants to achieve sustained economic growth.

Raising productivity is one of the key long-term aims of Chancellor Gordon Brown. Consider this report from his October 2000 speech to the [Confederation of British Industry](#)

Closing the Productivity Gap

“Chancellor Gordon Brown is looking to union and business leaders to work out how to boost Britain's economy. Productivity in the UK falls behind competitors such as the United States by a third, and a quarter behind the French.

Gordon Brown blamed the shortfall on the "old British problems" of low skills, under-investment, resistance to change and complacency”

1.10.3 Capital

The term capital means **investment in goods that are used to produce other goods in the future**. **Fixed capital** includes machinery, plant and equipment, new technology, factories and buildings – all of which are goods designed to increase the **productive potential of the economy** in future years.

Working capital refers to stocks of finished and semi-finished goods (components) that will be either consumed in the near or will be made into finished consumer goods. Another term for stocks is inventories.

New items of capital machinery, buildings or technology are generally used to enhance the **productivity** of other factors of production (e.g. improved technology in farming has increased the productivity of our agricultural sector and investment in information and communication technology can increase the efficiency of workers across many industries).

1.11 Entrepreneurship

An **entrepreneur** is an individual who seeks to supply products to a market for a rate of return (i.e. a profit). Entrepreneurs will usually invest their own **financial capital** in a business and take on the risks associated with a business investment. The reward to this risk-taking is the **profit** made from running the business.

Many economists agree that entrepreneurs should be classed as specialised part of the factor input 'labour'.

There is a consensus that Britain needs to encourage and develop more of an **entrepreneurial culture** if it is to achieve faster economic growth in the years ahead. The emergence of new businesses and higher levels of **research and development spending** from smaller “seed-corn companies” is more firmly established in other countries (noticeably the United States).

Read this article from [New Business](#) about the inventor and entrepreneur [James Dyson](#) the man who invented the bag less vacuum cleaner and the new dual-cylinder washing machine.

Another high-profile entrepreneur in recent years has been [Stelios Haji-Ioannou](#), the founder of EasyJet and EasyEverything.

Have a look at this article on [social entrepreneurs](#) from the BBC online web site and further advice on [achieving success with small businesses](#).

1.11.1 Micro and Macroeconomics

Microeconomics concerns itself with the study of economics and decisions taken at the level of the individual firm, industry or consumer / household. Microeconomics is also concerned with how prices are determined in markets, how much people get paid in different occupations, how we decide what to buy; the effects of Government intervention on the prices and quantities of individual goods and services and also the efficiency with which our scarce resources are used.

Macroeconomics is more concerned with the economy as a whole. For example, how the levels of output, inflation, employment, growth, imports and exports are determined.

A sound knowledge of Micro is useful when attempting to understand Macro as well as being of value in its own right. Both branches of economics use a common set of tools and ideas.

1.12 Rewards to the Factors of Production

Factors of production are used to create output to be sold in markets. Each factor used in production can expect some reward. A summary appears below:

1.12.1 Income

Income represents a **flow of earnings** from using factors of production to generate an output of goods and services. The main sources of income for individuals and households are the following:

- ▶ **Wages and salaries from work** supplemented by overtime and productivity bonuses
- ▶ **Interest from savings held in banks**, building societies and other accounts
- ▶ Dividends from share ownership

- ▶ **Rent income** from the ownership of property

1.12.2 Wealth

Wealth is a **stock of assets** that generates a flow of income and can be held in a variety of forms by individuals, firms and also the nation as a whole:

- ▶ **Financial wealth** - stocks and shares, bank and building society accounts
- ▶ **Marketable wealth** - consumer durables that can be sold for a price
- ▶ **Social capital** - social infrastructure such as transport systems, schools and hospitals

It is important to distinguish between **income** and **wealth**. If you receive a higher wage or salary – this adds to your monthly income. If this is saved (in a bank, or by making contributions to a pension fund) you are adding to your financial wealth.

Being wealthy can also generate income. If you have shares – you can expect to receive dividend income every few months; if you have money in a savings account – you will be paid interest.

Of course the value of financial wealth can fluctuate over time. From 2000-2003 we have seen a boom in the UK housing market leading to sharp rises in average house prices, particularly in London and the South East. The result has been a sharp jump in **housing wealth** for people with mortgages, but a growing **problem of affordability** for people looking to enter the housing market for the first time on relatively low incomes. See this article on [“Where the housing ladder is out of reach”](#)

The [distribution of wealth](#) in the UK is highly unequal. The latest available data shows that 94% of the total marketable wealth in this country is held by 50% of the population. Put another way, the other half of our population can lay claim to only 6% of total wealth.

1.12.3 Labour and Wages

Most people have the ability to do some form of work. If they are of working age and actively seeking a job then they are included in the **working population**. In industries and occupations where labour is not particularly scarce, so wages are lower. Millions of workers in the UK are paid hourly wages well below the national average.

The [National Minimum Wage](#) seeks to address some of the problems associated with low pay. On the other hand, some people have skills that are quite rare, and these people will command high wages and salaries in the modern labour market.

1.12.4 Capital and Interest

Businesses often need to borrow money to fund new capital equipment. The reward for investing money is called interest. Interest rates can of course go up or down. If the interest rate is high, it becomes less worthwhile to borrow money because any project will have to make more money than before to be profitable since more interest is now being paid.

Low interest rates reduce the opportunity cost of using funds to invest and therefore should stimulate an increase in the demand for credit.

1.12.5 Enterprise and Profit

In return for having the ideas that bring together the factors of production and taking the risk in putting funds into a business the entrepreneur takes any money that the business has left after the other factors of production have received their rewards. This is called **gross profit**. Taxes then have to be paid to the government, and the entrepreneur takes what is left. This after-tax profit is called net profit.

Economists often assume that one of the main objectives of a business is to achieve **maximum profits** from selling their output to consumers. This is not always the case! Some businesses are looking to achieve the highest **market share**. Increasing market share might mean sacrificing some profits in the short run by cutting prices and under-cutting rival suppliers in the market.

There is growing interest in the concept of [ethical businesses](#) and corporate social responsibility where the traditional assumption of businesses driven solely by the profit motive is challenged and where businesses are encouraged to take account of their economic, social and environmental impacts.

1.13 Resource Allocation in a Market Economy

All economic systems have to choose between alternative allocations (uses) of land, labour and capital.

In a **free market (private sector) economy**, households own resources and markets allocate resources through the price mechanism

An increase in demand raises the market price and encourages firms to switch additional resources into the production of that product – leading to an expansion of supply

The amount of goods and services consumed by households depends on their income. In this sense, every pound of income represents one **economic vote** in the market place. Household income depends mainly on the **market value of an individual's work**

Firms make decisions about the amount of capital and labour to use in production

The interaction of consumers and producers in markets determines the equilibrium price and equilibrium quantity bought and sold, hence the amount of resources used

In a **free market economic system**, governments take the view that markets work, assume a laissez faire (let alone) approach, step back, and allow the forces of supply and demand to set prices and allocate resources

Government intervention is required mainly to **prevent or correct market failure** through for example enforcing anti monopoly legislation (i.e. preventing abuses of market power), enforcing private property rights, and redistributing income through the tax and benefit system etc

1.14 The Importance of Incentives

Incentives matter enormously in our study of microeconomics, markets and market failure. For competitive markets to work efficiently **economic agents** (i.e. consumers and producers) must respond to appropriate **price signals in the market**.

As we shall see later, market failure occurs when the signalling and incentive function of the price mechanism fails to operate optimally

Government intervention in markets can often change the incentives that both producers and consumers face – for example a change in relative prices brought about by the introduction of government subsidies and taxation.

Suppose for example that the government decides to introduce a new tax on aviation fuel in a bid to reduce some of the externalities created by the air transport industry.

- ▶ How will airlines respond?
- ▶ Will they pass on the tax to consumers?
- ▶ Can they choose instead to absorb the tax and seek cost-savings elsewhere in their operations?
- ▶ If the tax does raise prices for air travelers, will they change their behaviour in the market?
- ▶ Is an aviation tax the most effective way of controlling pollution?
- ▶ Or could incentives and behaviour be changed through other means?

Agents may not always respond to incentives in the manner in which textbook economics suggests. The “**law of unintended consequences**” encapsulates the idea that government policy interventions can often be misguided of have unintended consequences! We shall return to this theme at various points in the study companion.