

# Basic economic ideas and resource allocation

## A-Level Economics

### The fundamental economic problem

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Economics starts with one big idea: **scarcity** . We never have enough to give everyone everything they want.

- **resources** are the things we use to make goods and services. They are **finite** – there is only a limited amount, so they are **scarce** .
- **goods** (things you can touch, like food) and **services** (work done for you, like a haircut) are what we make from resources.
- human **wants** are unlimited. People always want more.

Because wants are bigger than resources, this is called the **economic problem** . Every society must answer three questions:

1. **What** to produce?
2. **How** to produce it?
3. **For whom** to produce it?

#### ■ Choice and opportunity cost

Because resources are scarce, you must choose. Every choice means you give up something else.

**opportunity cost** – the next best **alternative** you give up when you make a decision.

Opportunity cost is faced by everyone:

- **consumers** (people who buy and use goods): buy a phone, and you give up the holiday that money could have paid for.
- **producers** and **firms** (the businesses that make goods): use a factory to make cars, and you give up the trucks it could have made.
- **governments** : spend tax money on hospitals, and you give up the schools that money could have built.

### Thinking like an economist

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#### ■ Economics as a social science

Economics is a **social science** . It studies how people behave when they make choices. Like other sciences, it builds **models** (simple pictures of the real world) and tests them with data.

The real world is complex, so economists change one thing at a time and keep every-

thing else fixed. This is the idea of **ceteris paribus** – a Latin phrase meaning “all other things stay the same”. For example: “if the price of coffee rises, people buy less coffee, *ceteris paribus*”.

## ■ Positive and normative statements

- a **positive statement** is about fact. It can be tested as true or false.  
Example: “a higher price of petrol reduces the amount people buy.”
- a **normative statement** is about opinion. It says what *should* happen, and it cannot be tested as true or false. Example: “the government should make petrol cheaper.”

Normative statements rest on a **value judgement** – a personal view about what is good or fair. Two people can agree on the facts and still disagree about what *should* be done.

| positive - a statement of fact                           | normative - an opinion                                    |
|----------------------------------------------------------|-----------------------------------------------------------|
| “a higher price of petrol reduces the amount people buy” | “the government <i>should</i> make petrol cheaper”        |
| can be <b>tested</b> :<br>true or false?                 | cannot be tested -<br>a <b>value judgement</b> (“should”) |

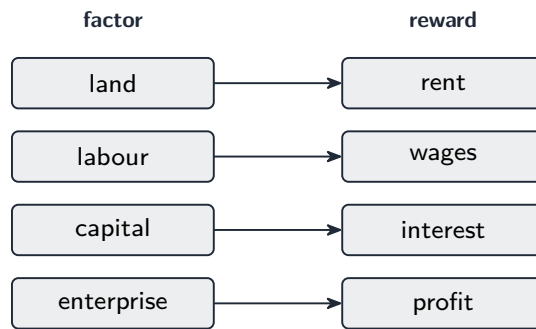
*A positive statement can be tested; a normative statement is a value judgement*

## ■ Microeconomics and macroeconomics

- **microeconomics** studies single parts of the economy: one market, one firm, one consumer.
- **macroeconomics** studies the whole economy together: total **output**, jobs, and rising prices.

## Factors of production

The **factors of production** are the four kinds of resource used to make goods and services. Each one earns a **reward**.



*The four factors of production and the reward each earns*

| Factor     | What it is                                                          | Its reward      |
|------------|---------------------------------------------------------------------|-----------------|
| land       | natural resources (fields, water, oil, minerals)                    | <b>rent</b>     |
| labour     | human work, both physical and mental                                | <b>wages</b>    |
| capital    | man-made things used to produce, like machines, tools and factories | <b>interest</b> |
| enterprise | the skill of bringing the other three together and taking the risk  | <b>profit</b>   |

Land includes some **non-renewable resources** (like oil and coal) that can run out. Enterprise is supplied by the **entrepreneur**, the person who has the business idea and risks their own money.



*An open-pit copper mine: land includes the natural resources (minerals, oil, water) that firms extract.*

## ■ Specialisation and division of labour

**specialisation** is when a worker, firm or country makes only the things it is best at, then trades for the rest.

Inside a workplace, specialisation leads to the **division of labour** : a big job is split into small tasks, and each **worker** does one task again and again.

| Advantages                                | Disadvantages                                    |
|-------------------------------------------|--------------------------------------------------|
| workers get faster and better at one task | doing one task is boring, so workers may quit    |
| less time wasted moving between jobs      | if one worker is absent, the whole line can stop |
| output per worker rises, so costs fall    | workers learn only one narrow skill              |



*A car assembly line: capital (machines and robots) plus the division of labour, each worker repeating one task.*

## ■ Mobility of factors

**mobility** means how easily a factor can move to a new use.

- **occupational mobility** – how easily a factor moves from one *job or use* to another. A teacher who retrain as a nurse is occupationally mobile.
- **geographical mobility** – how easily a factor moves from one *place* to another. Land cannot move at all, so it has no geographical mobility.

Labour is often not very mobile. Family ties, the cost of housing, and missing skills all make it hard for workers to move.

## Economic systems

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An economic system is the way a country decides how to **allocate** (share out) its scarce resources. There are three types.

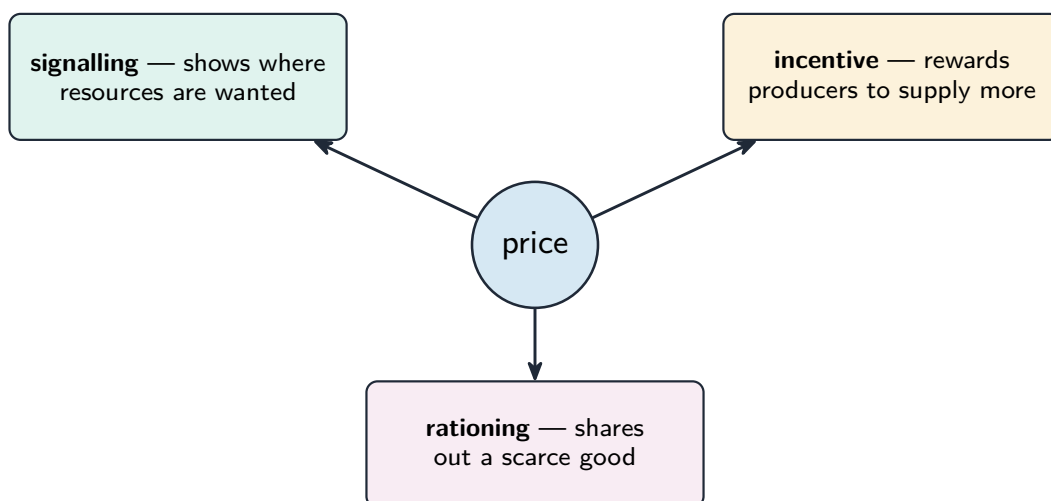
- a **market economy** : decentralised buyers and sellers influence production and allocation through prices and purchasing decisions.
- a **planned economy** (also called a **command economy**): central decisions determine resource allocation and production, often using quantities and eligibility rules.
- a **mixed economy** – a blend of the two. The **private sector** (firms and households) and the **public sector** (the government) both make decisions. Almost every real country is mixed.

**Worked allocation comparison.** Three illustrative clinic arrangements provide the same kind of service. Private clinics responding to paying patients illustrate market allocation: prices, demand and expected costs influence what and how much to supply, and ability to pay affects access. A central authority specifying quantities, staffing and eligibility illustrates planning. Public tax-funded appointments alongside privately sold appointments illustrate a mixed arrangement. Public provision of one service does not make the whole economy planned. Planning and tax funding do not remove scarce staff time or the need to choose who receives appointments. Ownership alone does not prove efficiency or fairness.

### ■ The price mechanism

In a market economy, resources are guided by the **price mechanism**. Prices do three jobs:

- **signalling** – a price tells buyers and sellers where resources are wanted. A rising price says “this is wanted – make more”.
- **incentive** – a higher price rewards producers, so they want to supply more of that good.
- **rationing** – when a good is scarce, a higher price shares it out to those who are willing and able to pay.



*In a market the price does three jobs at once – it signals, it gives an incentive, and it rations the scarce good*

## ■ Comparing the systems

| System  | Strengths                                                     | Weaknesses                                               |
|---------|---------------------------------------------------------------|----------------------------------------------------------|
| market  | choice, low prices, strong incentive to work and invent       | large gap between rich and poor; some goods not supplied |
| planned | smaller gap between rich and poor; key goods provided for all | weak incentive; shortages and surpluses; slow to change  |
| mixed   | tries to keep the good points of both                         | the right balance is hard to find                        |

In practice no country sits at a pure extreme. China's economy, for instance, is officially a *socialist market economy*, where markets set most prices while the government guides key sectors and owns major enterprises. Every real system mixes the two and sits somewhere on the spectrum below.



Exam: real economies are mixed — the question is how far market vs government decides

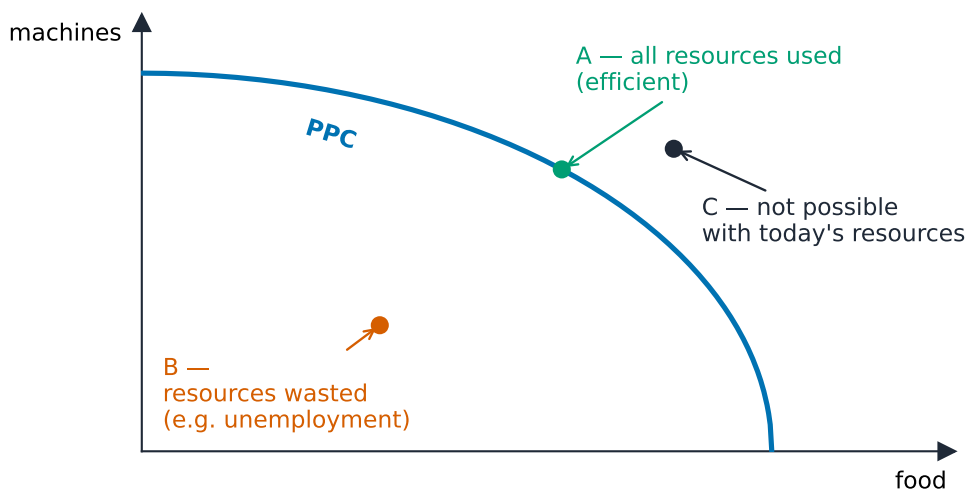
*Economic systems form a spectrum: a pure market at one end, full government planning at the other, mixed economies in between.*

## Production possibility curves

A **production possibility curve** (PPC) is a line showing the largest combinations of two goods an economy can make when all its resources are fully and well used.

Imagine an economy that makes only food and machines. The PPC is drawn with food on one axis and machines on the other.

- a point **on** the curve: production is **efficient** for the given resources and technology. This alone does not establish the mix society prefers.
- a point **inside** the curve: resources are wasted (for example, **unemployment** of workers). The economy could do better.
- a point **outside** the curve: impossible today, because there are not enough resources. This shows scarcity.



on = efficient · inside = inefficient · outside = unattainable

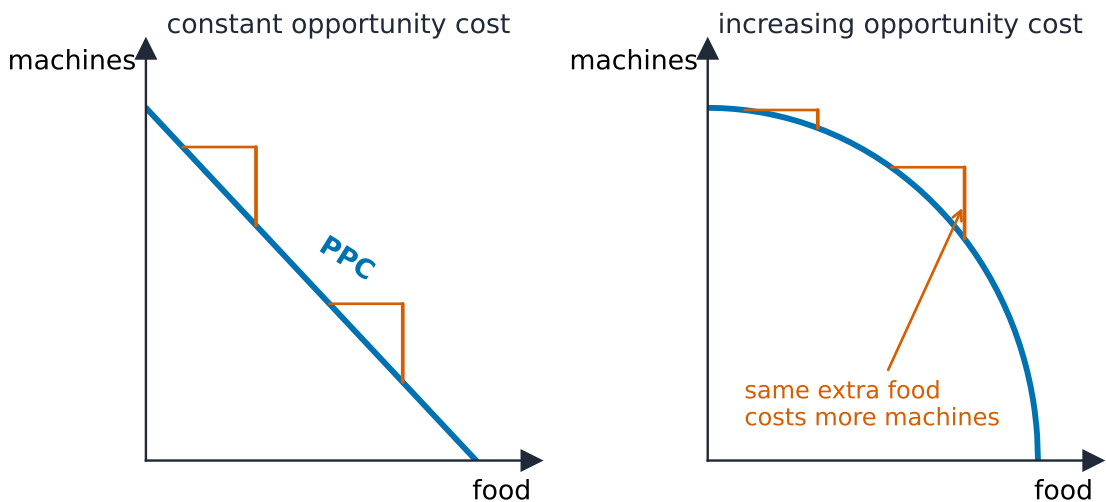
*A point on the curve uses all resources (efficient); inside the curve means waste, e.g. unemployment; outside is not possible yet.*

**Worked frontier classification.** An illustrative frontier joins food/machine combinations  $A=(20,0)$ ,  $B=(16,4)$ ,  $C=(10,8)$ ,  $D=(0,12)$ , with food in tonnes/day and machines in units/day.  $E=(8,4)$  is inside: B permits more food at the same machine output.  $F=(15,8)$  is outside: at eight machines the maximum food is ten tonnes. C is efficient in production, but the frontier alone cannot show whether society prefers C to B. Moving from B to C gives up six tonnes/day for four extra machines/day, an interval average of 1.5 tonnes per machine. Unused capacity can permit more output without sacrificing the other plotted good; it does not make every use of scarce time, money or staff costless. Opportunity cost is not confined to points on a PPC.

Moving along the curve shows opportunity cost: to make more food, you must move resources away from machines, so you make fewer machines. This is the **trade-off** between the two goods.

The *shape* of the curve shows how opportunity cost behaves:

- a straight-line PPC means **constant** opportunity cost – each extra unit of food costs the same number of machines.
- a curve that bows outwards means **increasing** opportunity cost – each extra unit of food costs more and more machines, because resources are not equally good at making both goods.

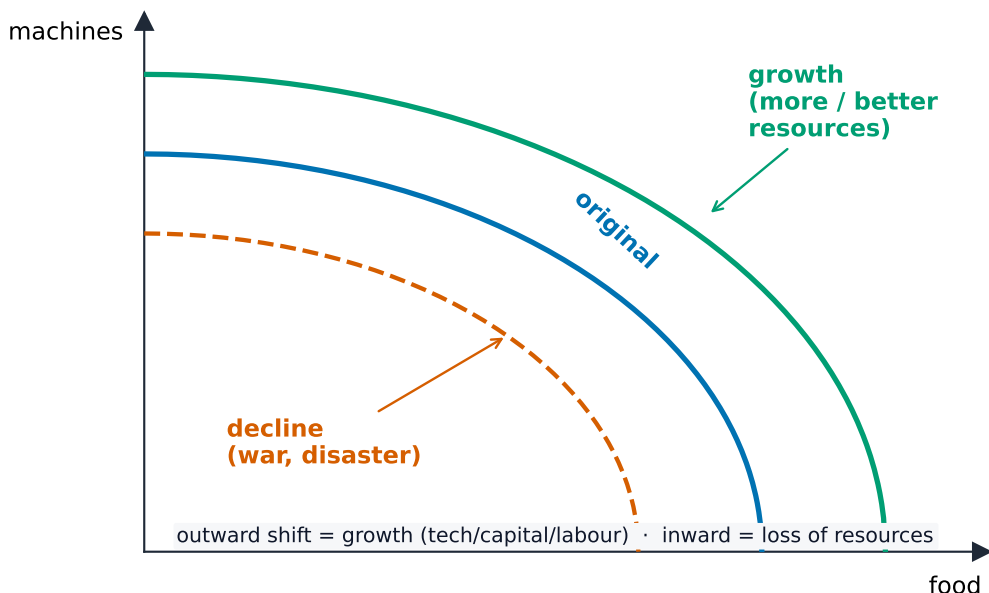


opportunity cost = goods forgone · bowed-out PPC  $\Rightarrow$  increasing opportunity cost

*A straight PPC means each extra unit of food costs the same; a bowed PPC means each extra unit costs more and more machines.*

## ■ Shifts and growth

When the PPC moves outward, productive capacity increases: this is potential **economic growth**. Actual output need not immediately rise to the new frontier. A sector-specific improvement can rotate one part of the frontier rather than shifting both intercepts. It happens when there are more resources, or better ones (new **technology**, a bigger or more skilled workforce). War or disaster can move the PPC inward – this is **economic decline**.

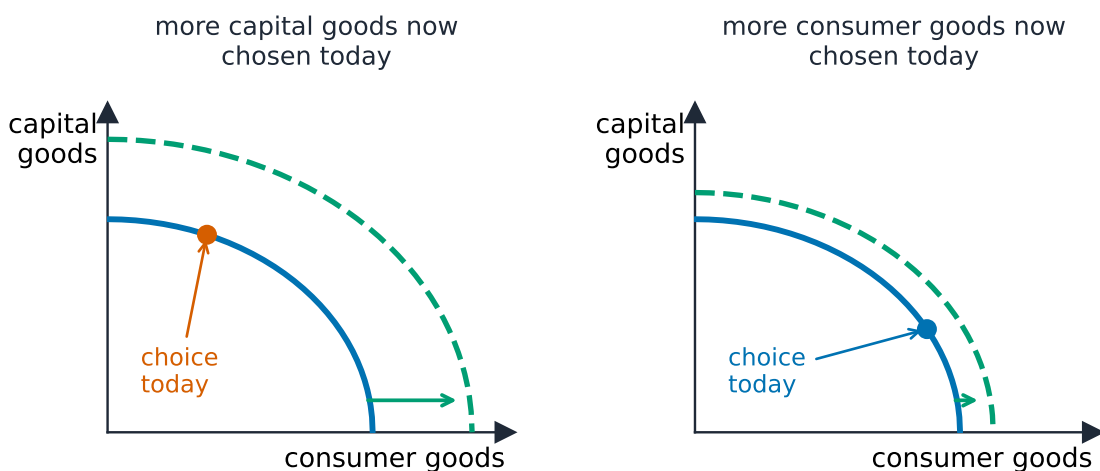


*More or better resources shift the whole PPC outward (growth); war or disaster shifts it inward (decline).*

A country must also choose between two kinds of good now:

- **capital goods** – goods used to make other goods (machines, factories).
- **consumer goods** – goods people use directly (food, clothes).

Making more capital goods today means fewer consumer goods today. Productive investment can increase future capacity, provided it adds effective resources after wear and replacement. More capital spending does not guarantee a larger shift: quality, use, skills and other constraints matter.



*Blue is the current PPC; dashed green is an illustrative future PPC. The larger future shift assumes the extra investment adds productive capacity.*

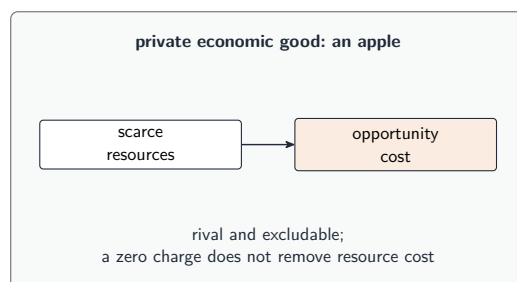
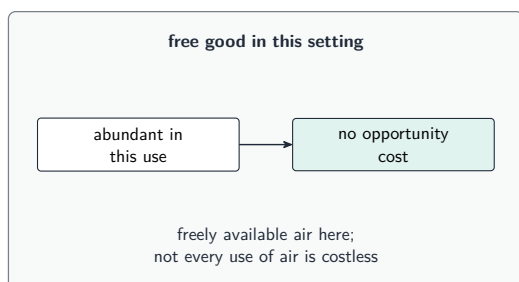
**Worked example.** Why is a production possibility curve usually drawn **concave** (bowed outwards) rather than as a straight line? A straight line would mean the opportunity cost of each extra unit stays **constant**. The curve bows out because factors of production are **not perfectly substitutable** - they are specialised. Starting from all-food production, the first factors moved into making cars are the ones **least suited** to farming, so very little food is given up for a lot of cars. Keep going and you must move factors that are **increasingly good at farming and increasingly bad at making cars**, so each extra car costs **more and more** food. That rising cost is **increasing opportunity cost**, and the bowed shape is simply its picture. A straight-line PPC is not wrong - it just assumes factors are perfectly substitutable, and naming that assumption is what earns the mark.

## Types of goods and services

### ■ Free goods and economic goods

- a **free good** has no opportunity cost in the relevant use: available supply is sufficient without sacrificing another valued use. Freely available air may qualify in one setting; supplying clean air or oxygen in a hospital can require scarce resources. A zero charge alone does not prove a good is free in this economic sense.
- an **economic good** uses scarce resources and has opportunity cost. A **private good** has rivalry and excludability. An apple is an example; economic resources can also be used to provide public services. A good can have opportunity cost even if its user is not directly charged.

A private good has two features. It has **rivalry** (if I eat the apple, you cannot) and **excludability** (the seller can stop you using it unless you pay).



*Opportunity cost depends on scarcity in the relevant use. A private economic good also has rivalry and excludability; a zero charge does not establish zero opportunity cost.*

## ■ Public goods

A **public good** is the opposite of a private good. It has two features:

- **non-rivalry** – one person using it does not reduce the amount left for others.
- **non-excludability** – you cannot stop people who do not pay from using it.

Because of non-excludability, public goods suffer from the **free-rider problem**

: people enjoy the good without paying for it. This can cause private under-provision because voluntary payments may not cover cost. It does not prove nobody contributes: donations, sponsorship or other funding can support some provision. Government financing is one response; the financing body and the actual provider need not be the same. Street lighting and **national defence** are standard examples under the non-rival, non-excludable assumptions.

|           | Excludable                            | Non-excludable                              |
|-----------|---------------------------------------|---------------------------------------------|
| Rival     | <b>Private good</b><br>food, clothes  | <b>Common resource</b><br>ocean fish, air   |
| Non-rival | <b>Club good</b><br>cinema, toll road | <b>Public good</b><br>street light, defence |

Exam: classify by rivalry × excludability — free-rider problem only for non-excludable goods

*Rivalry and excludability give four types of good: private, club, common resource, and public.*

**Worked classification.** An uncrowded local street light benefits nearby users and cannot readily exclude non-payers, fitting the public-good conditions in that setting. A publicly funded hospital appointment uses a scarce doctor's time even when the patient pays nothing. It can be reserved for a patient and cannot simultaneously serve everyone, so public ownership does not make it a public good. A paid lesson can be private and merit at once if the learner underestimates its benefit; the information test differs from rivalry and exclusion.

## ■ Merit and demerit goods

- a **merit good** is better for you (and for society) than you realise, so people buy too little of it. Examples: education and health care.
- a **demerit good** is worse for you than you realise, so people buy too much of it. Examples: cigarettes and alcohol.



*Education is a classic merit good. Its full value – better jobs, and a more skilled society – is easy to underestimate, so left to themselves people buy less of it than is good for them or the country. That is why governments provide and subsidise it*

People misjudge these goods because of **information failure** – they do not have, or do not use, the full facts about the benefit or harm.

Deciding what counts as a merit or demerit good is partly a value judgement, so people may disagree about which goods belong on each list.

## Exam tips

- Frame answers around **scarcity and choice**: every choice has an **opportunity cost** – the next best alternative given up.
- Read a **PPC**: a point inside means unused resources, on the curve is efficient, outside is unattainable; the slope shows opportunity cost.
- Distinguish **positive** (a testable fact) from **normative** (“should”, a value judgement) statements.
- Classify goods: free versus economic, and **public / merit / demerit** goods (non-excludable, non-rival, and so on).

Vocabulary card meanings

goods: Physical items that people can buy and sell. alternative: Any other option a person could have chosen. social science: A field that studies how people behave

in groups and markets. *ceteris paribus*: Holding every other factor unchanged while one factor is studied. positive statement: A claim that can be checked against facts. normative statement: A claim about what ought to happen, resting on a value judgement. microeconomics: The study of single markets, firms, and households. reward: The payment a factor of production receives for its use. rent: The payment made for the use of land. non-renewable resources: Inputs that nature does not restore within a human lifetime after they are used. division of labour: Splitting production so that each person does one task. worker: A person who supplies labour. mobility: How easily a factor can move to another job or place. geographical mobility: How easily a person can move to work in another place. planned economy: An economy in which the state decides what is produced. command economy: An economy run by government orders rather than by prices. economic decline: A fall in production and incomes across the whole economy. national defence: Protection of a country by its armed forces.