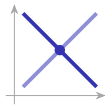


The Allocation of Resources

IGCSE Economics ■ Topic 2

IGCSE Economics



The Allocation of Resources

What we will cover

- 1 The price mechanism
- 2 Demand & supply
- 3 Equilibrium
- 4 Price elasticity
- 5 Price controls
- 6 Market failure

1 The market

The Allocation of Resources

└ The market

The price mechanism

In a free **market** 市场, the **price mechanism** 价格机制 **allocates** 配置 resources – deciding what is made, how, & for whom.

- **signalling** – tells what to make
- **incentive** – a reason to supply
- **rationing** – shares out scarce goods



Prices guide who buys and what is made

The Allocation of Resources

└ The market

Micro and macro, and what a market is

microeconomics 微观经济学 single parts of the economy – one industry, one product, one household

macroeconomics 宏观经济学 the economy as a whole – growth, inflation, unemployment, trade

a market 市场 any place or system where buyers and sellers meet to trade

no building needed it can be online, or over the phone – what makes it a market is the trading, not the location

ceteris paribus 其他条件不变 "other things equal" – change one thing at a time and hold the rest fixed

Every demand or supply diagram carries *ceteris paribus* silently. It is the reason a curve can shift at all.

The Allocation of Resources

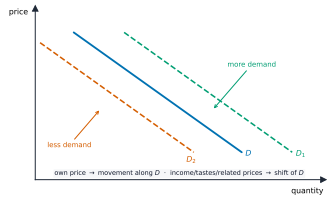
└ The market

Demand

Demand 需求 slopes **down**: a higher price, less bought (**law of demand** 需求定律).

Own price → a **movement along**; income, tastes & related prices **shift** the curve.

Demand, in detail



The demand curve slopes down. A change in income, tastes, population or related prices shifts the whole curve; a change in the good's own price is a movement along it.

Movements along, and shifts of, the curve

Two different ideas, and the exam separates them:

- **quantity demanded** 需求量 – the amount bought at one price;
- **demand** – the whole pattern of buying at every price.

- A change in the good's **own price** ⇒ a **movement along** the curve. You slide to a new point on the same line.
- A change in **anything else** ⇒ a **shift** 移动 of the whole curve. Rightward: more at every price.

Own price moves you **along**; every-thing else **shifts** the line.

Movement or shift, and which way

Direct relationship A direct relationship 正向关系: both move the same way – price and quantity supplied.

Inverse relationship An inverse relationship 反向关系: they move oppositely – price and quantity demanded, which is why the demand curve slopes down.

A movement A change in the good's **own price** moves you along the curve. Nothing shifts.

A shift Any other **determinants** 决定因素 – income, tastes, the price of a substitute, costs – shifts the whole curve.

In a **planned economy** 计划经济 the state sets the price instead, so neither curve does the work. That contrast is worth one sentence in an evaluation.

Movement along, or shift of, the curve

the law of demand 需求定律 price rises, quantity demanded falls; price falls, quantity demanded rises

a movement along caused by a change in the good's **own price** only

a shift of the curve caused by anything else – a **determinant** 决定因素 changing

demand shifters income, tastes, **advertising** 广告, population, and the price of substitutes and **complements** 互补品

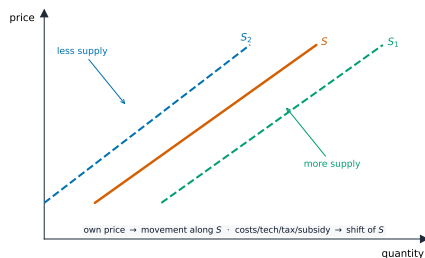
complements 互补品 goods used **together** – cars and fuel. If cars get dearer, demand for fuel falls

supply shifters **costs of production** 生产成本, technology, taxes and subsidies, number of firms, and **weather** for farm goods

Ask one question: **did the good's own price change?** If yes, move along the curve. If no, shift it.

Supply

Supply 供给 slopes **up**: a higher price, more supplied (**law of supply** 供给定律). Costs, technology & taxes **shift** the supply curve.



Price elasticity of supply

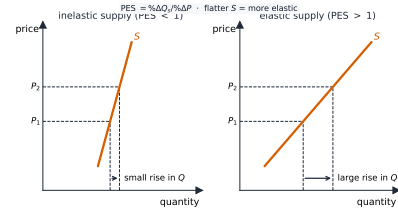
PES 供给价格弹性 measures how much quantity supplied responds to a price change. Supply is more elastic when firms have **spare capacity**, can **store** the good, and have **time** to react – so supply is nearly always more elastic in the long run.

What makes supply elastic

stocks 库存	goods kept in store can be sold quickly, which makes supply elastic
spare capacity	unused machines and workers, so output can rise fast
time	the longer the period, the more elastic supply becomes
farm goods	often inelastic in the short run, because crops take a season to grow
factor mobility	how easily resources can be moved into the industry

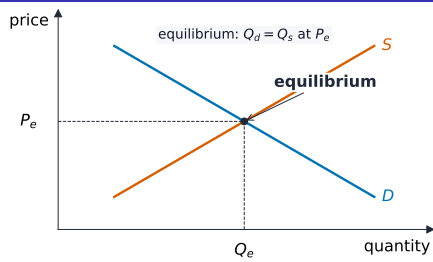
Time is the master factor: given long enough, almost any supply becomes elastic. That is why the exam always names the period.

Price elasticity of supply, in detail



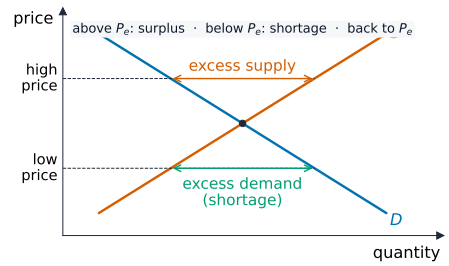
The same price rise: a small quantity response when supply is inelastic, a large one when it is elastic

Equilibrium – one



Equilibrium

Equilibrium – two



Equilibrium

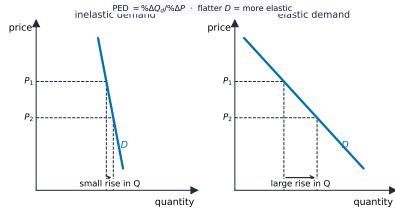
2 Elasticity and failure

Price elasticity of demand

Price elasticity of demand 需求价格弹性 measures how much quantity responds to price.

- inelastic 缺乏弹性 – little response
- elastic 富有弹性 – big response

Price elasticity of demand, in detail

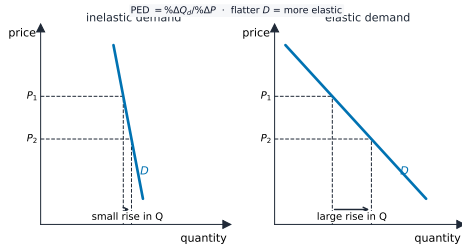


When demand is inelastic (steep) a price change barely changes quantity; when it is elastic (shallow) the same change moves quantity a lot.

Reading the elasticity value

- $PED > 1$: **elastic** 富有弹性 – quantity changes by a large %. Many substitutes, like one brand of crisps.
- $PED < 1$: **inelastic** 缺乏弹性 – quantity barely moves. Needs with few substitutes: petrol, salt.
- $PED = 1$: **unit elastic** 单位弹性.

Reading the elasticity value, in detail

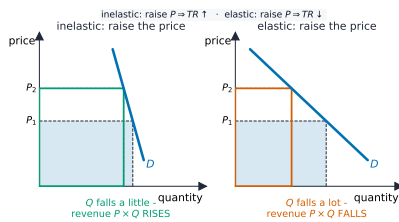


Steep is inelastic; shallow is elastic

Elasticity decides what a price rise does to revenue

If demand is **inelastic**, raising the price raises revenue – customers stay. If it is **elastic**, raising the price **lowers** revenue, because enough customers leave to outweigh the higher price.

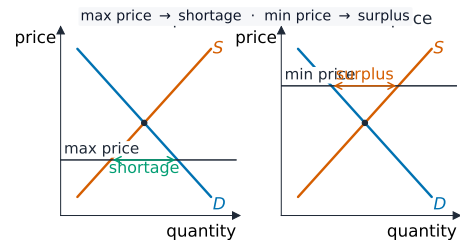
Elasticity decides what a price rise does to revenue



If demand is **elastic**, raising the price **lowers** revenue – enough customers leave to outweigh the higher price they pay.

Price controls

- a **maximum price** 最高限价 (below equilibrium) causes a **shortage**
- a **minimum price** 最低限价 (above) causes a **surplus**



Externalities

An **externality** 外部性 falls on third parties.

An **external cost** 外部成本 (pollution) is over-produced by the market – a **market failure** 市场失灵.



External costs spill onto third parties

Private, external and social



A power station's plume falls on third parties, not the producer

- **private cost** 私人成本 – to the person doing it.
- **external cost** 外部成本 – paid by other people: factory smoke harming nearby families.
- **social cost** 社会成本 = private + external.

Benefits work the same way. Markets fail because firms and consumers weigh only the **private** side.

External costs and external benefits

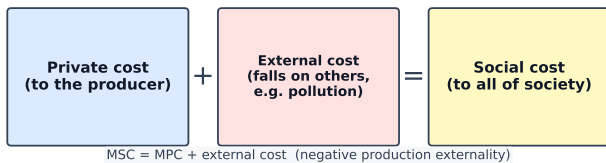
the idea	when you produce or consume something, the cost or benefit to you is not always the cost or benefit to everyone
a private cost 私人成本	what the buyer or seller pays
an external cost 外部成本	what falls on other people – pollution, noise, congestion
an external benefit 外部效益	a benefit others get for free – your neighbour's tidy garden is nice for you too
the social cost 社会成本	private cost plus external cost – what it really costs society

The market prices only the private column. Every case for taxing, subsidising or regulating starts by naming what is in the external one.

Externalities – diagram

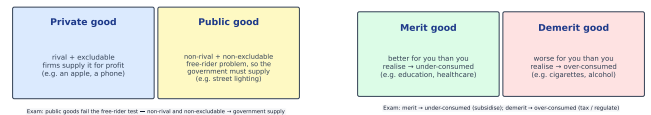
- **merit goods** 有益物品 are better for you than you realise, so the market makes too few (education, healthcare).
- **demerit goods** 有害物品 are worse for you than you realise, so the market makes too many (cigarettes, alcohol).
- **public goods** 公共物品 are things everyone can use and no one can be stopped from using, like street lights or national defence.

Externalities – diagram, in detail



An external cost (e.g. pollution) falls on third parties, so the social cost is greater than the producer's private cost

Public, merit and demerit goods



A **public good** 公共物品 (street lights) is not provided by the market. **Merit goods** 有益品 are under-consumed; **demerit goods** 有害品 over-consumed.

Monopoly power

A **monopoly** 垄断 is a single firm that controls a market. With no competition it can charge **high prices** and let **quality** fall – and the consumer has nowhere else to go.

This is another **market failure**: resources are used badly even though every party is acting in its own interest.

The mixed economy, and how governments intervene

A **mixed economy** 混合经济 has a **private sector** 私营部门 guided by the price mechanism and a **public sector** 公共部门 run by the government. Most real economies are mixed; China's is a socialist market economy.

Method	What it does
maximum price 最高价格	a ceiling – causes a shortage
minimum price 最低价格	a floor – causes a surplus
indirect tax 间接税	raises price, cuts demerit demand
subsidy	cuts price, raises output of merit goods
regulation 监管	rules and laws, like a smoking ban
direct provision 直接提供	the state supplies it, like schools

The market system, weighed both ways

advantage	prices guide resources to where they are wanted, without anyone planning
advantage	consumers have wide choice, and firms compete to win them
advantage	a strong incentive to work, invest and invent
drawback	the strong – rich firms and people – do well; the weak may be left with nothing
drawback	some goods are not supplied at all, and pollution is not counted
inefficient outcomes 低效的	monopoly power, and missing information, both distort the price signal

The mixed economy exists because both columns are true. Every evaluation question wants at least one line from each.

Judging intervention

Intervention can fix market failure, but it has costs of its own. Taxes and rules cost money to collect and to check, and governments get things wrong too – **government failure**.

So an evaluation answer never stops at "the government should intervene". Weigh the good effects **against** the bad ones, then decide.

Markets and the price mechanism



A stock exchange is a market: as buyers and sellers trade, their offers set the price of each share

Exam tips

- A change in a good's **own price** is a *movement along* the curve; a change in anything else (income, tastes, related prices) *shifts* the whole curve.
- **Equilibrium** is where demand meets supply. Below it there is excess demand (a shortage, so price rises); above it there is excess supply (a surplus, so price falls).
- $PED = \% \Delta Q \div \% \Delta P$. Demand is **inelastic** if $PED < 1$ (raising price raises revenue) and **elastic** if $PED > 1$ (raising price lowers revenue).
- **Market failure** (external costs, merit/demerit/public goods, monopoly) means resources are used badly; the government corrects it with taxes, subsidies, rules and direct provision.

3 Recap

Worked example – price elasticity of demand

Price rises 20% and quantity demanded falls 10%. Find the PED and say what it means.

- $PED = \frac{\% \Delta Q_d}{\% \Delta P} = \frac{-10}{20} = -0.5$
- Ignoring the sign, $0.5 < 1 \Rightarrow$ demand is price inelastic.
- Quantity changed **proportionally less** than price.
- So raising the price **raises total revenue** – which is why petrol is taxed so heavily.

PED is normally **negative** (price up, demand down) – compare its **size** with 1. Inelastic $\Rightarrow$ raise price for more revenue; elastic $\Rightarrow$ cut it.

Topic 2 – key takeaways

1 Demand & supply

demand down, supply up

2 Equilibrium

where demand meets supply

3 Elasticity

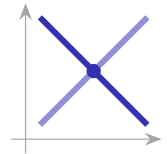
how quantity responds to price

4 Market failure

externalities, public & merit goods

Check yourself

- 1 Which way does a demand curve slope?
- 2 What is the equilibrium price?
- 3 What does a maximum price cause?
- 4 Give one example of an external cost.



Answers 1. downwards 2. where demand = supply 3. a shortage 4. e.g. pollution