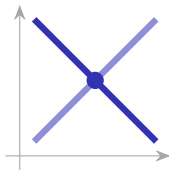


The Allocation of Resources

IGCSE Economics ■ Topic 2

IGCSE Economics



What we will cover

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



The price mechanism

In a free **market** , the **price mechanism allocates** 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

Micro and macro, and what a market is

microeconomics

single parts of the economy – one industry, one product, one household

macroeconomics

the economy as a whole – growth, inflation, unemployment, trade

a market

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

“other things equal” – change one thing at a time and hold the rest fixed

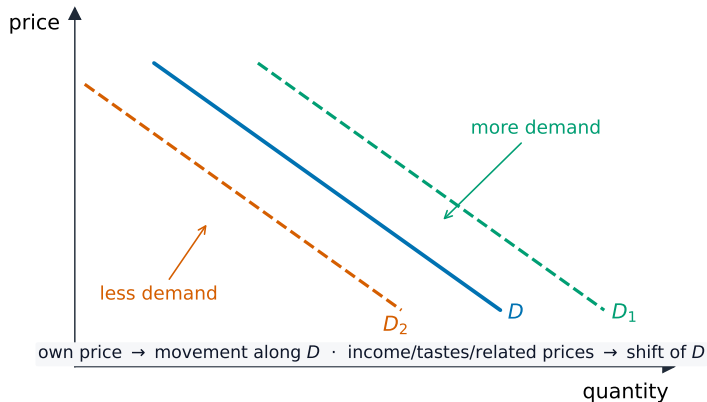
Every demand or supply diagram carries *ceteris paribus* silently. It is the reason a curve can shift at all.

Demand

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

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

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

Own price moves you **along**; everything else **shifts** the line.

Movement or shift, and which way

Direct relationship

A **direct relationship** : both move the same way – price and quantity supplied.

Inverse relationship

An **inverse relationship** : 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** – income, tastes, the price of a substitute, costs – shifts the whole curve.

In a **planned economy** 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

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** changing

demand shifters

income, tastes, **advertising**, population, and the price of substitutes and **complements**

complements

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

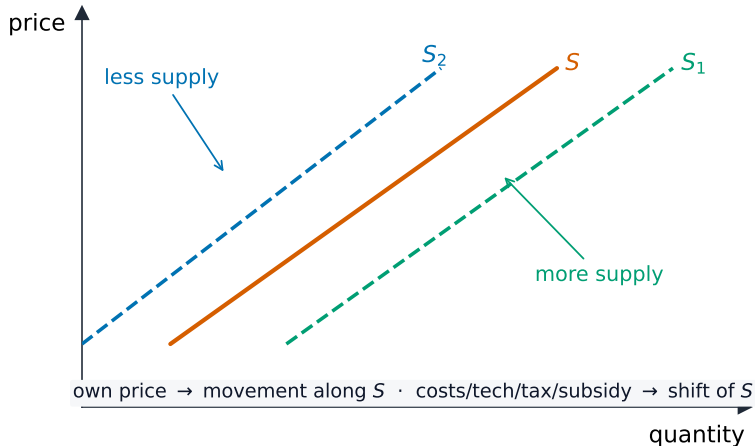
supply shifters

costs of production, 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 slopes **up**: a higher price, more supplied (**law of supply**). Costs, technology & taxes **shift** the supply curve.



Price elasticity of supply

PES 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 goods kept in store can be sold quickly, which makes supply **elastic**

spare capacity unused machines and workers, so output can rise fast

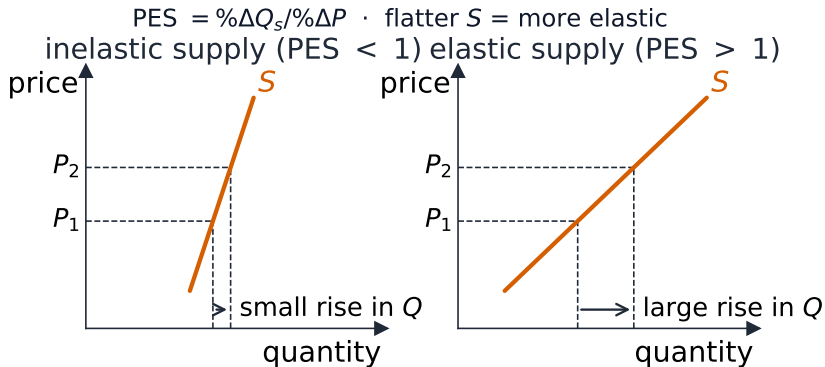
time the longer the period, the more elastic supply becomes

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

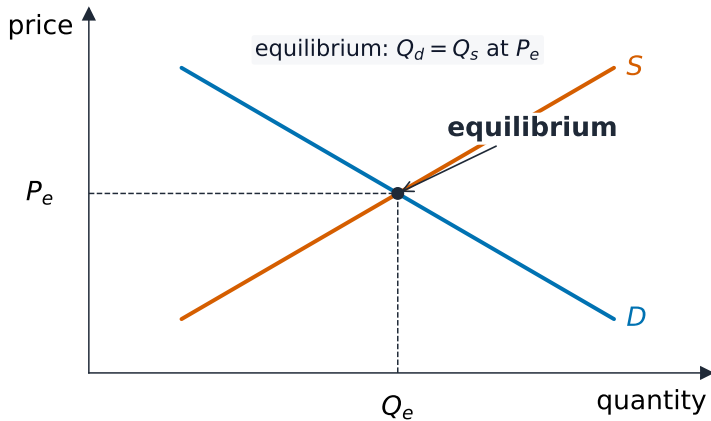
Time is the master factor: given long enough, almost any supply becomes elastic. That is why the exam always names the period.

Price elasticity of supply, in detail

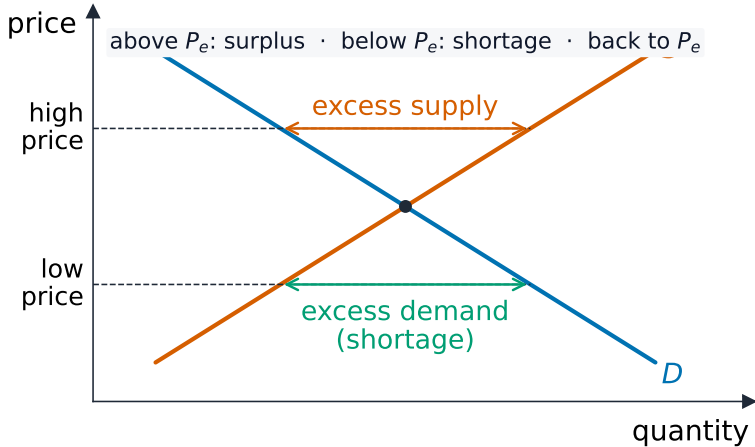


The same price rise: a small quantity response when supply is inelastic, a large one when it is elastic

Equilibrium – one



Equilibrium – two



Equilibrium

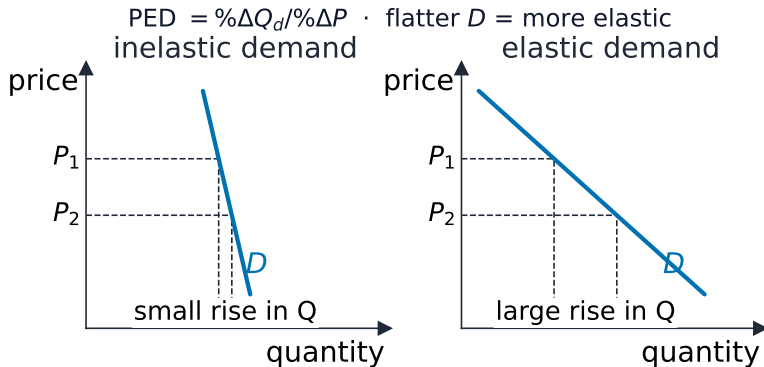


Price elasticity of demand

Price elasticity of demand measures how much quantity responds to price.

- **inelastic** – little response
- **elastic** – big response

Price elasticity of demand, in detail



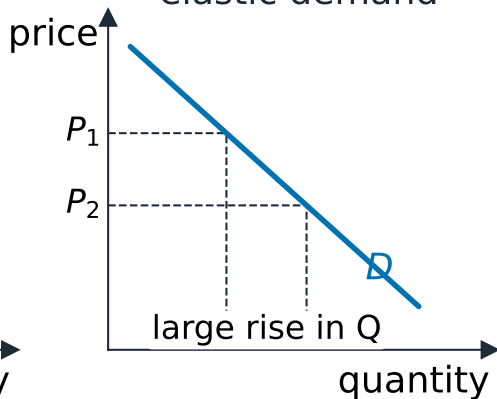
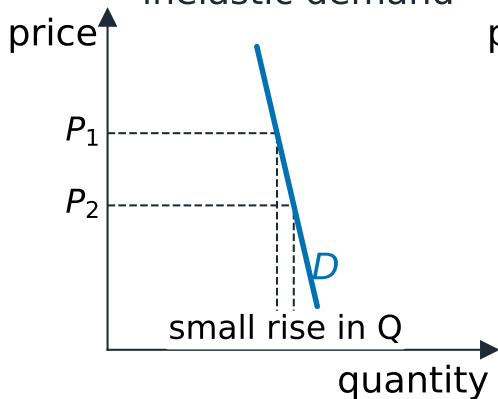
When demand is inelastic (steep) a price change barely changes quantity; when it is elastic (shallow) the same change moves quantity a lot.

Reading the elasticity value

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

Reading the elasticity value, in detail

$PED = \frac{\% \Delta Q_d}{\% \Delta P}$ · flatter D = more elastic
inelastic demand

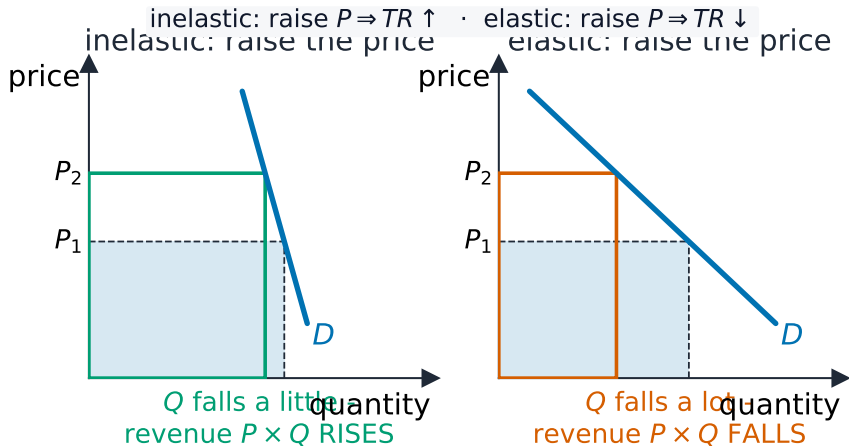


Steep is inelastic; shallow is elastic

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.

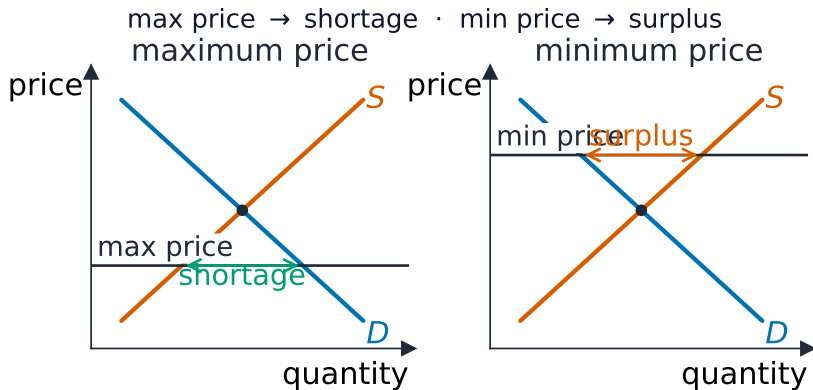
Elasticity and revenue, in detail



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

Price controls

- a **maximum price** (below equilibrium) causes a **shortage**
- a **minimum price** (above) causes a **surplus**



Externalities

An **externality** falls on third parties.

An **external cost** (pollution) is over-produced by the market – a **market failure** .



External costs spill onto third parties

Private, external and social



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

- **private cost** – to the person doing it.
- **external cost** – paid by other people: factory smoke harming nearby families.
- **social cost** = 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

what the buyer or seller pays

an external cost

what falls on **other people** – pollution, noise, congestion

an external benefit

a benefit others get **for free** – your neighbour's tidy garden is nice for you too

the social cost

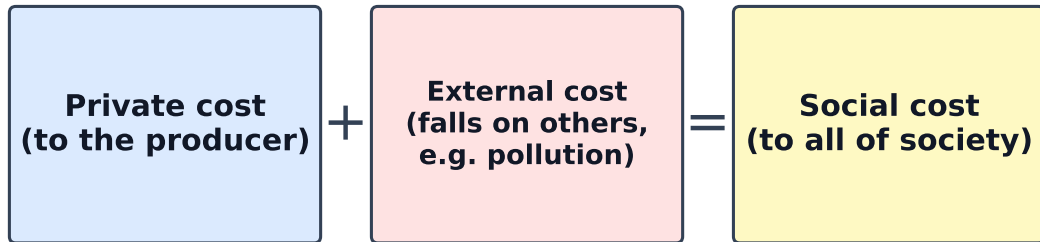
private cost **plus** external cost – what it really costs society

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

Externalities – diagram, in detail



$$MSC = MPC + \text{external cost (negative production externality)}$$

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

Public goods

Private good

rival + excludable
firms supply it for profit
(e.g. an apple, a phone)

Public good

non-rival + non-excludable
free-rider problem, so the
government must supply
(e.g. street lighting)

Exam: public goods fail the free-rider test — non-rival and non-excludable → government supply

A **public good** (street lights) is **non-rival** and **non-excludable**, so the market supplies none of it.

Merit and demerit goods

Merit good

better for you than you realise → under-consumed
(e.g. education, healthcare)

Demerit good

worse for you than you realise → over-consumed
(e.g. cigarettes, alcohol)

Exam: merit → under-consumed (subsidise); demerit → over-consumed (tax / regulate)

Merit goods are **under**-consumed and **demerit goods** **over**-consumed, because the private benefit is not the social one.

Monopoly power

A **monopoly** 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** has a **private sector** guided by the price mechanism and a **public sector** run by the government. Most real economies are mixed; China's is a socialist market economy.

Method	What it does
maximum price	a ceiling – causes a shortage
minimum price	a floor – causes a surplus
indirect tax	raises price, cuts demand
subsidy	cuts price, raises output of merit goods
regulation	rules and laws, like a smoking ban
direct provision	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 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.



Worked example – price elasticity of demand

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

- $\text{PED} = \frac{\% \Delta Q_d}{\% \Delta P} = \frac{-10}{20} = -0.5$
- 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

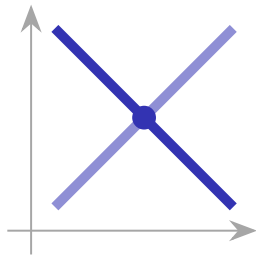
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Market failure

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