Government Microeconomic Intervention

A-Level Economics ▪ Topic 3

A-Level Economics

What we will cover

1 Why markets fail

2 Externalities

3 Taxes & subsidies

4 Price controls & buffer stocks

5 Regulation & government failure

6 Inequality

pollution spills onto others

1 Market failure

Why markets fail

Market failure 市场失灵 is when a free market does not **allocate** 配置 resources efficiently. A free market often gives a good result – but not always, and there are several reasons:

- **externalities** – costs/**benefits** 福利金 on others
- **public goods** – **free-rider problem** 搭便车问题
- **merit & demerit goods** – misjudged
- **monopoly power** – cuts **output** 产出, raises price
- **inequality** & **asymmetric information**

demerit goods are over-consumed

Public, merit and demerit goods

public good 公共物品	**non-rivalry** 非竞争性 and **non-excludability** 非排他性: non-payers cannot be shut out, so nobody pays and the free market supplies none of it – street lighting, defence
merit good 优值品	worth more than people realise, so it is under-consumed – education, vaccination
demerit good 劣值品	worse than people realise, so it is over-consumed – cigarettes, gambling

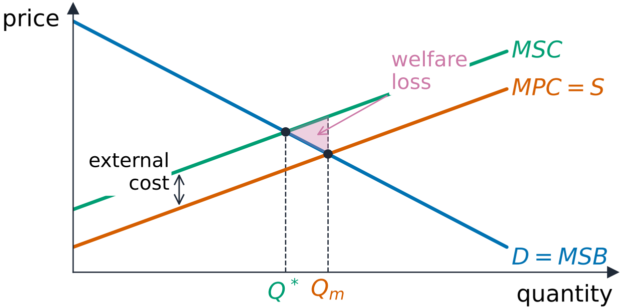
Merit and demerit goods are both **information failure** 信息失灵: people misjudge the benefit or the harm. The public good is different – there the problem is that *charging* is impossible.

Negative externality

A **negative externality** 负外部性: **social cost** 社会成本 (MSC) exceeds **private cost** 私人成本 (MPC).

> Ignoring the external cost, the market over-produces at Q_m; the triangle is the welfare loss.

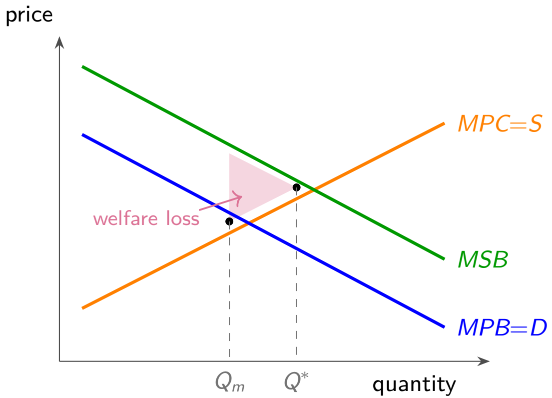
Negative externality, in detail



$MSC > MPC \Rightarrow Q_m > Q^*$ · DWL from over-production

A **negative externality** 负外部性: **social cost** 社会成本 (MSC) exceeds **private cost** 私人成本 (MPC), so the market over-produces.

Positive externality



A **positive externality** 正外部性: **social benefit** 社会收益 (MSB) exceeds private benefit (MPB).

> Buyers ignore the benefit to others, so the market under-produces at Q_m (e.g. vaccination).

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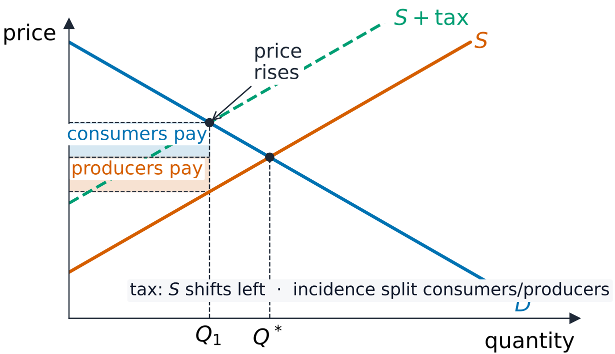
Intervention

Indirect taxes and incidence

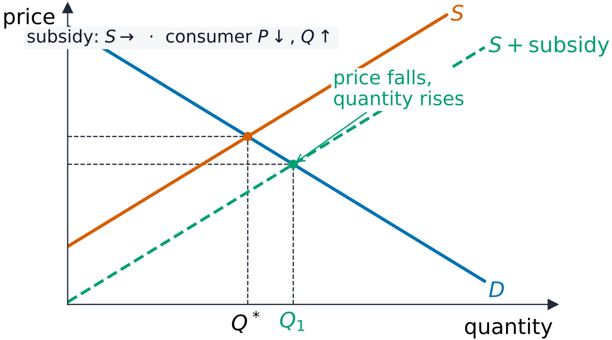


An **indirect tax** 间接税 shifts supply left, raising price, cutting quantity.

- demand **inelastic** 缺乏弹性 → consumer pays most
- demand **elastic** 富有弹性 → producer pays most

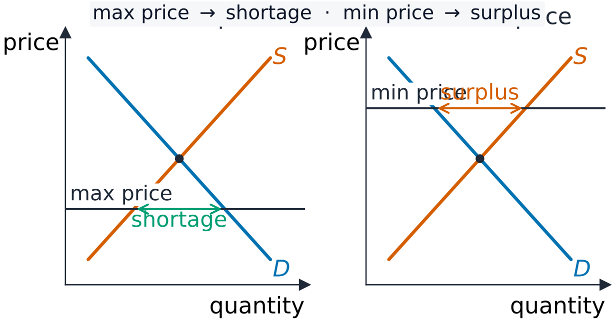
The **incidence** 税收归宿 is who really pays.

Subsidies



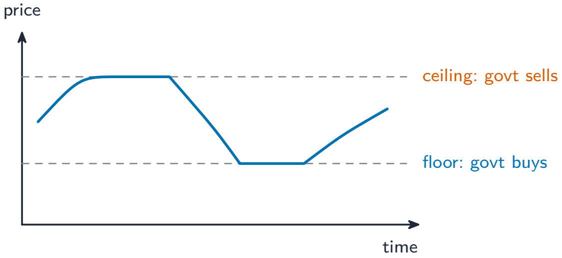
A **subsidy** 补贴 is a payment to producers – it lowers costs, shifts supply right, lowers the price and raises the quantity. Used for **merit goods** 优值品 and goods with positive externalities.

Maximum and minimum prices



- **maximum price** 最高限价 (below equilibrium) → **shortage** 短缺 (e.g. rent control)
- **minimum price** 最低限价 (above equilibrium) → **excess supply** 超额供给 (e.g. minimum wage)

Buffer stocks



A **buffer stock** 缓冲库存 steadies a farm price inside a band:

- price hits the **floor** → government buys & stores
- price hits the **ceiling** → government sells from store

Other tools and government failure

regulation
bans, limits, standards

state provision
free at point of use

permits 可交易许可证
cap pollution, trade

Government failure 政府失灵: intervention makes things worse – poor information, high cost, a **black market** 黑市, or political motives.

Permits, and why governments fail too

tradable permits 可交易许可证	set a total cap on pollution and issue permits; firms that pollute less can sell their spare permits
why it works	the cap fixes the quantity, and the market finds the cheapest places to cut
regulation	direct rules and standards – certain, but blunt and expensive to enforce
state provision	the government supplies the good itself – and must guess how much is wanted
government failure 政府失灵	intervention leaves society worse off – through poor information, unintended consequences, high administration costs, or decisions made for political rather than efficiency reasons

> Every intervention question wants the same two halves: how it corrects the failure, and how it might fail itself.

Income and wealth inequality

income 收入 – a flow

money over a period

wealth 财富 – a stock

assets owned at a point

Redistribution 再分配 via a **progressive tax** 累进税, **benefits** 福利金 & state provision – but a **trade-off** 取舍: too much may weaken the incentive to work.

Markets can leave income highly unequal

Inequality, and information the market cannot fix

inequality 不平等	the market rewards those who own resources, so it can leave some people with too little to live on
income against wealth	income is a flow per period; wealth is a stock of assets. Wealth is far more unequally held
asymmetric information 信息不对称	one side of a deal knows more – a used-car seller knows the faults, the buyer does not
adverse selection 逆向选择	the informed side self-selects, so only bad cars reach the market
moral hazard 道德风险	insurance changes behaviour, because the insured no longer bears the cost

Both are market failures, not market imperfections: the market clears, and the outcome is still inefficient.

Income and wealth, and the policies that move them

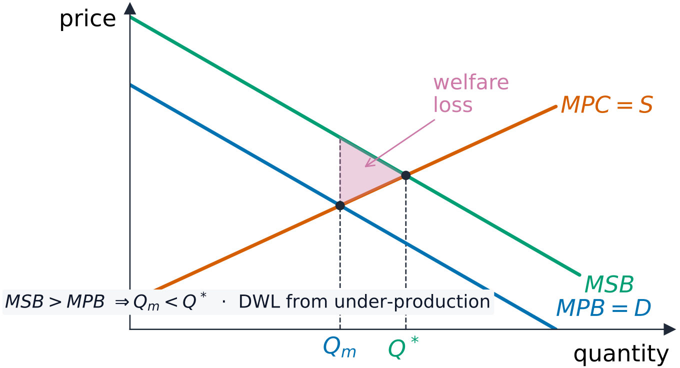
income	a flow – earned per period: wages, interest, profit, rent
wealth	a stock – assets owned at a point in time
the link	wealth produces income (savings earn interest), and income can be saved to build wealth – so the two are connected
a progressive tax 累进税	takes a larger **percentage** 百分比 from higher incomes than from lower
benefits 福利金	also called **transfer payments** 转移支付 – money paid by government to those on low incomes
the incidence of a tax 税负归宿	who really pays: with inelastic demand, most falls on the consumer

> Wealth is far more unequally held than income, and it is harder to tax because it can be moved or held in untaxed forms.

Exam tips

- Define **market failure** as a misallocation of resources, then name the type (externality, public good, information gap).
- On an **externality** diagram, mark the divergence of private and social cost/benefit and shade the welfare loss.
- Evaluate each intervention (tax, subsidy, regulation, tradable permits) with one advantage and one drawback.
- Show that **tax incidence** depends on elasticity – the more inelastic side bears more of the tax.

With a positive externality



> With a positive externality, social benefit (MSB) is above private benefit (MPB), so the market under-produces at Q_m instead of the social optimum \$Q^

3 Recap

Worked example – taxing an externality

A factory pollutes. Explain how an indirect tax can correct the market failure.

- Pollution is a **negative externality** 负外部性: MSC lies above MPC.
- The market sets MPC = MPB $\Rightarrow$ over-production above the social optimum.
- A tax equal to the external cost shifts supply left, raising private cost to the social cost.
- The firm now internalises the externality $\Rightarrow$ output falls to the social optimum.

Set the tax equal to the marginal external cost at the optimum, not at the free-market output. The problem is over-production; the fix is to make the polluter pay.

Topic 3 – key takeaways

1 Market failure

externalities, public/merit goods, monopoly

2 Externalities

negative over-produces; positive under-produces

3 Tools

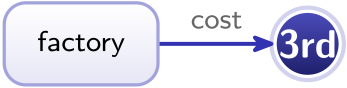
tax, subsidy, price controls, buffer stock

4 Government failure

intervention can make things worse

Check yourself

1. Does a negative externality over- or under-produce?
2. Who pays most of a tax if demand is inelastic?
3. A maximum price below equilibrium causes what?
4. Income is a flow – what is wealth?



Answers **1.** over-produces **2.** consumers **3.** a shortage **4.** a stock of assets owned