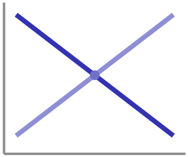
The Price System

A-Level Economics ▪ Topic 2

A-Level Economics

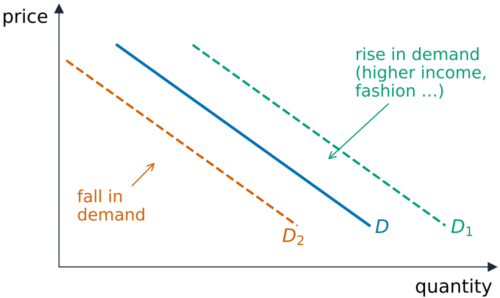


What we will cover

1. Demand & marginal utility
2. Supply
3. Price elasticity (PED)
4. YED, XED & PES
5. Market equilibrium
6. Consumer & producer surplus

buyers & sellers meet

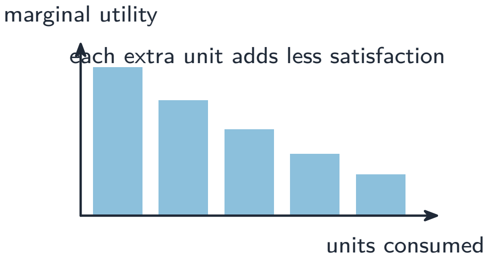
Demand and what shifts it



Law of demand 需求定律: price up $\Rightarrow$ quantity down, so the curve slopes down.

- own price $\rightarrow$ *move along*
- **income** 收入, **substitute** 替代品 & **complement** 互补品 prices, tastes $\rightarrow$ *shift*

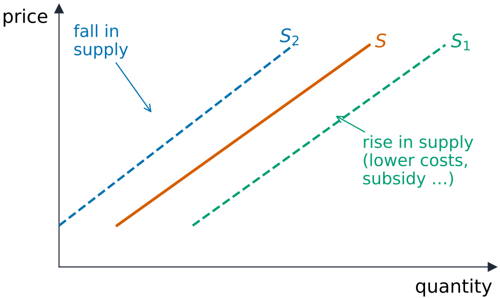
Marginal utility



Diminishing marginal utility 边际效用递减: each extra unit adds less satisfaction than the last.

> Because later units are worth less, buyers pay less for them – so demand slopes downward.

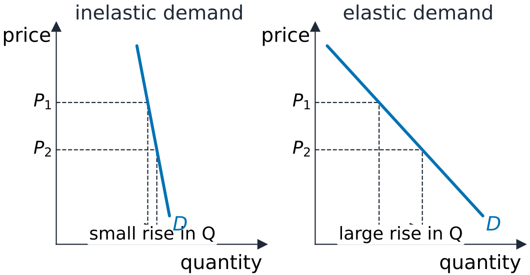
Supply and what shifts it



Law of supply 供给定律: price up $\Rightarrow$ quantity up (more profit), so the curve slopes up.

- lower **costs** 生产成本, better tech, a **subsidy** 补贴 $\rightarrow$ shift right
- higher costs or an indirect tax $\rightarrow$ shift left

Price elasticity of demand



$$\text{PED} = \frac{\%\,\Delta\text{quantity}}{\%\,\Delta\text{price}}$$

> 1 **elastic** 富有弹性 (responds a lot);
< 1 **inelastic** 缺乏弹性 (responds little).

Worked example

price $+10\%$, quantity -25% $\Rightarrow$
PED $= -2.5$ (elastic)

PED and total revenue

Total revenue 总收益
$=$ price $\times$ quantity.

- **inelastic**: raise price $\rightarrow$ TR rises
- **elastic**: raise price $\rightarrow$ TR falls

A tax on an inelastic good (petrol) raises a lot of revenue without cutting sales much.

Income and cross elasticity

YED 需求收入弹性

normal good: income up $\rightarrow$ demand up $(+)$

inferior good: income up $\rightarrow$ demand down $(-)$

XED 需求交叉弹性

substitutes 替代品: $+$ (rival dearer $\rightarrow$ buy more)

complements 互补品: $-$ (partner dearer $\rightarrow$ buy less)

Restaurant meals: YED $= +30\%/+20\% = +1.5$ (normal, luxury). Tea $\rightarrow$ coffee: XED $= +0.4$ (substitutes).

Price elasticity of supply

$$\text{PES} = \frac{\%\,\Delta\text{supplied}}{\%\,\Delta\text{price}}$$

more elastic with
spare capacity 闲置产能 & **stocks** 库存

momentary 瞬时
PES $= 0$

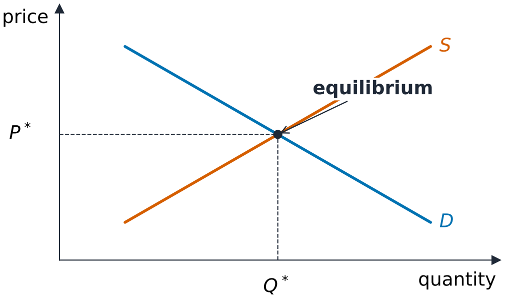
→

short run 短期
rises a little

→

long run 长期
most elastic

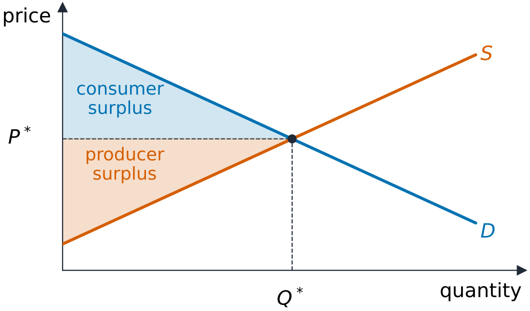
Market equilibrium



Equilibrium 均衡: where demand meets supply – no pressure to change.

- price too low $\rightarrow$ **shortage** 短缺 $\rightarrow$ price pushed up
- price too high $\rightarrow$ **excess supply** 超额供给 $\rightarrow$ price pushed down

Shifts and surplus



A demand rise lifts both price & quantity; a supply rise cuts price, lifts quantity.

- **consumer surplus** 消费者剩余 – below demand, above price
- **producer surplus** 生产者剩余 – above supply, below price

Their sum is total **welfare** 福利, largest at equilibrium.

Topic 2 – key takeaways

1 Demand & supply

own price moves along; other causes shift

2 PED

> 1 elastic, < 1 inelastic; drives revenue

3 YED & XED

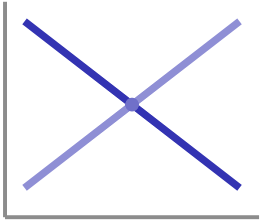
normal/inferior; substitutes/complements

4 Equilibrium

D meets S; surplus measures welfare

Check yourself

1. A subsidy shifts supply which way?
2. If PED $= 0.4$, is demand elastic or inelastic?
3. An inferior good has YED of what sign?
4. Where is total welfare largest?



Answers **1.** right (supply rises) **2.** inelastic **3.** negative **4.** at the free-market equilibrium