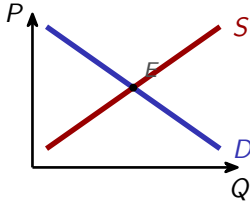


# Basic Economic Concepts

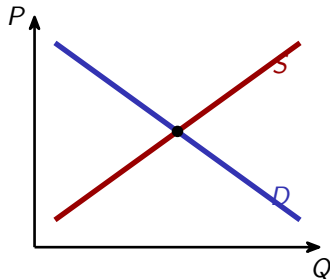
## AP Macroeconomics ■ Unit 1

### AP Macroeconomics



## What we will cover

- 1 Scarcity and the factors of production
- 2 Opportunity cost and the PPC
- 3 Comparative advantage and trade
- 4 Demand
- 5 Supply
- 6 Market equilibrium



1

Scarcity

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# Scarcity: the starting point of economics

Every economy faces the same basic problem:

**wants**  
unlimited

>

**resources**  
limited



Three questions – and every choice has a cost:

- **what** to produce?
- **how** to produce?
- **for whom?**



*Limited resources force every society to choose*

# The four factors of production

The scarce **resources** 资源 an economy uses to make everything:

**Land** 土地

natural resources

**Labour** 劳动

human effort and skill

**Capital** 资本

tools, machines, factories

**Entrepreneurship** 企业家才能

initiative and risk-taking

Entrepreneurs combine the other three and bear the risk of the venture.

# 2

## Opportunity cost & the PPC

# Opportunity cost

The **opportunity cost** 机会成本 of a choice is the value of the **single best alternative** you give up.

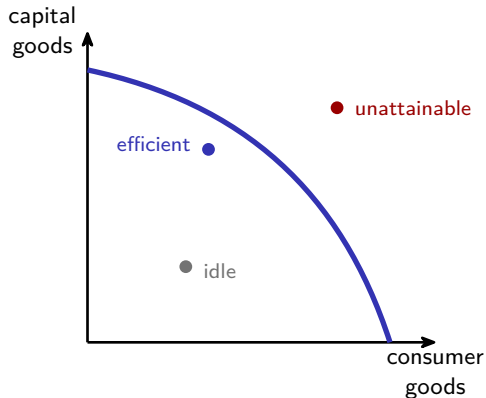
- measured in what you *sacrifice*, not only in money
- every choice has one – because resources are scarce

A new road's real cost is the schools or hospitals the **same resources** could have built.



*Every choice gives up the next-best option*

# The production possibilities curve



The **PPC** 生产可能性曲线 shows every efficient mix of two goods:

- **on** the curve – **efficient**, all resources used
- **inside** – resources lie idle (a recession)
- **outside** – unattainable today

Its outward *bow* = **increasing opportunity cost** 机会成本递增.

# The PPC, and what it is made of

## The curve

The **production possibilities curve (PPC)** 生产可能性曲线 shows the most of two goods an economy can make with its resources fully employed.

## Labor

**Labor** 劳动 is one of the four factors – with land, capital and entrepreneurship – and more or better of any of them shifts the curve out.

## Trade-offs

Points on the curve are **trade-offs** 取舍: more of one good is less of the other, and the slope is the opportunity cost.

## Bowed outward

Resources are not equally good at both jobs, so the opportunity cost rises as you specialise – which is what bows the curve.

Inside the curve is not a choice, it is waste. On it is efficient; beyond it is unattainable today.

## Worked example – reading a trade-off

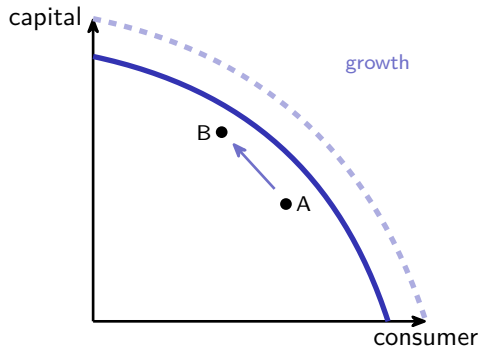
### A → B along the curve

A: 60 consumer, 10 capital.      B: 50 consumer, 25 capital.

give up 10 consumer  $\Rightarrow$  gain 15 capital

cost of 1 capital =  $\frac{10}{15} \approx 0.67$  consumer

Building **capital** today shifts the whole curve outward later – **economic growth** 经济增长.



3

## Comparative advantage

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# Absolute vs comparative advantage

## **Absolute** 绝对优势

make *more* with the same  
resources

## **Comparative** 比较优势

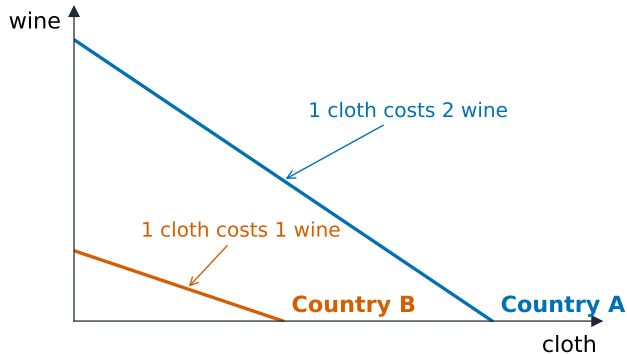
make it at a *lower opportunity  
cost*



*Specialize, then trade – both sides can gain*

Both sides gain even if one is better at everything – as long as costs differ.

# Comparative Advantage and Gains from Trade



Comparative advantage comes from differently-sloped production possibilities curves

## Gains from trade – worked example

| per day   | wheat | cloth |
|-----------|-------|-------|
| Country A | 12    | 6     |
| Country B | 4     | 4     |



### Compare opportunity costs

Cost of 1 cloth:  $A = \frac{12}{6} = 2$  wheat,  $B = \frac{4}{4} = 1$  wheat.

⇒ B is cheaper at cloth

Cost of 1 wheat:  $A = 0.5$  cloth,  $B = 1$  cloth.

⇒ A is cheaper at wheat

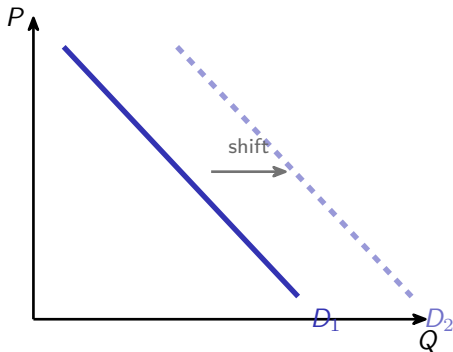
The **terms of trade** 贸易条件 must fall *between* the two costs for both to win.

4

Demand

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# The law of demand

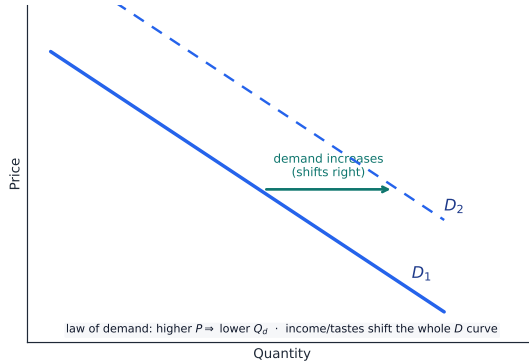


**Demand** 需求: how much buyers will buy at each price. Higher price  $\rightarrow$  lower **quantity demanded** 需求量 – the curve slopes **down**.

**Own price** changes  $\Rightarrow$  move **along**.

**Anything else**  $\Rightarrow$  the whole curve **shifts**.

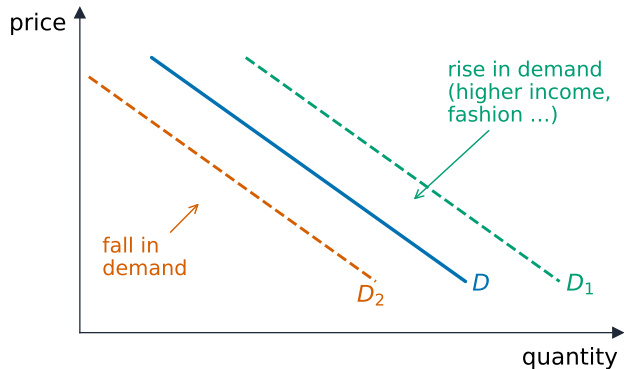
# The law of demand slopes the curve – one



*The law of demand slopes the curve downward; a determinant shifts the whole curve*

The law of demand slopes the curve downward; a determinant shifts the whole curve

## The law of demand slopes the curve – two



*The demand curve slopes down; income, tastes, and related prices shift it*

The demand curve slopes down; income, tastes, and related prices shift it

# What shifts demand? Remember TRIBE

**T**astes

**R**elated prices

**I**ncome

**B**uyers

**E**xpectations

**Substitutes** 替代品: coffee up  
⇒ demand for tea up

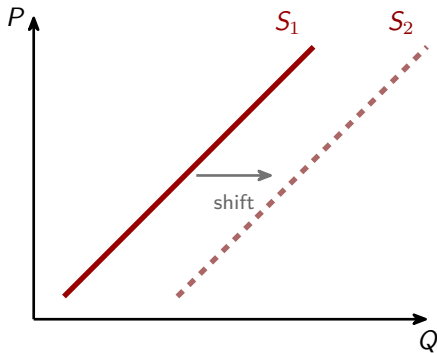
**Complements** 互补品: petrol  
up ⇒ demand for cars down

**Normal good** 正常品: more income ⇒ more demand.    **Inferior good** 低档品: more income  
⇒ less demand.

5

Supply

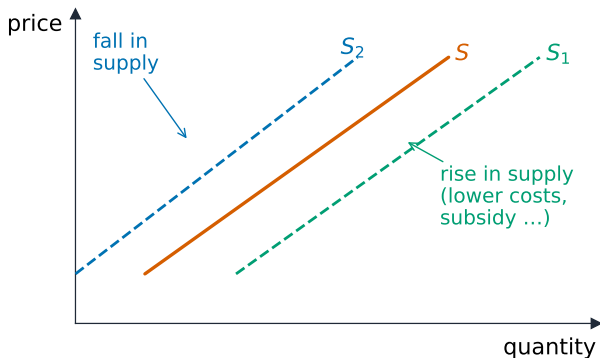
# The law of supply



**Supply** 供给: how much sellers will sell at each price. Higher price  $\rightarrow$  higher **quantity supplied** 供给量 – the curve slopes **up**. Shifters: input **costs** 成本, technology, number of sellers, taxes, **subsidies** 补贴.

- lower costs / better tech  $\Rightarrow$  shift **right**
- a new tax  $\Rightarrow$  shift **left**

## The supply curve slopes up; costs



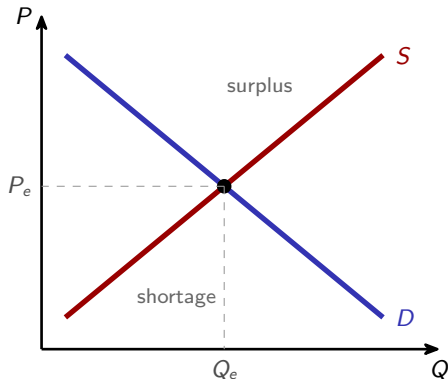
The supply curve slopes up; costs, technology, tax, and subsidy shift it

# 6

## Market equilibrium

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# Market equilibrium

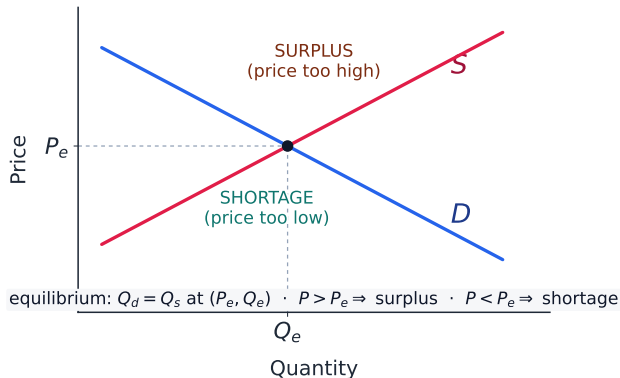


**Equilibrium** 均衡: where supply meets demand – no pressure to change.

- price **above**  $P_e$ : a **surplus** 过剩  $\Rightarrow$  sellers cut price
- price **below**  $P_e$ : a **shortage** 短缺  $\Rightarrow$  buyers bid it up

Both push the market back toward  $P_e$ .

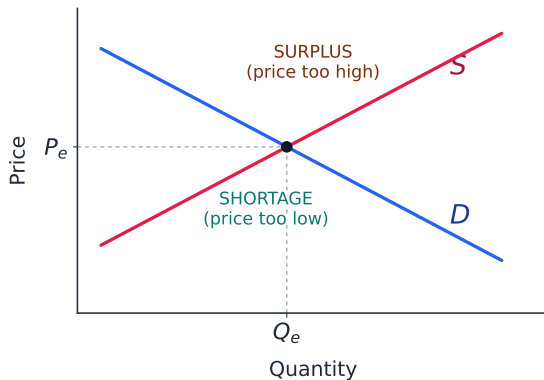
# Market equilibrium sits where supply meets d – one



*Market equilibrium sits where supply meets demand; away from it lie surplus and shortage*

Market equilibrium sits where supply meets demand; away from it lie surplus and shortage

## Market equilibrium sits where supply meets d – two



*Equilibrium price and quantity where demand meets supply*

Equilibrium price and quantity where demand meets supply

## Four cases – how a shift moves equilibrium

**Demand rises**

$P \uparrow$     $Q \uparrow$

**Demand falls**

$P \downarrow$     $Q \downarrow$

**Supply rises**

$P \downarrow$     $Q \uparrow$

**Supply falls**

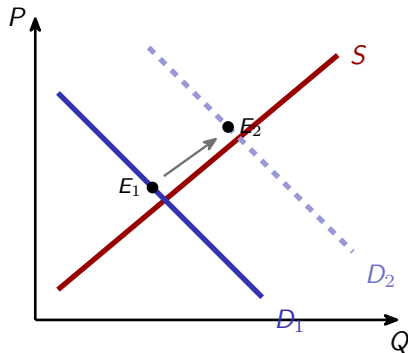
$P \uparrow$     $Q \downarrow$

## Worked example – a hot summer

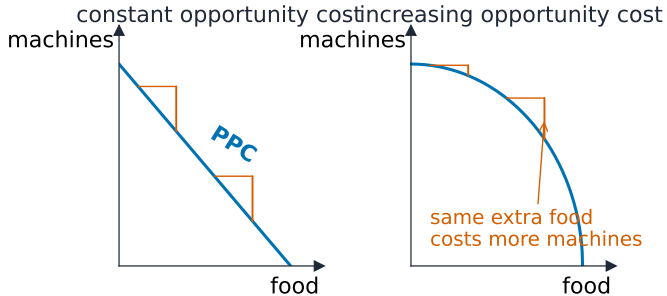
### Demand for ice cream rises

The curve shifts **right** ( $D_1 \rightarrow D_2$ ). At the old price a **shortage** appears, so the price rises to a new equilibrium at a **higher price and higher quantity**.

If input costs *also* rise (supply shifts left), price rises even more – but the effect on quantity becomes **ambiguous**.

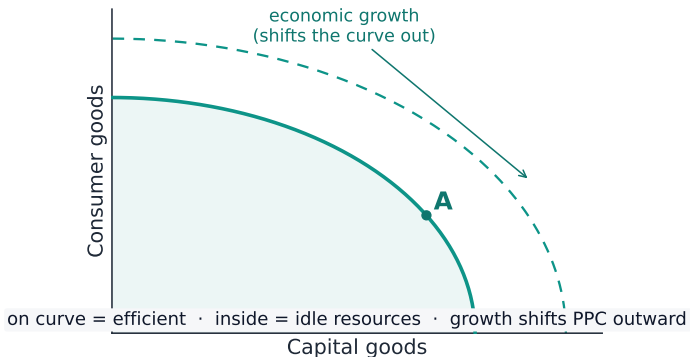


# Opportunity Cost and the Production Possibilities Curve (PPC)



A straight PPC means constant opportunity cost; a bowed one means increasing cost

## A production possibilities curve; investing in



A production possibilities curve; investing in capital goods shifts it outward

## Exam tips

- Opportunity cost is what you **give up** – read it off a PPC as the slope; a bowed-out PPC shows increasing opportunity cost.
- **Comparative advantage** (lower opportunity cost), not absolute advantage, decides who should specialise and trade.
- Points inside the PPC are inefficient, outside unattainable; more resources/technology shift it out (growth).
- Distinguish a **movement along** a demand/supply curve (own price) from a **shift** (a determinant).
- These micro tools drive the aggregate models later – draw and shift the correct curve in the correct direction.

7

Recap

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# Unit 1 – key takeaways

1

## Scarcity

limited resources force choice;  
every choice has an opportunity  
cost

2

## PPC

efficient points on the curve; the  
bow shows rising opportunity cost

3

## Comparative advantage

specialize at your lowest cost,  
then trade – both gain

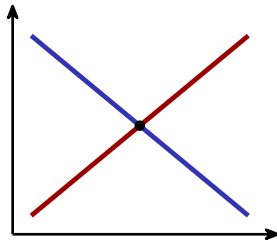
4

## Supply & demand

equilibrium clears the market;  
shifts move price and quantity

## Check yourself

- 1 A point *inside* the PPC means what about resources?
- 2 Who has the comparative advantage – lower cost or more output?
- 3 Coffee's price rises. What happens to demand for tea?
- 4 Demand rises and supply falls. What happens to price?



**Answers** 1. some lie idle (inefficient) 2. lower opportunity cost 3. it rises (substitutes) 4. price rises