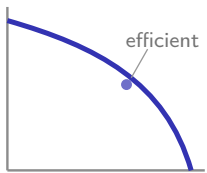
Basic Economic Concepts

AP Microeconomics ▪ Unit 1

AP Microeconomics



What we will cover

1. Scarcity & choice
2. Economic systems & prices
3. Production possibilities curve
4. Comparative advantage & trade
5. Costs & thinking at the margin
6. Consumer choice

1 Scarcity

The economic problem

- Unlimited **wants** 欲望 > finite **resources** 资源 ⇒ **scarcity** 稀缺
- Scarcity forces choice; every choice has an **opportunity cost** 机会成本
- Three questions: what? how? for whom?

Scarcity is not poverty: even a billionaire has only 24 hours a day, so **everyone** must choose.

Scarce goods force every buyer to choose

Scarcity, and the resources it applies to

economics 经济学	begins with one stubborn fact: wants are effectively unlimited, and the **resources** 资源 to satisfy them are not
land	natural resources, and the rent they earn
labor 劳动	human effort, and wages
capital	tools, machines and buildings, and interest
entrepreneurship 企业家才能	organising the other three and bearing the risk – and profit
the consequence	every choice has an opportunity cost: the next best alternative given up

> Scarcity is not poverty. Even a rich society must choose, which is why the subject applies to every economy at every income level.

Factors of production

Land
土地
natural resources

Labour
劳动
human effort

Capital
资本
tools & machines

Entrepreneur
企业家才能
combines & takes risk

The four **factors of production** 生产要素 are the scarce resources every economy allocates.

2 Systems & prices

Three economic systems

Market
市场经济

buyers & sellers decide through **prices**

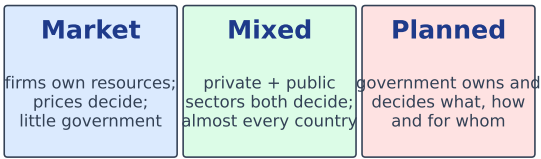
Command
计划经济

central **government** owns & plans

Mixed
混合经济

markets + government; almost every country

Market, command, mixed – in words



- A **market economy** 市场经济: private buyers and sellers decide through **prices** – self-interest and competition coordinate them.
- In a **command economy** 计划经济, the government owns resources and plans production.
- Real economies are **mixed** 混合经济 – mostly markets, with government providing some goods and correcting problems.

Prices coordinate a market

A high **price** does two jobs at once:

- **signal** 信号: the good is scarce / wanted
- **incentive** 激励: rewards producers to supply more

> Adam Smith's **invisible hand** 看不见的手: no one is in charge, yet resources flow toward what people value most.

Prices guide goods across markets

How the three systems answer the three questions

an economic system 经济体制	a society's way of answering what, how, and for whom to produce
market	decentralised: prices and profit decide, with no planner
command	the state decides all three
mixed	markets for most goods, the state for public goods and redistribution
why markets work	prices carry information and **incentives** 激励 automatically – no one needs to know the whole system
where they fail	public goods, externalities, market power, and inequality of outcome

The information argument is the strong one: a price summarises millions of separate facts that no planner could collect in time.

3 Production possibilities

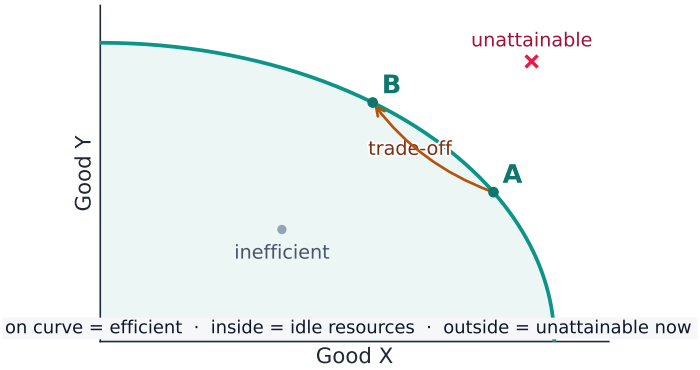
The production possibilities curve

The **PPC** 生产可能性曲线 shows the most an economy can make of two goods.

- **On** the curve – efficient
- **Inside** – wasteful (idle resources)
- **Outside** – unattainable

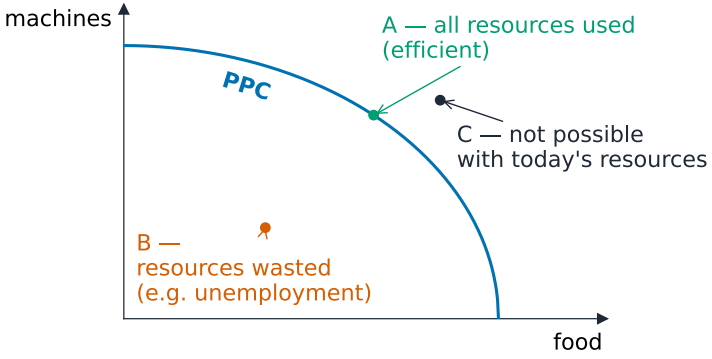
Economic growth 经济增长 shifts the whole curve **outward**.

The production possibilities curve, in detail



A production possibilities curve: efficient, inefficient, and unattainable points

Points on



Points on, inside, and outside the production possibilities curve

Why the curve bows outward

The **law of increasing opportunity cost** 机会成本递增规律: resources are not equally suited to both goods, so each extra unit of one costs ever more of the other.

Worked example – opportunity cost

A country makes wheat and steel. At A: 100 wheat, 0 steel. At B: 80 wheat, 30 steel.

Moving A→B gains 30 steel by giving up 20 wheat, so

$$\text{opp. cost of 1 steel} = \frac{20}{30} = 0.67 \text{ wheat.}$$

4 Comparative advantage

Absolute vs comparative advantage

absolute advantage 绝对优势

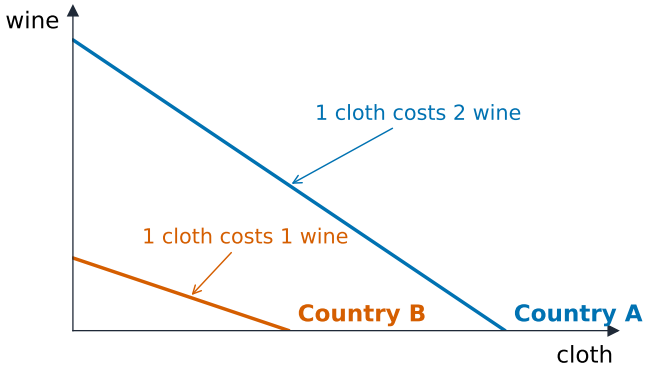
makes **more** with
the same resources

comparative advantage 比较优势

has the **lower opportunity cost**

Specialize where your opportunity cost is lower, then **trade** 贸易 – this gains for both sides **even if one is better at everything**.

Absolute vs comparative advantage, in detail



Comparative advantage comes from differently-sloped production possibilities curves

Comparative advantage – worked example

In a day: X makes 10 phones **or** 20 shirts; Y makes 4 **or** 4.

- X: 1 phone costs $\frac{20}{10} = 2$ shirts
- Y: 1 phone costs $\frac{4}{4} = 1$ shirt

$\Rightarrow$ **Y** makes phones; **X** makes shirts

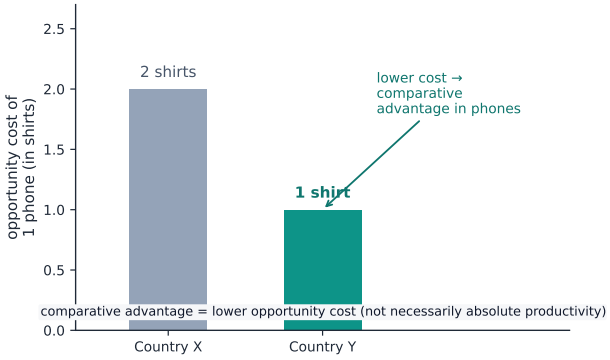
X has the absolute advantage in both, yet trade still helps both. The **terms of trade** 贸易条件 lie between the two costs.

Comparative advantage: the calculation the exam repeats

absolute advantage	producing more of a good with the same resources
comparative advantage	producing it at a lower opportunity cost – and this is what decides trade
from an output table	opportunity cost of X = the other good's output divided by X's output
from an input table	the ratio runs the *other* way – X's input over the other good's input
then	each side **specialises** 专业化 where its opportunity cost is lower, and trades
terms of trade	any rate between the two opportunity costs makes both sides better off

These calculations appear almost every year. Practise from both output and input tables, because the ratio inverts between them.

Comparative advantage – worked example, in detail



One country can be better at both goods and trade still helps both: the **terms of trade** 贸易条件 lie between the two opportunity costs.

5 Costs & the margin

Cost-benefit analysis & sunk costs

Cost-benefit analysis 成本收益分析: act only when benefit $\geq$ cost – and the real cost is the **opportunity cost**, not just money spent.

The sunk-cost fallacy

You paid \$50 for a concert ticket (a **sunk cost** 沉没成本). That night you feel ill and would rather stay home.

The \$50 is gone **either way**, so ignore it – choose what you now prefer. Going just "to get your money's worth" is the **sunk-cost fallacy** 沉没成本谬误.

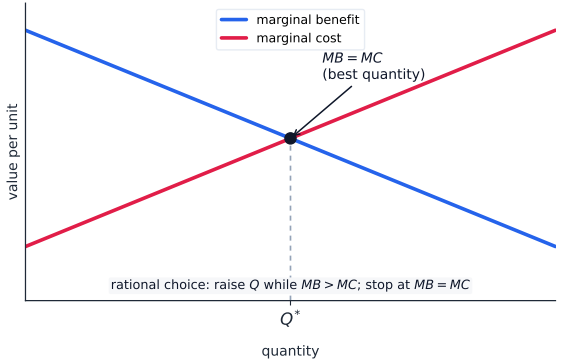
Think at the margin

Decide one **margin** 边际 at a time – one more unit.

- **marginal benefit** 边际收益 (MB): extra gain
- **marginal cost** 边际成本 (MC): extra cost

> Keep going while $MB > MC$; stop at $MB = MC$ – the greatest net benefit.

Think at the margin, in detail



Rational choice: keep going while marginal benefit exceeds marginal cost, stopping where they are equal

Marginal analysis: the two rules that are tested

cost–benefit	an action is worthwhile only when its benefit is at least as large as its cost
the marginal rule	do the action while MB $\geq$ MC; the optimum is where MB = MC
reading it from a table	take each extra unit while its marginal benefit still covers its marginal cost, and stop at the crossover
consumer choice	spend so that the marginal utility per dollar is equal across all goods
why equal	if one good gave more utility per dollar, shifting a dollar to it would raise total utility – so you were not at the optimum

"MB = MC" and "equal MU per dollar" are tested repeatedly. Be able to find the optimal quantity from a table, not only to state the rule.

Consumer choice

The **law of diminishing marginal utility** 边际效用递减规律: each extra unit adds less **utility** 效用 – the fifth slice of pizza satisfies far less than the first. This is why demand curves slope **down**.

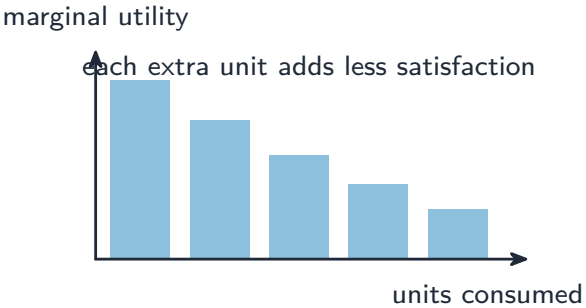
The utility-maximizing rule

Spread a fixed budget so the marginal utility **per dollar** is equal across all goods:

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}.$$

If one good gives more utility per dollar, shift spending toward it until the ratios balance.

Marginal Analysis and Consumer Choice



Each extra unit consumed gives less extra satisfaction (diminishing marginal utility)

Key points

Scarcity forces choice; every choice has an **opportunity cost**

The **PPC** shows efficient, wasteful & unattainable output

Comparative advantage + trade gains for both sides

Choose at the **margin**: act while $MB > MC$, stop at $MB = MC$

Exam tips

- Opportunity cost is the next-best alternative given up; **ignore sunk costs** in any decision.
- Comparative advantage (lower opportunity cost) determines specialisation and the gains from trade.
- Apply marginal analysis: keep doing an activity while $\mathbf{MB} > \mathbf{MC}$, stopping where $\mathbf{MB} = \mathbf{MC}$.
- Maximise utility by equalising the **marginal utility per dollar** across goods.
- Read opportunity cost off the PPC slope; a bowed curve shows increasing cost.

6 Recap

Unit 1 – key takeaways

1 Opportunity cost

next-best alternative; ignore sunk costs

2 Trade

comparative advantage (lower OC) sets specialisation

3 Margin

keep going while MB $>$ MC; stop at MB $=$ MC

4 PPC

slope is OC; bowed curve $\Rightarrow$ increasing cost

Check yourself

1. Why does the PPC bow outward?
2. Absolute or comparative advantage: which drives trade?
3. Should a sunk cost affect your next decision?
4. What rule does marginal analysis give?

Answers **1.** resources are not equally suited to both goods **2.** comparative **3.** no – it is already spent **4.** do it while MB $>$ MC; stop where MB $=$ MC