

Exercise walk-through

1.3

Factors of production

A-Level Economics

Classify combinations using a stated frontier

A **PPC** shows maximum feasible combinations for given resources and technology. This illustrative frontier joins these combinations:

Point	Food (tonnes/day)	Machines (units/day)
A	20	0
B	16	4
C	10	8
D	0	12

Use the frontier, not just the word efficient

Classify E=(8 food,4 machines) and F=(15 food,8 machines). Can the economy make more food at E without giving up machines? Does choosing C prove that society prefers its product mix?

A production limit does not choose society's preferred mix

E is inside: at four machines the frontier permits 16 tonnes of food, exceeding E's eight. F is outside: at eight machines the maximum food is 10 tonnes, below F's 15.

C is on the frontier: producing more of one good requires giving up some of the other. It is **efficient** in production, not proof that this mix is the one society values most.

Moving E to B uses spare capacity to add food without losing machines. That possibility does not mean every inside-point decision is costless: scarce staff, funds or time may still have a next-best use.

The **trade-off** along B to C is six tonnes of food for four more machines. That is an average opportunity cost of 1.5 tonnes per extra machine over this interval.

Reading a production possibility curve

On the curve

Production is efficient for the given resources and technology; more of one good costs some of the other.

Inside it

Unused capacity or waste: more output may be feasible without sacrificing the other plotted good.

Outward shift

Growth. It happens with more resources, or better ones – new **technology**, a bigger or more skilled workforce.

Inward shift

War or disaster can move the curve inward – **economic decline**.

The curve is a picture of opportunity cost: its slope *is* what one more unit of this good costs in units of that one.

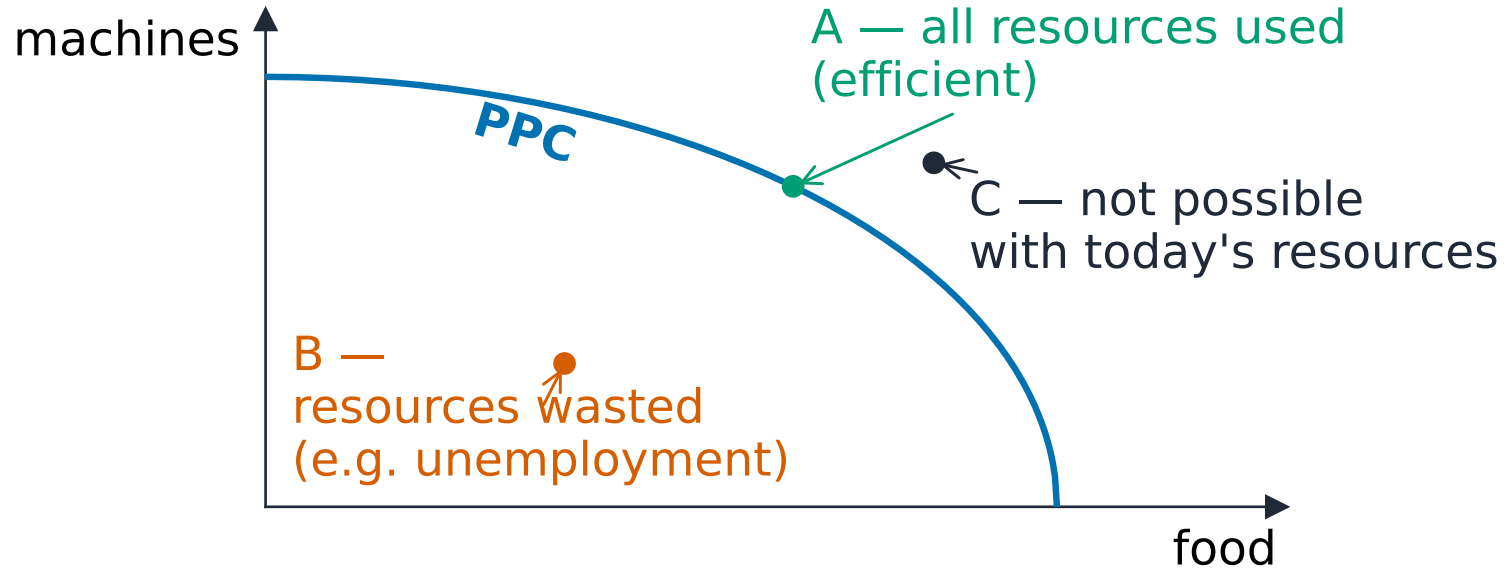
Worked example – why the PPC is bowed outwards

Why is a production possibility curve usually drawn rather than as a straight line?

- a straight line means a **constant** opportunity cost
- but factors are **not equally suited** to both uses
- move the best-suited first, so later units cost **more**
- so the curve steepens: **increasing opportunity cost**

The shape *is* the economics: a straight PPC would say a farmer and a machinist are interchangeable.

Production possibility curve, in detail



on = efficient · inside = inefficient · outside = unattainable

The **PPC**

shows the most of two goods an economy can make.

Exercises 2.1·2.2

2.1 State the reward earned by each factor of production.

[2]

2.2 Define the term *division of labour*.

[2]

Exercises 2.1·2.2

2.1 State the reward earned by each factor of production. [2]

2.1

- land
- rent; labour
- wages; capital
- interest; enterprise
- profit (2 for all four; 1 for two or three)

2.2 Define the term *division of labour*. [2]

2.2

- splitting a production process into separate small tasks, each done repeatedly by a different worker (2 for a clear definition; 1 for a partial idea)

Exercises 2.3-3.1

2.3 State the difference between occupational and geographical mobility. [2]

3.1 The reward to the factor *capital* is: [1]

☐

A rent

B wages

C interest

D profit

Exercises 2.3-3.1

2.3 State the difference between occupational and geographical mobility. [2]

2.3

- occupational mobility is how easily a factor moves to a different job or use; geographical mobility is how easily it moves to a different place (2 for a clear difference; 1 for a partial idea)

3.1 The reward to the factor *capital* is: [1]

- ☐ **A** rent
B wages
C interest
D profit

3.1 C

- Capital earns interest

Exercises 3.2-3.3

3.2 Explain two advantages to a firm of using the division of labour.

[6]

3.3 Discuss whether the division of labour always benefits workers.

[8]

Exercises 3.2-3.3

3.2 Explain two advantages to a firm of using the division of labour. [6]

3.2

- [6] For **each** of two advantages: AO1 1 + AO3 up to 2. Example chains – *faster work*: repeating one task
- workers become skilled and quick
- output per worker rises and unit costs fall. *Less wasted time*: no moving between jobs
- more is produced in the same time. Maximum 3 per advantage

3.3 Discuss whether the division of labour always benefits workers. [8]

3.3

- [8] AO1/AO2/AO3 up to 5 + AO4 up to 3. **Benefits**: higher productivity and pay, and skills built up. **Costs**: boredom and low motivation from repetition, a narrow skill set, and vulnerability if one worker is absent. Judgement: it benefits workers when pay and variety are managed, but repetitive work can harm motivation – it depends on the job design and the workers