Exercise walk-through

Price elasticity of supply ▪ 2.3

eXercise

You must be able to

- calculate and interpret PES
- explain the determinants of PES (spare capacity, stocks, mobility, time)
- analyse why supply is more elastic in the long run

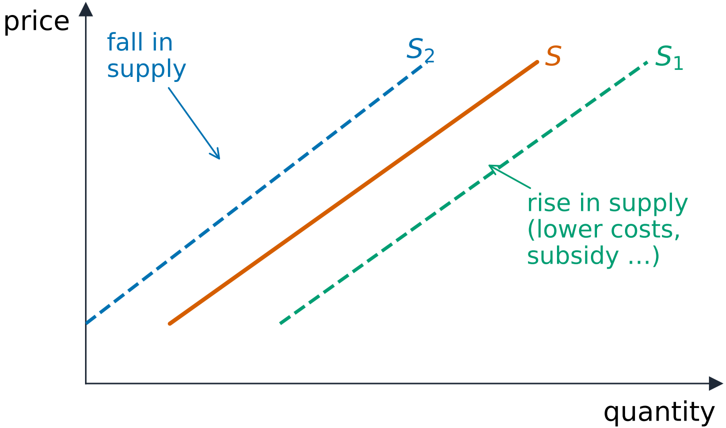
Method — Price elasticity of supply

$$\text{PES} = \frac{\%\Delta Q_s}{\%\Delta P}$$

- **Worked:** price $+8\%$, quantity supplied $+4\%$ $\rightarrow \frac{4}{8} = 0.5 \rightarrow$ **inelastic** (<1).
- **More elastic supply when:** there is **spare capacity 闲置产能**, **stocks 库存**, mobile factors, and more time.
- **Time:** momentary (PES $= 0$) $\rightarrow$ short run (a little) $\rightarrow$ long run (most elastic).

Answer shapes: AO1 + AO2 + AO3 (analysis) + AO4 (judgement, for evaluate questions).

Method — Price elasticity of supply



Lower costs or a subsidy shift supply right; higher costs or a tax shift it left

Practice 2.1 ▪ 2 marks

Define *price elasticity of supply (PES)*.

Solution 2.1

Method: Price elasticity of supply

Worked steps

a measure of how much the quantity supplied responds to a change in price, equal to $\%\Delta Qs \div \%\Delta P$ (2 for a clear definition; 1 for a partial idea).

Practice 2.2 ▪ 2 marks

Price rises by 20% and quantity supplied rises by 30%. Calculate the PES and classify the supply.

Solution 2.2

Method: Price elasticity of supply

Worked steps

PES $= \frac{+30}{+20} = +1.5$; greater than 1, so supply is **elastic** (2; award 1 for a correct value with no classification).

Practice 2.3 ▪ 2 marks

State two factors that make supply more elastic.

Solution 2.3

Method: Price elasticity of supply

Worked steps

any two of: spare capacity; large stocks; easily mobile factors of production; more time $(1 + 1)$.

Exam-style 3.1 ▪ 1 mark

Supply is most likely to be **price inelastic** when:

- **A** firms have spare capacity
- **B** there are large stocks of the good
- **C** the good takes a long time to produce
- **D** factors of production move easily into the industry

Solution 3.1

Method: Price elasticity of supply

A firms have spare capacity

B there are large stocks of the good

C the good takes a long time to produce ✓

D factors of production move easily into the industry

Worked steps

C. A long production time makes supply slow to respond, so it is inelastic.

Exam-style 3.2 ▪ 6 marks

Explain why the supply of a good is usually more elastic in the long run than in the short run.

Solution 3.2

Method: Price elasticity of supply

Worked steps

[6] AO1 1 + AO3 up to 5 — in the short run at least one factor is fixed, so firms can increase output only a little when price rises; in the long run all factors can be varied (new machines, more workers, new firms enter) $\rightarrow$ output can respond fully $\rightarrow$ supply is more elastic.

Exam-style 3.3 ▪ 6 marks

Explain, with an example, why the supply of agricultural products is often price inelastic.

Solution 3.3

Method: Price elasticity of supply

Worked steps

[6] AO1 1 + AO2/AO3 up to 5 — crops take a growing season to produce, so a price rise cannot raise this year's output (momentary/short-run supply is fixed); farmers also cannot store some perishable goods $\rightarrow$ quantity supplied responds little to price $\rightarrow$ supply is inelastic.