Exercise walk-through

Price elasticity of supply (PES) ▪ 2.7

eXercise

You must be able to

- calculate and interpret PES
- classify supply as elastic or inelastic
- explain the determinants of PES (time, spare capacity, stocks)

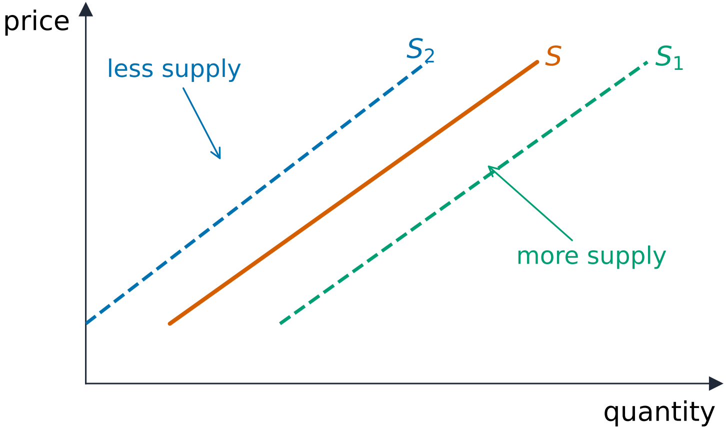
Method — Measuring PES

$$\text{PES} = \frac{\%\ \text{change in quantity supplied}}{\%\ \text{change in price}}$$

- **Worked:** price $+10\%$, quantity supplied $+30\%$ $\rightarrow$ PES $= \frac{30}{10} = 3$ $\rightarrow$ **elastic** (>1).
- **More elastic supply when:** more **time 时间**, **spare capacity 闲置产能**, **stocks 库存**, easily switched factors.
- Farm goods often have **inelastic** supply in the short run (crops take a season to grow).

Answer shapes: K + App + An + Ev (a justified judgement, for discuss questions).

Method — Measuring PES



Shifts in the supply curve

Practice 2.1 ▪ 2 marks

Define *price elasticity of supply (PES)*.

Solution 2.1

Method: Measuring PES

Worked steps

a measure of how much the quantity supplied responds to a change in price (% change in quantity supplied ÷ % change in price) (2 for a clear definition; 1 for a partial idea).

Practice 2.2 ▪ 2 marks

Price rises by 20% and quantity supplied rises by 10%. Calculate the PES and classify the supply.

Solution 2.2

Method: Measuring PES

Worked steps

PES $= \frac{10}{20} = 0.5$; less than 1, so supply is **inelastic** (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: Measuring PES

Worked steps

any two of: more time; spare capacity; stocks held; easily switched factors $(1 + 1)$.

Exam-style 3.1 ▪ 1 mark

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

A the firm has spare capacity

B the good can be stored as stock

C the good takes a long time to produce

D factors move easily into the industry

Solution 3.1

Method: Measuring PES

A the firm has spare capacity

B the good can be stored as stock

C the good takes a long time to produce ✓

D factors 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 ▪ 4 marks

Explain why the supply of fresh vegetables is often price inelastic in the short run.

Solution 3.2

Method: Measuring PES

Worked steps

[4] K 1 + An up to 3 — fresh vegetables take a growing season to produce and cannot be stored long $\rightarrow$ so if the price rises, farmers cannot quickly grow more this season $\rightarrow$ the quantity supplied responds little $\rightarrow$ supply is inelastic in the short run.

Exam-style 3.3 ▪ 6 marks

Analyse why the supply of a manufactured good is usually more elastic than the supply of a farm crop.

Solution 3.3

Method: Measuring PES

Worked steps

[6] K/App/An — a manufactured good can be made faster: firms can add shifts, use spare capacity, or draw on stocks $\rightarrow$ so when the price rises they raise output quickly $\rightarrow$ supply is elastic. A farm crop takes a whole season to grow and cannot be stored long $\rightarrow$ output cannot rise quickly $\rightarrow$ supply is inelastic $\rightarrow$ so the manufactured good's supply responds more to price.