2.7 Price elasticity of supply (PES)

Name: _____ Class: _____ Date: _____ **Total: 21 marks**

KEY WORDS time • price elasticity of supply • spare capacity • stocks • good

Objective

Build the skills to answer exam questions on **price elasticity of supply** (PES) – its formula, **elastic and inelastic** supply, and the determinants.

You must be able to:

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

1 Key knowledge and worked examples

■ Measuring PES

PES measures a response to the good's own price, with other supply influences unchanged.

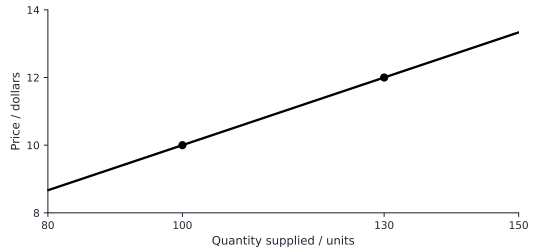
$$\text{PES} = \frac{\text{\% change in quantity supplied}}{\text{\% change in price}}$$

- **Worked:** price +10%, quantity supplied +30% → PES = $\frac{30}{10} = 3$ → **elastic** (>1).
- **More elastic supply when:** more **time**, **spare capacity**, **stocks**, 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).

■ Worked application: Elasticity is movement along supply, not its shift

Using original fictional data and initial values, price rises from \$10 to \$12 and quantity supplied rises from 100 to 130 units, with other supply influences unchanged. Percentage price change is $(12 - 10)/10 \times 100 = 20\%$; quantity change is $(130 - 100)/100 \times 100 = 30\%$. Thus PES is $30/20 = 1.5$, so supply is elastic over this change. This is a response to the good's own price along a supply curve. A lower production cost would instead shift the curve and should not be folded into this elasticity calculation as though price were the only changed influence. More time or spare capacity can permit a larger quantity response.



2 Practice

2.1 Define *price elasticity of supply (PES).* [2]

2.2 Price rises by 20% and quantity supplied rises by 10%. Calculate the PES and classify the supply. [2]

2.3 State two factors that make supply more elastic. [2]

3 Exam-style questions

3.1 Supply is most likely to be price **inelastic** when: [1]

☐ **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

3.2 Explain why the supply of fresh vegetables is often price inelastic in the short run. [4]

3.3 Analyse why the supply of a manufactured good is usually more elastic than the supply of a farm crop. [6]

3.4 Using initial values, price rises from \$20 to \$22 and quantity supplied rises from 200 to 210, with other supply influences unchanged. Calculate PES, classify supply and explain one reason supply may become more elastic over a longer period. [4]

Solutions

IGCSE Economics answers are marked by **level of response**: award **K** knowledge, **App** application, **An** analysis and **Ev** a justified judgement.

Each answer shows the steps, then the **result**.

2.1

- **PES** measures how much quantity supplied responds to a change in price (K)
- PES = $\frac{\text{\% change in quantity supplied}}{\text{\% change in price}}$

2.2

- quantity supplied rises 10% when price rises 20%

$$\text{PES} = \frac{10}{20} = \mathbf{0.5}$$

- less than 1, so supply is **inelastic** (K)

2.3

- any **two** of: **more time** / **spare capacity** / **stocks held** / **easily switched factors** (K, K)

3.1 C

- a **long production time** makes supply slow to respond, so it is **inelastic** (K)
- A, B and D all make supply *more* elastic

3.2

- fresh vegetables take a **growing season** and cannot be stored long (K)
- if the price rises, farmers cannot quickly grow more this season (An)
- quantity supplied responds little → supply is **inelastic in the short run** (An)

3.3

- a manufactured good can be made faster: extra shifts, spare capacity, or stocks (K)
- when the price rises, firms raise output quickly → supply is **elastic** (An)
- a farm crop takes a whole season → output cannot rise quickly → supply is **inelastic** (An)

3.4

Price rises 10% and quantity 5%; PES = 5/10 = 0.5, inelastic; a explained time-related response, such as expanding capacity or training workers to increase output, can increase elasticity.