Exercise walk-through

Capacity utilisation and outsourcing ▪ 4.3

eXercise

You must be able to

- calculate **capacity utilisation** and explain a good level
- explain the problems of under- and over-utilisation
- analyse and evaluate the decision to outsource

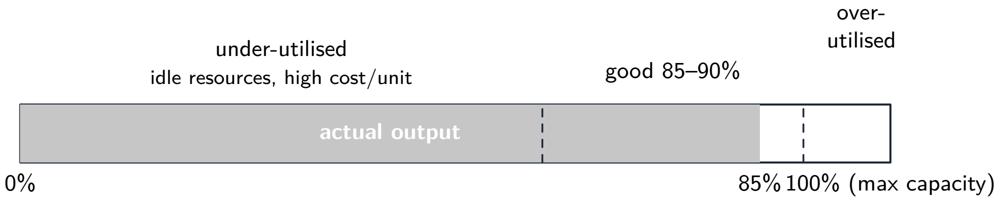
Method — Using capacity, and outsourcing

$$\text{capacity utilisation} = \frac{\text{actual output}}{\text{maximum possible output}} \times 100\%$$

- **Worked:** actual output 1700, maximum 2000 $\rightarrow \frac{1700}{2000} \times 100 = 85\%$.
- **Under-utilisation:** idle resources $\rightarrow$ high fixed cost per unit. **Over-utilisation** (near 100%): no time for repairs, tired staff, quality may fall. Most firms aim for **85–90%**.
- **Outsourcing:** paying another firm to do work — cheaper and lets the firm focus, but less control of quality.

Answer shapes: AO1 + AO2 + AO3 (reasoning chain) + AO4 (a supported judgement *in context*).

Method — Using capacity, and outsourcing



Method — Using capacity, and outsourcing

A factory line: capacity is the most a firm can produce with its resources

Practice 2.1 ▪ 2 marks

Define the term *capacity utilisation*.

Solution 2.1

Method: Using capacity, and outsourcing

Worked steps

the proportion of a firm's maximum possible output that it is actually producing, shown as a percentage (2 for a clear definition; 1 for a partial idea).

Practice 2.2 ▪ 2 marks

A factory's maximum output is 5000 units; it actually makes 4000. Calculate the capacity utilisation.

Solution 2.2

Method: Using capacity, and outsourcing

Worked steps

$\frac{4000}{5000} \times 100 = 80\%$ (2; award 1 for a correct method with the wrong figure).

Practice 2.3 ▪ 2 marks

Define the term *outsourcing*.

Solution 2.3

Worked steps

paying another firm (a supplier) to do work the business used to do itself (2 for a clear definition; 1 for a partial idea).

Exam-style 3.1 ▪ 3 marks

Explain one problem for a business of operating at a low level of capacity utilisation.

Solution 3.1

Method: Using capacity, and outsourcing

Worked steps

[3] **AO1** 1 — state a problem (high fixed cost per unit; idle machines and staff; lower profit). **AO2** up to 2 — develop it, e.g. the same rent and salaries are spread over fewer units $\rightarrow$ higher cost per unit $\rightarrow$ lower profit margin (2 developed / 1 limited).

Exam-style 3.2 ▪ 8 marks

Analyse two benefits to a business of **outsourcing** part of its work.

Solution 3.2

Method: Using capacity, and outsourcing

Worked steps

[8] For **each** of two benefits: **AO1** 1 + **AO2** 1 + **AO3** up to 2. Example chains — *lower cost*: a specialist supplier produces more cheaply → the firm's costs fall → higher profit or lower prices. *Focus and flexibility*: the firm concentrates on what it does best → better core products → and can scale output up or down without buying machines. Maximum 4 per benefit, 8 total.

Exam-style 3.3 ▪ 12 marks

A business is running close to 100% capacity. Evaluate whether it should **outsource** some of its production.

Solution 3.3

Method: Using capacity, and outsourcing

Worked steps

[12] **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **For outsourcing:** it adds capacity without buying machines, meets extra demand, and keeps the firm flexible. **Against:** less control of quality, possible delays, and reliance on another firm. Judgement: outsourcing is sensible to handle demand the firm cannot meet at 100% capacity, but only with a reliable supplier and good quality checks — otherwise expanding its own capacity may be safer; it depends on how long the extra demand will last.