

Introduction to management accounting and costing concepts (P.5)

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Example of total cost:

Add Variable and Fixed Costs together to calculate the TOTAL COSTS of the pizza place:

$$\text{TOTAL COST} = \text{FIXED COST} + (\text{VARIABLE COST PER UNIT} * \text{NUMBER OF UNITS})$$

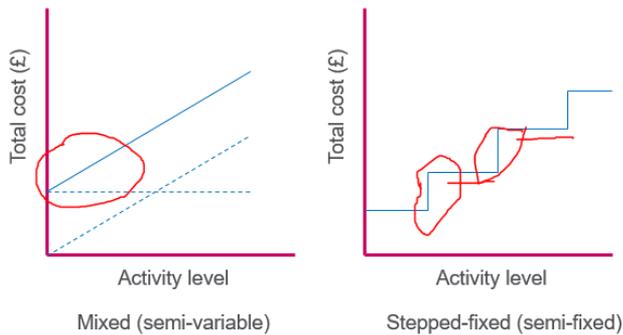
$$= \text{£}10,000 + (5 * \text{No of pizzas made})$$

What is the total cost for 50 and 80 pizzas?

- 50 pizzas = TC = 10,000 + (£5 * 50) = £10,250.00
- 80 pizzas = TC = 10,000 + (£5 * 80) = £10,400.00

STEPPED FIXED COSTS:

- Some costs increase at set thresholds
- E.g in childcare- if the legislation states you must have 1 adult for every 3 children;
If you have 1-3 children you pay for 1 adult
If you have 4 children you pay for 2 adults but this stays the same if you have 5 or 6 children



Separating out Fixed and Variable costs:

Solution: A technique which examines past activity and related costs allow us to examine the fixed and variable elements = " the High and Low" method.

$$\text{Variable cost} = \text{Slope of the line} = \frac{\text{Rise}}{\text{Run}} = \frac{Y_2 - Y_1}{X_2 - X_1}$$

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Example of Hi- Lo Methods

- ▶ An analysis of cost and activity levels for Snape Limited over recent years reveals the following data

Activity level (units)	Total cost
3,000	£16,500
5,000	£20,100
4,000	£18,200
8,000	£24,000
6,000	£21,900

- ▶ Using the Hi-Lo method, we can (estimate) separate out the fixed and variable elements of the cost structure of Snape to identify the variable cost per unit and the total fixed cost
 1. High point = 8,000 units and £24,000
Low point = 3,000 units and £16,500
 2. Calculate the difference in cost at these 2 levels
Difference in cost = £24,000 - £16,500 = £7,500.00
 3. Calculate the VC per unit by dividing the difference in cost by the change in number of units between the high and low points
VC = £7,500 / 5,000 = £1.50 unit
 4. Use the VC to extract fixed cost as the balancing figure at either the high or low point
 - High point: TVC = 1.50 * 8,000 = 12,000 fixed cost = 24,000 - 12,000 = £12,000.00
 - Low point: TVC = 1.50 * 3,000 = 4,500 fixed cost = 16,500 - 4,500 = £12,000.00

Quiz (p.1)

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1. XYZ plc manufactures widgets. In the current year direct material costs were £40,000 and direct labour costs were £30,000. In addition XYZ plc incurred £20,000 of indirect manufacturing overhead and £50,000 of selling, general and administration overhead. What was the prime cost for the business in the current year?
 - A. £50,000
 - B. **£70,000** (Direct materials cost + Direct labour cost)
 - C. £90,000
 - D. £100,000
2. ABC Ltd manufactures sprockets. In the current year direct material costs were £12,000 and direct labour costs were £15,000. In addition ABC plc incurred £35,000 of indirect manufacturing overhead and £47,000 of selling, general and administration overhead. What was the conversion cost for the business in the current year?
 - A. £27,000
 - B. £47,000
 - C. **£50,000** (Direct labour cost + Manufacturing overhead)
 - D. £97,000
3. MNO Inc manufactures ratchets. In the current year direct material costs were £32,000 and direct labour costs were £12,000. In addition MNO plc incurred £24,000 of indirect manufacturing overhead and £17,000 of selling, general and administration overhead. What was the total manufacturing cost for the business in the current year?
 - A. £36,000
 - B. £44,000
 - C. **£68,000** (Direct Material cost + Direct labour cost + manufacturing overhead)
 - D. £85,000
4. Olivander Limited has identified total costs at two activity levels. At a level of 10,300 units total costs are £18,680, whilst at 3,500 units costs are £7,800. Using the Hi-Lo method, what is the total fixed cost and variable cost per unit for Olivander Limited?
 - A. £2,200 and £1.81 per unit
Find the difference between the total cost at high activity level (which is £18,680) and the total cost at the low activity level (which is £7,800); $£18,680 - £7,800 = £10,880$

Divide this difference in cost on the difference in the activity levels : $£10,880 / (10,300 - 3,500)$

This gives the Variable cost rate of £1.6 per unit.

Next, find the total variable cost by multiplying the Variable cost rate with a level of activity, e.g., at high activity level, total variable cost is: $£1.6 \times 10,300 = £16,480$

Finally, to find the Fixed cost, from the total cost at 10,300 units of activity, subtract the variable cost: $£18,680 - £16,480 = £2,200$.
 - B. £7,800 and £1.81 per unit
 - C. £7,800 and £1.60 per unit
 - D. **£2,200 and £1.60 per unit**

Quiz (P.2)

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5. Olivander Limited has a budgeted activity level for the coming year of 6,800 units. Assuming a fixed cost of £2,200 and a variable cost per unit of £1.60, what is your estimate of the total cost for the coming year?

A. £13,080

B. £10,880

C. £18,680

D. £2,200