Basic Aspects of Cost Accounting

The fundamental concepts of the framework of cost accounting

Topics

- Cost units, cost centres and cost objects
- The classification of costs
- The elements of cost
- Cost behaviour patterns
- Analysing semi-variable costs

Key learning system questions

1. Cost behaviour
2. High-low method
Cost units, cost centres and cost objects

**Definitions**

- **Cost unit** – a unit of product or service in relation to which costs are ascertained.
- **Cost centre** – a production or service location, a function, an activity or an item of equipment for which costs are accumulated.
- **Cost object** – anything for which costs can be ascertained.

**Cost unit examples**

- **Product**: litre of paint, batch of cakes
- **Service**: restaurant meal, tonne-mile

**Cost centre examples**

- **Location**: production department A
- **Function**: administration
- **Activity**: invoice processing
- **Item of equipment**: stamping machine

**Cost object examples**

- **Product, service, centre, activity, customer, distribution channel**
Cost units, cost centres and cost objects

The link between cost centres, cost units and cost objects

A cost centre acts as a collecting place for costs. The total cost centre cost may then be related to the cost units which have passed through the cost centre to determine a cost per unit. Cost centres and cost units are types of cost object.
The classification of costs

Types of cost classifications

- **Nature of cost:** material, labour or expense
- **Purpose of cost:** direct costs and indirect costs
- **Responsibility for cost:** grouping according to responsibility centres

Definitions

- **Direct cost** – a cost that can be specifically attributed to a particular cost unit
- **Indirect cost** – a cost that cannot be economically attributed to a particular cost unit

Costs are classified so that they can be arranged into logical groups for further analysis.

Indirect costs are also referred to as **overheads**.

Tracing costs to responsibility centres involves grouping costs according to which manager or management team is **responsible for the control of the cost**.
A sound understanding of the difference between total direct cost, total production cost and total cost will help you in assessment questions on a variety of different topics.

Direct materials
+ Direct labour
+ Direct expenses
= **Total direct cost**

+ Indirect materials
+ Indirect labour
+ Indirect expenses
= **Total production cost**

+ Other overhead
= **Total cost**

**Study tip**

Direct costs are those that can be specifically identified with the cost object we are trying to cost.

**Remember this!**

Total direct cost is also referred to as **prime cost**

Indirect materials, indirect labour and indirect expenses associated with production are also referred to as **production overhead**

**Other overhead** includes selling, distribution and administration overhead.
Cost behaviour patterns describe the way that costs behave in relation to changes in the level of activity.

**Definition**

**Fixed cost** – a cost which, within certain activity limits, is not affected by fluctuations in the level of activity.

**Examples of fixed costs**
- Rent of the factory
- Accountant’s salary

**Definition**

**Stepped fixed cost** – a cost which remains constant for a range of activities, but which increases to the next step when a critical level of activity is reached.

**Examples of stepped fixed costs or step costs**
- Supervisors’ salaries
- Machine rentals
Cost behaviour patterns

**Definition**

**Variable cost** – a cost which varies in relation to the level of activity

**Examples of variable costs**
- Packaging material costs
- Royalties

**Definition**

**Semi-variable cost** – a cost containing both fixed and variable components and which is thus partly affected by a change in the level of activity

**Examples of semi-variable costs**
- Telephone expenses
- Gas and electricity bills

Semi-variable costs are also referred to as semi-fixed or mixed costs
The high-low method

- Uses historical data on costs and activity levels
- Selects the highest and lowest activity levels and assumes that the change in cost between the levels is caused by the change in variable cost
- Variable cost per unit of activity is determined by dividing change in total cost by change in activity level
- Fixed cost determined by substituting variable cost per unit into either of the activity levels

Study tip

This is a very important technique. It is vital that you are able to apply it to a wide variety of data. The activity measure will vary but the technique remains the same.

Example

<table>
<thead>
<tr>
<th>Activity level</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 units</td>
<td>£4,675</td>
</tr>
<tr>
<td>220 units</td>
<td>£4,330</td>
</tr>
<tr>
<td>800 units</td>
<td>£5,200</td>
</tr>
</tbody>
</table>

Analyse the cost into its fixed and variable components

Solution

\[
\frac{\text{£}(5,200 - 4,330)}{(800 - 220)} = \text{£} 1.50
\]

Fixed cost = £5,200 - £(1.50 × 800) = £4,000
Analysing semi-variable costs

Scattergraph

- Uses historical data on costs and activity levels
- All available pairs of data plotted on graph
- Line of best fit is drawn by eye

Example

Fixed cost = vertical axis intercept = £200

Variable cost per unit = gradient of line of best fit

\[ \frac{\£ (500 - 200)}{(150 - 0)} \]

\[ = \£ 2 \text{ per unit} \]

Variable cost per unit is given by gradient of line

Fixed cost is given by intercept on vertical axis, i.e., cost at zero activity