

Topic 1

[week 1 and 2]

Control Systems

EDUCATION BEYOND BORDERS

Required for Materials, Labour, and Overhead

Learning Outcomes

Upon completion of this topic, students should be able to:


- **Describe the nature of costs, classification of costs, and cost behaviour**
- **Describe the accounting for materials, labour, and overheads**

Cost Accounting

Can be defined as the establishment of budgets, standard costs and actual costs of operations, processes, activities or products, and the analysis of variances, profitability, or the social use of funds.

Cost

Can be defined as the amount of expenditure [actual or notional] incurred on, or attributable to, a specified thing or activity.



Cost Units

Can be defined as a unit of product or service in relation to which costs are ascertained.



Direct Costs

Direct costs are those costs which can be directly identified with a job, batch, product, or service. Direct costs comprise direct material cost, direct wages cost, and direct expenses.

Indirect Costs

All material, labour, and expense cost which cannot be identified as direct costs are termed indirect costs. The three elements of direct costs are collectively known as overheads.

Conversion Cost

This is a term used to describe the costs of converting purchased materials into finished or semi-finished products. It is thus total production cost minus initial material input costs.

Cost Centre

Can be defined as a production or service location, function, activity, or item of equipment whose costs may be attributed to cost units.

Cost Allocation

Can be defined as that part of cost attribution which charges a specific cost to a cost centre or cost unit.



Cost Apportionment

Can be defined as that part of cost attribution which shares costs among two or more cost centres or cost units in proportion to the estimated benefit received, using a proxy.

Objectives of Material Pricing

The two main objectives are:

- **To charge to production on a consistent and realistic basis the cost of materials used.**
- **To provide a satisfactory basis of valuation for inventory on hand.**



Problems of Materials Pricing

In practice, the problem of pricing material issues, which determine product costs, is complicated by several factors:

- **Rapidly changing price for bought in materials and components.**
- **The stock of any given material is usually made up of several deliveries which may have been made at different prices.**
- **The frequent impossibility of identifying items with their delivery consignment.**
- **The sensitivity of profit calculations to the pricing method adopted particularly where materials form a large part of total cost.**

Pricing Systems

- **First in first out [FIFO]**
- **Last in first out [LIFO]**
- **Average price [AVCO]**



FIFO Characteristics

- **It is an actual cost system.**
- **It is a good representation of sound storekeeping practice.**
- **Because it is actual cost system, unrealised profits and losses do not arise.**
- **The stock valuation is based on the more recently acquired materials and thus more nearly approaches current market values.**

LIFO Characteristics

- **It is an actual cost system.**
- **Will frequently result in many batches being only partly charged to production where a subsequent batch received.**
- **Stocks are valued at the oldest prices.**
- **Product costs will tend to be based fairly closely on current prices and will therefore be more realistic.**

AVCO Characteristics

- **Although realistic, it is not an actual buying in price.**
- **It is less complicated to administer than FIFO and LIFO systems.**
- **It has an effect on product costs and stock valuation somewhere between the FIFO and LIFO systems.**
- **Makes cost comparison between jobs using similar materials somewhat easier.**

Remuneration Methods

The two main categories of remuneration are:

- **Time based**
- **Related in some way or another to output or performance**



Time Based System

- **Basic system**
- **High day rate system**



Advantages of Basic System

- **Simple to understand and administer.**
- **Simplifies wage negotiations in that only one rate needs to be determined unlike the continuous complex negotiations over individual rates in some incentive scheme.**

Disadvantages of Basic System

- **No real incentive to increase output.**
- **All employees in the grade paid the same regardless of performance.**
- **Constant supervision may be necessary.**

Advantages of High Day Rate System

- **It is claimed to attract higher grade workers.**
- **Provides a direct incentive without the complications of individual piecework rates.**
- **Simple to understand and administer.**

Incentive Schemes

- **Straight piecework**
- **Differential piecework**
- **Group incentive scheme**

Advantages of Incentive Schemes

- **Increases production thereby increases wages but also reducing overheads per unit.**
- **May enable firms to remain competitive in inflationary conditions.**
- **May improve morale by ensuring that extra effort is rewarded.**
- **More efficient workers may be attracted by the opportunity to earn higher wages.**

Disadvantages of Incentive Schemes

- **Frequently there are problems in establishing performance levels and rates with frequent and continuing disputes.**
- **Some intensive schemes are complex and hard to administer.**
- **Some group of workers, although relatively unskilled, may earn high wages through incentive schemes whilst others engaged on skilled work may become resentful when differentials are eroded.**

Overhead Absorption

Can be defined as a means of attributing overheads to a product or service based, for example, on direct labour hours, direct labour cost, or machine hours.

Absorption Bases

- **Direct labour hour**
- **Machine hour**
- **Direct wages**
- **Direct material**
- **Prime cost**
- **Cost unit**



Overhead Absorption Rate [OAR]

OAR

=

Total overheads of cost centre

Total number of units of absorption
base applicable to cost centre

Predetermined Overhead Absorption Rate [OAR]

Predetermined OAR

Budgeted total overheads of cost centre

**Budgeted total number of units of
absorption base applicable to cost centre**

Under or Over Absorption

If the overheads absorbed are greater than actual overheads, this is known as over absorption. Conversely, if absorbed overheads are less than actual overheads, this is known as under absorption.

Absorption Costing

- **Stage 1: Cost elements**
- **Stage 2: Coding**
- **Stage 3: Cost analysis**
- **Stage 4: Service cost centres**
- **Stage 5: Production cost centres**
- **Stage 6: Overhead absorption**

