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# INTRODUCTION TO COST & MANAGEMENT ACCOUNTING

## Meaning and Definition

**Cost**-The amount of expenditure attributable to a specified article, product or activity.

**Costing**- It is the technique and process of ascertaining costs.

**Cost Accounting**- the process of accounting which begins with the recording of income and expenditure and ends with periodical statements and reports.

**Cost Accountancy** the application of costing and cost accounting principles, methods and techniques .

**Management Accounting** the application of the principles of accounting and financial management

**Cost Management**- It is an application of management accounting concepts to plan, monitor and control costs.

## Objective of Cost Accounting System

**Ascertainment of Cost:** objective of cost accounting is accumulation and ascertainment of cost for each cost object.

**Determination of Selling Price:** cost accounting system provides a basis for price fixation and rate negotiation.

**Cost Control:** It ensures that expenditures are in consonance with predetermined set standard

**Assisting management in decision making:** It assists management in planning, implementing, measuring, controlling and evaluation of various activities

**Cost Reduction:** It is permanent reduction in the unit cost without impairing the quality of the product. Can be done using value chain analysis

MT - Selling price are set aftr ascertaining cost thn decision are taken for cost control & Reduc<sup>n</sup>

## Scope of Cost Accounting

**Costing:** Costing is the technique of ascertaining costs using some arithmetical process

**Cost Accounting:** it is a formal mechanism of cost ascertainment

**Cost Analysis:** process of finding out the factors responsible for variance and accordingly fixation of responsibility for cost differences.

**Cost Control:** Identifying ways of reducing and controlling cost. cost is analyzed to whether further cost reduction is possible.

**Cost Reports:** Reports are prepared for the use by the management which helps in planning and control, performance appraisal and managerial decision making.

**Statutory Compliances:** Maintaining cost accounting records as per the rules

MT- Aftr cost accounting is analysed, compared & controlled th statutory report is presented

**Cost Object:** Cost object is anything for which a separate measurement of cost is required. Cost object may be a product (book), a service (airline), a project, a customer, a brand category etc.

**Cost Units:** It is a unit of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed. Example for power industry is kilo Watt hour (kWh).

**Cost Drivers:** A Cost driver is a factor or variable which effect level of cost. Example for a purchase department is number of purchase orders.

## Cost accounting & Information Technology

Enterprise Resource Planning (ERP)

Internet (incl. Intranet & Extranet)

Cost Accounting using IT

Paperless Environment

Just-in-Time (JIT)

## Responsibility Centre

**Cost Centre :** A Centre which is held accountable for incurrence of cost. Which are under it control.

**Revenue Centre:** Who is accountable for generation of revenue eg-Sales Department

**Profit Centre:** Who is accountable for both generation of revenue & incurrence of cost

**Investment Centre:** Which are accountable for capital investment decision

**Standard Cost Centre:** Where input required for the output can be specified

**Discretionary Cost Centre:** Whose output can't be measured in financial terms

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Designed & Compiled by-  
Atul Garg (student of HJ)



## User of Cost Accounting System

## Essentials of Good Accounting System

Internal User

External User

Manager

Regulatory Authorities

Operational Level Staff

Auditors

Employees

Shareholder

Creditor & Lenders

**Informative and simple:** It should be practical, simple and capable of meeting the requirements of a business concern.

**Accurate and authentic:** The data to be used by it should be accurate and authenticated  
**Uniformity and consistency:** It is required for benchmarking and comparability of the results of the system

**Integrated and inclusive:** It should be integrated with other systems like financial, taxation & statistics etc. to have a complete overview and clarity in results.

**Flexible and adaptive:** It should be flexible enough to make amendment and modifications

**Trust on the system:** Management should have trust on the system and its output.

*MT- Simple & Flexible sys helps in maintaining Consistent Integrated Trust*

## Classification of Cost

By Nature or Element

By Functions

By Variability or Behavior

By Controllability

By Normality

By Cost for Decision Making



# By Cost for Managerial Decision Making

## (a) Pre determined Cost

A cost which is computed in advance before production or operations start

## (b) Standard Cost

A pre-determined cost, which is calculated from managements 'expected standard of efficient operation' and the relevant necessary

## (c) Marginal Cost

The amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit.

## (d) Estimated Cost

The expected cost of manufacture, or acquisition, often in terms of a unit of product computed on the basis of information available in advance of actual production or purchase

## (e) Differential Cost

It represents the change (increase or decrease) in total cost (variable as well as fixed) due to change in technology, process or method of production, etc.

## (f) Imputed Costs

These costs are notional costs which do not involve any cash outlay

## (g) Capitalised Costs

These are costs which are initially recorded as assets and subsequently treated as expenses.

## (h) Product Costs

These are the costs which are associated with the purchase and sale of goods (in the case of merchandise inventory).

## (i) Opportunity Cost

This cost refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action

## (j) Out-of-pocket Cost

It is that portion of total cost, which involves cash outflow

## (k) Shut down Costs

Those costs, which continue to be incurred even when a plant is temporarily shut down. Eg-rent, rate etc.

## (l) Sunk Cost

Historical costs incurred in the past are known as sunk costs. They play no role in decision making in the current period.

## (m) Absolute Cost

These costs refer to the cost of any product, process or unit in its totality.

## (n) Discretionary Costs

Such costs are not tied to a clear cause and effect relationship between inputs and outputs.

## (o) Period Cost

These are the costs, which are not assigned to the products but are charged as expenses against the revenue of the period in which they are incurred.

## (p) Engineered Costs

These are costs that result specifically from a clear cause and effect relationship between inputs and

## (q) Explicit Costs

These costs are also known as out of pocket costs and refer to costs involving immediate payment of cash. Salaries, wages, postage and telegram, printing and stationery, interest on loan etc.

## (r) Implicit Costs

These costs do not involve any immediate cash payment.

# CHAPTER-2 MATERIAL COSTING

**Direct Materials** cost of which can be directly attributable to the end product for which it is being used, in an economically feasible way.

**Indirect Material:** The materials which are not directly attributable to a particular final product.

## Requirement of Material Control

- **Purchase Procedure:** For determine purchases are made, after making suitable enquiries, at the most favourable terms to the firm.
- **Documentation:** Use of standard forms for placing the order, noting receipt of goods, authorising issue of the materials etc.
- **Storage:** of all materials and supplies in a well designated location with proper safeguards.

## Material Procurement Procedure

**Bill of Materials-** It is the basic document which is prepared by experts specifying the quality and quantity of materials required to make final goods.

**Material Requisition Note-** It is prepared by the department which require materials for processing.

**Purchase Order-** After selection of vendor for the materials, the purchase department initiates purchase order for the required quality and quantity.

**Purchase Requisition Note-** It is the document which authorise purchase department to purchase the requisitioned materials. Based on this document the purchase department invites proposals or quotations from the vendors.

**Goods Received Note (GRN)-** This document is evidence of the receipt of goods from the vendor.

**Material Returned Note-** This document is prepared when all or any materials are returned back to vendor.

**Invoice-** This is the bill charged by vendor for the materials. Invoice also shows the duties and taxes to be paid for the purchase of materials. The invoice is the basis for valuation of material in store ledger and books of account.

## Duties of storekeeper

- He should keep control over all activities in Stores department.
- He should ensure that all the materials are stored in a safe condition.
- He should maintain proper record of quantity received, issued, balance in hand.
- He should issue materials only against the material requisition slip approved by the authority.

## JIT Inventory Management

JIT is a system of inventory management with an approach to have zero inventories in stores.

- Demand for final product.
- Production starts to process the demand for product.
- Material Requirement is sent to Purchase department.
- Order for raw materials sent to supplier.

## ABC Analysis

This system exercises discriminating control over different items of inventory on the basis of the investment involved.

### Advantages of ABC

- It ensures that, minimum investment will be made in inventories of stocks to be carried.
- The cost of placing orders, receiving goods and maintaining stocks is minimised.
- Attention Required
- Time is saved since attention need be paid only to some of the items rather than all.

## First in First Out Method

The materials are issued in the order in which they arrive in the store or the items longest in stock are issued first.

### Advantages

- Simple to understand and easy to operate.
- Cost charged to production represents actual cost.
- Closing stock of material will be represented very closely at current market price.

## Last in First Out Method

This method is based on the assumption that the items of the last batch (lot) purchased are the first to be issued.

### Advantages

- The cost of materials issued will be either nearer to and or will reflect the current market price.
- The use of LIFO helps to iron out the fluctuations in profits.
- In the period of inflation LIFO will tend to show the correct profit.

### Disadvantages

- Costs of different similar batches of production carried on at the same time may differ a great deal.
- This method of valuation of material is not acceptable to the income tax authorities.

## Weighted Average Method

This method gives due weightage to quantities. Issue price is calculated dividing sum of products of price and quantity by total number quantities.

### Advantages

- It smoothens the price fluctuations if at all it is there due to material purchases.
- Issue prices need not be calculated for each issue unless new lot of materials is received.

### Disadvantages

- Material cost does not represent actual cost price and therefore, a profit or loss will arise out of such a pricing method

## Simple Average Method

Materials issued are valued at average price, which is calculated by dividing the total of rates at which different lot of materials are purchased by total number of lots. In this method quantity purchased in each lot is ignored.

# CHAPTER 3-EMPLOYEE COST AND DIRECT EXPENSES

## Direct Employee Cost

- Payment of employees who are **directly engaged** in the **production process**.
- **Easily identified and allocated** to cost unit.
- **Varies with the volume** of production.

## Indirect Employee Cost

- Payment of employee who are **not directly engaged** in the production process.
- **Apportioned** on some appropriate basis
- **May not vary with the volume** of production.

## Collection of Employee Cost

It is the duty to analyse the total payment of wages of each department into:

The amount treated as-

- **direct cost** = goods produced
- **indirect employee** = overheads
- **cost of idle time** = loss.
- **abnormal loss/ gain** t/f profit and loss account.

## EMPLOYEE COST CONTROL

### Personnel Department

It searches for the required skills and qualification.

### Engineering and Work Study Department

Supervises production activities.

### Time-Keeping Department

Concerned with the maintenance of attendance

## Important Factor to control Employee Cost

- Assessment of **manpower** requirements.
- **Control** over time-keeping and time-booking.
- Time & Motion Study.
- Control over **idle time and overtime**.
- Control over **employee turnover**.
- **Wage and Incentive** systems.



## IDLE TIME

- The time during which no production is carried-out because the **worker remains idle but are paid**.
- Idle time can be normal or abnormal.
- **Eg-paid leaves, allowable rest or off time etc.**

## Overtime

**Work done beyond normal working hours** is known as 'overtime work'.

Overtime Payment = Wages paid for overtime at normal rates + Premium (extra) payment

## Overtime Premium

The rate for overtime work is **higher than the normal time rate**; usually it is at double the normal rates. The extra amount so paid over the normal rate is called overtime

## Normal Idle Time

### Causes

The **time lost** b/w factory gate and the place of work.  
The **interval** between one job and another.  
The **setting up time** for the machine.  
Normal **rest time, break** for lunch etc.

### Treatment

It is **treated as a part of cost of production**.  
In case of indirect workers, **normal idle time** is considered for the computation of overhead rate.

## Abnormal Idle Time

### Causes

Idle time may also arise due to abnormal factors.  
Power failure, Breakdown of machines  
**Non-availability** of raw materials, strikes, lockouts, poor supervision etc.

### Treatment

It is **shown as a separate item** in the Costing P&L. It should be **further categorised** into controllable & uncontrollable.  
For each category, the **break-up of cost** due to various factors should be

## Controllable & Uncontrollable idle time

It refers to that time which could have been put to productive use had the management been more alert and efficient.

It refers to time lost due to abnormal causes, over which management does not have any control e.g., breakdown of machines etc.

## Causes & Treatment of overtime premium

Causes	Treatment
The customer may agree to bear the entire charge of overtime because <b>urgency of work</b> .	If overtime is resorted to at the desire of the customer, then overtime <b>premium may be charged to the job directly</b> .
Overtime may be called for to make up any shortfall in production due to some <b>unexpected development</b> .	It should be treated as <b>overhead cost</b> of the particular department or cost centre which works overtime.
Overtime work may be necessary to make up a shortfall in production due to some <b>fault of management</b> .	If overtime is worked due to the fault of another department. It <b>should be charged to the latter department</b> .
Overtime work may be resorted to, secure an out-turn in <b>excess of normal output</b> to take advantage of an expanding market or of rising demand.	It should not be charged to cost, but to Costing Profit and Loss Account.

## Advantages of Rowan

- It is claimed to be a **fool-proof system** in as much as a worker can never double his earnings even if there is bad rate setting.
- It is admirably **suitable for encouraging moderately** efficient workers as it provides a better return for moderate efficiency than under the Halsey Plan.
- The **sharing principle** appeals to the employer as being equitable.

## Disadvantages of Rowan

- The system is a bit **complicated**.
- The **incentive is weak** at a high production level where the time saved is more than 50% of the time allowed.
- The sharing principle is **not generally welcomed** by employees.

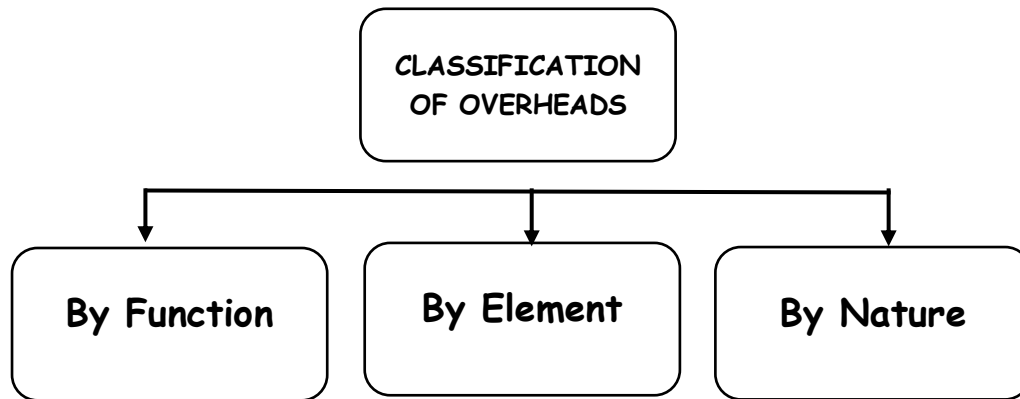
## Advantages of Halsey

- Time **rate is guaranteed** while there is opportunity for increasing earnings by increasing production.
- The system is **equitable in as much as the employer gets a direct return** for his efforts in improving prod<sup>n</sup> methods and providing better equipment.

## Disadvantages of Halsey

- Incentive is **not so strong** as with piece rate system. In fact the harder the worker works, the lesser he gets per piece.
- The **sharing principle** may not be liked by employees.

# CHAPTER - 4 OVERHEADS - ABSORPTION COSTING METHOD



## By Function

Factory or Manufacturing or Production OH

all expenditures incurred from the procurement of materials to the completion of finished product.

Office and Administrative Overheads

which is not related directly to production, selling, distribution, research or development activity.

Selling and Distribution Overheads

It includes all indirect expenses in sales management for the organization & making product available for sale

## By Element

Indirect Materials

Materials which do **not normally** form part of the finished product are known as indirect materials.

Indirect Employee Cost

which **cannot be allocated** but can be apportioned to or absorbed by cost units.

Indirect Expenses

Which **cannot be directly,** conveniently and wholly **allocated** to cost centres.

## By Nature

Fixed Overhead

They do not tend to increase or decrease with the changes in output.

Variable Overhead

These costs tend to **vary** with the volume of activity.

Semi-Variable

These costs contain **both components** & are partly affected by fluctuations in the level of activity.

## ACCOUNTING AND CONTROL OF MANUFACTURING OH

factory overhead rates are estimated and overheads absorbed at last show how actual are compared with the absorbed amount.

### Distinction Between Various Terms Used:

#### Estimation and Collection of OH

The first stage is to **estimate the amount of overheads**, keeping in view the past figures and adjusting them for known future changes.

#### Assignment of OH

It is the **traceability** of the overheads to a cost object in an economically feasible manner.

#### Cost Allocation

It refers to the direct assignment of cost to a cost object which can be **traced directly**.

#### Cost Apportionment

OH which **cannot be directly allocated** to the various departments & cost centres. Such un-allocable expenses are to be **spread over** the various departments.

#### Re-Apportionment

The process of **assigning service department OH to production departments** is called re-apportionment. Here all the factory overheads are collected under

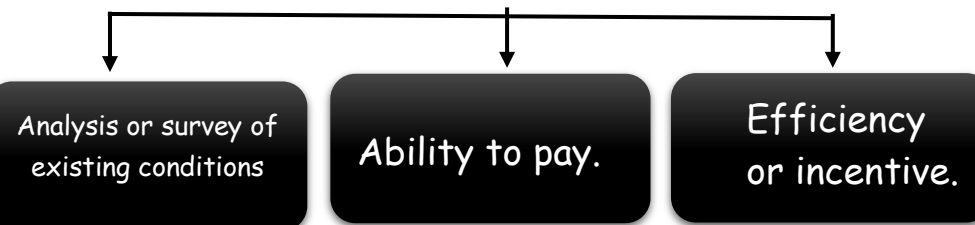
#### Absorption

Each unit of production **automatically absorbs a certain amount of factory overheads through pre-determined rates**. During the year a certain amount will be absorbed over the various

#### Treatment of Over and Under Absorption

The overheads are generally **either under-absorbed or over-absorbed**. The **difference has to be adjusted** keeping in view of such differences and the reasons therefore.

#### Basis of apportioning OH





## Difference Between Allocation and Apportionment

Allocation	Apportionment
Allocation deals with the whole items of cost, which are identifiable with any one department.	Apportionment deals with the proportions of an item of cost,
Allocation is a direct process of charging expenses to different cost centers.	Apportionment is an indirect process because there is a need for the identification of the appropriate portion of an expense to be borne by the different departments benefited.
Allocation is a much wider term than apportionment.	This is narrower than Allocation.

### Direct Re-distribution Method

Service department costs under this method are apportioned over the production departments only, ignoring the services rendered by one service department to the other.

### Non - Reciprocal Method

It gives cognizance to the services rendered by service department to another service department. this method is more complicated bcz a sequence of apportionments has to be selected here.

## Reciprocal Service Method

**Simultaneous equation method:** The costs of service departments are ascertained, then re-distributed

**Trial and Error Method:** The cost of one service cost centre is apportioned to another service cost centre. The cost of another service centre plus the share received from the first cost centre is again apportioned to the first cost centre. This process is repeated till the amount to be apportioned becomes negligible.

**Repeated Distribution Method:** Service departments' costs are distributed to other service and production departments on agreed percentages and this process continues to be repeated, till the figures of service departments are either exhausted or reduced to too small a figure.

## Method of Absorbing Overhead to various products or job

Percentage of Direct Material

Percentage of Prime Cost

Percentage of Labour Cost

Labour/Machine Hour Rate

Rate per Unit of Output

# CHAPTER-5 COST SHEET

## Prime Cost

Prime cost represents the **total** of direct materials costs, direct employee costs and direct expenses. The **total of cost for each element has to be calculated separately.**

## Cost of Production

In a **conventional cost sheet**, this item of cost can be seen. It is the **total of prime cost and factory related costs and overheads.**

## Cost of Goods Sold

It is the **cost of production for goods sold**. It is calculated after **adjusting the values of opening and closing stocks of finished goods.**

## Cost of Sales

It is the total cost of a product incurred **to make the product available to the customer** or consumer. It includes Cost of goods sold, administration and marketing expenses.

## Packing Cost

**Primary**-Packing material which is essential to hold and preserve the product for its **use.**

**Secondary**-Packing material that enables to **store, transport** make the product marketable.

## Administrative OH

**Production**- It **includes the cost of production administration only.**

**Sales**- It is the cost related with General & administration of the entity.

## Advantages of Cost Sheet

- (i) It provides the **total cost figure.**
- (ii) It helps in cost **comparison.**
- (iii) Facilitates **preparation of cost estimates.**
- (iv) **Help in arriving at the figure of selling price.**
- (v) **Facilitates cost control.**

# CHAPTER - 6 Cost Accounting System

## NON-INTERGRATED ACCOUNTING SYSTEM

It is a system of accounting under which **separate ledgers are maintained** for cost and financial accounts.

<b>Cost Ledger</b>	<ul style="list-style-type: none"> <li>This is the <b>principle ledger</b> of the cost department in which <b>impersonal accounts</b> are recorded.</li> </ul>
<b>Stores Ledger</b>	<ul style="list-style-type: none"> <li>It contains an <b>account for each item</b> of stores.</li> <li>The <b>entries</b> in each account maintained in this ledger are <b>made from the invoice, GRN, MRN etc.</b></li> </ul>
<b>Work - in - Process Ledger</b>	<ul style="list-style-type: none"> <li>This ledger is also known as <b>job ledger</b>, it contains accounts of unfinished jobs and processes.</li> <li>All material costs, wages and overheads for each job in process are <b>posted to the respective job account</b> in this ledger.</li> </ul>
<b>Finished Goods Ledger</b>	<ul style="list-style-type: none"> <li>It contains an <b>account for each item</b> of finished product manufactured or the completed job.</li> </ul>

## INTERGRATED ACCOUNTING SYSTEM

It is system of accounting where **cost and financial accounts are kept in the same set of books**.  
**No separate sets of books** for Costing and Financial records.

### Advantages

<b>No Need for Reconciliation</b>	The question of <b>reconciling costing profit and financial profit</b> does not arise, as there is only one figure of profit.
<b>Less Efforts</b>	Due to use of one set of books, there is a <b>significant saving</b> in efforts made.
<b>Less time consuming</b>	<b>No delay is caused</b> in obtaining information as it is provided from books of original entry.
<b>Economical process</b>	It is <b>economical</b> also as it is based on the concept of " <b>Centralisation of Accounting function</b> ".

## RECONCILIATION OF ACCOUNTS

When the **cost and financial accounts are kept separately**, it is imperative that those **should be reconciled**; otherwise the cost accounts would not be reliable.

Reconciliation of the balances generally, is **possible preparing a Memorandum Reconciliation Account**. In this account, the **items charged in one set of accounts but not in the other** or those charged in excess as compared to that in the other are collected and by adding or subtracting them from the balance of the amount of profit shown by one of the accounts, shown by the other can be reached.

The **procedure is similar to the one followed for reconciling the balance with a bank that shown by the cash book or the ledger**.

## Features of integrated

- Complete analysis of **cost and sales** are kept.
- Complete details of **all payments in cash** are kept.
- Complete details of **all assets and liabilities** are kept and this system does not use a notional account to represent

## Procedure for Reconciliation

- Ascertainment of profit as per **financial accounts**.
- Ascertainment of profit as per cost accounts.
- **Reconciliation** of both the profits (similar to the bank reconciliation statement).



# CHAPTER - 7 ACTIVITY BASED COSTING

## Meaning of Important Terms

**Activity Based Costing** is an accounting methodology that assigns costs to activities rather than products or services.

**Activity** refers to an event that incurs cost.

**Cost Object** is an item for which cost measurement is required e.g. a product or a customer.

**Cost Driver** is a factor that causes a change in the cost of an activity.

**Cost Pool** represents a group of various individual cost items. It consists of costs that have same cause effect relationship.

## Advantages of ABC

- It enables better pricing policies by supplying accurate cost information.
- Help to identify non-value added activities which facilitates cost reduction.
- It highlights problem areas which require attention of the management.
- More accurate costing of products/services.
- Overhead allocation is done on logical basis.

## Disadvantages of ABC

- It is not helpful to small Organization.
- Selection of most suitable cost driver may not be useful.
- It may not be applied to organization with very limited products.
- It is more expensive particularly in comparison with Traditional costing system.

## ABC Method

Overheads are related to activities and grouped into activity cost pools.

Costs are related to activities and hence are more realistic.

Activity-wise cost drivers are determined.

## ABC Method

Overheads are related to activities and grouped into activity cost pools.

Costs are related to activities and hence are more realistic.

Activity-wise cost drivers are determined.

## Activity Based Budgeting

It provides a framework for estimating the amount of resources required in accordance with the budgeted level of activity.

## Benefits of ABB

It can enhance accuracy of financial forecasts and increasing management understanding.

ABB eliminates much of the needless rework created by traditional budgeting techniques.

# CHAPTER-8 UNIT & BATCH COSTING

## Unit Costing

**Concept-** Single/ output / unit costing is applied in situation where **standardized product(s) is / are produced from a single process**. In other words, **Output is identical**, and each unit of output **requires identical cost**

**Examples-** Unit Costing Method is applied in **industries which produces single output or a few variants of a single output**. Ex. Quarries, Brickworks, colliery, paint manufacturing, etc.

**Focus Area-** The **primary focus areas** is on the preparation of cost sheet for the product.

**Costing-** The **principles of cost** ascertainment are the same as applicable for job

## Batch Costing

**Batch-** Where the **output of the job consists of homogeneous (similar) units**, a lot (or) collection of similar units may be used as a cost unit for ascertaining cost. Such lot or collection of units is called as a batch.

**Batch Costing-** It is a **form of Job costing** wherein cost is ascertained for a collection/ lot of units called a batch. **Separate cost sheet are maintained for each batch of products** by assigning a batch number.

Batch costing may be used in the following circumstances-

1. When the output of a job consists of a number of dependent units.

2. When customer's annual requirement is to be supplied in uniform quantities over the year.

3. When certain features like size, colour, taste, quantity etc. are required uniformly over a collection of units.

## EOQ

**Meaning-** **Economic Batch Quantity (EBQ)** represents the optimum size for batch production, at which the total of set - up costs per annum, and Inventory Carrying Costs per annum, are minimum.

**If batch size increases, there is an increase in the carrying cost but the set up cost per unit of product is reduced**, this situation is reversed when the batch size decreases.

# CHAPTER-9 JOB & CONTRACT COSTING

## Job Costing

A Job refers to any **specific assignment, contract or work order** wherein work is executed as per customer's specific requirements. The **output** of the job generally consists of **one unit or a manageable number of units**. **Ascertainment of cost of each Job is called Job Costing.**

### Advantages

- Helps in **Cost Ascertainment & ensure Profit.**
- Aids **Production Planning and Control.**
- **Easy to implement Budgetary Control and Standard Costing.**

### Disadvantages

- **Time consuming, costly and laborious** clerical process.
- **Higher possibilities of errors** in job Cost Estimates.
- **Not suitable for long term work**, or in inflationary situations.

## Contract Costing

Contract costing is a **form of specific order** costing where job undertaken is relatively large and normally **takes period longer than a year** to complete.

**Cost Plus Contract**- where the value of the contract is determined by adding an agreed percentage of profit to the total cost.

### Advantages

- The Contractor is assured of a fixed percentage of profit.
- It is useful when the work to be done is not definitely fixed at the time of making the estimate.
- Contractee can ensure himself about 'the cost of the contract'.

### Escalation Clause

It empowers a contractor to revise the price of the contract in case of increase in the prices of inputs. Inclusion of such a clause in a contract deed is called an "Escalation Clause".

# CHAPTER - 10 PROCESS & OPERATION COSTING

## Process Costing

It is defined as "a method of Cost Accounting whereby costs are charged to processes or operations and averaged over units produced".

### Features

- The output of one process becomes the input of another process.
- The end product is not distinguishable from one another.
- It is not possible to trace the identity of any particular lot of output.
- Production of a product may give rise to Joint and/or By-Products.

## Inter-Process Profit

The difference between cost and the transfer price is known as inter-process profits.

### Advantages

- Comparison between the cost of output and its market price at the stage of completion is facilitated.
- Each process is made to stand by itself as to the profitability.

### Disadvantages

- The use of inter - process profits involves complication.
- The system shows profits which are not realised because of stock not sold out.

## Operation Costing

- It is used when an entity produces more than one variant of final product using different materials but with similar conversion activities.
- It is also known as Hybrid product costing system.
- Moreover, under operation costing, conversion costs are applied to products using a predetermined application rate.
- This predetermined rate is based on budgeted conversion costs.
- The cost of raw material is accumulated on the basis of job or batches or units of two variants of products. But the costs for the conversion activities need not to be identified with the product variants as both the Products require similar activities for conversion.
- Conversion activity costs are accumulated on the basis of departments or processes only.



# CHAPTER - 11 Joint Product

**Joint Product:** Two or more product(s), Produced from the same process or operation, considered to be of relatively equal importance.

**Co-Product:** Two or more product, belonging to the same line of activity, but arising from different processes or operations, considered to be of relatively equal importance.

**By- Product:** "products recovered from material discarded in a main process, or from the production of some major products, where the material value is to be considered at the time of severance from the main product."

**Spilt off Point:** refers to the stage or point of production, wherein common raw material gets spilt or identified into two or more Finished Products.

## Method of Joint Cost Apportionment

**Physical Quantities Method:** Joint Costs are apportioned on the basis of physical quantities, such as weight or measure expressed in gallons, tonnes, kilograms, litres etc. Any loss arising in processing is also apportioned over the products on the same basis.

**Disadvantages:** It gives equal importance and value to all the joint products, if the quantities were the same.

This method cannot be applied if the physical quantities of the Joint Products are measured differently, e.g. one product in kilograms and the other product in liters.

**Average Cost Method:** Under this method, Total Joint Costs up to the split off point are divided by total units of joint products produced. Costs are apportioned in the ratio of quantities produced.

**Disadvantages:** Here, all Joint Products will have uniform cost per unit. Relative importance is not considered.

# CH-12 Operating Cost

**Meaning:** Operating Costing is the method of **ascertaining the costs of providing/ operating/ rendering a service**. The principal of **Operating Costing** is to accumulate costs under suitable heading and to express them in terms of number of units of service rendered.

The factors that have a bearing on cost are identified based on study of technical and operating data.

## **Absolute (Weighted Average)**

**Tonne - kilometres-** This is the sum total of Tonne - kilometers, arrived at by multiplying various distances by respective load quantities carried.

## **Commercial (Simple Average)**

**Tonne - kilometres-** It is derived by multiplying total distance (i.e. kilometers), by average load quantity (Tons).

## Standard Load

- Where the goods to be transported are of varying bulk and weight, the **calculation of actual number of Tonne - kilometers may not be easy**.
- In such a case, the '**Standard Load**' is selected as the unit, i.e. the **load which a Lorry would carry**. This would have reference both to bulk and weight and would give an efficient method for **distributing the cost of transport over different departments**.
- Thus, if the Turnover of various departments is reduced to the '**Standard Load**' by **first calculating their weight and then the bulk of article produced**, the costs of distributing the product can be easily ascertained.

- On the same principle, the **Cost of Electricity Generation is correlated with units generated and also with units sold**, and similarly in Hospitals the cost of their maintenance is co - related to units of '**Available Bed - Days**'.
- This **principle also can be extended** for associating cost with **convenient units of service rendered** by an Entity, so that Management is able to judge whether the **Entity is running efficiency** and in the manner in which the service requires to be improved or be made **more economical**.

# CHAPTER - 13 Standard Costing

Standard Cost is the **pre - determined operating cost** calculated from Management's standards of **efficient operation and the relevant necessary expenditure**.

## • Uses of Standard Costs

1. Planning & Control: It provide a **benchmark**, which serve two purpose - showing direction to the activities of the Firm (planning) and analysing whether actual activities are in proper direction (control).
2. Pricing Decisions: It **decisions** as also for decisions involving submission of quotations, responding to tenders, etc.
3. Inventory Valuation: It is used to value Inventory, where **actual figures are not available**.

- Financial Standard: These are standards, which relate to monetary factors of cost, i.e. Material Prices, Wage Rates, These are also called **Monetary Standards**.
- Physical Standards: which relate to Material Consumption Quantity, Labour Processing Time, etc. may also be called **Non - Monetary**

## Problems faced while setting Physical Standards

- When new products are manufactured for sale, material quality requirements and labour skill requirement may not be accurately determined.
- Installation of new machines, for which estimation of output and standard of achievable efficiency is not possible.
- There may be various ways in which the materials can be processed. Each of these methods of work has different requirements.

**Favourable Variance:** Variances which lead to an increase in Profit are called Favourable Variances. Favourable Variances are credited to the P&L Account.

**Adverse Variance:** Variances which lead to a decrease in Profit are called Adverse variance. Adverse Variances are debited to the P&L Account.

### Controllable vs Non-Controllable Variances

**Controllable Variances:** These can be controlled / managed by the concerned Department Heads/ Responsibility Centres. they may also be called as the **Operational** Component of the Variance. Department Managers are appreciated for Favourable Variances and answerable for Adverse Variances.

**Non - Controlled Variance:** These are beyond the control of Department Heads / Responsibility Centres. they may also be called as the **Planning** Component of the Variances. Department Managers cannot be held responsible for Favourable or Adverse Variances.

### Budgetary Control

Budgets are financial and / or quantitative statements, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for achieving that objective.

### Advantages of Standard Costing

- **Measuring Performance:** Standards provide a basis for measurement of actual performance.
- **Cost Control:** Adverse variances can be controlled and their recurrence avoided.
- **Price Fixing:** where demand for a product is elastic, standard cost can be used as a basis for fixing the selling price.
- **Quotations and Estimates:** Standard Costing facilitates the estimation of the cost of new products with greater accuracy.
- **Stock Valuation:** Standard Costs represent normal cost and are ideal for Stock Valuation, when compared to actual costs.

### Advantages of Standard Costing

- **Variation in Price:** The prices cannot be accurately estimated. Hence, the System cannot operate effectively in such situations.
- **Varying level of output:** Capacity utilisation cannot be precisely estimated for absorption of overhead.
- **Changing technology:** In light of frequent technological changes affecting the conditions of production, standard costing may not be suitable.
- **People's Attitude:** Technical people are accustomed to think of standards as physical standards. so, they will be misled.

# CHAPTER - 14 MARGINAL COSTING

## Meaning

- The effect on profit, of changes in volume or type of output, by differentiating between Fixed Costs and Variable Costs is called **marginal costing**.
- **Direct Costing** is the practice of charging all Direct Costs to operations, processes or products, leaving all Indirect Costs to be written off against profits in the period in which they arise.
- **Differential Cost** is "the increases or decrease in total cost or the change in specific elements of cost that result from any variation in operations.
- **Variable Cost** is that portion of cost, which changes or varies proportionately based on output/volume / quantity.
- **Fixed Costs** are costs which are assumed to remain constant, for a given period of time, irrespective of level of output during that period.
- **Cost Variance** is the difference between Standard Cost and comparable Actual Cost incurred during a period.
- Expenses that exhibit features of Fixed and Variable Costs are **Semi-variable cost**.

- **PV Ratio** is the relationship between Contribution and Sales Value. It is also termed as Contribution to Sales Ratio.
- **BEP** is the level of Sales at which Total Contribution equals Fixed Costs. Hence, at that level, there is neither a Profit nor a Loss to the Firm.
- **MOS** represents the difference between the Actual Sales and Break - Even Point Sales. It can be expressed as a percentage of Total Sales, or in terms of quantity.
- **Indifference Point** is the level of Sales at which Total Costs of two options are equal.
- **Shut Down Point** indicates the level of operations (Sales), below which it is not justifiable to pursue operations.

## Limitation of BEC

- The Variable Cost line need not necessarily be a straight line because of the possibility of operation of law of increasing returns or law of decreasing returns.
- The Selling Price may be a constant factor. Any increase or decreases in output is likely to have an influence on the Selling Price per unit.
- The Break Even Chart assumes that business condition will not change. This assumption is not realistic.

## Improvement in MOS

- Increases in Selling Price, provided the demand is inelastic so as to absorb the increased prices.
- Reduction in Fixed Expenses.
- Reduction in Variable Expenses
- Increasing the Sales Volume
- Substitution or introduction of a product mix such that more profitable lines are introduced.



## Advantages of Marginal Costing

- **Pricing Decision:** Since Marginal Cost per unit is constant from period to period within a short span of time, firm decisions on pricing policy can be taken.
- **Overheads Variances:** Marginal Costing avoids under recovery or over recovery of Fixed Overheads since these costs are recognised as Period Costs.
- **Break-Even Analysis:** It shows the effect of increasing or decreasing production activity on the profitability of the Company.
- **Control over Expenditure:** Management can compare the actual Variable Expenses with the budgeted Variable Expenses and take corrective action through Variance Analysis.

## Limitation of Marginal Costing

- **Difficult to classify:** It is difficult to exactly segregate the expenses into Fixed and Variable category.
- **Single Cost Driver:** It assumes that the Output Quantity is the only Cost and Revenue Driver, which causes changes in the levels of Revenue and Costs.
- **Contribution is not final:** Contribution of a product itself is not a guide for optimum profitability unless it is linked with the Key Factor.
- **Naïve assumptions:** Some assumptions regarding the behaviour of Revenue and Costs are not necessarily true in a realistic situation.

## Areas Where Marginal Costing Technique is Used

- **Determination of Selling Price:** under normal circumstances, for special market or for a special customer, during recession, at Marginal Cost or below Marginal Cost.
- **Product Mix Decision:** Selection of optimal product mix, Substitution of one product with another, Discounting or dropping of a product line, etc.
- **Shut - down or Continue Decision, or determination of output level in period of recession or depression.**
- **Marketing Decision Selling in the Domestic Market or in the Export Market, acceptance of Export Offers, etc.**
- **Change vs. Status Quo Retaining or replacing a Machine/ Process, etc.**

# CHAPTER-15 BUDGETARY CONTROL

**Budget** is a quantitative expression of a plan for a defined period of time.

1. It may include planned Sales Volume and Revenue, Resource Quantities, Costs and Expenses, and Assets, Liabilities and Cash Flows.

**Budgeting** means of -

Co-ordinating the combined intelligence of an entire organisation, into a plan of action, Based on past performance, and Governed by rational judgement of factors, that will influence the course of business in the future.

## Essentials of Budget

Clearly **defined** organizational structure.

**Responsibility** assigned to identifiable units within the Entity.

**Commitment** of entire organisation to budgeting. Setting of clear **objectives** and reasonable targets.

Objectives to be in **tune** with the Entity's Strategies and long term plans.

## Features of Budget

1. **Scope:** A Budget is a detailed plan of all the **economic activities** of a Business.
2. **Futuristic:** A Budget is concerned for a definite future period.
3. **Written:** A Budget is a written document.
4. **Co-operation:** All the Department of a Business Unit co-operate for the preparation of a Business Budget.
5. **Focus:** Budget is a written document.
6. **Past and Present:** Budget is usually prepared in the light of past experience, adjusted for current trends.
7. **Continuous and Flexible:** Budget should be updated, corrected and controlled whenever circumstances change.

## Budgetary Control

- a. **Objectives:** Determining the objectives to be achieved, over the budget period, and the policy that might be adopted for the achievement of these ends.
- b. **Activities:** Determining the variety of activities that should be undertaken for achievement of the objectives.
- c. **Plans:** Drawing up a plan or a scheme of operation in respect of each class of activity, in physical as well as monetary terms for the full budget period and its parts.
- d. **Performance Evaluation:** Laying out a system of comparison of actual performance by each person, section or department with the relevant budget and determination of causes for the discrepancies, if any.

## Advantages of Budgetary

1. **Efficiency:** It enables the Management to conduct its business activities in an efficient manner.
2. **Resource Utilisation:** Effective utilization of scarce resources, i.e. men, material, machinery, methods and money - is made possible through Budgets.
3. **Cost Control:** It is a powerful instrument used by Firms to control their expenditure.
4. **Cost Consciousness:** It inculcates the feeling of cost consciousness among workers and Managers.
5. **Performance Evaluation:** It provides a yardstick for measuring and evaluating the performance of individuals and their departments.
6. **Standard Costing:** It creates suitable conditions for the implementation of Standard Costing System in the Firm.
7. **Variance Analysis:** It reveals deviations from the budgeted figures after making a comparison with actual figures.

## Disadvantages of Budgetary Control

1. **Estimates:** Budgets may or may not be true, as they are based on estimates. The assumptions about future events may or may not actually happen.
2. **Rigidity:** Budgets are considered as rigid document. Too much emphasis on budgets may affect day - to - day operations and ignores the dynamic state of organisational functioning.
3. **False Sense of Security:** Mere budgeting cannot lead to profitability. Budgets cannot be executed automatically. It may create a false sense of security that everything has been taken care of in the budgets.
4. **Lack of co - ordination:** Staff co - ordination is usually not available during Budgetary Control exercise.
5. **Time and Cost:** The introduction and implementation of the system may be expensive.

## Fixed Budget

**Meaning:** It is a Budget designed to remain unchanged irrespective of the level of activity actually attained.

### Merits

- Simple to understand.
- Can be quickly prepared.
- Variables and Sensitivity Analysis not required.
- Single Absorption Rate avoids confusion.

### Demerits

- Misleading since poor performance may remain undetected and a good performance may go unrealized.
- Not suitable for long term evaluation
- Not suitable when environment conditions change constantly

## Flexible Budget

1. **Meaning:** It is Budget, which by recognising the difference between fixed, semi - variable and variable costs, is designed to change in relation to level of activity.

### Merits

- Sales, Costs and profit can calculate easily for various levels of production capacity.
- Change in business condition are considered and adjusted suitably.

### Demerits

- Useful only when a Standard System is in use.
- Time consuming, expensive and labour oriented preparation process

**Profit Budget:** Budgets that enable the ascertainment of Profit, for example, Sales Budget, Profit & Loss Budget, etc.

**Physical Budgets:** Budgets that contain information in terms of physical units about sales, production, etc. for example, Quantity of sales, Quantity of Production, Inventories, Manpower Budgets.

**Cost Budgets:** Budgets which provide Cost Information in respect of Manufacturing, Selling, Administration, etc. for example, Manufacturing Costs, Selling Costs, Administration Cost, R&D Cost Budgets.

**Financial Budgets:** A Budget, which facilitates to ascertain the Financial Position of a concern, for example, Cash Budgets, Capital Expenditure Budget, Budgeted Balance Sheet, etc.

## ZERO BASE BUDGETING

**Meaning:** It is an Expenditure Control Device where each Divisional Head has to justify the requirement of funds for each head of expenditure and prepare the budget accordingly, without reference to the past budget or achievements.

### Advantages

**Priority Allocation:** It provides a systematic approach for the evaluation of different activities and rank them in order of preference for the allocation of scarce resources

**Management by Objectives:** The technique can be used for the introduction and implementation of the system of 'Management by Objectives'

### Disadvantages

**Time Consuming:** It is time consuming & costly. It needs properly trained Personal to do the required job.

**Lack of Adequate Data:** ZBB requires data for justifying the allocation of resources to various alternatives in every period. Sometimes, this data may not be available for analysis.