



Strategic Cost Management
Subject Code – MBAFM313

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Module – 2
Overheads

OVERHEADS

- Overheads are the indirect costs that cannot be allocated to any specific job or process as they are not capable of being identified with any specific job or process. It includes cost of indirect materials, Indirect labor and indirect expenses that cannot be conveniently charged to any job or process.
- The CIMA defines overhead cost as “the total cost of indirect materials, labor and indirect expenses.
- In short, it is the cost of materials, labor and expenses that cannot be economically identified with specific saleable cost unit.

CLASSIFICATION OF OVERHEAD COSTS

1. FUNCTIONAL CLASSIFICATION

- a. Manufacturing overheads
- b. Administration overheads
- c. Selling and distribution overhead
- d. R&D overheads

2. CLASSIFICATION WITH REGARDS TO BEHAVIOR OF THE EXPENDITURE

- a. Fixed overhead
- b. Variable overhead
- c. Semi-variable overhead

3. ELEMENT WISE CLASSIFICATION

- a. Indirect material cost
- b. Indirect labor cost
- c. Indirect expenses

COLLECTION OF OVERHEADS

Collection of overheads means the pooling of indirect items of expenses from books of account and supportive/ corroborative records in logical groups having regards to their nature and purpose. Overheads are collected on the basis of pre-planned groupings, called cost pools.

Difference between Allocation and Apportionment

Allocation	Apportionment
Assignment of particular cost to a particular department or cost center is called as allocation.	These costs are common to various departments and cannot be charged to a particular department or cost center.
Allocation deals with whole items of costs.	Apportionment deals with proportions of items of costs.
No base is required for allocation of cost to a department, it is a direct process.	A equitable base is required for apportionment of cost to the production or services department.

STEPS OF FACTORY OVERHEAD COSTING

Manufacturing overhead costing comprised of the following steps-

- (i) Collection of factory overhead costs
- (ii) Allocation of overhead costs
- (iii) Apportionment or distribution of overhead costs
- (iv) Re-distribution of service department cost to production department
- (v) Absorption of overheads.

ALLOCATION AND APPORTIONMENT

Allocation refers to identification of overhead costs to the cost center. But apportionment refers to the distribution of overhead cost on some logical base when identification to cost center is not possible.

A cost center may be a person or location or an equipment or group of these in respect of which cost is ascertained for the purpose of cost control. It may be production cost center or service cost center.

Apportionment or distribution of overhead costs- When overheads are not allocable, overheads would be apportioned or distributed on some logical bases, some of these are:

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Basis of apportionment:

Overheads	Basis of apportionment
Insurance, depreciation, repairs & maintenance on plant & machinery, building & other fixed assets.	Value of assets.
Welfare expenses, time keeping & pay-roll office expenses, canteen exp. Supervision charges, medical expenses etc.	Number of employees.
Supervisor's salary, ESI contribution	Direct wages
Electric charges(lighting)	No of light points or floor area.
Power	Hp of machines or kilo watts.
Air-conditioning, heating	Floor area, weight volume.
Delivery van expenses	Ton miles, or weight volume
Audit fees	Sales or total cost
Insurance of stock	Value of stock
Store keeping expenses	No of stores requisitions or value of materials consumed.
Internal transport	Weight of packages or mileage.
Purchasing expenses	No of purchase requisitions.
Other exp. Or general exp. Or misc. Expenses	Direct labour hours, machine hours, direct wages or direct materials.

PRIMARY DISTRIBUTION OF OVERHEADS

- Primary distribution of overheads refers to allocation and apportionment of overhead expenses among production and service departments of an organization.
- This process involves allocation of overheads which can be directly identified with a particular department and apportionment of common item of overheads on appropriate basis among all the departments.
- The entire process of allocation and apportionment is systematically presented in a perform which is known as primary distribution overhead summary or overhead distribution summary.

SECONDARY DISTRIBUTION OF OVERHEADS

The cost-of-service cost centers are apportioned to production cost centers as well as other service cost centers. Secondary distribution of overheads may be done by following either Reciprocal basis or Non- Reciprocal Basis.

While reciprocal basis considers the exchange of service among the service departments, non-reciprocal basis considers only one directional service flow from a service cost centre to other production cost centre.

Secondary Apportionment of Overheads on Reciprocal Basis The services rendered by certain service cost centers are also utilized by other service cost centers.

In reciprocal secondary distribution, the cost-of-service cost centers are apportioned to production cost centers as well as other service cost centers.

In such case, any one of the following three methods may be followed :

- Repeated Distribution Method
- Simultaneous Equation Method
- Trial & Error Method

ABSORPTION OF OVERHEADS

The process of distributing the overhead costs of production department cost centers to the cost units.

There are different methods of absorption of overheads. Such methods are –

1. Percentage of value of raw material
2. Percentage of Direct labour cost (Applicable in case production process is labour intensive and depends on labour time and type)
3. Labour hour rate method (Applicable in case production process is labour intensive and depends on labour time)
4. Machine hour rate method. (Applicable in case production process is machine based)

UNDER ABSORPTION AND OVER ABSORPTION OF OVERHEADS

If overhead absorbed exceeds the actual overhead the excess of absorbed overhead over the actual overhead is called over absorption of overhead as the amount charged to production has not been incurred.

On the other hand when actual overhead is more than the overhead absorbed then the excess of actual overhead over absorption overhead is known as under absorption of overhead as this amount remains uncharged to production

Over absorption takes place:

1. The total overhead incurred is less than the estimated or budgeted overhead
2. The output (or hours worked) are more than the estimate or budget.

Under absorption takes place when:

1. The total overhead incurred exceeds the estimated overhead
2. The output are less than the estimate or budget

Causes of Under or Over absorption of Overheads

1. Error in estimating the overheads may lead to over or under absorption of overheads.
2. The anticipated output may be different from the actual output
3. The hours anticipated may be more or less than the actual hours worked.
4. Due to fluctuations in the prices of material or wage rates, the basis upon which the factory overhead
is recovered from production may not be correct.
5. If overhead are not charged to work-in-progress proportionately.
6. Non-recurring expenditure incurred due to unexpected changes in the methods of production.
7. Seasonal fluctuations in the overhead expenses.

TRADITIONAL COSTING METHOD

Traditional costing methods are accounting systems for assigning indirect costs to products or services by using a single overhead rate based on volume, typically direct labor hours or machine hours.

These methods include absorption costing and marginal costing and are often used when direct labor costs are low or the production process is highly automated.

The predetermined overhead rate is calculated by dividing total estimated indirect costs by the total estimated activity base, and this rate is then applied to each product.

Disadvantages of the Traditional Costing System

1. It offers limited accuracy, even in the best of situations.
2. It wants to ignore unexpected circumstances.
3. It isn't always a helpful system.
4. Its simplicity may be too simple.
5. It does not account for non-manufacturing costs.

ACTIVITY-BASED COSTING (ABC)

The activity-based costing (ABC) system is a method of accounting you can use to find the total cost of activities necessary to make a product. The ABC system assigns costs to each activity that goes into production, such as workers testing a product, setting up of machines, orders passed for purchase of raw materials etc.

Cost pool: It is an aggregate of all the costs associated with performing a particular business activity.

Cost driver: It is an activity that is the root cause of why a cost occurs. It must be applicable and relevant to the event that is incurring a cost. A cost driver assists with allocation expenses in a systematic manner that results in more accurate calculations of the true costs of producing specific products

Steps in ABC:

1. Identifying Activities: The first stage is to identify the functional areas or major activities involved in the production. Examples of activities include machine related activities, divert labour related activities and various support activities like ordering, receiving, material handling, packing, despatching etc. Various activities are identified by carrying out activity analysis. The activities may be basically fall into four categories as suggested by Cooper and Kaplan’.

a) Unit Level Activities or Primary Activities: The cost of primary activities (like use of indirect materials and consumables, testing of every item produced) may be correlated to number of units produced (i.e. on volume- basis).

b) Batch Level Activities: These are manufacturing support activities (like material ordering, machine set-up costs, inspection of products etc). The cost of such activities is driven by number of batches of units produced.

c) Product Level Activities: Activities like designing of the product, keeping technical drawings of product, activities up to date, advertising of a specific product are called product level. The cost of these activities is driven by the creation of a new product line and its maintenance.

d) Facility Level Activities: Certain activities cannot be related to a particular product, instead may be related to certain facilities like maintaining the building, security of plant, salaries of production manager, advertisement to promote organisation etc.

- It may be noted that unit level activities and facility level activities are the same as those in traditional absorption costing which will be allocated on physical volume basis, ABC will be more useful if there is significant size of batch level and product level activities.

2. Assigning Costs to Activity Cost Centres: The second stage requires that a cost centre (also called a cost pool) be created for each activity.

- After the activities have been identified the cost of resources consumed over a specified period must be assigned to each activity. These costs will have to be apportioned on some suitable basis.
- For example, the total costs of all set ups might constitute one cost centre for all setup related costs.

3. Selecting Appropriate Cost Drivers: The third stage of designing ABC system is to identify the factors that influence the cost of a particular activity.

- The term cost-driver is used to describe the significant determinant of the cost of the activity. The most suitable cost driver in each activity under functional areas should be identified.
- A cost driver is any factor that influences costs.

4. Assigning the Cost of the Activities to Products: The final stage is to trace the cost of the activities to products according to each product's demand for these activities using cost drivers as a measure of demand.

- A product's demand for the activities is measured by the number of transactions it generates for the cost driver.
- The cost driver should be measurable in a way that enables it to be identified with individual products.

USES OF ABC

- **Identification of necessary activities:** The ABC system shows how overhead is used, which helps to determine whether certain activities are necessary for production.
- **Focus on Value adding activities:** The Activity Based Costing helps the management on focusing the forces on value adding activities and eliminate non-value adding activities.
- **Ensuring profit margin:** The specific allocation of costs also helps to set prices that produce a healthy small business profit margin.
- **Product pricing:** With an ABC system, the business can assign costs to each activity in the production process, allowing it to more accurately set a price that accounts for how much it costs to create a product.
- **Measures to improve productivity:** The accurate cost information helps the management to adopt productivity improvement approaches like Total Quality Management (TQM), Business Process Re-engineering (BPR) etc.
- **Help in deciding Make or Buy:** The management can take make or buy decisions by considering the cost of manufacture of a product or sub contract the same with an outside agency through Activity Based Costing analysis.

BENEFITS OF USING ABC SYSTEM

1. ABC helps to reduce costs by providing meaningful information for cost-management. It helps in making the right decision.
2. ABC technique provides due importance to non-manufacturing cost which constitute a substantial portion of total cost. Traditionally non-manufacturing costs have been allocated under volume basis and thus, high volume products have been overvalued.
3. ABC technique provides accurate and reliable cost information. This cost information is essential for recent approaches in productivity improvement like Total Quality Management (TQM) and Business Process Reengineering.
4. ABC enables the management in formulating an effective pricing policy while fixing prices.
5. Cost of each activity is determined with the help of ABC. There is accuracy in indirect cost-allocation to products. This technique is helpful in make or buys decisions and transfer pricing.

WEAKNESS OF ABC SYSTEM

1. It is based on historical costs; while for planning decisions future costs are more relevant.
2. For many short-term decisions, identification of variable costs is very important. But ABC system does not partition variable and fixed elements of overhead costs.
3. The accuracy of ABC system fully depends upon the quality of cost drivers. The allocation and absorption of costs may become an arbitrary allocation process, if the cost drivers are not associated with the factors causing costs.
4. ABC system tends to be more costly than the traditional methods of applying costs to products

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Activity Based Costing	Traditional Absorption Costing
1. Overheads are <i>related</i> to activities and grouped into activity cost pools.	1. Overheads are <i>related</i> to cost centers/departments.
2. Costs are related to activities and hence are <i>more realistic</i> .	2. Costs are related to cost centers and hence not realistic of cost behaviour.
3. Activity-wise cost drivers are <i>determined</i> .	3. Time (Hours) are <i>assumed</i> to be the only cost driver governing costs in all departments.
4. Activity-wise recovery rates are determined and there is no concept of a single overhead recovery rate.	4. Either multiple overhead recovery rate (for each department) or a single overhead recovery rate may be determined for absorbing overheads.
5. Cost are assigned to cost objects , e.g. customers, products, services, departments, etc.	5. Costs are assigned to Cost Units i.e. to products, or jobs or hours.
6. <i>Essential activities can be simplified and unnecessary activities can be eliminated</i> . Thus the corresponding costs are also reduced/ minimized. Hence ABC aids cost control.	6. <i>Cost Centers/ departments cannot be eliminated</i> . Hence not suitable for cost control.