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# [COST ACCOUNTING AND BUDGETING]

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## **INTRODUCTION**

### **What is cost?**

Cost is the amount of expenditure incurred on or attributable to a specified activity. Costs are usually ascertained in respect of cost units or cost objectives

### **Cost unit**

A cost unit is a quantitative unit of a product or service in relation to which costs are ascertained e.g. kilowatt hours.

### **Cost objective**

A cost objective is any activity for which a separate measurement of cost is desired. A cost unit is a cost objective. However, there are some cost objectives which are not cost units. Examples of cost objectives include a product, a service, a department or segment of the business, a function, a process or activity or indeed anything for which one wants to measure the cost of resources used. Sometimes it is impossible to trace some costs direct to cost units. Under such situations costs are first traced to cost centres for further spreading unto cost units.

### **Cost centre**

A cost centre is a location, a person, an item of equipment (or a group of these in relation to which cost are ascertained and further related to cost units e.g. maintenance section, managing director and the plant. Cost centres are broadly classified into:

1. Production cost centres
2. Service cost centres

## CLASSIFICATION OF COST

Cost can be classified variously for different objectives.

### I. Classification According To Element of Cost

Costs can be classified by element. There are three basic elements of cost. These are materials, labour and other facilities or resources other than materials and labour. Thus when classified according to elements, there are the following classes of cost:

**Materials cost:** These are the costs of materials or commodity other than fixed assets, introduced into product or consumed in the operations of an organisation. In other words, they are the cost of materials input into the production of goods and services. For example, the cost of: Raw materials, Component parts, Work in progress, Primary packing materials and Stationary

**Labour Cost:** These are the cost of employee remuneration i.e. payments made to and on behalf of employees for offering labour services in the production function.

**Expenses** These are all other costs other than material cost and labour costs. For example the cost of: hiring special equipment and maintaining such equipment, royalty payments, copyrights and patent payments, utilities such as electricity and water, rent etc.

### II. Classification As Direct Or Indirect

Cost can also be classified either as direct cost or as indirect costs.

**Direct Cost:** These are cost that can be directly identified and charged to a cost unit without apportioning. Direct costs comprises of:

**a. Direct material cost:** These are the costs of material that can be physically identified with a specific cost unit. They are the cost of materials entering into and becoming constituent elements of a product or saleable service. Direct materials costs are allocated to cost units. **Note** Some materials which could qualify as direct materials may be treated as indirect materials for purposes of materiality and convenience. Examples: Materials specifically purchased for a particular job order or process, Materials requisitioned from

store for a particular production order, Work in progress and component parts and Primary packing materials.

**Direct labour or wages cost:** These are the cost of remuneration for employees' efforts and skill applied directly to a product or saleable service. Such wages are allocated directly to cost units. Examples of direct labour cost are: Wages of production operatives who are involved in transforming the raw materials into finished goods, Wages of waiters who serve meals at a hotel and Wages of sales assistants involved in selling goods in a retailing shop.

**Direct Expenses:** These are costs other than material cost, labour cost which can be identified with and charged or allocated to a cost unit. In other words they are costs other than material cost and labour cost which are incurred for a specific product or saleable service. Examples of direct expenses are: the cost of hiring a special equipment for a particular production order, the maintenance cost of special equipments hired for particular production orders, royalty payments and traveling expenses

### **Indirect Cost**

All costs that cannot be identified with and allocated to a cost unit but that has to be apportioned to a number of cost centres and further absorbed by cost units are described as indirect cost. Another term for all indirect costs is overhead costs. Indirect costs comprise of:

**Indirect Material Cost:** These are the cost of material items that cannot be identified with any one product because they are used for the benefit of all products rather than for any one specific product. In other words, these are materials cost which cannot be allocated to cost units but are apportioned and absorbed by cost units. For example; The cost of materials required for operating and maintaining plant & equipment such as , cost of stationary and cost of cleaning materials

**Indirect labour cost:** These are wages of employees who do not work on the product itself but who assist in the manufacturing process. Such costs cannot be allocated to cost units; rather they are apportioned to cost centres and further related to cost units through absorption. For example: salaries of factory supervisors, wages of the stores dept employees

**Indirect Expenses** These are expenses incurred in general and not for the production of a specific cost unit. For example” Selling and distribution expenses, advertising, sales promotion and administrative expenses

#### **COST CARD**

Direct material cost	xx	
Direct labour cost	xx	
Direct Expenses	<u>xx</u>	
<b>Prime cost</b>		<b>xxx</b>
Indirect material cost	xx	
Indirect labour cost	xx	
Indirect expenses	<u>xx</u>	
<b>Overhead cost</b>		<b><u>xxx</u></b>
<b>Total cost</b>		<b><u>xxx</u></b>

### **III. Classification According To Function**

All the indirect costs, that is, overhead cost, can also be classified according to function. Thus, overhead can be classified as:

**Production Overheads:** These are the indirect cost of manufacturing a cost unit. It comprises of indirect materials consumed in the factory, indirect factory wages and other indirect expenses incurred in connection with production.

**Selling Overheads:** These are marketing costs incurred in securing orders, e.g. sales promotion cost.

**Marketing Overheads:** These are the costs incurred in publicizing and presenting to customers the products of the undertaking in suitably attractive forms at acceptable prices together with the cost of all relevant research work, the securing of orders and delivery of the goods to customers. It also includes the costs of after sales services or processes. Thus, marketing costs comprise of: selling costs, distribution costs and other connected costs.

**Distribution Overheads:** These are the costs incurred in making the finished goods ready for dispatch and the delivery of the product to customers, e.g. cost of carriage outwards. **e. Administrative Overheads:** These are the costs of formulating policy, directing and controlling operations not related directly to production, selling, distribution or research and development. **Research and Development Overheads:** These are the costs of seeking new ideas, materials, methods of production and improved products and the development and design of such ideas so that they can be applied to formal production.

### Cost Card

Direct material cost	xxx	
Direct labour cost	xxx	
Direct expenses	<u>xxx</u>	
<b>Prime cost</b>		<b>xxx</b>
Indirect production material cost	xxx	
Indirect production labour cost	xxx	
Indirect production expenses	xxx	
Production overheads	<u>xxx</u>	
<b>Production cost</b>		<b>xxx</b>
Selling overheads	xxx	
Distribution overheads	xxx	
Administrative overheads	<u>xxx</u>	
<b>Total cost</b>		<b><u>xxx</u></b>
Profit margin		xxx
<b>Selling price</b>		<b><u>xxx</u></b>

### IV. Classification According To Behavior

Costs may be classified according to the way the cost behaves in relation to activity level. In this regard, cost may be classified as:

**Fixed Cost** These are costs that do not vary with changes in activity levels. They usually change with the passage of time. For example, rent and rates, the managing director's salary etc

**Variable Cost** These are costs which vary in direct proportion with changes in activity levels. For example, the cost of raw materials, direct wages and direct expenses such as royalties.

**Semi-fixed\semi-variable or mixed cost:** These are costs which contain fixed and variable elements. That is, for a given range of activity level. The cost may remain constant and beyond the relevant ranges, costs may then vary in direct proportion with changes in activity level. For example, the cost of utilities such as electricity, water and telephone.

**Stepped fixed cost:** These are costs which are fixed for a given range of activity level but which change discretely for ranges of activity levels beyond the given ranges.

## V. Classification as Product Costs or Period Costs

**Product Costs** These are the costs that are identified with goods produced or purchased for resale. These usually are the production or manufacturing costs. They are the costs used for the valuation of stocks and work in progress. Examples of product costs are: cost of raw materials, production wages and production overheads such as electricity, depreciation of plant, rent of factory premises etc. Product costs can be analyzed as expired costs or unexpired costs.

**Period Costs** These are the costs incurred and charged against profit for a period, and not included in cost for stock valuation purposes. These usually are non-manufacturing costs. Examples are selling and distribution overheads and administrative overheads. Period costs are charged in full to the profit and loss account for the period. They are not included for stock valuation purposes.

## **VI. Classification of Costs as Relevant and Irrelevant Costs**

**Relevant Costs/Revenue** These are those future costs and revenues that can be altered by a given decision. Examples: Future costs Opportunity costs Avoidable costs Incremental costs etc.

**Irrelevant Costs/Revenues** These are those costs/revenues that will not be affected by a given decision. Irrespective of what decision is taken, the cost will not alter. Examples Past costs Sunk costs Unavoidable costs

## **VII. Other Classifications of Cost**

**Avoidable Costs** These are costs that may be saved by the adoption of a given alternative option.

**Non-Avoidable Costs** These are costs that cannot be saved or eliminated by the adoption of a given alternative line of action.

**Normal Costs** These are costs planned for and expected at given levels of activity under specified conditions. For example, normal scrap and loss of materials cost of expected idle time etc.

**Abnormal Costs** These are costs not planned for and therefore not expected to be incurred at a given level of activity under conditions in which that level of activity is normally achieved, e.g. cost of excessive scrap and abnormal idle time pay etc.

**Sunk Costs** These are the costs of resources already acquired. They are costs created by decisions made in the past and cannot be altered by decisions to be made in the future. For example the written down value of plant previously acquired.

**Opportunity Costs** These are the values of benefits forgone or sacrificed in favour of alternative courses of action.

**Incremental Costs/Revenue** They are the additional costs or revenues that arise from the production or sale of a group of additional units. These are sometimes termed differential costs.

**Marginal Costs/Revenues** These are the additional cost or revenue that arises from the production of one additional unit of output or service.

**Future cost** These are costs estimated and are reasonably expected to be incurred in the future.



**Replacement Costs** These are the estimated costs at which an identical item can be acquired or produced.

**Conversion costs** These are the cost of transforming raw materials into finished goods or the cost of converting raw materials from one stage of production cycle to the next. It is total cost of production less cost of bought in materials.

**Policy Costs** These are costs additional to normal requirement incurred in accordance with the policy of an undertaking. They are also termed discretionary costs.

**Development Costs** These are costs of research into improving the production of goods and services.

**Value Added** This is the increase in market value of a product as a result of changing the form, location etc, of that product. It is the total market value of the product less cost of bought in materials and services.

**Standard Costs** These are cost estimated and expected to be incurred per unit of activity under efficient production conditions.

**Budgeted costs** These are costs estimated and planned for a given activity level, function or segment of the organisation within a specified time horizon.

**Actual costs** These are the cost actually incurred in the production process. Actual costs are not estimates but are historical or past costs.

## **BUDGETING**

### **What is budget?**

A budget is " A financial and/or quantitative statement, prepared and approved prior to define period of time, of the policy to be pursued during that period for the purpose of attaining a given objective."

According to Brown and Howard of Management Accountant "a budget is a predetermined statement of managerial policy during the given period which provides a standard for comparison with the results actually achieved."

**Essentials of a Budget:**

- (1) It is prepared for a definite future period.
- (2) It is a statement prepared prior to a defined period of time.
- (3) The Budget is monetary and I or quantitative statement of policy.
- (4) The Budget is a predetermined statement and its purpose is to attain a given objective.

A budget, therefore, be taken as a document which is closely related to both the managerial as well as accounting functions of an organization.

**Requisites for Effective Budgetary Control**

The following are the requisites for effective budgetary control:

- (1) Clear cut objectives and goals should be well defined.
- (2) The ultimate objective of realizing maximum benefits should always be kept uppermost.
- (3) There should be a budget manual which contains all details regarding plan and procedures for its execution. It should also specify the time table for budget preparation for approval, details about responsibility, cost centers etc.
- (4) Budget committee should be set up for budget preparation and efficient execution of the plan.
- (5) A budget should always be related to a specified time period.
- (6) Support of top management is necessary in order to get the full support and co-operation of the system of budgetary control.
- (7) To make budgetary control successful, there should be a proper delegation of authority and responsibility.
- (8) Adequate accounting system is essential to make the budgeting successful.
- (9) The employees should be properly educated about the benefits of budgeting system.
- (10) The budgeting system should not cost more to operate than it is worth.
- (11) Key factor or limiting factor, if any, should consider before preparation of budget.
- (12) For budgetary control to be effective, proper periodic reporting system should be introduced

## **Types of Budgets**

As budgets serve different purposes, different types of budgets have been developed. The following are the different classification of budgets developed on the basis of time, functions, and flexibility or capacity.

### **(A) Classification on the Basis of Time**

**1. Long-Term Budgets:** Long-term budgets are prepared for a longer period varies between five to ten years. It is usually developed by the top level management. These budgets summaries the general plan of operations and its expected consequences. Long-Term Budgets are prepared for important activities like composition of its capital expenditure, new product development and research, long-term finance etc.

**2. Short-Term Budgets:** These budgets are usually prepared for a period of one year. Sometimes they may be prepared for shorter period as for quarterly or half yearly. The scope of budgeting activity may vary considerably among different organization.

**3. Current Budgets:** Current budgets are prepared for the current operations of the business. The planning period of a budget generally in months or weeks. As per ICMA London, "Current budget is a budget which is established for use over a short period of time and related to current conditions."

### **(B) Classification on the Basis of Function**

**1. Functional Budget:** The functional budget is one which relates to any of the functions of an organization. The number of functional budgets depends upon the size and nature of business. The following are the commonly used:

- (1) Sales Budget
- (2) Purchase Budget
- (3) Production Budget
- (4) Selling and Distribution Cost Budget
- (5) Labour Cost Budget
- (6) Cash Budget

### (7) Capital Expenditure Budget

**2. Master Budget:** The Master Budget is a summary budget. This budget encompasses all the functional activities into one harmonious unit. Master Budget is the summary budget incorporating its functional budgets, which is finally approved, adopted and employed.

### (C) Classification on the Basis of Capacity

**1. Fixed Budget:** A fixed budget is designed to remain unchanged irrespective of the level of activity actually attained.

**2. Flexible Budget:** A flexible budget is a budget which is designed to change in accordance with the various level of activity actually attained. The flexible budget also called as Variable Budget or Sliding Scale Budget, takes both fixed, variable and semi fixed manufacturing costs into account.

### **COST STATEMENT/SHEET**

Cost statement is an analytical statement of expenses relating to production of an article which informs regarding total cost, per unit cost and quantity of production. According to Weldon, "Cost statements are prepared for the use of management and consequently, they must include all the essential details which will assist the manager in checking the efficiency of production" "Cost sheet is a cost schedule or document which provides for the assembly of the estimated detailed cost in respect of a cost centre or cost unit" When cost per unit of production is not necessary to calculate then a statement of cost is prepared to ascertain total cost and profit or loss on production otherwise prepare cost sheet.

### Simple cost statement

Direct Materials or Raw Materials consumed	x x x x
Direct labour/ Wages	x x x x
Other Direct Expenses/chargeable Expenses	x x x x
<b>Prime Cost</b>	<b>x x x x</b>
Add : Work or factory overheads	x x x x
Work/Factory Cost	x x x x
Add : Office/ Adm. Overhead	x x x x
<b>Cost of output/Cost of Production</b>	<b>x x x x</b>
Add : Selling & Distribution Overhead	x x x x
<b>Total Cost/ Cost of sales</b>	<b>x x x x</b>
Add : Profit (% on Cost or Selling Price)	x x x x
<b>sales</b>	<b>x x x x</b>

### Detailed cost statement

Purchases of Raw materials	xxxx	
Add: Stock of Raw Materials	xxxx	
Carriage inward	xxxx	
	xxxx	
Less: Stock of Raw Materials	(xxxx)	
<b>Cost Of Raw Material Consumed</b>		<b>xxxx</b>
Add: Direct wages		xxxx
Add: Other direct expenses		xxxx
<b>Prime Cost</b>		<b>xxxx</b>
Add: Factory Overheads		
Indirect wages	xxxx	
Experiment expenses	xxxx	
Wastage of materials	xxxx	
Factory overhead	xxxx	xxxx

		XXXX
Add: Opening Stock of WIP		XXXX
		XXXX
Less: Closing Stock of WIP		(XXXX)
<b>Factory cost</b>		<b>XXXX</b>
Add: Office Overheads		
Establishment on costs		XXXX
<b>Cost of Production</b>		<b>XXXX</b>
Add: opening Stock of Finished Goods		XXXX
		XXXX
Less: Closing stock of Finished Goods		(XXXX)
<b>Cost of Goods Sold</b>		<b>XXXX</b>
Add: Selling Overheads		XXXX
Add: Distribution Overheads		XXXX
<b>Total cost of goods sold</b>		<b>XXXX</b>
Sales		XXXX
<b>Net Profit</b>		<b>XXXX</b>

### Example

The following figures have been extracted from the records of a manufacturing company for the year ending 31st December, 2014. You are required to prepare a statement of cost showing: (a) Cost of raw materials consumed (b) Prime Cost (c) Factory Cost (d) Cost of production (e) Cost of goods sold (f) Total cost of goods sold and profit on sales.

Stock of Raw Materials (1-1-14)	3,000.00
Stock of Raw Materials (31-12-14)	2,400.00
Purchases of Raw materials	14,000.00
Stock of work-in-progress (1-1-14)	1,000.00
Stock of work-in-progress (31-12-14)	800.00
Carriage inward	500.00
Manufacturing wages	4,000.00
Other direct expenses	200.00
Indirect wages	1,000.00
Experiment expenses	400.00
Wastage of materials	50.00
Factory overhead	7,000.00
Establishment on costs	2,000.00
Selling overhead	4,000.00
Distribution overhead	1,000.00
Stock of finished goods (1-1-14)	1,200.00
Stock of finished goods (31-12-14)	3,000.00
Sales	40,000.00

### Solution: Statement of cost

Purchases of Raw materials	14,000.00	
Add: Stock of Raw Materials	3,000.00	
Carriage inward	500.00	
	17,500.00	
Less: Stock of Raw Materials	(2,400.00)	
<b>Cost Of Raw Material Consumed</b>		<b>15,100.00</b>
Add: Direct wages		4,000.00
Add: Other direct expenses		200.00
<b>Prime Cost</b>		<b>19,300.00</b>

Add: Factory Overheads		
Indirect wages	1,000.00	
Experiment expenses	400.00	
Wastage of materials	50.00	
Factory overhead	7,000.00	8,450.00
		27,750.00
Add: Opening Stock of WIP		1,000.00
		<b>28,750.00</b>
Less: Closing Stock of WIP		(800.00)
<b>Factory Cost</b>		<b>27,950.00</b>
Add: Office Overheads		
Establishment on costs		2,000.00
<b>Cost of Production</b>		<b>29,950.00</b>
Add: opening Stock of Finished Goods		1,200.00
		<b>31,150.00</b>
Less: Closing stock of Finished Goods		(3,000.00)
<b>Cost of Goods Sold</b>		<b>28,150.00</b>
Add: Selling Overheads		4,000.00
Add: Distribution Overheads		1,000.00
<b>Total Cost of Goods Sold</b>		<b>33,150.00</b>
Sales		40,000.00
<b>Net Profit</b>		<b>6,850.00</b>