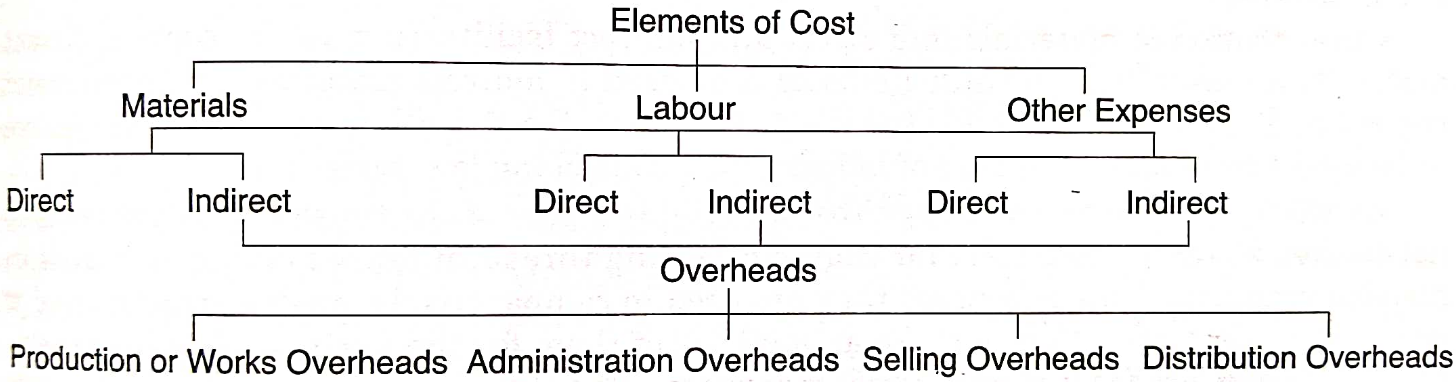
Chapter 2 Cost—Analysis, Concepts, Classifications and Cost Sheet

Elements of Cost

Mere knowledge of total cost cannot satisfy the needs of management. For proper control and managerial decisions, management is to be provided with necessary data to analyse and classify costs. For this purpose, the total cost is analysed by elements of cost *i.e.,* by the nature of expenses. Strictly speaking, the elements of cost are three *i.e.,* materials, labour and other expenses. These elements of cost are further analysed into different elements as illustrated in the following chart :



By grouping the above elements of cost, the following *divisions of cost* are obtained :

1. Prime Cost = Direct Materials + Direct Labour + Direct Expenses
2. Works or Factory Cost = Prime Cost + Works or Factory Overheads
3. Cost of Production = Works Cost + Administration Overheads
4. Total Cost or Cost of Sales = Cost of Production + Selling and Distribution Overheads

The difference between the cost of sales and selling price represents profit or loss.

ILLUSTRATION 1. Ascertain the prime cost, works cost, cost of production, total cost and profit from the undermentioned figures :

Direct Materials ₹ 5,000 ; Direct Labour ₹ 3,500 ; Factory Expenses ₹ 1,500 ; Administration Expenses ₹ 800 ; Selling Expenses ₹ 700 and Sales ₹ 15,000.

SOLUTION

Prime Cost = Direct Materials + Direct Labour = ₹ 5,000 + ₹ 3,500 = ₹ 8,500.

Works Cost = Prime Cost + Factory Expenses = ₹ 8,500 + ₹ 1,500 = ₹ 10,000.

Cost of Production = Works Cost + Administration Expenses = ₹ 10,000 + ₹ 800 = ₹ 10,800.

Total Cost or Cost of Sales = Cost of Production + Selling Expenses

= ₹ 10,800 + ₹ 700 = ₹ 11,500.

Profit = Sales – Total Cost = ₹ 15,000 – ₹ 11,500 = ₹ 3,500.

Now all these terms will be examined in detail one by one.

1. Direct Materials are those materials which can be identified in the product and can be conveniently measured and directly charged to the product. Thus, these materials directly enter the production and form a part of the finished product. For example, timber in furniture making, cloth in dress making and bricks in building a house. Following are normally classified as direct materials :

(*i*) ***All raw materials*** like jute in the manufacture of gunny bags, pig iron in foundry, and fruits in canning industry.

(*ii*) Materials ***specifically purchased*** for a specific job, process or order like glue for book-binding, starch powder for dressing yarn etc.

(*iii*) ***Parts or components purchased or produced*** like batteries for transistor-radios and tyres for cycles.

(*iv*) ***Primary packing materials*** like cartons, wrappings, cardboard boxes, etc. used to protect finished product from climatic conditions or for easy handling inside the factory.

From the above discussion it becomes clear that indirect materials are those materials which cannot be classified as direct materials. Examples of indirect materials are : consumables like cotton waste, lubricants, brooms, rags, cleaning materials, materials for repairs and maintenance of fixed assets, high speed diesel used in power generators etc.

Classification of materials into direct and indirect facilitates material control. Direct materials are usually high value items as compared to indirect materials and need strict control and critical analysis for reducing their cost. On the other hand, simple control techniques are sufficient in case of indirect materials being low value items.

However, in some cases, though the material is a part of the finished product yet it is not treated as direct material ; for example, sewing thread in dress making and nails in furniture making. This is because they are used in comparatively small quantities and it would be futile elaboration to make an analysis of them for the purpose of direct charge. Such materials are treated as indirect materials. Thus, it can be concluded that the ease and the feasibility with which a material can be traced into the composition of a finished product will determine what is to be treated as direct material.

2. Direct Labour is all labour expended in altering the construction, composition, confirmation or condition of the product. In simple words, it is that labour which can be conveniently identified or attributed wholly to a particular job, product or process or expended in converting raw materials into finished goods. Wages of such labour are known as direct wages. Thus, it includes payment made to the following groups of labour :

(*i*) Labour engaged on the actual production of the product or carrying out of an operation or process.

(*ii*) Labour engaged in aiding the manufacture by way of supervision, maintenance, tools setting, transportation of material etc.

(*iii*) Inspectors, analysts etc. specially required for such production.

The wages paid to supervisors, inspectors, etc., though not direct labour, can be treated as direct labour if they are directly engaged on specific product or process and the hours they spend on it can be directly measured without much of an effort. Similarly where the cost is not significant like the wages of trainees or apprentices, their labour though directly spent on a product, is not treated as direct labour.

3. Direct Expenses (or Chargeable Expenses). All expenses which can be identified to a particular cost centre and hence directly charged to the centre are known as direct expenses. In other words all expenses (other than direct materials and direct labour) incurred specifically for a particular product, job, department etc. are called direct expenses. These are directly charged to the product as part of prime cost. Examples of such expenses are royalty, excise duty, hire charges of a specific plant and equipment, cost of any experimental work carried out specially for a particular job, cost of making a specific pattern, design, drawing or making tool, for a job, cost of making travelling expenses incurred in connection with a particular contract or job etc.

4. Overheads may be defined as the aggregate of the cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged direct to specific cost units. Thus overheads are all expenses other than direct expenses. In general terms, overheads comprise all expenses incurred for or in connection with the general organisation of the whole or part of the undertaking *i.e.,* the cost of operating supplies and services used by the undertaking and including the maintenance of capital assets. The main groups into which overheads may be sub-divided are (*i*) Manufacturing Overheads ; (*ii*) Administration Overheads (*iii*) Selling Overheads ; (*iv*) Distribution Overheads and (*v*) Research and Development Overheads.

(*i*) Manufacturing or Production or Works Overhead. It is the indirect expense of operating the manufacturing divisions of a concern and covers all indirect expenditure incurred by the undertaking from the receipt of the order until its completion ready for despatch either to the customer or to the finished goods store. Examples of such expenses are : depreciation and insurance charges on fixed assets like plant and machinery, works, building, and electric equipments and floating assets like stores, finished goods etc.; repairs and maintenance of fixed assets ; electricity charges ; coal and other fuel charges; rent, rates and taxes on works, land and properties, works office printing, stationery, postage, telegrams and telephone charges ; welfare services like canteen and recreation clubs ; medical services like dispensary and hospital and service department expenses. It also includes wages of indirect workers, indirect materials such as lubricants, cotton wastes and other factory supplies, salaries and other costs related to tool room, design and drawing office, production control and progress department.

(*ii*) Administration Overhead. It is the indirect expenditure incurred in formulating the policy, directing the organisation, controlling and managing the operations of an undertaking which is not related directly to a research, development, production or selling activity or function. It consists of all expenses incurred in the direction, control and administration (including secretarial, accounting and financial control) of an undertaking. Examples are the expenses in running the general office *e.g.* office rent, light, heat, salaries and wages of clerks, secretaries and accountants, credit approval, cash collection and treasurer's department, general managers, directors, executives; legal and accounting machine services ; investigations and experiments and miscellaneous fixed charges.

(*iii*) Selling Overhead. It is the cost of seeking to create and stimulate demand and of securing orders and comprises the cost of soliciting and recurring orders for the articles or commodities dealt in and of efforts to find and retain customers. It refers to those indirect costs which are associated with marketing and selling (excluding distribution) activities. Examples are sales office expenses; salesmen's salaries and commission ; showroom expenses ; advertisement charges ; fancy packing to attract sales ; samples and free gifts ; after sales service expenses; demonstration and technical advice to potential customers; cost of marketing information system and costs of catalogues and price lists.

***(iv)* Distribution Overhead.** It is the expenditure incurred in the process which begins with making the packed product available for despatch and ends with making the reconditioned return empty package, if any available for reuse. It comprises all expenditure incurred from the time the product is completed in the works until it reaches its destination. Under these would be included warehouse rent ; warehouse staff salaries, insurance etc. ; expenses on delivery van and trucks ; expenses on special packing for bulk transport like bales, crates, chests etc. ; losses in warehouse stocks and finished goods damaged in transit and cost of repairing and reconditioning of empties and wastage of finished goods.

***(v)* Research and Development Expenses.** Research cost is the cost of searching for new and improved products, new applications of materials or products, and new applications and improved methods. Development cost is the cost of the process which begins with the implementation of the decision to produce a new or improved method and ends with the commencement of formal production of that product or by that method.

Overheads can also be classified as (*i*) indirect materials, (*ii*) indirect labour and (*iii*) indirect expenses.

***(i)* Indirect Materials.** Such materials refer to those materials which do not normally form a part of the finished product. It has been defined as "materials which cannot be allocated but which can be apportioned to or absorbed by cost centres or cost units". These are :

(*a*) *Stores used in maintenance of machinery, building* etc. like lubricants, cotton waste, bricks and cements ;

(*b*) *Stores used by the service departments i.e.* non-productive departments like power house, boiler house and canteen etc. ; and

(*c*) Materials which due to their *cost being small,* are not considered worthwhile to be treated as direct materials.

Examples of indirect materials are stores consumed for repair and maintenance work, sundry stores of small value expended for factory use, small tools for general use, lubricating oil, losses, deficiencies and deterioration of stores etc.

***(ii)* Indirect Labour.** The wages of that labour which cannot be allocated but which can be apportioned to or absorbed by cost centres or cost units is known as indirect labour. In other words wages paid to labour which is employed other than on production constitute indirect labour costs. Examples of such labour are : charge-hands and supervisors ; maintenance workers ; departmental coolies ; men employed in service departments, material handling and internal transport ; apprentices, trainees and instructors; works clerical staff and labour employed in time office and security office, holiday pay, leave pay, employer's contribution to funds, miscellaneous allowances to labour.

***(iii)* Indirect Expenses.** Such expenses which cannot be allocated but can be apportioned to or absorbed by cost centres or cost units as rent, rates, insurance, municipal taxes, general manager's salary, canteen and welfare expenses, power and fuel, cost of training new employees, lighting and heating, telephone expenses. So, under indirect expenses two types of expenses are included : (*a*) such type of expenditure in respect of which payments are made for services rendered or supplies made. Amount in respect of such expenditure will be found from the voucher registers on the dates on which they are incurred, (*b*) such items which do not involve any payments and are mere adjustment transactions *e.g.,* depreciation.

Expenses Excluded from Costs

The total cost of a product should include only those items of expenses which are a charge against profit. *Items of expenses which are relating to capital assets, capital losses, payments by way of distribution of profits and matters of pure finance should not form a part of the cost.* Following are the items which are not included in cost accounts :

(a) *Purely Financial Charges.* (*i*) Loss arising from the sale of fixed assets, (*ii*) Loss on investments, (*iii*) Discount on shares and debentures, (*iv*) Interest on bank loan, mortgages and debentures, (*v*) Expenses of the company's share transfer office, (*vi*) Damages payable, (*vii*) Penalties and fines, (*viii*) Losses due to scrapping of machinery, (*ix*) Remuneration paid to the proprietor in excess of a fair reward for services rendered, (*x*) Interest on capital, (*xi*) Expenses of raising capital, (*xii*) Cost discount.

(b) *Appropriations of Profit.* (*i*) Donations and Charities, (*ii*) Taxes on income and profits, (*iii*) Dividend paid, (*iv*) Transfers to reserves and sinking funds, (*v*) Additional provision for depreciation on fixed assets and for bad debts, (*vi*) Capital expenditure specially charged to revenue.

(c) *Writing off Intangible and Fictitious Assets.* Goodwill, Patents and Copyrights, Advertisement, Preliminary Expenses, Organisation Expenses, Underwriting Commission, Discount on Issue of Shares/Debentures.

(d) *Purely Financial Incomes.* (*i*) Rent receivable, (*ii*) Profits on the sale of fixed assets, (*iii*) Transfer fees received, (*iv*) Interest received on bank deposits, (*v*) Dividend received, (*vi*) Brokerage received, (*vii*) Discount, commission received.

(e) *Abnormal Gains and Losses*—(*i*) Abnormal wastage of material, (*ii*) wages of abnormal idle time, (*iii*) cost of abnormal idle facilities, (*iv*) excessive depreciation, (*v*) abnormal gain on manufacturing.

Cost Sheet or Statement of Cost

Cost sheet is a statement designed to show the output of a particular accounting period alongwith break-up of costs. The data incorporated in cost sheet are collected from various statements of accounts which have been written in cost accounts, either day-to-day or regular records.

There is no fixed form for preparation of a cost sheet but in order to make the cost sheet more useful it is generally presented in columnar form. The columns are for the total cost of the current period, per unit for the current period, total cost and per unit cost for a preceding period and total and per unit cost for the budget period and so on. The information to be incorporated in a cost sheet would depend upon the requirement of management for the purpose of control.

Cost sheet is a memorandum statement. Therefore, it does not form part of double entry cost accounting records. Inspite of this, the relationship between cost sheet and financial accounts which are maintained on double entry system is very important as cost sheet derives its data from financial accounting. In case predetermined rates are not used, the entire data required for preparation of cost sheet is derived from financial accounting. Therefore, periodically it becomes necessary to reconcile the information obtained from cost accounting and financial accounting separately. Cost sheet does not include selling and distribution expenses.

Main *advantages* of a Cost Sheet are :

1. It *discloses the total cost and the cost per unit* of the units produced during the given period.

2. It enables a manufacturer to keep a *close watch and control* over the cost of production.
3. By providing a *comparative study* of the various elements of current cost with the past results and standard costs, it is possible to find out the causes of variations in costs and to eliminate the adverse factors and conditions which go to increase the total cost.
4. It acts as a guide to the manufacturer and helps him in *formulating a definite useful production policy*.
5. It helps in *fixing up the selling price* more accurately.
6. It helps the businessman to *minimise the cost of production* when there is a cut throat competition.
7. It helps the businessman to submit quotations with reasonable degree of accuracy against tenders for the supply of goods.

Note : If profit is also calculated alongwith cost then cost sheet is known as Statement of Cost and Profit.

SPECIMEN OF STATEMENT OF COST AND PROFIT

Units :

	Total Cost	***Cost per Unit***
	₹	₹
Direct Materials		
Direct Labour		
Direct or Chargeable Expenses		
Prime Cost		
Add : Works Overheads		
Works Cost		
Add : Administration Overheads		
Cost of Production		
Add : Selling and Distribution Overheads		
Total Cost or Cost of Sales		
Profit		
Sales		

Thus, **Cost Sheet** is a document which provides the detailed cost of cost centre or cost unit. It does not include selling and distribution expenses. While in **statement of cost and profit,** the **first** part gives the cost of production, the **second** part gives the cost of goods sold and the **third** part shows cost of sales and profit for the period.