

Financial Accounting

Financial accounting is mainly concerned with recording the business transactions in the books of account for the purpose of presenting final accounts to the management, shareholders and tax authorities, etc. It is defined as 'the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events, which are in part at least, of a financial character and interpreting the results thereof.'¹

The information supplied by financial accounting is summarized in the following three statements at the end of a period, generally one year.

- (a) *Profit and Loss Account*, showing the net profit or loss during the period;
- (b) *Balance Sheet*, showing the financial position of the firm at a point of time;
- (c) *Cash Flow Statement*, showing the inflows and outflows of cash arising from the business activities during the period covered by the statement.

Thus, the objective of financial accounting is to present a true and fair view of a company's income, financial position and funds, at regular intervals of one year.

Cost Accounting

Compared with financial accounting, cost accounting is a relatively recent development. Modern cost accounting developed only during the nineteenth century. In fact, cost accounting started as a branch of financial accounting, but it is now regarded as an accounting system in its own right. The vital importance that cost accounting has acquired in the modern age is because of the increasing complexity of the modern industry.

Financial information, supplied by financial accounting in the form of financial statements stated above, relates to past activity. Cost accounting, on the other hand, is not restricted to just the past. It is concerned with the ascertainment of past, present and expected future costs of products manufactured or services supplied. Detailed meaning and definition of cost accounting is given later in this chapter. In brief, cost accounting is a system of determining the costs of products or services.

Cost accounting has primarily developed to help managers understand the costs of running a business. Profit and loss account and balance sheet are presented to the management by the financial accountant. But modern management needs much more detailed information than those supplied by these financial statements. Cost accounting provides detailed cost information to various levels of management for efficient performance of their functions. The information supplied by cost accounting acts as a management tool for decision making, to optimize the utilization of scarce resources and ultimately add to the profitability of business by controlling expenditure under various heads.

Management Accounting

Management accounting is the modern concept of accounts as a tool of management. It is concerned with all such accounting information that is useful to management. In other words, the term management accounting is applied to the provision of accounting information for management activities such as decision making, planning and controlling, etc. Thus, any form of accounting, which enables a business to be conducted more efficiently, can be regarded as management accounting. The Chartered Institute of Management

1. American Institute of Certified Public Accountants (AICPA).

Accountants (CIMA), London has defined management accounting as *'the presentation of accounting information in such a way as to assist management in the creation of policy and in the day-to-day operations of an undertaking.'*

Cost accounting and management accounting are intimately related areas, so much so that Horngren, a renowned author on the subject, has gone to the extent of saying, *'Modern cost accounting is often called management accounting. Why? Because cost accountants look at their organization through a manager's eyes.'* Thus managerial aspects of cost accounting are inseparable from management accounting.

Limitations of Financial Accounting

Cost accounting has emerged mainly because of certain limitations of financial accounting. Financial accounting is so limited and inadequate in regard to the information which it can supply to management that businessmen have been eager to adopt supplementary accounting systems like cost accounting. The limitations of financial accounting are summarized as follows:

- 1. Shows only overall performance** Financial accounting provides information about profit, loss, cost, etc., of the collective activities of the business as a whole. It does not furnish costing data classified in terms of departments, products, processes, sales territories, etc.
- 2. Historical in nature** Financial accounting is historical, since the data are summarized only at the end of the accounting period. There is no system of computing day-to-day cost and also for computing pre-determined costs.
- 3. No performance appraisal** In financial accounting, there is no system of developing norms and standards to appraise the efficiency in the use of materials, labour and other costs by comparing the actual performance with what should have been accomplished during a given period of time.
- 4. No material control system** Generally, there is no proper system of control over materials which may result in losses in the form of obsolescence, deterioration, excessive scrap, misappropriation, etc.
- 5. No labour cost control** In financial accounting, there is no system of recording loss of labour time, *i.e.*, idle time. Labour cost is not recorded by jobs, processes or departments, and as such it offers no system of incentives that may be easily used to compensate workers for their above-standard performance.
- 6. No proper classification of costs** In financial accounting, costs are not classified into direct and indirect, fixed and variable and controllable and uncontrollable costs. These classifications have utility of their own.
- 7. No analysis of losses** Financial accounting does not fully analyse the losses due to idle time, idle plant capacity, inefficient labour, sub-standard materials, etc. Thus, exact causes of the losses are not known.
- 8. Inadequate information for fixing of prices** Costs are not available as an aid in determining prices of products, services or production orders.
- 9. No cost comparison** Comparison is the foundation of modern management control. But financial accounting does not provide data for comparison of costs of different periods, different jobs or departments, sales territories, etc.
- 10. Fails to supply useful data to management** Financial accounting fails to supply useful data to management for taking various decisions, like, replacement of labour by machines, introduction of new products, make or buy and selection of the most profitable product mix.

MEANING OF COSTING AND COST ACCOUNTING

The Chartered Institute of Management Accountants (CIMA), London has defined costing as, 'the techniques and processes of ascertaining costs.' Wheldon has defined costing as, 'the proper allocation of expenditure and involves the collection of costs for every order, job, process, service or unit.' Thus, costing simply means cost finding by any process or technique. It consists of principles and rules which are used for determining:

- (a) the cost of manufacturing a product, e.g., motor car, furniture, chemical, steel and paper and
- (b) the cost of providing a service, e.g., electricity, transport and education.

The terms 'costing' and 'cost accounting' are often used interchangeably. Cost accounting is a formal system of accounting for costs in the books of account, by means of which, costs of products and services are ascertained and controlled. According to L C Cropper, 'cost accounting means a specialized application of the general principles of accounting, in order to ascertain the cost of producing and marketing any unit of manufacture or of carrying out any particular job or contract.' An authoritative definition of cost accounting has been given by CIMA, London as follows: 'Cost accounting is the process of accounting for costs from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units. In its widest usage, it embraces the preparation of statistical data, the application of cost control methods and ascertainment of profitability of activities carried out or planned.'

Costing and Cost Accounting—Difference Though the terms 'costing' and 'cost accounting' are interchangeably used, there is a difference between the two. Costing is simply the method of determining costs by using any method like arithmetic process, memorandum statements, etc. Cost accounting, on the other hand, denotes the formal accounting mechanism, by means of which costs are ascertained by recording them in the books of account. In simple words, costing means finding out the cost of products or services by any technique or method, while cost accounting means costing using the double entry system.

Cost Accountancy Cost accountancy is a very wide term. It means and includes the principles, conventions, techniques and systems which are employed in a business to plan and control the utilization of its resources. It is defined by CIMA, London as, 'the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purposes of managerial decision making.'

Cost accountancy is thus the science, art and practice of a cost accountant. It is a science in the sense that it is a body of systematic knowledge, which a cost accountant should possess for the proper discharge of his duties and responsibilities. It is an art as it requires the ability and skill on the part of a cost accountant, in applying the principles of cost accountancy to various managerial problems, like price fixation, cost control, etc. Practice refers to constant efforts on the part of cost accountant, in the field of cost accountancy. Theoretical knowledge alone would not enable a cost accountant to deal with the various intricacies involved. He should, thus, have sufficient practical training, and exposure to real life costing dilemmas.

Cost accountancy has a very wide scope. It includes costing, cost accounting, cost control and cost audit. Cost control and cost audit have been discussed in Section II of this book.

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Applications of Cost Accounting

Cost accounting is generally considered as being applicable only to manufacturing concerns. This is not so. Its applications are in fact much wider. All types of activities, manufacturing and non-manufacturing, in which monetary value is involved, should consider the use of cost accounting. Wholesale and retail businesses, banking and insurance companies, railways, airways, shipping and road transport companies, hotels, hospitals, schools, colleges, universities, farming and cinema houses, all may employ cost accounting techniques to operate efficiently. It is only a matter of recognition by the management of the applicability of these costing concepts and techniques in their own fields of endeavour.

OBJECTIVES AND FUNCTIONS OF COST ACCOUNTING

The main objectives of cost accounting are, as follows:

1. **Ascertainment of cost** This is the primary objective of cost accounting. In cost accounting, cost of each unit of production, job, process or department, etc., is ascertained. Not only actual costs incurred are ascertained but costs are also predetermined for various purposes. For cost ascertainment, various methods and techniques are employed under different situations.

2. **Cost control and cost reduction** Cost accounting aims at improving profitability by controlling and reducing costs. For this purpose, various specialized techniques, like standard costing, budgetary control, inventory control, value analysis, etc., are used. This objective of cost control and cost reduction is becoming increasingly important in the present scenario because of growing competition in the business world.

3. **Guide to business policy** Cost accounting aims at serving the needs of the management in conducting the business with utmost efficiency. Cost data provide guidelines for various managerial decisions, like making or buying, selling below cost, utilization of idle plant capacity, introduction of a new product, etc.

4. **Determination of selling price** Cost accounting provides cost information on the basis of which selling prices of products or services may be fixed. In periods of depression, cost accounting guides the firms in deciding the extent to which the selling prices may be reduced to meet the situation.

In order to realize these objectives, the data provided by cost accounting may have to be re-classified, re-organized and supplemented by other relevant business data from outside the formal cost accounting system.

COST ACCOUNTING AND FINANCIAL ACCOUNTING—A COMPARISON

Both cost accounting and financial accounting are concerned with systematic recording and presentation of financial data. The two systems rest on the same principles concerning debit and credit and have the same sources of recording the transactions. But cost accounting is much more detailed than financial accounting. This is because in financial accounting, profit or loss is ascertained for the business as a whole whereas in cost accounting, detailed cost and profit data for various parts of business, like departments, products, etc., are shown. This is explained in the following illustration.

Suppose a company is manufacturing three products—X, Y and Z. Under financial accounting and cost accounting, the following types of statements are prepared:

Under Financial Accounting A profit and loss account is prepared to compute profit as shown on the next page (data is assumed):

Profit and Loss Account for the Period.....

	₹		₹
To Materials	75,000	By Sales	1,50,000
To Wages	20,000		
To Other expenses	25,000		
To Profit (Balance figure)	30,000		
	<u>1,50,000</u>		<u>1,50,000</u>

This statement shows that total profit is ₹30,000 but it does not disclose the details of profit/loss of each of the products X, Y and Z in the total profit. This is revealed by cost accounting.

Under Cost Accounting A detailed statement is prepared as follows (data of the above given profit and loss account with further assumptions):

Statement of Cost and Profit for the Period.....

	Total ₹	Product X ₹	Product Y ₹	Product Z ₹
Materials	75,000	40,000	12,000	23,000
Wages	20,000	10,000	5,000	5,000
Other expenses	25,000	20,000	3,000	2,000
Total cost	<u>1,20,000</u>	<u>70,000</u>	<u>20,000</u>	<u>30,000</u>
Sales	<u>1,50,000</u>	<u>96,000</u>	<u>28,000</u>	<u>26,000</u>
Profit/Loss (-)	<u>30,000</u>	<u>26,000</u>	<u>8,000</u>	<u>(-) 4,000</u>

The above detailed statement prepared under cost accounting shows that in the total profit of ₹30,000, Product X contributed ₹26,000 and Product Y ₹8,000, whereas Product Z gave a loss of ₹4,000. When the firm's management gets this information, it will investigate to find out the reasons for loss in product Z. If product Z cannot be made profitable, its production should be stopped to improve the overall profit picture of the company. However, this type of information is not revealed by financial accounting.

Differences between cost accounting and financial accounting are explained below:

Basis	Financial Accounting	Cost Accounting
1. Purpose	Its main purpose is to prepare profit & loss account and balance sheet for reporting to owners or shareholders and other outside agencies, i.e., external users.	The main purpose of cost accounting is to provide detailed cost information to management, i.e., internal users.
2. Statutory requirements	These accounts have to be prepared according to the legal requirements of Companies Act and Income Tax Act.	Maintenance of these accounts is voluntary, except in certain specified industries where it has been made obligatory to keep cost records under the Companies Act.
3. Analysis of cost and profit	Financial accounts reveal the profit or loss of the business as a whole for a particular period. It does not	Cost accounts show the detailed cost and profit data for each product line, department, process, etc.

(Contd.)

	show the figures of cost and profit for individual products, departments and processes.	
4. Periodicity of reporting	Financial reports (profit and loss account and balance sheet) are prepared periodically, usually on an annual basis.	Cost reporting is a continuous process and may be done on a daily, weekly, monthly, etc., basis
5. Control aspect	It lays emphasis on the recording of financial transactions and does not attach any importance to the control aspect.	It provides for a detailed system of controls with the help of certain special techniques like standard costing and inventory control, etc.
6. Historical and predetermined costs	It is concerned almost exclusively with historical records. The historical nature of financial accounting can be easily understood in the context of the purposes for which it was designed.	It is concerned not only with historical costs but also with predetermined costs. This is because cost accounting does not end with what has happened in the past. It extends to plans and policies to improve performance in the future.
7. Format of presenting information	Financial accounting has a single uniform format of presenting information, <i>i.e.</i> , profit and loss account, balance sheet and cash flow statement.	Cost accounting has varied forms of presenting cost information, which are tailored to meet the needs of management and thus, lacks a uniform format.
8. Types of transactions recorded	Financial accounting records only external transactions, like sales, purchases, receipts, etc., with outside parties.	Cost accounting records not only external transactions but also internal or inter-departmental transactions like issue of materials by store keeper to production departments.
9. Types of statements prepared	Financial accounting prepares general purpose statements like profit and loss account and balance sheet. That is to say, financial accounting must produce information that is used by many classes of people, none of whom have explicitly defined informational needs.	Cost accounting generates special purpose statements and reports like report on loss of materials, idle time report, variance report, etc. It identifies the user, discusses his problems and needs and provides tailored information.

MEANING OF COST

The term 'cost' does not have a definite meaning and its scope is extremely broad and general. It is, therefore, not easy to define or explain this term without leaving any doubt concerning its meaning. Cost accountants, economists and others develop the concept of cost according to their needs because one complete description of 'cost' to suit all situations is not possible.

According to Cambridge International Dictionary of English, cost means '*the amount of money needed to buy, do or make something.*' However, some authoritative definitions of cost are given below:

1. Cost is '*the amount of expenditure (actual or notional), incurred or attributable to a given thing.*' (CIMA, London)
2. '*A cost is the value of economic resources used as a result of producing or doing the things costed.*' (W M Harper)
3. '*Cost is a measurement, in monetary terms, of the amount of resources used for the purpose of production of goods or rendering of services.*' CAS-I of ICAI

In fact, in order to assign a definite meaning to the term 'cost', it should be used with a modifier or an adjective, according to the specific purpose for its use. For example, direct cost, fixed cost, variable cost, controllable cost, material cost, selling cost, prime cost, marginal cost, differential cost, standard cost, estimated cost, actual cost, joint cost, conversion cost etc., have specific meanings. All these terms have been explained in this book.

Cost vs Expense and Loss

Often the terms 'cost' and 'expense' are used interchangeably. But cost should be distinguished from expense and loss.

Expense Expense is defined as 'an expired cost resulting from a productive usage of an asset.' It is that cost which has been applied against revenue of a particular accounting period in accordance with the principle of matching costs to revenue. In other words, an expense is that portion of the revenue-earning potential of an asset which has been consumed in the generation of revenue. Unexpired or unconsumed part of the cost is recorded as an asset in the balance sheet. Such an unexpired cost is converted into an expense when it expires while helping to earn revenue. For example, when a plant is purchased, depreciation on plant (expired cost) is charged to the profit and loss account as an expense and cost of plant remaining after providing depreciation (unexpired cost) is shown as an asset in the balance sheet. Every year, depreciation on plant, representing expense, is debited to profit and loss account and depreciated value representing unexpired cost is shown in the balance sheet. Pre-paid insurance is also an example of unexpired cost which is shown in the balance sheet as an asset.

Loss Loss is defined as 'reduction in a firm's equity, other than from withdrawals of capital for which no compensating value has been received.' A loss is an expired cost resulting from the decline in the service potential of an asset that generated no benefit to the firm. Obsolescence or destruction of stock by fire are examples of loss.

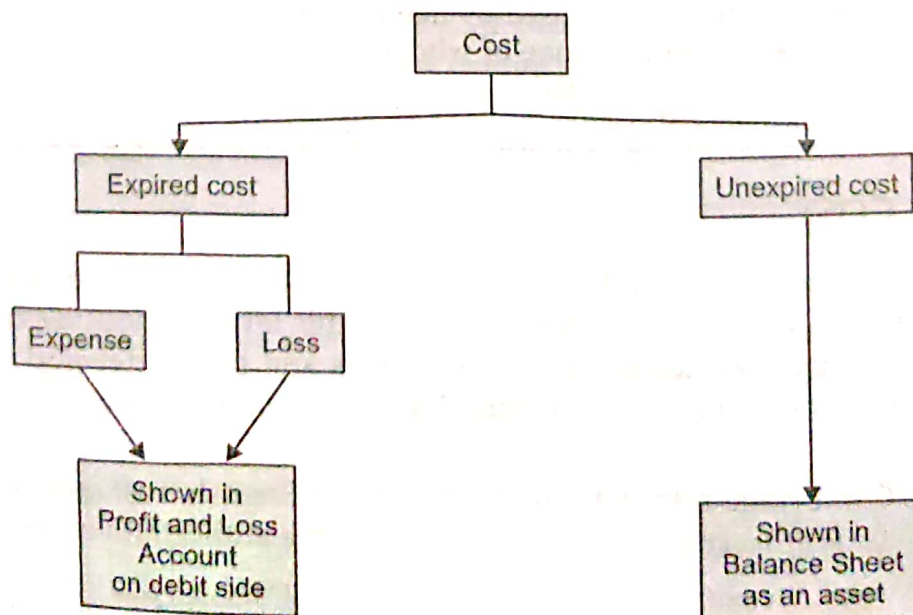


Fig. 1.2: Relation of Cost, Expense and Loss

COST CENTRE

For the purpose of ascertaining cost, the whole organization is divided into small parts or sections. Each small section is treated as a cost centre of which cost is ascertained. A cost centre is defined by CIMA, London as 'a location, person, or item of equipment (or group of these), for which costs may be ascertained and used for the purpose of control.' Thus, a cost centre refers to a section of the business to which costs can be charged. It may be a location (a department, a sales area), an item of equipment (a machine, a delivery van), a person (a salesman, a machine operator) or a group of these (two automatic machines operated by one workman). The main purpose of ascertaining the cost of a cost centre is control of cost.

Cost centres are primarily of two types:

- (a) **Personal cost centre**—which consists of a person or a group of persons.
- (b) **Impersonal cost centre**—which consists of a location or an item of equipment or group of these.

From a *functional* point of view, cost centres may be of the following two types:

- (a) **Production cost centre** These are those cost centres where actual production work takes place. Examples are, weaving department in a textile mill, melting shop in a steel mill and cane crushing shop in a sugar mill.
- (b) **Service cost centre** These are those cost centres which are ancillary to and render services to production cost centres. Examples of service cost centres are power house, tool room, stores department, repair shop and canteen.

A cost accountant sets up cost centres to enable himself to ascertain the costs he needs to know. A cost centre is charged with all the costs that relate to it, *e.g.*, if a cost centre is a machine, it will be charged with the costs of power, light, depreciation and its share of rent, etc. The purpose of ascertaining the cost of a cost centre is cost control. The person in charge of a cost centre is held responsible for the control of cost of that centre.

COST UNIT

"Cost unit is a form of measurement of volume of production or service. This unit is generally adopted on the basis of convenience and practice in the industry concerned." CAS-I*.

A cost unit is defined by CIMA, London as a 'unit of product or service in relation to which costs are ascertained.' For example, in a sugar mill, the cost per tonne of sugar may be ascertained, in a textile mill the cost per metre of cloth may be ascertained. Thus 'a tonne' of sugar and 'a metre' of cloth are cost units. In short, cost unit is unit of measurement of cost.

All sorts of cost units are adopted, the criterion for adoption being the applicability of a particular cost unit to the circumstances under consideration. Broadly, cost units may be of two types as explained below:

- (i) **Units of production**, *e.g.*, a ream of paper, a tonne of steel or a metre of cable.
- (ii) **Units of service**, *e.g.*, passenger miles, cinema seats or consulting hours.

*CAS—Cost Accounting Standards issued by Institute of Cost Accountants of India (ICAI).

METHODS OF COSTING

The methods or types of costing refer to the techniques and processes employed in the ascertainment of costs. Several methods have been designed to suit the needs of different industries. The method of costing to be applied in a particular concern depends upon the type and nature of manufacturing activity. Basically, there are two methods of costing:

1. Job costing or job order costing
2. Process costing

All other methods are variations of either job costing or process costing. The various methods given here are in outline only and detailed discussion of each of these is given in later chapters.

1. Job order costing This method 'applies where work is undertaken to customers' special requirements.'² Cost unit in job order costing is taken to be a job or work order for which costs are separately collected and computed. A job, big or small, comprises a specific quantity of a product or service to be provided as per customer's specifications. Industries where this method is used include printing repair shops, interior decoration and painting.

2. Contract costing or terminal costing This is a variation of job costing and, therefore, principles of job costing apply to this method. The difference between job and contract is that job is small and contract is big. It is well said that *a contract is a big job and a job is a small contract*. The cost unit here is a 'contract' which is of a long duration and may continue over more than one financial year. Contract costing is most suited to construction of buildings, dams, bridges and roads, shipbuilding, etc.

3. Batch costing Like contract costing, this is also a variation of job costing. In this method, the cost of a batch or group of identical products is ascertained and therefore each batch of products is a cost unit for which costs are ascertained. This method is used in companies engaged in the production of readymade garments, toys, shoes, tyres and tubes, component parts, bakery, etc.

4. Process costing As distinct from job costing, this method is used in mass production industries manufacturing standardized products in continuous processes of manufacturing. Costs are accumulated for each process or department. Here raw material has to pass through a number of processes in a particular sequence to the completion stage. In order to arrive at cost per unit, the total cost of a process is divided by the number of units produced. The finished product of one process is passed on to the next process as raw material. Textile mills, chemical works, sugar mills, refineries, soap manufacturing, etc., may be cited as examples of industries which employ this method.

5. Operation costing This is nothing but a refinement and a more detailed application of process costing. A process may consist of a number of operations and operation costing involves cost ascertainment for each operation instead of a process where distinctly separate operations are involved in a process, cost of each operation is found for effective control mechanism.

6. Single, output or unit costing This method of cost ascertainment is used when production is uniform and consists of a single or two or three varieties of the same product. Where the product is produced in different grades, costs are ascertained grade-wise. As the units of output are identical, the cost per unit is found by dividing the total cost by the number of units produced. This method is applied in mines, quarries, brick kilns, steel production, flour mills, etc.

2. CIMA, London Terminology.

7. Operating or service costing This method should not be confused with operation costing. It is used in undertakings which provide services instead of manufacturing products. For example, transport undertakings (road transport, railways, airlines, shipping companies), electricity companies, hotels, hospitals and cinemas, use this method. The cost units are passenger-kilometre or tonne-kilometre, kilowatt hours, a room per day in a hotel, a seat per show in a cinema hall, etc. This method is a variation of process costing.

8. Multiple or composite costing It is an application of more than one method of cost ascertainment with respect to the same product. This method is used in industries where a number of components are separately manufactured and then assembled into a final product. For example, in a television set manufacturing company, manufacture of different components may require different production methods and thus different methods of costing may have to be used. Assembly of these components into final product requires yet another method of costing. Other examples of industries which make use of this method are air-conditioners, refrigerators, scooters, cars and locomotives.

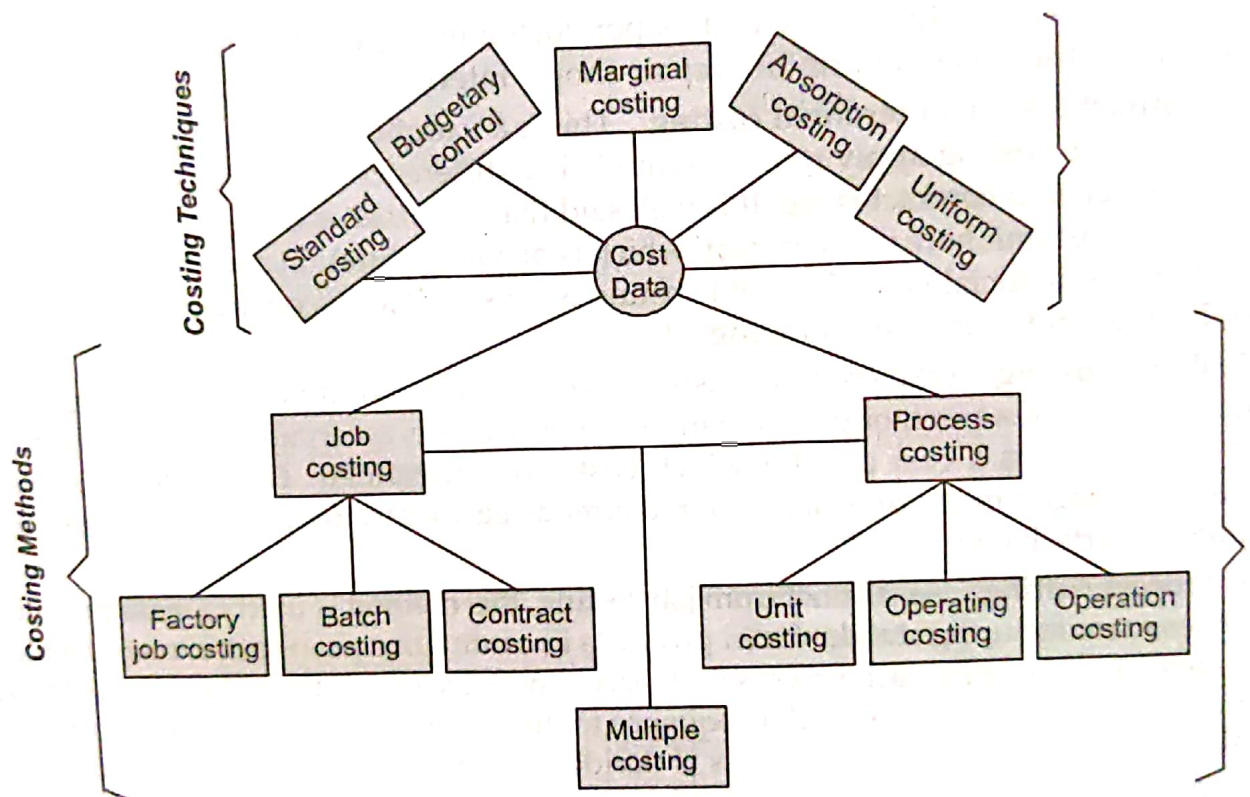


Fig. 1.3: Costing Methods and Techniques

TECHNIQUES OF COSTING

It is the type of industry that determines which of the eight methods of costing discussed above will be used in a particular enterprise. However, in addition to these methods, there are certain techniques of costing which are not alternatives to the methods discussed above. These techniques may be used for special purpose of control and policy in any business irrespective of the method of costing being used there. These techniques have been briefly explained below:

1. Standard costing This is a very valuable technique of controlling cost. In this technique, standard cost is predetermined as target of performance, and actual performance is measured against the standard. The difference between standard and actual costs are analysed to know the reasons for the difference so that corrective actions may be taken.

2. Budgetary control Closely allied to standard costing is the technique of budgetary control. A budget is an expression of a firm's business plan in financial form and budgetary control is a technique applied to the control of total expenditure on materials, wages and overheads by comparing actual performance with planned performance. Thus, in addition to its use in planning, the budget is also used for control and co-ordination of business operations.

3. Marginal costing In this technique, separation of costs into fixed and variable (marginal) is of special interest and importance. This is so because marginal costing regards only variable costs as the cost of the products. Fixed cost is treated as period cost and no attempt is made to allocate or apportion this cost to individual cost centres or cost units. It is transferred to costing profit and loss account of the period. This technique is used to study the effect on profit of changes in volume or type of output.

4. Total absorption costing It is a traditional method of costing whereby total costs (fixed and variable) are charged to products. This is in complete contrast to marginal costing where only variable costs are charged to products. Although until recently, this was the only technique employed by cost accountants, but now a days it is considered to have only a limited application.

5. Uniform costing This is not a separate technique or method of costing like standard costing or process costing. It simply denotes a situation in which a number of firms adopt a uniform set of costing principles. It has been defined by CIMA, London as '*the use by several undertakings of the same costing principles and/or practices.*' This helps to compare the performance of one firm with that of other firms and thus, to derive the benefit of anyone's better experience and performance.

Costing Methods and Techniques are Tools

Methods and techniques of costing described above should be regarded as tools of a cost accountant and it should not be construed that a particular method or technique is superior to any other. Just as a skilled workman uses different tools for different tasks, similarly, a cost accountant should use these methods and techniques appropriately either individually or in combination. For example, standard costing may be combined with process costing to give 'standard process costing', or standard costing may be combined with marginal costing as well as process costing to give 'standard marginal process costing'. Although this may appear confusing, yet if principles involved in each method or technique are clearly understood, there should not be any difficulty in making the best use of these methods and techniques.

COST ASCERTAINMENT AND COST ESTIMATION

Cost Ascertainment Cost ascertainment is concerned with computation of actual costs incurred. It refers to the methods and processes employed in ascertaining costs. It has been seen earlier that in different types of industries, different methods are employed for ascertaining cost. These methods are job costing, contract costing, batch costing, process costing, operating costing, single costing and multiple costing. The basic principles underlying these methods are the same but these methods have been designed to suit the needs of individual business conditions. The ascertainment of actual cost has very little utility because of the following reasons:

1. Actual costs cannot be used for the purpose of price quotations and filling tenders.
2. Actual cost has practically no utility for cost control purposes.
3. Actual costs are ineffective as means of measuring performance efficiency.

In spite of these limitations, ascertainment of actual costs proves very useful in many cases. For instance, ascertainment of actual costs reveals unprofitable activities, losses and inefficiencies occurring in the form of idle time, excessive scrap, etc.

Cost Estimation As against ascertainment of actual costs, costs may also be predetermined. Cost estimation is the process of predetermining costs of goods or services. The costs are determined in advance of production and precede the operations. Estimated costs are definitely the future costs and are based on the average of past actual costs adjusted for anticipated changes in future. Cost estimates may have the following uses:

1. Cost estimates are used in making price quotations and bidding for contracts.
2. Cost estimates are used in the preparations of budgets.
3. They help in evaluating performance.
4. They are used in preparing projected financial statements.
5. Cost estimates may serve as targets in controlling the costs.

Extreme care should be taken in cost estimation because a high price quotation may result in loss of business.

CLASSIFICATIONS OF COST

Classification is the process of grouping costs according to their common characteristics. It is a systematic placement of like items together according to their common features.

There are various ways of classifying costs as given below. Each classification serves a different purpose:

1. Classification into Direct and Indirect Costs

Costs are classified into direct costs and indirect costs on the basis of their identifiability with cost units or jobs or processes or cost centres.

Direct costs These are those costs which are incurred for and easily identified with a particular cost object. Cost of raw materials used and wages of a machine operator are common examples of direct costs. To be specific, cost of steel used in manufacturing a machine can be easily known. It is, therefore, a direct cost. Similarly, wages paid to a tailor in a readymade garments company for stitching a pair of trousers is a direct cost because it can be easily identified in the cost of that garment.

Indirect costs These are general costs and are incurred for the benefit of a number of cost object. These costs cannot be easily identified with a particular cost object. Depreciation of machinery, insurance, lighting, power, rent, managerial salaries, materials used in repairs, etc., are common examples of indirect costs. For example, depreciation of machine for stitching a pair of trousers cannot be known and thus it is an indirect cost.

Costs are not traced or identified directly with a cost object for one of the following three reasons:

1. It is impossible to do so; e.g., rent of building.
2. It is not convenient or feasible to do so; e.g., nails used in furniture or sewing thread.
3. Management chooses not to do so; i.e., many companies classify certain items of cost as indirect because it is customary in the industry to do so; e.g., carriage inward may be treated as an indirect expense (alternatively, it may be treated as a part of the cost of materials purchased).

The terms 'direct' and 'indirect' should be used in relation to the object of costing. An item of cost may be a direct cost in one case and the same may be indirect in another case.

It is the nature of business and the cost unit chosen that will determine whether a particular cost is direct or indirect. For example, depreciation of asphalt mixing plant used by a road building contractor at site is a direct cost, whereas depreciation of plant used in a factory is an indirect cost. It is because in the factory, plant would probably benefit more than one cost unit and it may not be convenient to allocate depreciation to various cost units with any degree of accuracy.

This classification is important from the point of view of accurate ascertainment of cost. Direct costs of a product can be conveniently determined while the indirect costs have to be arbitrarily apportioned to various cost units. For example, in readymade garments, the cost of cloth and wages of tailor are accurately ascertained without any difficulty and are thus direct costs. But the rent of factory building, managerial salaries, etc., which are indirect costs, have to be apportioned to various cost units on some arbitrary basis and cannot be accurately ascertained.

2. Classification into Fixed and Variable Costs

Costs behave differently when level of production rises or falls. Certain costs change in accordance with production level while other costs remain unchanged. As such on the basis of behaviour or variability, costs are classified into fixed, variable and semi-variable.

- (i) **Fixed costs** These costs remain constant in 'total' amount over a specific range of activity for a specified period of time, *i.e.*, these do not increase or decrease when the volume of production changes. For example, building rent and managerial salaries remain constant and do not change with change in output level and thus are fixed costs. But fixed cost 'per unit' decreases when volume of production increases and vice versa, fixed cost per unit increases when volume of production decreases. For example, if total fixed cost is ₹20,000 per month, per unit fixed cost will be as follows:

No. of units produced	Total fixed cost ₹	Fixed cost per unit ₹
1	20,000	20,000
2	20,000	10,000
20	20,000	1,000
200	20,000	100
2,000	20,000	10

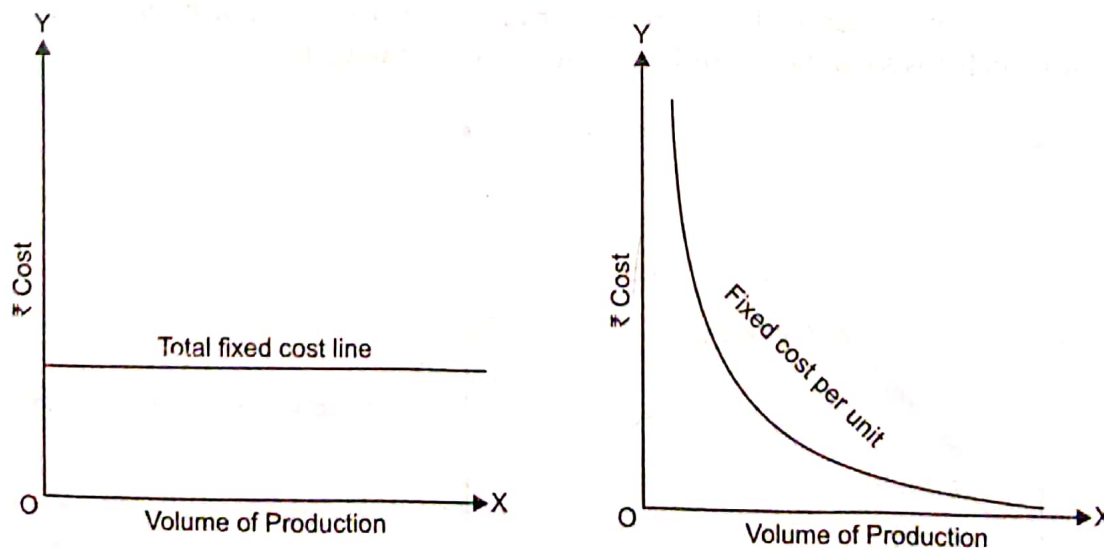


Fig. 1.4: Behaviour of Fixed Cost

The line representing fixed cost per unit will not touch X-axis because the fixed cost per unit cannot be zero.

Relevant range – Fixed cost remains fixed only in relation to a given range of output and for a given time span. If the output is to be increased beyond the range, the fixed cost will also increase. Relevant range refers to the band of activity or volume in which specific relationship between the level of activity and the fixed cost in question is valid.

The characteristics of fixed cost are:

- (a) fixed total cost within a relevant range of output;
- (b) increase or decrease in per unit fixed cost when quantity of production changes;
- (c) apportioned to departments on some arbitrary basis;
- (d) such cost can be controlled mostly by top level management.

(ii) **Variable costs** These costs tend to vary in direct proportion to the volume of output. In other words, when volume of output increases, total variable cost also increases and vice versa, when volume of output decreases, total variable cost also decreases, but the variable cost per unit remains fixed. It is shown in the following table assuming variable cost per unit is ₹50.

- Fixed Costs**

 - Rent and lease
 - Managerial salaries
 - Building insurance
 - Salaries
 - Municipal taxes

- Variable Costs**

 - Direct materials
 - Direct wages
 - Power
 - Royalties
 - Normal spoilage
 - Commission of salesmen
 - Small tools

No. of units (A)	Variable cost per unit (B) ₹	Total variable cost (A × B) ₹
1	50	50
25	50	1,250
300	50	15,000
4,000	50	2,00,000

Thus, in general, variable costs show the following characteristics:

- (a) variability of the total cost in direct proportion to the volume of output;
- (b) fixed cost per unit in the face of changing volume;
- (c) easy and reasonably accurate distribution of cost to departments;
- (d) such costs can be controlled by functional managers.

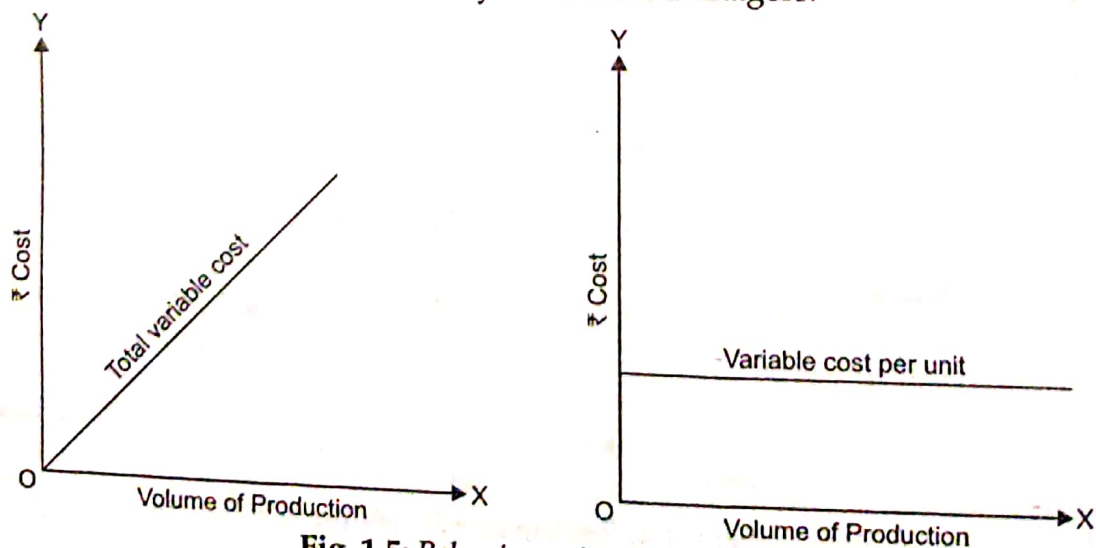


Fig. 1.5: Behaviour of Variable Costs

(iii) **Semi-variable or semi-fixed costs (mixed costs)** These costs include both a fixed and a variable component, *i.e.* these are partly fixed and partly variable. A semi-variable cost has a fixed cost element which needs to be incurred irrespective of the level of activity achieved. On the other hand, the variable element in semi-variable costs changes either at a constant rate or in lumps. For example, introduction of an additional shift in the factory will require additional supervisors and certain costs will increase by steps. In the case of a telephone connection, there is a minimum rent and beyond a specified number of calls, the charges vary according to the number of calls made. In fact, there is no definite pattern of behaviour of semi-variable costs. This is shown in Fig. 1.6.

- Semi-variable Costs**

 - Supervision
 - Maintenance and repairs
 - Telephone expenses
 - Light and power
 - Depreciation

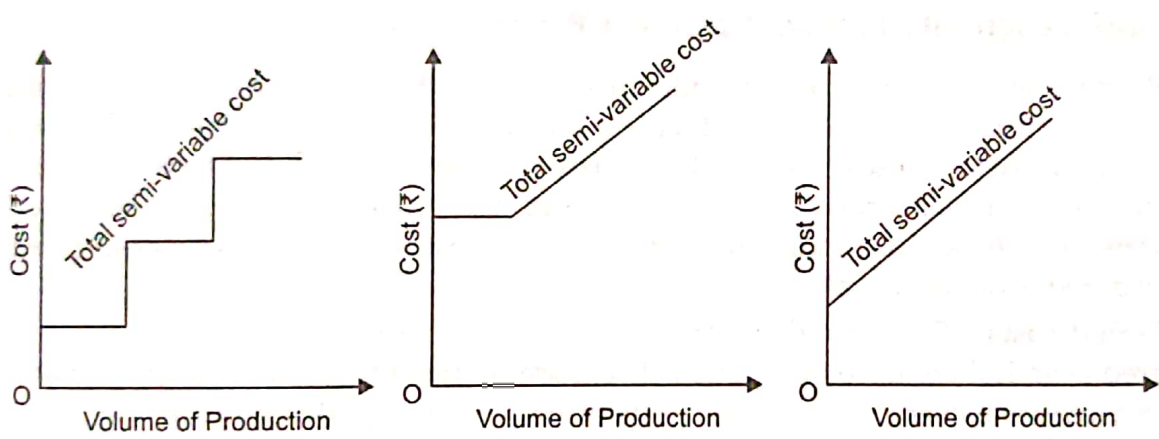


Fig. 1.6: Behaviour of Semi-variable Cost

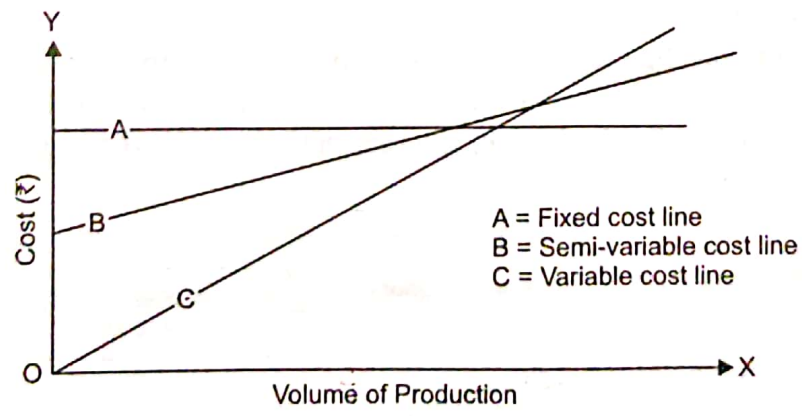


Fig. 1.7: Comparative Behaviour of Fixed, Variable and Semi-variable Costs

3. Classification into Committed and Discretionary Costs

It is explained above that costs may be classified into fixed and variable. Fixed costs are further classified into committed costs and discretionary (or programmed) costs. This

classification is based on the degree to which a firm is locked into an asset or service that is generating the fixed cost.

Committed costs These are those costs that are incurred in maintaining physical facilities and managerial set up. Such costs are committed in the sense that once the decision to incur them has been made, they are unavoidable and invariant in the short run. For example, salary of the managing director may represent a *committed cost* if, by policy, the managing director is not to be relieved unless the firm is liquidated. Similarly, depreciation of plant and equipment is *committed* because these facilities cannot be easily changed in the short run.

Discretionary costs These are those costs which can be avoided by management decisions. Such costs are not permanent. Advertising, research and development cost and salaries of low level managers are examples of discretionary costs because these costs may be avoided or reduced in the short run, if so desired by the management.

This classification into committed and discretionary costs is important from the point of view of cost control and decision making.

4. Classification into Product Costs and Period Costs

Product costs These costs include all such costs that are involved in acquiring or making a product. For a trader, product cost includes purchase cost plus freight inwards. For a manufacturer, these consist of direct materials, direct labour and factory overheads. Product costs are 'absorbed by' or 'attached to' the units produced. These are called *inventoriable costs* because these are included in the cost of product as work-in-progress, finished goods or cost of sales.

Period costs These are those costs which are not necessary for production and are incurred even if there is no production. These are written off as expenses in the period in which these are incurred. Such costs are incurred for a time period and are charged to the profit and loss account of the period. Showroom rent, salary of company executives and travel expenses are examples of period costs. These costs are not inventoried, *i.e.*, these are not included in the value of stocks. Administration and selling expenses are generally treated as period costs.

Classification into product and period cost is important from the point of view of profit determination. This is so because product cost is carried forward to the next accounting period as part of the unsold finished stock, whereas period cost is written off in the accounting period in which it is incurred.

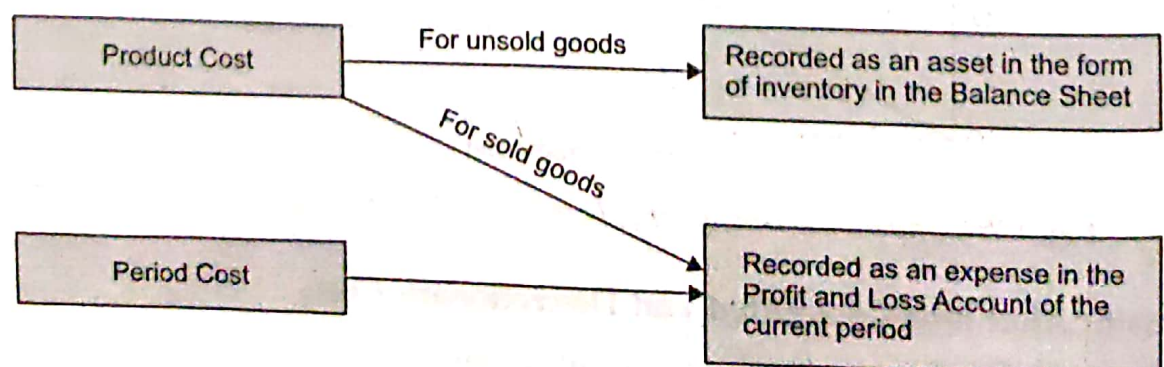


Fig. 1.8: Accounting Treatment of Product and Period Costs

5. Classification into Controllable and Non-controllable Costs

From the point of view of controllability, costs are classified into controllable costs and non-controllable costs.

Controllable costs These are the costs which may be directly regulated at a given level of management authority. In other words, controllable costs are those costs which are subject to the discretion of the manager and hence can be kept within predefined limits. Variable costs are generally controllable by department heads. For example, cost of raw material may be controlled by purchasing in larger quantities.

Non-controllable costs These are those costs which cannot be influenced by the action of a specified member of an enterprise. For example, it is very difficult to control costs like factory rent, managerial salaries, etc.

Two important points should be noted regarding this classification. First, controllable costs cannot be distinguished from non-controllable costs without specifying the level and scope of management authority. In other words, a cost which is uncontrollable at one level of management may be controllable at another level of management. For example, a departmental manager may have no control over the number of supervisors employed in his department, but this decision may have to be taken by the production manager. Thus, supervision cost will be non-controllable at the departmental manager's level, but it will be controllable at the level of production manager. Secondly, all costs are controllable in the long run at some appropriate management level.

It is a misconception that variable costs are controllable and fixed costs are non-controllable. However, variable costs are more prone to control than fixed costs.

6. Classification into Historical Costs and Predetermined Costs

On the basis of time of computation, costs are classified into historical costs and predetermined costs.

Historical costs These are the costs which are ascertained after these have been incurred. Historical costs are thus, nothing but *actual costs*. These costs are not available until after the completion of the manufacturing operations.

Predetermined costs These are future costs which are ascertained in advance of production, on the basis of a specification of all the factors affecting cost. These costs are extensively used for the purpose of planning and control.

7. Classification into Normal and Abnormal Costs

Normal cost may be defined as a cost which is normally incurred on expected lines at a given level of output. This cost is a part of cost of production. *Abnormal cost* is that which "is an unusual or a typical cost whose occurrence is usually irregular and unexpected and due to some abnormal situation of the production." Such cost is over and above the normal cost and is not treated as a part of the cost of production. It is charged to costing profit and loss account.

SPECIAL COSTS FOR MANAGEMENT DECISION MAKING

There are certain costs which are specially computed for use by the management for the purpose of decision making. These costs may not be recorded in the books of account.

Relevant Costs and Irrelevant Costs

Relevant costs Not all costs are relevant for specific decisions. A relevant cost is a cost whose magnitude will be affected by a decision being made. In decision making, management should consider only future costs and revenues that will differ under each alternative. Management is concerned only with those things it can affect. Management cannot change the cost of plant and machinery purchased in 1995. It can change future costs by its current decisions. Hence, relevant costs are future costs that will differ depending on the actions of the management. For each decision, the management must decide which costs are relevant. For example, in pricing a competitive bid, only differential costs are relevant. In measuring firm's ability to survive short-run adversity, only liabilities and future out-of-pocket costs are relevant.

Whether a cost is relevant or not depends upon the circumstances. In one case, a cost may be relevant but in another case the same cost may not be relevant. It is thus not possible to prepare a list of relevant costs to be used in all types of decisions.

Irrelevant costs These are those costs that will not be affected by a decision. To take an example from day-to-day life, one may have to decide about making a journey by own car or by a public transport bus. In this decision, insurance cost of car is irrelevant because it will not change, whatever alternative is chosen. However, cost of petrol and other operating costs of car will differ under the two alternatives and thus, are relevant for this decision.

Sunk Costs

A *sunk cost* is an expenditure made in the past that cannot be changed and over which management no longer has control. These costs are not relevant for decision making about the future. Thus, the book value of an asset currently being used is not relevant in making the decision to replace it. Similarly, the cost of land purchased in the year 2003 is not relevant in deciding whether to sell the land or hold it. What is relevant is how much cash could be realized in future by selling it. Despite the fact that sunk costs, which are historical costs, are irrelevant for making decisions, they are frequently analysed in detail before decisions about future courses of action are made. For example, historical costs may affect future tax payments which will differ depending on the course of action selected by management. Moreover, an analysis of historical costs may provide information about how future costs will differ under alternative courses of action.

One should understand the difference between sunk costs and irrelevant costs. Not all irrelevant costs are sunk costs but all sunk costs are irrelevant. To take an example, in choosing from the two alternative methods of production, if direct material cost is the same under the two alternatives, it is an irrelevant cost. But direct material cost is not a sunk cost because it will be incurred in future and is a future cost. In the opinion of Horngren, a well known authority on the subject, sunk cost has the same meaning as the past cost and all past costs are irrelevant.

Differential (or Incremental) Cost

This cost may be regarded as the difference in total cost resulting from a contemplated change. In other words, *differential cost* is the increase or decrease in total cost that results from an alternative course of action. It is ascertained by subtracting the cost of one

alternative from the cost of another alternative. The alternative choice may arise because of change in method of production, in sales volume, change in product mix, make or buy decisions, take or refuse decision, etc.

For differential cost analysis, we need to know the incremental revenues (the change in revenue) and incremental cost (the change in cost) arising from the decision.

Marginal Cost

Marginal cost is the additional cost of producing one additional unit. It is the same thing as variable cost. In other words, marginal cost is the aggregate of variable costs, i.e., prime cost plus variable overhead. Marginal costing (or variable costing) is a technique of charging only variable costs to products. Inventory is also valued at variable cost only. Fixed cost is treated as period cost and written off in profit and loss account of the period. Marginal costing is also a very important analytical and decision making tool in the hands of management.

Imputed Costs

These are hypothetical or notional costs which are specially computed outside the accounting system for the purpose of decision making. Interest on capital invested is a common type of imputed cost. As interest on capital is usually not included in cost, it is considered necessary to take it into account when deciding about the alternative capital investment projects. The failure to consider imputed interest cost may result in an erroneous decisions. For example, project *A* requires a capital investment of ₹50,000 and project *B* ₹40,000. Both the projects are expected to yield ₹10,000 as additional profit. Obviously, these two projects are not equally profitable since project *B* requires less investment and thus, it should be preferred. Similarly, rental value of building owned by a firm is also an imputed cost.

Opportunity Cost

Opportunity cost is the value of the alternatives foregone by adopting a particular strategy. In other words, it is a cost that measures the benefit that is lost or sacrificed when the choice of one course of action requires that other alternative course of action be given up. For example, a company has deposited ₹1 lakh in bank at 10 per cent p.a. interest. Now, it is considering a proposal to invest this amount in debentures where the yield is 17 per cent p.a. If the company decides to invest in debentures, it will have to forego bank interest of ₹10,000 p.a., which is the opportunity cost.

Opportunity cost is a pure decision-making cost. It is an imputed cost that does not require a cash outlay and it is not entered in the accounting books.

Replacement Cost

This is the cost at which there could be purchased an asset identical to that which is being replaced. In simple words, replacement cost is the current market cost of replacing an asset. When the management considers the replacement of an asset, it has to keep in mind its replacement cost and not the cost at which it was purchased earlier. For example, a machinery purchased in 1990 at ₹10,000 is discarded in 1998 and a new machinery of the same type is purchased for ₹15,000. So the replacement cost of the machinery is ₹15,000.

Material Cost

According to commodities supplied, the cost of procurement is directly attributable. Rebates, duty tax, etc., are also included. Materials may be classified into:

Direct materials can be easily identified with the finished product. For example, the iron in a car. However, in some cases, the finished product contains small quantities of materials, e.g., nails in garments, etc.

Indirect materials cannot be directly identified with the finished product. These are materials used in the production of finished products, e.g., (i) the sand paper used in the production of sand paper.

Labour Cost

Labour cost includes salaries and wages for permanent and casual workers like P.F. workers, etc.

Direct labour is that which is directly attributable to the finished product, e.g., the wages paid to workers operating a machine.

Indirect labour is that which is not directly attributable to the finished product, e.g., the wages paid to workers operating a machine.

Expense

All costs incurred in the production of services are classified as expenses.

Out-of-pocket Cost (Explicit Cost and Implicit Cost)

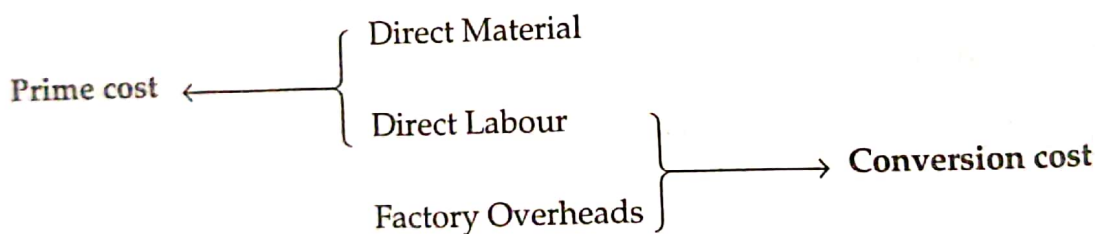
There are certain costs which require cash payment to be made (such as wages, rent) whereas many costs do not require cash outlay (such as depreciation). *Out-of-pocket costs*, also known as *explicit costs*, are those costs that involve cash outlays or require the utilization of current resources. Examples of out-of-pocket costs are wages, material cost, insurance and power cost. Out-of-pocket cost may be either fixed (manager's salary) or variable (raw materials and direct wages). Depreciation on plant and machinery does not involve any cash outlay and therefore is not an out-of-pocket cost. Such costs are also known as *implicit costs*. Out-of-pocket cost is frequently used as an aid in make or buy decision, price fixation during depression and many other decisions.

Future Cost

No decision can change what has already happened. The past is history and decisions made now can affect only what will happen in the future. Thus, the only relevant costs for decision making are *predetermined* or *future costs*. But it is the historical costs which generally provide a basis for computing future costs. However, changing relationships in the future are also given due consideration while estimating future costs.

Conversion Cost

This term is used to denote the sum of direct labour and factory overhead costs in the production of a product. In other words, conversion cost is the factory cost minus direct material cost. It is the total cost of 'converting' a raw material into finished product. Appropriate use of this cost can be made in certain managerial decisions.



It should be noted that labour cost is a part of prime cost as well as conversion cost.

ELEMENTS OF COST

A cost is composed of three elements, *i.e.*, material, labour and expense. Each of these elements may be direct or indirect. This is shown below:

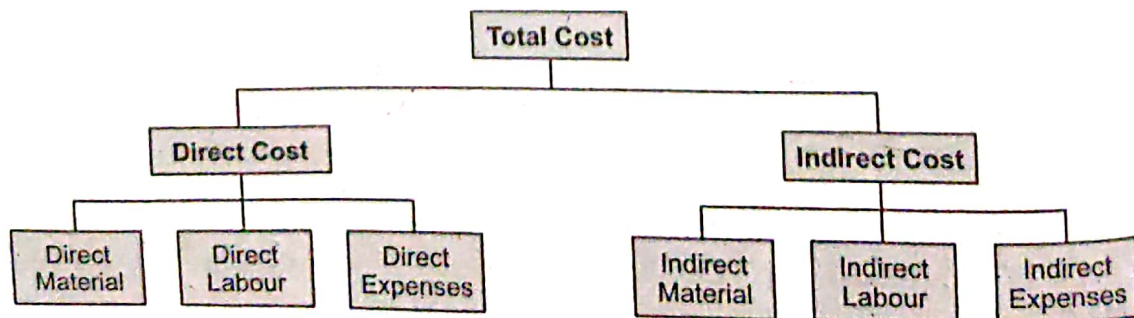


Fig. 1.9: Primary Elements of Cost

Material Cost

According to CIMA, London, material cost is 'the cost of commodities supplied to an undertaking.' Material cost includes cost of procurement, freight inwards, taxes, insurance, etc., directly attributable to the acquisition. Trade discounts, rebates, duty drawbacks, refund on account of modvat, sales tax, etc., are deducted in determining the cost of material. Materials may be direct or indirect.

Direct materials Direct material cost is that which can be easily identified with and allocated to cost units. Direct materials generally become a part of the finished product. For example, cotton used in a textile mill is a direct material. However, in many cases, though a material forms a part of the finished product, yet, it is not treated as direct material; e.g., nails used in furniture, thread used in stitching garments, etc. This is because value of such materials is so small that it is quite difficult and futile to measure it. Such materials are treated as indirect materials.

Indirect materials These are those materials which cannot be conveniently identified with individual cost units. These are minor in importance, such as (i) small and relatively inexpensive items which may become a part of the finished product, e.g., pins, screws, nuts and bolts, thread, etc., (ii) those items which do not physically become a part of the finished products, e.g., coal, lubricating oil and grease, sand paper used in polishing, soap, etc.

Direct Materials

- Clay in bricks
- Leather in shoes
- Steel in machines
- Cloth in garments
- Timber in furniture

Indirect Materials

- Lubricating oil
- Sand paper
- Nuts and bolts
- Coals
- Small tools
- Gum

Direct Labour

- Machine operator
- Shoe-maker
- Carpenter
- Weaver
- Tailor

Labour Cost

"Labour cost means the payment made to the employees, permanent or temporary, for their services." CAS-I of ICAI. It includes salaries, wages, commission and all fringe benefits like P.F. contribution, gratuity, ESI, overtime, incentive bonus, wages for holidays, idle time, etc.

Direct labour Direct labour cost consists of wages paid to workers directly engaged in converting raw materials into finished products. These wages can be conveniently identified with a particular product, job or process. Wages paid to a machine operator is a case of direct wages.

Indirect labour It is of general character and cannot be conveniently identified with a particular cost unit. In other words, indirect labour is not directly engaged in the production operations but only to assist or help in production operations.

Indirect Labour

- Supervisor
- Inspector
- Cleaner
- Clerk
- Peon
- Watchman

Expenses

All costs other than material and labour are termed as expenses. It is defined as 'the cost of services provided to an undertaking and the notional cost of the use of owned assets' (CIMA).

Direct expenses According to CIMA, London, 'direct expenses are those expenses which can be identified with and allocated to cost centres or units.' These are those expenses which are specifically incurred in connection with a particular job or cost unit. Direct expenses are also known as chargeable expenses.

- Direct or Chargeable Expenses**
- Hire of special plant for a particular job
 - Travelling expenses in securing a particular contract
 - Cost of patent rights
 - Experimental costs
 - Cost of special drawings, designs and layouts
 - Job processing charges
 - Royalty paid in mining
 - Depreciation or hire of a plant used on a contract at site

Indirect expenses All indirect costs, other than indirect materials and indirect labour costs, are termed as indirect expenses. These cannot be directly identified with a particular job, process or work order and are common to cost units or cost centres.

- Indirect Expenses**
- Rent and rates
 - Depreciation
 - Lighting and power
 - Advertising
 - Insurance
 - Repairs

Prime Cost

This is the aggregate of direct material cost, direct labour cost and direct expenses. Thus,

$$\text{Direct material} + \text{Direct labour} + \text{Direct expenses} = \text{Prime Cost}$$

Overheads

These are the aggregate of indirect material cost, indirect labour cost and indirect expenses. Thus,

$$\text{Indirect material} + \text{Indirect labour} + \text{Indirect expenses} = \text{Overheads}$$

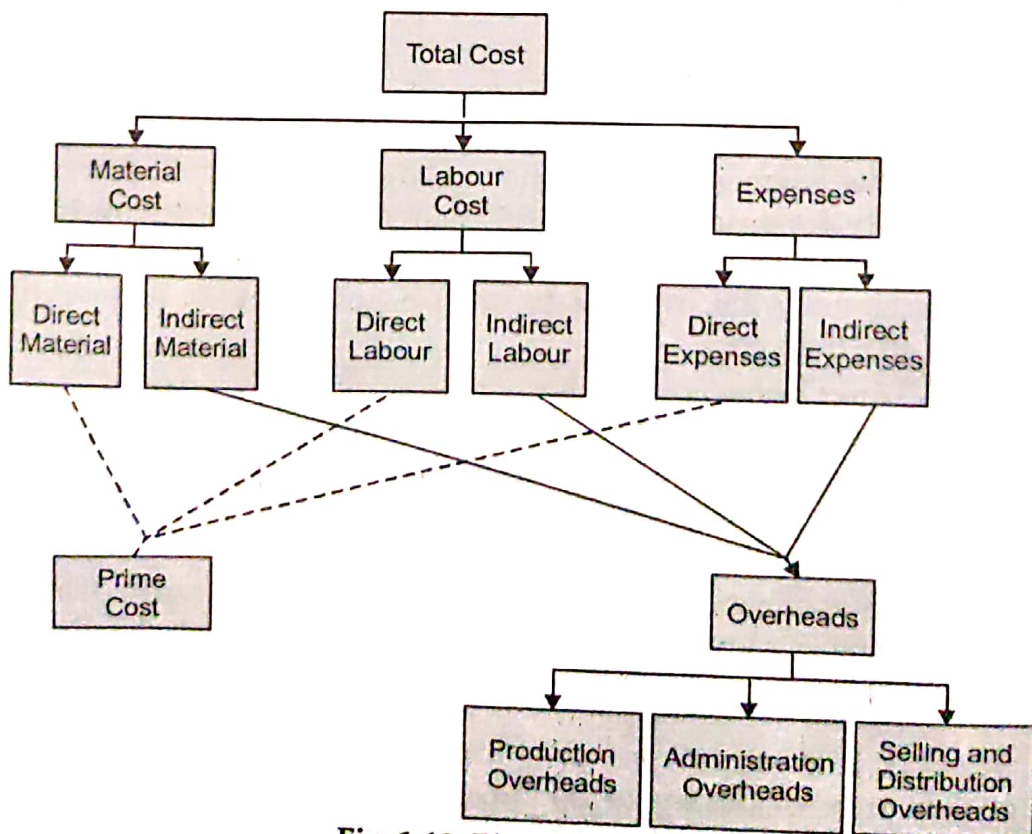


Fig. 1.10: Elements of Cost

Overheads are divided into three groups as follows:

1. **Production overheads** Also known as factory overheads, works overheads or manufacturing overheads, these are those overheads which are concerned with the production function. They include indirect materials, indirect wages and indirect expenses in producing goods or services.

- (a) *Indirect material*—Examples: Coal, oil, grease, etc.; stationery in factory office, cotton waste, brush and sweeping broom.
- (b) *Indirect labour*—Examples: Works manager's salary, salary of factory office staff, salary of inspector and supervisor, wages of factory sweeper and wages of factory watchman.
- (c) *Indirect expenses*—Examples: Factory rent, depreciation of plant, repair and maintenance of plant, insurance of factory building, factory lighting and power and internal transport expenses.

2. **Office and administration overheads** These are the indirect expenditures incurred in general administrative function, *i.e.*, in formulating policies, planning and controlling the functions, directing and motivating the personnel of an organization in the attainment of its objectives.

These overheads are of general character and have no direct connection with production or sales activities. This category of overheads is also classified into indirect material, indirect labour and indirect expenses.

- (a) *Indirect material*—Examples: Stationery used in general administrative office, postage, sweeping broom and brush.
- (b) *Indirect labour*—Examples: Salary of office staff, salary of managing director, remuneration of directors of the company.
- (c) *Indirect expenses*—Examples: Rent of office building, legal expenses, office lighting and power, telephone expenses, depreciation of office furniture and equipments, office air-conditioning and sundry office expenses.

3. **Selling and distribution overheads** Selling overheads are the costs of promoting sales and retaining customers. They are defined as '*the cost of seeking to create and stimulate demand and of securing orders.*' Examples are advertisements, samples and free gifts and salaries of salesmen.

Distribution cost includes all expenditure incurred from the time the product is completed until it reaches its destination. It is defined as '*the cost of sequence of operations which begins with making the packed product available for dispatch and ends with making the reconditioned returned empty packages if any, available for reuse.*' Examples are carriage outwards, insurance of goods in transit, upkeep of delivery vans and warehousing.

Selling and distribution overheads are also grouped into indirect material, indirect labour and indirect expenses.

- (a) *Indirect material*—Examples: Packing material; stationery used in sales office, cost of samples, price list; catalogues, oil, grease etc., for delivery vans, etc.
- (b) *Indirect labour*—Examples: Salary of sales manager, salary of sales office staff, salary of warehouse staff and salary of drivers of delivery vans.
- (c) *Indirect expenses*—Examples: Advertising, travelling expenses, showroom expenses, carriage outwards, rent of warehouse, bad debts and insurance of goods in transit.

Illustration 1.1

A manufacturer has shown an amount of ₹19,310 in his books as 'Establishment' which really include the following expenses:

	₹
Interest on debentures	1,200
Agents' commission	6,750
Warehouse wages	1,800
Warehouse repairs	1,500
Lighting of office	70
Office salaries	1,130
Director's remuneration	1,400
Travelling expenses of salesmen	1,760
Rent, rates and insurance of warehouse	310
Rent, rates and insurance of office	230
Lighting of warehouse	270
Printing and stationery	1,500
Trade magazine	70
Donations	150
Bank charges	100
Cash discount allowed	770
Bad debts	300

From the information prepare a statement showing total:

- (a) Selling expenses
- (c) Administration expenses
- (b) Distribution expenses
- (d) Expenses which you would exclude from costs

(Adapted)

Solution:

(a) <i>Selling Expenses:</i>	₹
Agents' commission	6,750
Travelling expenses of salesmen	1,760
Bad debts	300
Total	8,810
(b) <i>Distribution Expenses:</i>	₹
Warehousing wages	1,800
Warehouse repairs	1,500
Rent, rates and insurance of warehouse	310
Lighting of warehouse	270
Total	3,880

Overview of Cost Accounting

(c) Administration Expenses:	₹
Office salaries	1,130
Office lighting	70
Director's remuneration	1,400
Rent, rates and insurance of office	230
Printing and stationery	1,500
Trade magazine	70
Total	4,400
(d) Items not included in costs:	₹
Donations	150
Cash discount allowed	770
Bank charges	100
Interest on debentures	1,200
Total	2,220

Note: For details of items not included in cost, refer to chapter 5 – Output or Unit Costing. Cost Sheet has been discussed in detail in chapter 5.

Components of Total Cost— Elements of cost may be grouped as follows:

- (i) **Prime Cost** = Direct material + Direct labour + Direct expenses
- (ii) **Works Cost or Factory Cost** = Prime cost + Factory overheads
- (iii) **Cost of Production** = Works cost + Administration overheads
- (iv) **Total Cost or Cost of Sales** = Cost of production + Selling and distribution overheads

Cost Sheet (Cost Statement)

It is a statement which is prepared periodically to provide detailed cost of a cost centre or cost unit. A cost sheet not only shows the total cost but also the various components of the total cost. Period covered by a cost sheet may be a year, a month or a week, etc.

Illustration 1.2

From the following information for the month of January, prepare a cost sheet to show the following components: (a) Prime Cost, (b) Factory Cost, (c) Cost of Production, (d) Total Cost.

	₹
Direct material	57,000
Direct wages	28,500
Factory rent and rates	2,500
Office rent and rates	500
Plant repairs and maintenance	1,000
Plant depreciation	1,250
Factory heating and lighting	400
Factory manager's salary	2,000
Office salaries	1,600

(Contd.)

than other traditional types of inventory systems. It speeds up, simplifies, and reduces accounting effort in an environment that minimizes inventory balances, requires few allocations, uses standard costs and has minimal variances from standards. Backflush costing system is best suited to companies that maintain low inventories because costs flow directly to cost of goods sold. It is based on the philosophy that inventory is not a value-adding activity. It usually eliminates separate accounting for work-in-process.

Backflush accounting is suitably employed where the overall business cycle time is relatively short and inventory levels are low. But this concept of backflush costing is not widely considered to be in compliance with generally accepted accounting principles.

TARGET COSTING

Cost is an important justification for determining the selling price. In a traditional 'cost-plus' price method, the selling price of a product is set on the basis of total cost plus desired profit. This sounds logical because a company must cover all costs and earn a profit. But it must be accepted that in a competitive market, a company has little influence over the selling price of its product. Thus a cost plus price may not be acceptable in the market and if it is so then cost-plus pricing approach will prove a recipe for market failure. This view is based on the ground that it is not for the customer to ensure a profit to the manufacturer. In the words of Peter E Drucker, 'Customers do not see it as their job to ensure manufacturer a profit. The only sound way to price is to start out with what the market is willing to pay.'

In fact, the price of a product has to be on the basis of what the market is willing to pay. *Target costing* is a method of determining the cost of a product or service on the basis of competitive price prevailing in the market. In this technique, it is the market price that determines, the cost of a product and not the cost that determines the selling price. Target costing is defined as 'a cost management tool for determining and realizing a total cost at which a proposed product with specified functionality must be produced to generate the desired profitability at its anticipated selling price in the future.' It is important that the cost and the price are for the specified product functionality which can be understood from the needs for the customer and his willingness to pay for each function.

Target cost is an allowable cost for the product or service, given a competitive price, so that the company can earn the desired profit margin.

Thus:

$$\text{Target cost} = \text{Competitive market price} - \text{Required profit}$$

In simple words, target costing involves setting a target cost by subtracting the desired profit margin from the competitive market price. For example, if a manufacturer has target a profit of ₹25,000 on a new product by producing and selling 50,000 units at a price of ₹4 per unit,

Sales 50,000 units @ ₹4	₹2,00,000
Desired profit	₹25,000
Target cost	<u>₹1,75,000</u>

The target cost is determined by working from the market price of product to the cost that will allow a company to earn a target profit.

In order to reduce cost to a target cost level, companies have to:

- (a) redesign the product or service,
- (b) use advanced cost management techniques to seek higher productivity, and
- (c) use new and advanced technology in the manufacture of goods and services.

Target Costing Process

The basic steps in target costing are: define, set, achieve and maintain:

1. **Define the product, i.e.,** to analyse the product and its functions, identify the customers, study competitive position, etc.
2. **Set the target, i.e.,** to study how much the customer will pay and what should be the cost of the product.
3. **Achieve the target** to make value analysis and cost analysis to achieve the target cost.
4. **Maintain competitive cost i.e.,** not only to achieve the target cost but to stay ahead of competitors by using cost reduction methodology on a continuous basis.

LIFE-CYCLE COST ANALYSIS (LCCA)

There are several techniques which may be used for evaluating the economic performance of investment projects. Life-cycle cost analysis is one such technique used by management to evaluate the alternatives for equipments, projects, structures or systems, etc. Under this technique, the total cost of ownership of competing alternative projects, like machinery and equipment, spanning the full anticipated life, is established. As it encompasses the entire life span of the project and provides a long-term perspective, it is also called *whole life costing*.

In life-cycle cost analysis, all the relevant costs of the project, that occur throughout its life, not only the original expenditure, are considered. Thus life-cycle cost includes the initial one time cost (non-recurring) and all recurring costs over the full life span of the equipment. Examples of one-off non-recurring costs include the purchase costs, documentation costs, installation costs, transport and handling costs, etc. and examples of recurring costs are operating cost, cost of changes, maintenance, repairs and spares, cost of upgrading and disposal costs, incurred over the lifetime of the product. It is for this reason that life-cycle costs are called *cradle to grave costs* or *womb to tomb costs*.

Definition

Life-cycle costing has been defined by Consortium of Advanced Management-International, CAM-I as '*accumulation of costs for activities that occur over the entire life-cycle of a product, from inception to abandonment by the manufacturer and the customer*'. It is also defined as '*summations of cost estimates from inception to disposal for both equipments and projects, as determined by an analytical study and estimates of total costs experienced in annual time increments during the project life, with consideration for time value of money*'. Thus life-cycle cost is the total cost of ownership of plant and machinery, which includes the cost of acquisition, operation, maintenance, spares, upgrading and/or decommission.

The objective of life-cycle cost analysis is to help the management in choosing the most cost-effective alternative, from a number of available options, so as to achieve the lowest long-term cost of ownership. It is relevant to most equipment purchasing decisions.

Discounting Value of money decreases with time, i.e., a sum of money received today is worth more than an equivalent amount received at a later date, say after one year. This means time value of money must also be given due consideration, i.e., all future costs must be adjusted to their present value. This is called discounting, which is a technique used to compare costs and benefits that occur in different time periods. Life-cycle costing considers the full cost of ownership, which extends over a numbers of years; it must discount the total cost being considered in the present value format. In other words, life cycle cost include cradle to grave costs converted to NPV (Net Present Value) models.

As against life-cycle costing, it is very common that simple payback period approach is followed. Under this approach, the cost of acquisition is the only basis for the selection of equipments, considering the simple pay back period. This is a simple way to screen the projects and can be successfully used only in the case of low cost capital expenditures. But it can not compare complex projects where cost and savings vary in both magnitude and timing. It also does not consider the time value of money.

Uses Life-cycle cost analysis is an important analytical tool that is applicable to a broad range of investment decisions. By focusing on the project's life-cycle, it prompts the analyst to address not only the initial cost of a project, but also timing and resources required for future maintenance and rehabilitation activities. Moreover, this technique provides a more complete financial picture by considering the initial cost and all the further costs and benefits over the entire life time of the project.

Limitations Life-cycle cost analysis provides critical information to the overall decision-making process, but not the final answer. This is because apart from life-cycle costs, there may be other considerations such as available budget, risks involved, political and environmental concerns, etc. Getting input data can also be challenging. This technique is therefore, not so easy to learn and apply.

KAIZEN COSTING

The word Kaizen means 'continuous improvement in small steps' or 'change for the better'. Kaizen costing is a term which was developed in Japan immediately after the Second World War. Kaizen is thus a Japanese workplace philosophy which focuses on making continuous small improvements. The practice of Kaizen focuses upon continuous improvement in manufacturing processes, purchasing, logistics, other supporting business processes and management. Kaizen costing is based on the belief that nothing is ever perfect, so improvements and reductions in costs are always possible.

Meaning and definition

As its name suggests, kaizen costing is a continuous process that strives to reduce costs by making improvements and removing waste. It is applied to a product which is already under production. It is based on the philosophy of making small changes on a regular basis, always aiming at improving productivity, safety and effectiveness while reducing waste. These day-to-day small improvements when added together represent enormous savings for the company and also enormous self-esteem for the workforce.

The originator of kaizen costing, Yashihuro Monden in his book 'Cost Reduction Systems' has defined it as 'the maintenance of present cost levels for products currently being manufactured via systematic efforts to achieve the desired cost level'. Kaizen is also described as '*a system of continuous improvement in quality, technology, processes, company culture, productivity, safety and leadership*'. The system of Kaizen attempts to improve all functions and involves every employee, from management level to the assembly line workers. Thus kaizen strategy calls for never-ending efforts for improvement involving everyone in the organization – managers and workers alike. Everyone is encouraged to come up with suggestions on a regular basis for small improvements which aim at eliminating waste in business processes. This is not a periodical activity i.e. once a year, but it works continuously. The format for kaizen can be individual suggestion system or suggestions may be from a small group or large group of employees. Successful continuous improvement requires full commitment from senior managers, along with effective, well-

documented policies and procedures designed to examine and develop all new ideas. Key elements of Kaizen philosophy are: effort, quality, participation of employees, willingness to change and communication.

Characteristics. Basic characteristics of Kaizen include:

1. **Small ideas.** Kaizen is small ideas. It is based on the premise that small ideas result for the company.
2. **Continuity.** Kaizen is continuous flow in small improvements and when added together represent enormous savings of ideas for improvements on day-to-day basis. It is not periodical in nature.
3. **Participation.** Successful implementation of *Kaizen* requires the participation of all employees in the improvement. Involvement of all employees also results in their improved morale.
4. **Permanent changes.** Once the change/ improvement is made, it is adopted on permanent basis.
5. **Practical approach.** Changes made have to be within realist or practical constraints.

Kaizen is considered as the 'Key to Japan's Competitive Success.' It was first implemented in several Japanese businesses after the Second World War when American occupation forces brought in American experts for the rebuilding of Japanese industry. Kaizen has been successfully applied in many Japanese companies, such as Toyota and Canon. It has taken over 50 years of slow accumulation of many small developments in process and quality that has helped make Toyota the lowest cost and highest quality automobile company in the world. *Kaizen* has spread throughout the world and has been applied in banking, healthcare, government and many other fields. However, some critics of kaizen claim that the cost-cutting measures come at the expense of fair labor practices and quality of products. For example, accusations of death by overwork at Toyota that included unpaid "so-called voluntary quality control meetings held after regular work hours".

SOCIAL ACCOUNTING AND AUDIT

The companies should have social/ethical values and contribute to the welfare of society and not be solely devoted to maximizing profits. Social accounting (also known as social accounting and audit) is an important tool to measure the social performance of a company. It refers to a systematic accounting of those activities of a business which have social implications. It is defined as, "the measurement and reporting, internal or external, of information concerning the impact of an entity and its activities on society." Seidler Lee and Lynn have defined social accounting as, "the modification and application of conventional accounting to the analysis and solutions of problems of a social nature." Social aspects of business relate to fair pricing of products, labour practices and human rights, pollution and environment, community development programmes, etc.

The scope of social accounting extends to beyond the traditional financial statements prepared by business undertakings. They have to make social responsibility income statement and balance sheet. France, UK and USA are the top countries where social responsibility statements are made with other financial statements. In India, social accounting is not so popular but some Indian companies are now focusing on social responsibility and also started to make social report for calculating to total cost and benefits for performing social responsibility. But it is not compulsory to make these statements.

The accounting system may be so designed so as to extend it to measure the social performance of the business. Operating statements may be prepared to show the social

costs and benefits of various activities of business enterprises by assigning monetary values to various activities, like, extra cost of employing persons from backward classes, training programmes for handicapped and disabled persons, improving environments, etc. A business enterprise must behave like a good corporate citizen and identify itself with the national objectives. It should realise its social responsibilities and provide information about the social impact of its activities. If a business is engaged in socially irresponsible pursuits, it should be impelled to refrain from continuing such actions, if not compensate for the damages its activities have caused, or else face closure of its operations. Sachar Committee went to the extent of suggesting an amendment on the Companies Act requiring Companies to submit a social report along with the Director's Report clearly indicating the various activities relating to social aspects which have been executed during the year.

FINANCIAL AND NON-FINANCIAL PERFORMANCE MEASURES

Choosing appropriate performance measures for a business entity is a challenge. Organizations use a mix of financial and non-financial measurement systems to track their progress. In performance measures, it is now felt that in traditional financial measures, such as ROI and other financial ratios (as discussed in Ch. 14 – Financial Statement Analysis) there is too much emphasis on profits and earnings and little emphasis on drivers of value, such as customer and employee satisfaction, quality of products and innovation. These financial measures no longer work adequately. Now a days competition goes beyond costs and profits. Depending on market environments, apart from cost, other indicators are also important. Financial measures have proved inadequate to evaluate the total performance. This has led to innovations leading to non-financial measures such as: quality, market share, brand image, product leadership, number of customer complaints, efficiency of distribution channels, intellectual capital and customer loyalty, etc. These non-financial factors prove intangible assets which are as much drivers of success in many industries as much as the fixed and current assets shown on the balance sheets. Moreover, non-financial measures may prove better indicators of future financial performance.

Although there are many advantages of non-financial performance measures, they are not without drawbacks. One is that there is no standard definition which makes non-financial performance measures comparable across organizations. The choice of measures must be linked to company specific factors such as corporate strategy, value drivers, organizational objectives and the competitive environment.

In conclusion it may be said that although non-financial measures are increasingly important in performance evaluation and decision-making, companies should not simply copy measures that are used by others. Rather, companies have to adapt these. A combination of financial and non financial measures produces the best evaluation.

SUMMARY AND KEY TERMS

- ❖ **Cost management** is the practical application and use of cost accounting methods and techniques by the management to improve business performance. In competitive environment, companies have to make continuous efforts to find out ways and means to *control* and *reduce costs*.
- ❖ **Cost control** is exercised by comparing actual costs with pre determined standard costs so that the difference between the two can be measured and is thus simply the function of keeping costs within the prescribed limits.