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# UNIT 7                    UNDERSTANDING AND                                   CLASSIFYING COSTS

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## Objectives

The Objectives of this unit are:

- to familiarise you with the process of determination of costs, particularly in a manufacturing concern
- to explain how the costing techniques are useful in the process of managerial decision-making.

## Structure

- 7.1 Introduction
- 7.2 Cost Accounting
- 7.3 Costs
- 7.4 Elements of Cost
- 7.5 Components of Total Cost
- 7.6 Cost Sheet
- 7.7 Classification of Costs
- 7.8 Some other Concepts of Costs
- 7.9 Summary
- 7.10 Key Words
- 7.11 Self-assessment Questions/Exercises
- 7.12 Further Readings

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## 7.1 INTRODUCTION

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You will recall that units 1 and 2 of this Course gave you detailed outline about the conceptual frame work of accounting and the role the accountant is required to play in the present commercial and industrial set-up. You have seen that he is more of an adviser to the management. He functions as the channel through which accounting information flows to the management efficiently and effectively. He gathers information, breaks it down, sifts it and organises it into meaningful categories. He separates relevant information from irrelevant and then ranks the former according to the degree of importance to management. He also compares the actual performance with the planned one and reports and interprets the results of operations to all levels of management and to the owners of the business.

In performing the above multiple duties, the accountant has to make use of different management accounting techniques. Cost techniques have a precedence over other techniques since accounting treatment of costs is often both complex and financially significant. For example, if a firm proposes to increase its output by 10%, is it reasonable to expect total cost increase by less than 10%, exactly 10% or more than 10%? Such questions are concerned with the cost behaviour, i.e., the way costs change with the level of activity.

Answers to these questions are pertinent for the management accountant or financial analyst, since they are basic for the firm's projections and profits which ultimately



become the basis for all financial decision. It is, therefore, necessary for a management accountant or financial analyst to have a reasonably good working knowledge about basic cost concepts and patterns of cost behaviour. All these come within the range of cost accounting.

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## 7.2 COST ACCOUNTING

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In the initial stages cost accounting was merely considered to be a technique for ascertainment of costs of products or services on the basis of historical data. In course of time it was realised, due to competitive nature of the market, that ascertainment of cost' was not so important as controlling costs was. Hence, cost accounting is considered more as a technique for 'cost control' rather than as a technique merely for cost ascertainment. Due to technological developments in all fields, 'cost reduction' has now come within the ambit of cost accounting. Cost accounting is thus concerned with:

- Ascertaining the costs.
- Controlling the costs.
- Reducing the costs

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## 7.3 COSTS

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Cost Accountant is concerned with costs and hence it will be of relevance to us to understand the meaning of the term 'Cost' in a proper perspective.

In general, cost means the amount of expenditure (actual or notional) incurred on, or attributable to a thing. For example, if you have purchased a book for Rs. 150, it can be said that the cost of the book to you is Rs.150. Similarly, if furniture manufacturer makes a table by paying Rs.500 for timber, Rs 20.0 as carpenter's wages and Rs.100 as rent of the works, it can be said that the table cost him Rs.800. It may be noted, however, that the term cost cannot be exactly defined. Its interpretation depends on:

- a) the nature of the business or industry; and
- b) the context in which it is used.

In a business where selling and distribution expenses are quite nominal, the cost of the article may be calculated without considering the selling and distribution overheads. In a business where the nature of the product requires heavy selling and distribution expenses, the calculation of cost without taking into account selling and distribution expenses may prove very costly to the business. Further the costs may pertain to factory, office or other establishment aspects of operations. For example, **prime** cost , includes expenditure on direct materials, direct labour and direct expenses. Money spent on materials is termed as cost of materials, that spent on labour as cost of labour and so on. Thus, the use of the term 'cost' without background information may be quite misleading.

It may also be noted that there is no such things as an exact cost or a true cost because no figure of cost is true in all circumstances and for all purposes. Many items of cost of production are handled in an optional manner which may give different costs for the same product or job without going against the accepted principles of cost accounting Depreciation is one such item. Its amount varies in accordance with the method of depreciation being used. However, endeavour should be made to obtain as far as possible the accurate cost of a product or service.



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## 7.4 ELEMENTS OF COST

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In order to understand the correct interpretation of the term cost, it will be appropriate for us to learn about the basic elements of cost. There are broadly three elements of cost.

### Material

The substance from which the product is made is known as material. It may be in a raw or a manufactured state. It can be direct as well as indirect.

**Direct Materials:** All material which becomes an integral part of the finished product and which can be conveniently assigned to specific physical units is termed as 'Direct Material'. The following are some of the examples of direct material:

- All material or components specifically purchased, produced or requisitioned from stores.
- Primary packing material (e.g., carton, wrapping, cardboard, boxes, etc.)
- Partly produced or purchased components.

**Indirect Material:** All material which is used for purposes ancillary to the business and which cannot conveniently be assigned to specific physical units, is termed as 'indirect material'. Consumable stores, oil and waste, printing and stationary material, etc., are a few examples of indirect material.

### Labour

For conversion of materials into finished goods, human effort is needed, such human effort is called labour. Labour can be direct as well as indirect.

**Direct Labour:** Labour which takes an active and direct part in the production of a particular commodity is called direct labour. Direct labour costs are, therefore, specifically and conveniently traceable to specific products.

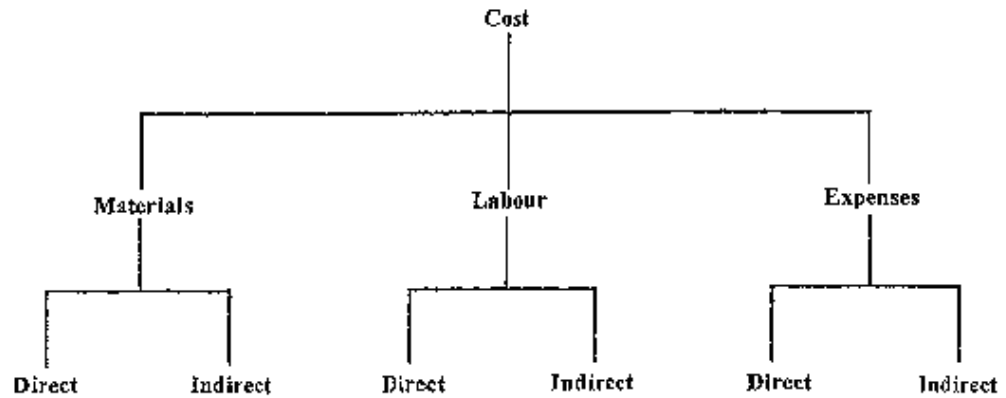
**Indirect Labour:** Labour employed for the purpose of carrying but tasks incidental to goods produced or services provided is indirect labour. Such labour does not alter the construction, composition or condition of the product. It cannot be practically traced to specific units of output. Wages of store-keepers, foremen, time-keepers, directors' fees, salaries of salesmen, etc., are all examples of indirect labour costs.

### Expenses

Expenses may be direct or indirect.

**Direct Expenses:** These are expenses which can be directly, conveniently and wholly allocated to specific cost centres or cost units. Examples of such expenses are: hire of some special machinery required for a particular contract, cost of defective work incurred in connection with a particular job or contract etc.

**Indirect Expenses:** These are expenses which cannot be directly, conveniently and wholly allocated to cost centres or cost units. Example of such expenses are rent, lighting, insurance charges; etc.



**Chart 7.1: Element of Cost**

**Overheads**

The term overhead includes indirect material, indirect labour and indirect expenses. Thus, all indirect costs are overheads.

A manufacturing organisation can broadly be divided into three divisions:

- Factory or Works, where production is done.
- Office and administration, where routine as well as policy matters are decided.
- Selling and distribution, where products are sold and finally despatched to the customers.

Overheads may be incurred in the factory or office or selling and distribution divisions. Thus, overheads may be of three types.

**Factory Overheads:** They include;

- Indirect material used in the factory such as lubricants,-oil, consumable stores, etc.
- Indirect labour such as gate-keeper's salary, time-keeper's salary, manager's salary, etc.
- Indirect expenses such as factory rent, factory insurance, factory lighting, etc.

**Office and Administration Overheads:** They include:

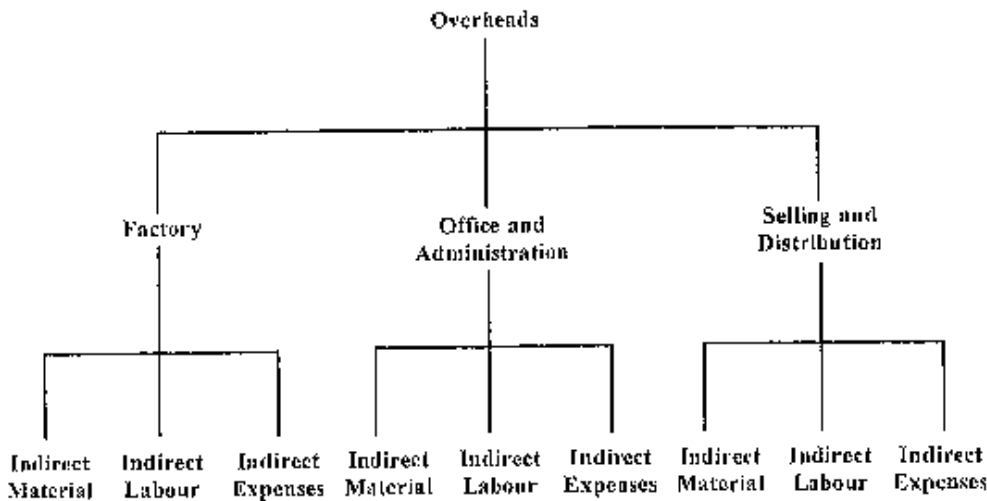
- Indirect material used in the office such as printing and stationery material, rooms and dusters, etc.
- Indirect labour such as salaries payable to office manager, office accountant, clerks, etc.
- Indirect expenses such as rent, insurance, lighting of the office.

**Selling and Distribution Overheads:** They include:

- Indirect material used such as packing material, printing and stationery material, etc:
- Indirect labour such as salaries of salesmen and sales manager, etc.
- Indirect expenses such as rent, insurance, advertising expenses, etc.



**Chart 7.2: Classification of Overheads**



## 7.5 COMPONENTS OF TOTAL COST

**Prime cost:** It consists of costs of direct material, direct labour, and direct expenses. It is also known as basic, first or flat cost.

**Factory Cost:** It comprises prime cost and, in addition, works or factory overheads which include costs of indirect material, indirect labour and indirect factory expenses. This cost is also known as works cost, production or manufacturing cost.

**Office Cost:** It comprises of factory cost and office and administration overheads. This is also termed as total cost of production.

**Total Cost:** It comprises of cost of production and selling and distribution overheads. It is also termed as Cost of Sales. '

Various components of the total cost can be depicted by means of Chart 7.3.

**Chart 7.3 : Components of Total Cost**

<b>Direct material</b>	
<b>Direct labour</b>	<b>Prime Cost or Direct cost or First cost or Flat Cost</b>
<b>Direct expenses</b>	<b>Works or Factory cost or Production cost or Manufacturing cost</b>
<b>Prime cost plus Works overheads</b>	<b>Office cost or Total cost of production</b>
<b>Works cost plus Office and Administration overheads</b>	<b>Cost of Sales or Total Cost</b>
<b>Office cost plus Selling and Distribution overheads</b>	

It may be noted that some accountants do not use the term office cost at all. They prefer to use the term total cost after adding office and administration overheads and selling and distribution overheads to works cost. However, while framing Chart 7.3 we have presumed that office and administration overheads exclusively relate to production. The selling and distribution overheads are inclusive of any office and administration overheads which may have been incurred in respect of sales.



## 7.6 COST SHEET

The elements/ components of total cost can be presented in the form of a statement, popularly known as 'Cost Sheet'. The cost sheet may be prepared separately for each cost center. It may have columns to show total cost, cost per unit, together with the relevant figures of the previous period.

The techniques of preparing a cost sheet can be understood with the help of an Illustration.

### Illustration 7.1

Let us prepare a cost sheet for a company showing different components of cost for 2003 from the following details

2003 from the following details.	Rs	Rs:
Raw Materials Consumed		80,000
Wages paid to labourers		20,000
Directly chargeable expenses		4,000
Oil & Waste		200,
Wages of Foremen		2,000
Storekeeper's Wages		1,000
Electric Power		400
Lighting :     Factory	1,000	
Office	400	1,400
Rent :         Factory	4,000	
Office	2,000	6,000
Repairs and Renewals:	1,000	
Factory Plant		
Machinerv	2,000	
Office premises	400	3,400
Depreciation : Office premises .	1,000	
Plant and Machinery	400	1,400
Consumable stores		2,000
Manager's Salary		4,000
Director's Fees		1,000
Office Printing & Stationery		400
Telephone Charges		100
Postage and Telegrams		200
Sales men's Commission and Salary		1,000
Traveling expenses		400
Advertising		1,000
Warehouse charges		400
Carriage outwards		300

### Cost Sheet for January, 2003

	Rs.	Rs.	Rs.
Direct Material: Raw materials consumed			80,000
Direct Labour: Wages paid to laborers			20,000
Direct Expenses: Directly chargeable expenses			4,000
<b>PRIME COST</b>			<b>1,04,000</b>



Add: Factory Overheads:			
Indirect Materials:			
Consumable stores	2,000		
Oil & Waste	200		
	<hr/>		
Indirect Labour:			
Wages of foremen	2,000	2,200	
Storekeeper Wages	1,000	3,000	
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Indirect Expenses:			
Electric Power	400		
Factory lighting	1,000		
Factory rent	4,000		
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Repairs and Renewals:			
Plant	1,000		
Machinery	2,000		
	<hr/>		
	3,000		
Depreciation:			
Plant and machinery	400	8,800	
Factory or Works Cost	<hr/>	<hr/>	14,000
			<hr/>
			1,18,000
Add: Office or Administrative Overheads :			
Indirect material:			
Office Printing and Stationery		400	
Indirect labour:			
Manager's salary	4,000		
Director's fees	1,000	5,000	
	<hr/>		
Indirect expenses:			
Office lighting	400		
Office rent	2,000		
Repairs and Renewals premises	400		
Depreciation on premises	1,000		
Telephone charges	100		
Postage and Telegrams	200	4,100	
	<hr/>	<hr/>	
			9,500
			<hr/>
			1,27,500
<b>TOTAL COST OF PRODUCTION</b>			
Add: Selling and Distribution overheads:			
Indirect labour:			
Salesmen's Commission and salary		1,000	
Indirect expenses:			
Travelling expenses	400		
Advertising	1,000		
Warehouse charges	400		
Carriage outward	300	2,100	3,100
	<hr/>	<hr/>	<hr/>
			1,30,600
<b>COST OF SALES</b>			



**Activity 7.1**

Complete the following Cost sheet

**Cost Sheet for June 2003**

Opening stock of raw material	10,000	
Add purchases	.....	
Less: Closing stock of raw material	50,000	
Raw material consumed	12,000	
Direct wages	.....	.....
Other Direct expenses		30,000
		2,000
		.....
a) <b>Prime Cost</b>	6,000	.....
Add: Factory overhead:	.....	
Indirect material		
Indirect labour		
Indirect expenses	<u>1,000</u>	
		9,000
b) <b>Factory or Works Cost</b>		<u>17,000</u>
Add: Office or administration Overheads		
c) <b>Cost of Production</b>	14,000	
Add: Opening stock of finished goods		
Less: Closing stock of finished goods	15,000	
Selling and Distribution overheads	<u>          </u>	8,000
d) <b>Cost of goods sold</b>		<u>1,03,000</u>
Sale of finished goods		1,33,000
Profit for the month		.....

**7.7 CLASSIFICATION OF COSTS**

Costs can be classified into different categories depending upon the purpose for which information is required. The costs can broadly be classified into **Fixed, Variable, Semi-variable and Step Costs**.

**Fixed Costs:** These are the costs which remain constant irrespective of the quantum of output within and up to the capacity that has been built up. Examples of such costs are: rent, insurance charges, management salary, etc.

Fixed costs remain constant per unit of time. As a result, they decrease per unit with every increase in output and *vice versa*. For example, if Rs.6,000 have been paid as rent for a factory building with an output of 1,000 units, the cost of rent per unit is R<sup>s</sup>.6. In case the output increases to 1,200 units, the cost of rent per unit will decrease to Rs.5. In case output is reduced to 800 units, the cost of rent per unit will increase to Rs.7.50.

Fixed costs sometimes are also referred to as period costs. They can further be divided into (i) committed fixed cost (ii) discretionary fixed costs.

**Committed Fixed Costs** Consists largely of those fixed costs that arise from the possession of plant, equipment and a basic organisational structure. For example, once a building is constructed and plant is installed, nothing much can be done to reduce the costs such as depreciation, property taxes, insurance and salaries of the key personnel, etc., without impairing the organisation's competence to meet the long-term goals.

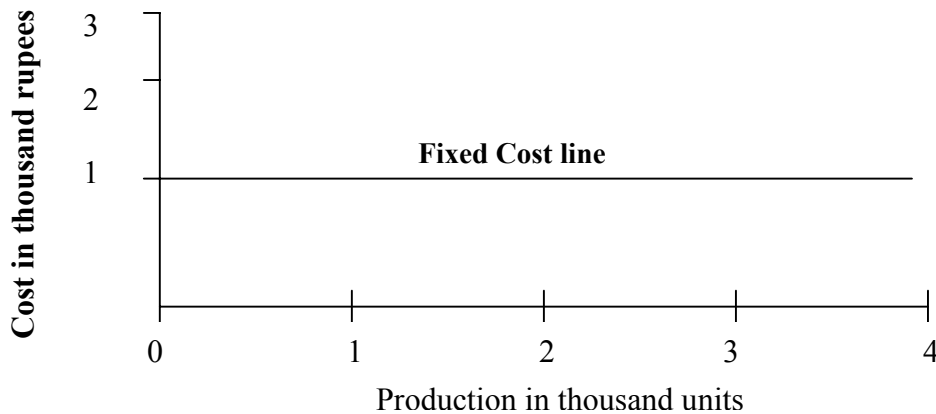
**Discretionary Fixed Costs** are those which are set at fixed amount for specific time periods by the management in the budgeting process. These cost directly reflect top management policies and have no particular relationship with volume of output. These costs can therefore be reduced or eliminated entirely, if the circumstances so require. Examples of such costs are: research and development costs, advertising and sales promotion costs, donations, management consulting fees, etc. These costs are also termed as managed or programmed costs.



Figure 7.1 shows the behaviour of fixed cost graphically.



Figure 7.1 : Fixed Cost behaviour



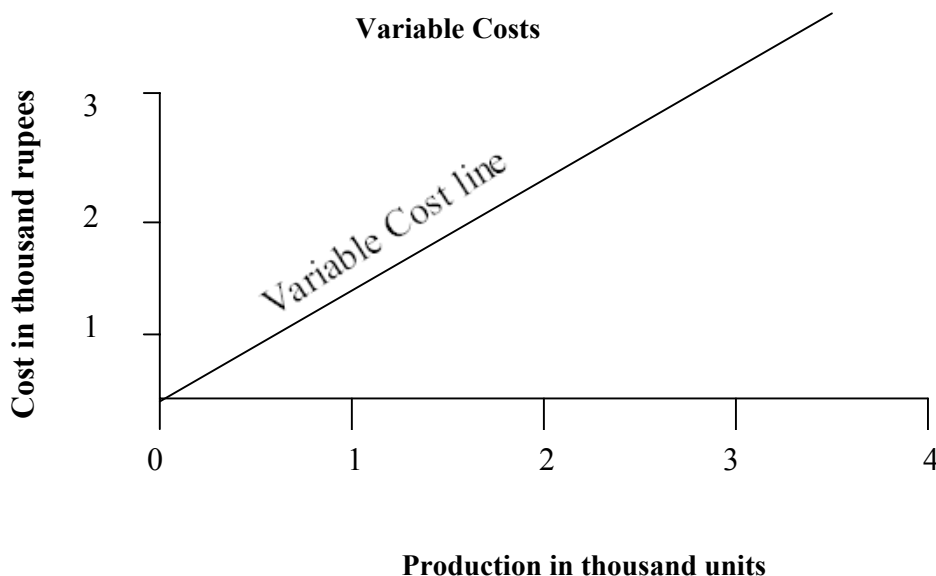
**Variable Costs:** These are the costs which vary in direct proportion to output. They increase or decrease in the same proportion in which the output increases or decreases. The example of such costs are direct material, direct labour, power, etc.

Variable costs may be said to be constant per unit of output. For example, if a factory incurs Rs. 1,000 on raw material for an output of 1,000 units, the cost of raw material per unit would amount to Re. 1. In case the output increases to 2,000 units, the cost of raw material would proportionately increase to Rs. 2,000 (i.e. Re. 1 x 2,000). Similarly if the output decreases to 800 units, the cost of raw material would also decrease to Rs 800 (i.e. Re.1 x 800)

Variable costs are also referred to as product costs.

Figure 7.2 gives graphical presentation of variable costs

Figure 7.1 : Variable Cost Behaviour

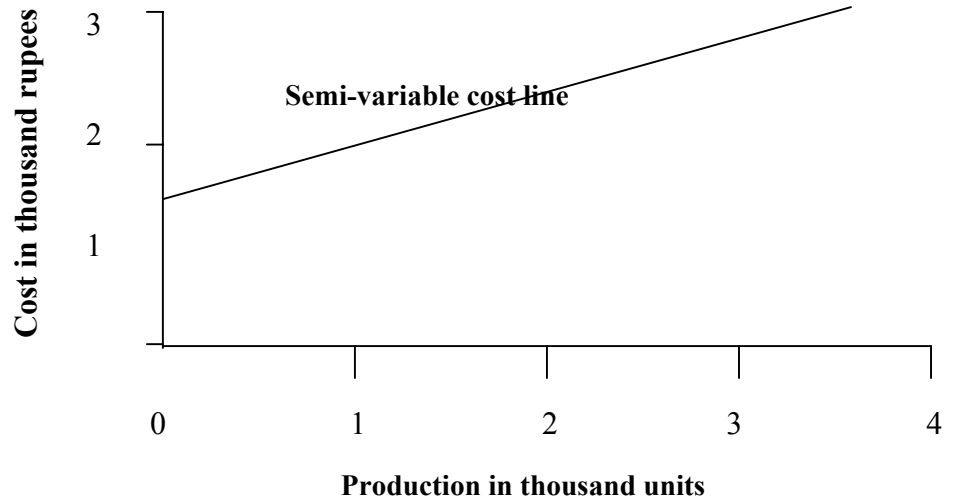


**Semi-variable Costs:** These are the costs which do vary but not in direct proportion to output. They are made up of both fixed and variable cost elements such as depreciation, repairs, light, heat, telephone, etc.



Semi –variable costs are shown graphically in Figure 7.3

**Figure 7.3: Semi-Variable Cost Behaviour**

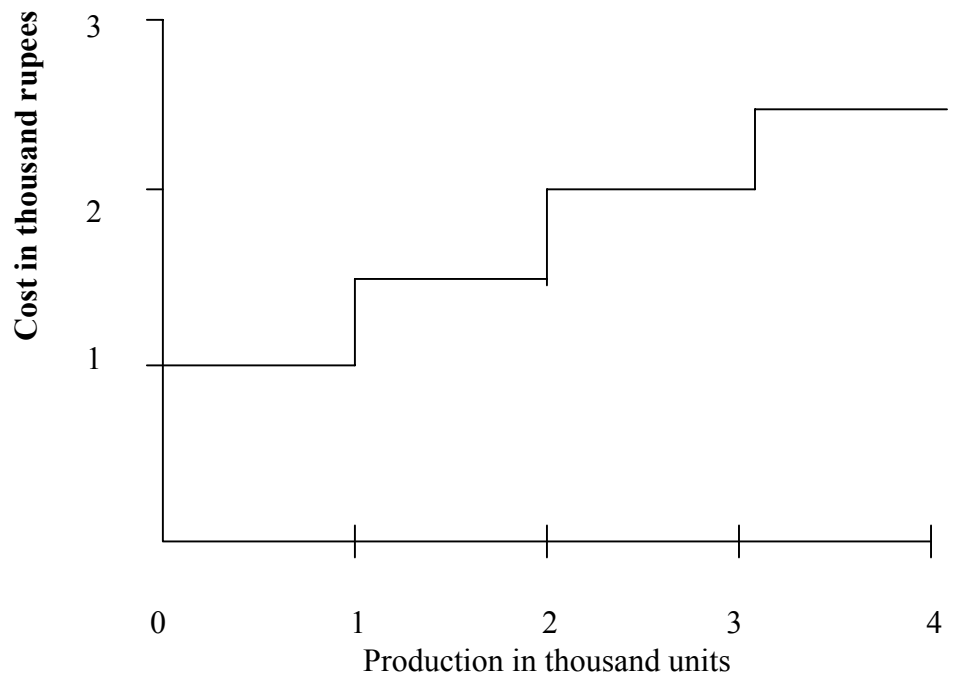


Identification of fixed and variable elements of semi-variable costs is important for the management for planning their business activities. Different methods are available for this purpose which will be discussed in the next unit.

**Step Costs:** Fixed cost in general remain fixed over a range of activity and then jump to a new level as activity changes. For example, a foreman can supervise a given number of workers. Beyond this number, it is necessary to hire a second foreman, then a third and so on. Similarly, the rental cost of delivery vehicles also follows the same pattern.

The general characteristic of fixed cost rising in steps is depicted in Figure 7.4

**Figure 7.4: Fixed Costs rising in Steps**





**Illustration 7.2**

A company has provided the following information to you in respect of 10,000 units of output. Let us calculate the total cost for 12,000 units of output and the cost per unit with the following information:

Variable cost	Rs.50,000
Fixed Cost	Rs.30,000
Semi-variable Cost (50% fixed)	Rs.80,000

**STATEMENT OF COST**

Output 12,000 units	<i>Rs.</i>	<i>Rs.</i>
		60,000
Variable Cost @ Rs.5		30,000
Fixed cost		
Semi-variable cost:	40,000	
Fixed	<u>48,000</u>	<u>88,000</u>
Variable cost @ Rs.4		
Total cost		1,78,000
 Cost per unit	 = <u>1,78,000</u> 12,000	 Rs.14.83

**Direct and Indirect Cost**

**Direct Costs:** These are costs which can be directly, conveniently and wholly traced to a product, service or job. Example of such costs are: direct material, direct labour and direct expenses.

**Indirect Costs:** These are costs which cannot be directly, conveniently and wholly identified with a specific product, service or job. They include all overhead costs such as salaries of time keepers, stores keepers, foreman, printing and stationery costs, etc.

Indirect or overhead cost are apportioned to different jobs, products or services on a reasonable basis. For example, the indirect factory labour cost may be apportioned over different jobs according to their direct labour cost. Similarly, the selling overheads can be charged to different products according to their sales values.

It may be noted that the more the share of the direct cost in relation to the total cost of the product, the greater is the exactness in costing. The reason for this is that indirect costs are allocated (or apportioned) on an estimated basis.

**Activity 7.2**

In terms of your own organisation give five examples of each of the following:

- a) Direct Costs
- b) Indirect Costs
- c) Fixed Costs
- d) Variables costs
- e) Semi-Variables Costs

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## 7.8 SOME OTHER CONCEPTS OF COSTS

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### Shut Down and Sunk Costs

**Shut Down Costs:** These represent the fixed costs which have to be incurred even during the period when a factory is shut down on account of some temporary difficulties, viz., shortage of raw materials, non-availability of requisite labour force etc. During this period, though no work is done, the fixed costs, such as rent, insurance, depreciation, maintenance, etc. for the entire plant are still to be incurred. Such costs of the idle plant are known as shut down costs.

**Sunk Costs:** These are historical or past costs, that is, costs which have been incurred as a result of a decision-made in the past. Such costs cannot be reversed or revised by subsequent decisions. Investments in plant and machinery, building, etc. are some prominent example of such costs. Sunk costs are considered not relevant for decisions concerning the increase in the present profit levels. Let us consider an example.

Goa Steel Ltd, purchased a machine for Rs.60,000. The machine has an operating life of five years without any scrap value. Soon after making the investment the management felt that the machine should not have been purchased as it was incapable of yielding the operating advantage originally contemplated. Originally, it was expected to result in savings in operating cost of Rs.40,000 over a period of ten years. On the other hand, the machine can be sold immediately for sum of Rs. 42, 000.

In taking the decision whether the machine should be sold or it should be used, the relevant amounts to be compared are Rs. 40,000 in cost savings over ten years and Rs. 42,000 that can be realised in case it is immediately disposed off. The amount of Rs. 60,000 invested in the asset is not relevant since it is the same in both cases. This amount is sunk cost. Therefore, Goa Steels should sell the machinery for Rs. 42,000 since it will result in a gain of Rs. 2,000 as compared to keeping and using it.

### Controllable and Uncontrollable Costs

**Controllable Costs:** These are costs which can be influenced by the action of a specified member of an organisation. For example, the foreman of a production department can control the utilisation of power or raw materials in his department. These are, therefore, controllable costs as far as he is concerned.

**Uncontrollable Costs:** These are costs which cannot be influenced by the action of a specified member of an undertaking. For example, the foreman of a production department can control the wastage of power in his department, but he cannot control the power which is being wasted in the power house itself resulting in higher cost per unit of power to him. Similarly, he cannot control the increase in the cost of materials consumed in his department, if the purchase department which is the supplying department, buys the materials at higher prices due to its own inefficiency. Such costs are controllable at a particular level of management while they are uncontrollable at some other level of management.

The difference between controllable and uncontrollable costs is of particular significance to the management. The executive concerned should be held responsible only for those costs which are within his control and not for costs which are beyond his control.

**Imputed or Hypothetical Costs:** These are costs which do not involve cash outlay. They are not included in cost accounts but are important for making management decisions. For example, interest on capital is ignored in cost accounting though it is considered in financial accounting. If two projects require unequal outlays of cash, the



management must take into consideration interest on capital to judge the relative profitability of the projects.

**Differential, Incremental or Decremental Costs:** The difference in total costs between two alternatives is termed as differential cost. In case the choice of an alternative results in increase in the total costs, such increased costs are known as incremental costs. If the choice results in decrease in total costs, the resulting decrease is known as decremental costs. While assessing the profitability of a proposed change, the incremental costs are matched with incremental revenues. The following illustration will demonstrate the concept of incremental costs.

### Illustration 7.3

A company is presently selling, 1000 unit @, Rs. 10 per unit. The variable cost per unit is Rs 5 and the total fixed costs are Rs.1,000. The company receives an order for supply of 200 units @ Rs.8 per unit. The execution of this export order will increase fixed cost by Rs.200.

The cost and sales data under the existing and proposed situation can be put as under:

	<i>Existing situation</i>		<i>Proposed situation</i>		<i>Incremental Cost Revenue</i>	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sales		10,000		11,600		1,600
Less: Variable costs	5,000		6,000			
Less : Fixed costs	4,000	9,000	4,200	10,200	1,200	
Profit		1,000		1,400		400

Under the existing situation, there is a profit of Rs.1,000. If the alternative proposal is considered, it would result in incremental revenue of Rs.1,600 against the incremental cost of Rs. 1,200. Hence the incremental profit will be Rs.400.

**Out-of-Pocket Costs:** Out-of-pocket cost means the present or future cash expenditure regarding a certain decision which may vary, depending upon the nature of the decision made. For example, a company has its own trucks for transporting raw materials and finished products from one place to another. It seeks to replace these trucks by employing public carriers of goods. In making this decision, of course, the depreciation of the trucks is not to be considered, but the management must take into account the present expenditure on fuel, salary to drivers and maintenance which have to be incurred in cash. Such costs for arriving at a decision are termed as out-of-pocket costs.

**Opportunity Costs:** Opportunity cost refers to the advantage, in measurable terms; which has been foregone on account of not using the facilities in the manner originally planned. For example, if an owned building is proposed to be utilised for housing a new project plant, the likely revenue which the building could fetch, if rented out, is the opportunity cost which should be taken into account while evaluating the profit-ability of the project.

Suppose you have sizeable deposit in a bank which is fetching you a return of 10% per annum. When your deposit is nearing maturity (but can be renewed), a friend of yours approaches you with a business proposal which is likely to earn for you a return of 18% (after tax). After careful consideration of the factors relating to risk and return, you decide to go in for the proposal. It is obvious that you have to give up the existing alternative in view of the limited funds that you have. Thus you will no longer have the bank deposit. The sacrifice in the form of 10% interest on your deposit in the bank that you have to forego if you go in for business proposal is the opportunity cost for the new alternative.



### Traceable, Untraceable and Joint Costs

**Traceable Cost:** These are costs which can be easily identified or traced to specific products, services or units of the company such as raw material and labour. etc.

**Untraceable Cost:** These are cost which cannot be identified with a department, process or product Such costs are also termed as common costs, as they are incurred collectively for a number of products or cost centres e.g., overheads incurred for the factory as a whole. As such they are apportioned among various products or cost centres using suitable criterion.

**Joint Costs:** Whenever two or more products are produced out of one and the same raw material or process, the cost of material purchased and the processing costs are called joint costs. Take the example of an oil refinery where a range of products such as bitumen, petrol, kerosene, diesel, etc., are derived in the process of refining crude oil. All these products have joint cost comprising the cost of crude and the cost incurred in the course of refining. These joint costs are then apportioned to various products on some basis.

**Conversion Cost:** The cost of transforming direct materials into finished products, exclusive of direct material cost, is known as conversion cost. It is usually taken as the aggregate of the cost of direct labour, direct expenses and factory overheads.

The above classification concepts of cost help the management in the decision making process. For example, segregation of cost into fixed and variable elements will help the management in analysing the total cost. Similarly, segregation of cost into controllable and uncontrollable categories will help the management in fixing responsibilities of d different executives for unfavourable cost variances. Numerous other examples can be given highlighting the usefulness of the above classification of costs.

### Activity 7.3

Classify each of the following as direct or indirect cost (D or I) and as fixed or variable cost (F or V). You will have two answers, D or I and F or V, for each of the following items:

	D/I	F/V
a) Workmen's compensation insurance in a factory	()	()
b) Cement for a building contractor	()	()
c) Steel scrap as raw material for a blast furnace	()	()
d) Raw material for food served in factory cafeteria	()	()
e) Factory rent	()	()
l) Foreman's training programme cost	()	()
g) Salary of store-keeper	()	()
h) Bottles used for filling soft drink in a bottling factory	()	()
l) Oil used for lubricating machines in a dairy plant	()	()
j) Milk used for making ice-cream	()	()
k) Air-conditioning equipment in the deluxe model of a car	()	()
l) Paper used by a newspaper firm for printing newspapers	()	()

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## 7.9 SUMMARY

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In order to maximise a firm's wealth, ascertaining and controlling of cost is necessary. Cost control involves controlling different elements of costs, viz. material, labour and expenses. Each of these elements of costs can further be classified into direct and



indirect. The term overhead is used for all indirect costs. Costs can be classified into different categories, such as direct and indirect costs, fixed, variable and semi-variable costs; controllable and uncontrollable costs; differential incremental or decremental costs, out -of-pocket costs and opportunity costs, etc. Each classification of costs has its own significance in the managerial decision-making process.

## 7.10 KEY WORDS

**Cost:** The amount of expenditure (actual or notional) incurred on or attributable to a given thing.

**Conversion Cost:** The Cost of converting direct materials into finished products, i.e, direct wages, direct expenses and factory overheads.

**Controllable Cost:** Costs chargeable to a job or cost center which can be influenced by the actions of the persons in whom the control of such a center is vested.

**Differential Cost:** The difference in total cost between two alternatives.

**Fixed Cost:** The cost which remains fixed irrespective of the quantum of output over a certain capacity of the organisation.

**Opportunity Cost:** The value of the benefit sacrificed in favour of choosing a particular alternative or action.

**Uncontrollable Cost:** The costs chargeable to a job or cost center which cannot be influenced by the action of the person in whom the control of the center vests.

**Variable Cost:** The cost which tends to vary in direct proportion to changes in the volume of output or turnover.

## 7.11 SELF-ASSESSMENT QUESTIONS/EXERCISES

1. What do you understand by cost accounting? State its objectives.
2. What do you understand by cost? Explain its different elements.
3. All controllable costs are direct costs, not all direct costs are controllable. Explain with the help of suitable examples.
4. "Fixed costs are variable per unit, while variable costs are fixed per units". Comment.
5. How would you differentiate between 'Direct cost' and 'Variable Costs'? Give suitable illustrations.
6. State whether each of the following statements is 'True' or 'False'.

	<b>True</b>	<b>False</b>
i) Cost Accounting is a branch of Financial Accounting.	<input type="checkbox"/>	<input type="checkbox"/>
ii) Depreciation is an 'out of pocket' cost.	<input type="checkbox"/>	<input type="checkbox"/>
iii) Fixed cost per unit remains fixed.	<input type="checkbox"/>	<input type="checkbox"/>
iv) An item of cost which is direct for one business may be indirect for another.	<input type="checkbox"/>	<input type="checkbox"/>
v) The terms 'overheads' and indirect expenses have same meaning.	<input type="checkbox"/>	<input type="checkbox"/>



7. Select the most appropriate answer for each of the following cases:
- i) Cost accounting mainly helps the management in: (a) earning extra profit; (b) providing information to management for decision-making; and (c) fixing prices of the products.
  - ii) Variable cost per unit: (a) remains fixed; (b) fluctuates with the volume of production; and (c) varies in sympathy with the volume of sales.
  - iii) Fixed cost per unit increases when: (a) production volume decreases; (b) production volume increases; and (c) variable cost per unit decreases
  - iv) Opportunity cost helps in: (a) ascertaining of cost (b) controlling cost; and (c) making managerial decisions.
  - v) Conversion cost is the sum total of: (a) direct material cost and direct wages cost (b) direct wages, direct expenses and factory overheads, and (c) indirect wages and factory overheads.

8. Prepare a cost sheet from the following details:

Raw Materials :	
Opening stock	20,000
Purchases	1,00,000
Closing	40,000
Direct wages	40,000
Chargeable Expenses	8,000
Machine hours worked	16,000
Machine hour rate	Rs. 2
Office overheads	10% of works cost
Selling Overheads	Rs. 1.50 per unit
Cash discount allowed	1,000
Interest on capital	2,000
Units produced	4,000
Units sold	3,600 @ Rs. 50 each

**(Hint:** Cash discount and interest on capital are to be excluded from costs).

9. Calculate (a) Value of raw material consumed, (b) Total cost of production, (c) Cost of production of goods sold, and (d) The amount of profit from the following particulars:

	Rs.
Opening Stock:	
Raw materials	5,000
Finished goods	4,000
Closing stock	
Raw materials	4,000
Finished goods	5,000
Raw materials purchased	40,000
Octroi paid on raw materials	4,000
Carriage inward	6,000
Direct wages paid	20,000
Direct expenses	2,000
Rent, rates and taxes	5,000
Power	2,000
Factory heating and lighting	2,000
Factory insurance	1,000



Experimental expenses	500
Office management salaries	4,000
Office printing and stationary	2,000
Salary of salesman	600
Advertising	300
Carriage outwards	100
Sales	1,00,000



### Answers to Activity 7.3

- |    |   |   |
|----|---|---|
| a) | I | V |
| b) | D | V |
| c) | D | V |
| d) | I | V |
| e) | I | F |
| f) | I | F |
| g) | I | F |
| h) | D | V |
| i) | I | V |
| j) | D | V |
| k) | D | V |
| l) | D | V |

### Answers to Self-assessment Questions/ Exercises

6. (i) F; (ii) F; (iii) F; (iv) T; (v) F.
- 7 (i) b; (ii) a; (iii) a; (iv) c; (v) b.
8. Prime Cost Rs. 1,28,000; Works cost Rs. 1,60,000  
Cost of production Rs. 1,76,000; Cost of sales Rs. 1,63,800; Profit Rs.  
16,200
- 9 (a) Rs.51,000; (b) Rs. 89,500; (c) Rs. 89,500 and (d) Rs. 10,500

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## 7.12 FURTHER READINGS

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Horngren, C.T.; Datar Srikant M and Foster George M, 2002, *Cost Accounting : A Managerial Emphasis*, Prentice Hall of India: New Delhi ( Chapters 2 and 9 )

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Harcourt Brace Javanovich: New York. ( Chapter 2)

Glautier, M.W.E. and B. Underdown, 1982, *Accounting Theory and Practice*, ELBS, London: Bombay ( Chapter 27)

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