(b) Indirect Cost: Indirect cost is that cost which can not be directly identified and is incurred for a number of departments or activities. This cost is apportioned to these cost centres or activities on some suitable basis. Examples of indirect cots are, wages of works manager, insurance of machinery, office salary etc.

2. Classification of Cost According to Element:

To manufacture any goods or services some basic or primary elements are required such as material cost, wages and expenses. These elements are required for any job or process where any manufacturing operations are carried on.

(a) Material Cost: Material is the primary element of production of goods or services. Material cost is the cost of commodities supplied to an organization to be introduced in any production process to convert it into finished product.

Material cost is of two types such as (i) Direct Material and (ii) Indirect Material.

(i) Direct Material Cost: According to CIMA, London, direct material cost is "the cost of materials entering into and becoming constituent elements of a product or saleable service and which can be identified separately in product cost".

Therefore, direct material is that material which is the primary element of cost of production and can be directly identified and allocated to a particular activity. Examples are iron ore in steel industry, crude oil in petroleum industry, clay in brick, leather in shoes etc.

***(ii)* Indirect Material Cost:** According to CIMA, London, indirect materials cost is that "materials costs which are not charged directly to a product, e.g., coolant, cleaning materials." Therefore, indirect materials are the cost of such materials which cannot be directly identified or charged to a cost centre but are incurred as common cost. These costs are apportioned on different activities on the basis of some equitable basis. Examples are cotton waste, small tools, lubricating oil etc.

(b) Wages Cost: According to CIMA, London, labour cost is "the cost of remuneration, i.e. wages, salaries, commissions, bonus, etc of employees of an undertaking." Labour cost is of two types such as (i) Direct Labour and (ii) Indirect Labour.

***(i)* Direct Labour:** According to CIMA, London, direct labour cost is "the cost of remuneration for employees, efforts and skills applied directly to a product or saleable service and which can be identified separately in product cost".

Therefore, direct labour is that labour cost which is given to the workers who are engaged for converting raw materials into finished products. Examples are wages of tailors in tailoring, carpenters in carpentry etc.

(ii) Indirect Labour: According to CIMA, London, indirect labour cost is the aggregate of those "labour costs, which are not charged directly to a product, e.g. supervision." Therefore, indirect wages are such wages which cannot be directly allocated but can be apportioned among the jobs on some suitable basis. For example, salaries of works manager, salary of office staff etc.

(c) Other Expenses Cost: According to CIMA, London, indirect expenses are those "expenses which are not charged directly to a product, e.g. building insurance, water rates." Therefore, indirect expenses are those expenses which cannot be directly identified but are incurred for a number of activities and are apportioned on these activities on some suitable basis.

3. Classification of Cost According to Function:

Cost can be classified according to function such as production, administration, selling, distribution etc

(i) Production Cost: Production cost is the cost relating to manufacture of a product or service such as factory indirect materials, factory indirect wages and factory expenses etc.

(ii) Administration Cost: According to CIMA, London, the administration cost is the "cost of management, and of secretarial, accounting and administrative services, which cannot be directly related to the production, marketing, and research or development functions of the enterprise." Example is salary of office staff, lighting, depreciation and insurance of office equipment, salary of managing director etc.

(iii) Selling Cost: According to CIMA, London, selling costs is the "cost incurred in securing orders, usually including salesman's salaries, commissions and travelling expenses." Examples are salary and commission of salesman, travelling expenses, advertisement and publicity, showroom expenses, market research expenses etc.

(iv) Distribution Cost: According to CIMA, London, distribution cost is the "cost in[illegible] warehousing saleable products and in delivering products to customers." Examples are, cost of warehousing, repair, maintenance, insurance and depreciation of delivery van, shipping cost etc.

(v) Research and Development cost: According to CIMA, London, research cost is "the cost of original investigation undertaken in order to gain new scientific or technical knowledge and directed towards a specific practical aim or objective." Examples are salary of research personnel, use of materials in laboratory, payment to outside research organization for conducting research etc.

4. Classification of Cost According to Behaviour:

Cost can be classified on the basis of behaviour or variability of the product or service. These are:

(i) **Fixed Cost:** According to CIMA, London, fixed cost is "the cost which accrues in relation to the passage of time and which, within certain output and turnover limits, tends to be unaffected by fluctuations in the level of activity (output or turnover); Examples are rent, rates, insurance and executive salaries."

(ii) **Variable Cost:** According to CIMA, London, variable cost is "the cost which tends to vary with the level of activity." Examples are raw materials, direct wages, power, fuel, chargeable expenses etc.

(iii) **Semi-variable Cost:** According to CIMA, London, semi-variable or semi-fixed cost is the "cost containing both fixed and variable elements and which is thus partly affected by fluctuations in the level of activity." Examples are telephone expenses, power expenses, repair of plant and machinery etc.

5. Classification of Cost according to controllability:

According to controllability cost can be classified in two ways. These are

(i) **Controllable Cost:** Avoidable cost or controllable costs are those costs which have already been incurred but could be avoided by proper means of control e.g. spoilage occurred above the normal limit, strike called by the employees of a firm, power failure etc.

(ii) **Uncontrollable Costs:** Unavoidable costs or uncontrollable costs are those costs which have been incurred by a firm and which could not be avoided and are within the normal limits set by the company e.g. normal loss during production, rest and lunch time of the workers, salary of office staff etc.

6. Classification of Cost According to Normality:

Cost can be classified according to the normality of the product or services. These are:

(i) **Normal Cost:** According to CIMA, London, normal cost is "a cost at a given level of output in the conditions in which that level of output is normally attained." Normal cost is a part of cost of production. For example, cost of materials, labour and overheads required for normal course of production activity.

(ii) **Abnormal Cost:** Abnormal cost is that cost which has not occurred due to normal business activity at a given level of output. This cost is unavoidable and cannot generally be controlled. Examples are, cost due to natural calamities such as earthquake, flood, lightning etc.

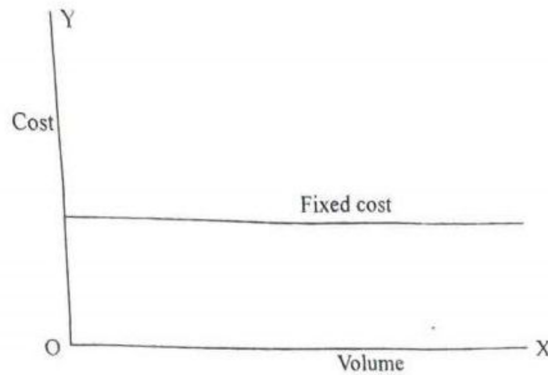
TYPES OF COSTS

There may be different types of cost in a firm. These are briefly discussed below:

1. Direct Costs: These are the costs which can be easily identified with specific departments, products or processes and directly related to particular units of output such as materials or labour.

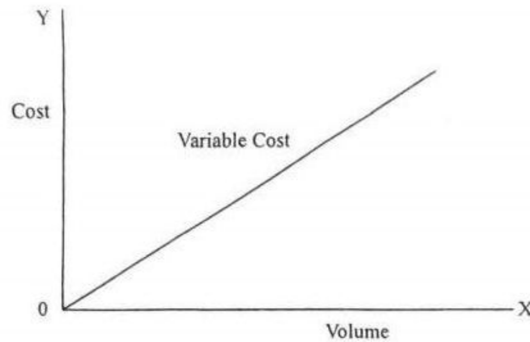
2. Indirect Costs: Indirect cost is the aggregate of indirect material, indirect labour and indirect expenses incurred in an organization. In other words, besides direct material, direct labour and direct expenses all expenses incurred in an organization is known as indirect costs. Examples are salary of supervision, advertisement, depreciation, insurance etc.

3. Fixed Costs: Fixed Cost is that cost which remains fixed for a particular time period or up to a particular level of output. Fixed cost depends mainly on the passage of time and do not vary directly with volume or rate of output. Examples are rent of a machine, salary of general manager, insurance of assets etc.



Fixed Cost Graph

4. Variable costs: Variable cost or marginal cost is that cost which varies directly according to the level of production or level of output achieved. In other words this cost increases or decreases as per level of production. Examples are material consumed, direct labour, freight charges etc.



Variable Cost Graph

5. Out-of-Pocket –Costs: It is that part of cost which requires cash payment to third parties as reversed to cost that does not require any cash outflow, such as depreciation. This is important for the purpose of different decision making process of price fixation during trade depression, for taking 'make or buy decision' etc.

6. Sunk Cost: This is the past cost which has already been incurred and is not relevant for decision making process. In other words, this is an unavoidable cost and cannot be changed once it has incurred. For example, while replacing a plant, the depreciated book value of the old plant is irrelevant. All fixed cost already incurred in a business is sunk cost for the purpose of decision making process. For example if a machine has a spare capacity of 200 units of a particular product may accept an offer of exporting it only at variable cost because fixed cost has already incurred and cannot be avoided at all.

7. Avoidable Costs: Avoidable cost or controllable costs are those costs which have already been incurred but could be avoided by proper means of control e.g. spoilage occurred above the normal limit, strike called by the employees of a firm, power failure etc.

8. Unavoidable Costs: Unavoidable costs or uncontrollable costs are those costs which have been incurred by a firm and which could not be avoided and are within the normal limits set by the company e.g. normal loss during production, rest and lunch time of the workers etc.

9. Relevant Cost: Relevant cost is that cost which is very important and to be considered for taking decision making purpose e.g. additional fixed cost for taking an important financial decision is relevant. Again a cost which is relevant in a particular decision may be irrelevant in another decision e.g. if a company wants to sell a machine the present depreciation cost is relevant but if the decision is to replace the machine the present depreciation cost is irrelevant.

10. Irrelevant Cost: Irrelevant cost is that cost which is not relevant while taking decision. In other words, this is the cost which is not to be considered for future decision making process e.g. fixed cost already incurred has not to be taken for any future decision making process. In case of make or buy decision fixed cost is irrelevant subject to the condition that there should not be any additional fixed cost.

11. Historical or Book Costs: The cost which has already been incurred is known as historical cost. This cost also known as sunk cost and has no relevancy in the decision making process in the current period.

12. Explicit Costs: These refer to costs which involve immediate payment of cash and are recorded in the books of accounts and can be easily measured. Examples are salaries, interest on loan etc. In finance, explicit cost is the cost of any source of capital that is the discount rate which equates the present value of cash inflows with the present value of cash outflows. These outflows may be in terms of payment of interest or dividend or principal amount of loan which is to be given to the different interested stakeholders. Actually explicit cost is the internal rate of return of the cash flows.

13. Implicit Costs: These costs do not involve any immediate cash payment and they are not recorded in the financial accounts. But these costs are important for some type of managerial decisions such as replacement of equipment, comparative profitability of two alternative courses of action. Example of these costs is: rent of own building, interest on own capital etc. In finance, implicit cost means some opportunity cost which has foregone or sacrificed by the equity shareholders. The best example is retained earning which is a part of profit the company has not given it as dividend but retained it to be reinvested in the business for the purpose of future development of the company. Now had the retained earning distributed by the company among the shareholders, they could have earned some interest or dividend income out of these money but they have to sacrifice it. That profit has some implicit cost which is equal to the opportunity cost sacrificed by the shareholders.

14. Specific Cost: Specific cost is a cost for a particular source of finance raised by a firm. A firm requires funds during its normal business activity or for the purpose of expansion, modernization, growth etc. For this purpose when a company rises funds only from a particular source e.g. loan from financial institution, the cost of that particular source of finance is known as specific cost of capital.

15. Composite Cost: A big company generally raises its finance from different sources viz owned capital and loaned capital. Now each source has its own specific cost. Overall cost of capital or weighted cost or composite cost is the average cost of all the sources of finance calculated on the basis of proportion or weight given to each source of finance. Every big firm arranges a balanced capital structure consists of different sources of owned and loaned capital. Now the average cost of these sources together is known as composite cost.

16. Opportunity Cost: An opportunity cost is the cost associated with an opportunity that is given up. It represents the cost of benefit that might have been earned if the opportunity were accepted. In other words, it is the opportunity lost for selecting a particular course of action by rejecting the other. For example, in the case of make or buy decision, if a product say X is produced in a machine the product Y can not be produced means loss of earning from product Y is the opportunity cost. Determining opportunity cost is very much important for evaluating alternative and for decision making like make or buy, export or not, shut down or continue, conducting extra shift or not etc.

17. Recurring Cost: A recurring cost is one that is incurred periodically and for a continuous period and may be anticipated. It may be daily, weekly, fortnightly, monthly and even yearly basis. For example, purchase of raw material for production, regular payment of wages, yearly insurance premium on machinery, rent of a machine etc.

18. Non-recurring Cost: A nonrecurring cost is one that does not occur in a regular way and is not generally anticipated. Any unexpected expenditure made in a business is of non-recurring nature. For example, if a machine is to be replaced immediately due to obsolete technology is an example of non-recurring expenses.

19. Incremental Cost or Differential Cost: Incremental cost is the cost related with the increasing production by one unit. As total cost consist of both variable and fixed, the incremental cost and the overall average cost per unit is not same. Determining incremental cost is very important for planning and decision making. It is

effectively used for making maximum profitability by analysing the best alternative. If differential revenue is greater than incremental cost, the decision may be positive to accept the venture. The following example highlights the incremental cost between two levels of activity.

Differe tial Cost Analysis

Details	80% Capacity (15,000 units)	100% Capacity (18,750 units)	Incremental Cost
Material and Labour	10,70,000	13,37,500	2,67,500
Variable overheads	2,25,000	2,50,000	25,000
Semi-variable overheads	1,05,000	1,11,000	6,000
Fixed overheads	4,00,000	4,70,000	70,000
Total	18,00,000	21,68,500	3,68,500

20. Marginal Cost: Marginal cost is the variable cost which varies directly according to the level of production or level of output achieved. In other words this cost increases or decreases as per level of production. Marginal cost per unit remains same irrespective of change in the volume of output. Examples are material consumed, direct labour, freight charges etc. According to CIMA, London, variable cost is "the cost which tends to vary with the level of activity." Examples are raw materials, direct wages, power, fuel, chargeable expenses etc. Marginal cost is determined for short term decisions and cost control.

21. Average Cost: The average cost is the total cost of an output which is derived by dividing the total cost of an output by the total units produced. For example if the total direct cost of producing 20,000 units of a machine tool is Rs 5,00,000, then we will get the average direct cost per unit is Rs 25 per unit. More and more production results in decrease in average cost because fixed cost remains same for a particular level of output.

22. Cash Cost: When a transaction is made in cash is known as cash cost. In other words when there is a change in cash flow for incurring an expense is known as cash cost. For example, purchase of a machine by paying cash is cash cost.

23. Book Cost: When a transaction is not made is cash but properly recorded in the books of accounts to show the changes in the value is known as book cost. For example, if a company provides depreciation in the books of accounts there is no cash cost but the value of asset for which depreciation has provided decreases. Another example of book cost id provision for bad debt provided in the books of accounts and again there is no cash cost but the value of account receivable will decrease.

24. Life Cycle Cost: Life Cycle Costs are the aggregation of all costs related with product or services over the various phases of a product or service life cycle. Life Cycle costs include planning, design and testing (development phase), conversion costs (operation phase), selling costs (advertising, distribution, warranty etc), declining and retiring cost over the different phases of life for a particular product or service. Determining Life Cycle Costs are very important to manage and control costs throughout its life cycle. Moreover, Life Cycle Cost is also important for pricing decision.

Distinction between Fixed Cost and Variable Cost:

Fixed Cost	Variable Cost
1. Fixed cost is that cost which remains fixed for a particular time period or up to a particular level of output.	1. Variable cost is that cost which varies directly according to the level of production or level of output achieved.
2. It is known as period cost, standby cost, policy cost or capacity cost.	2. It is known as product cost, direct cost, marginal cost or charging cost.
3. Although total fixed cost remains fixed irrespective of any level of production, the average fixed cost gradually decreases with the volume of output.	3. Although total variable cost gradually increases with the increase in the level of production or output, average variable overhead generally remains constant.
4. Fixed cost per unit changes inversely with the level of production.	4. Variable cost per unit remains fixed irrespective of output produced.
5. Fixed cost is generally uncontrollable.	5. Variable cost is always controllable.

Break-even Point:

The Break-even point is that point of sales volume (in unit or in money value), where totals cost of a particular level of output is exactly equal with total sales revenue. In other words this is a point where neither profit nor loss arises. At this point of output level contribution is such an amount which is just sufficient to recover the total fixed cost.

According to CIMA, London, the break even point is "The level of activity at which there is neither profit nor loss."

1. $$\text{Break-even Sales (in Rs)} = \frac{\text{Fixed Cost}}{\text{Profit Volume Ratio (P/V Ratio)}}$$

2. $$\text{Break-even Sales (in units)} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}}$$

3. $$\text{Profit Volume Ratio (P/V Ratio)} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

Or

$$\text{Profit Volume Ratio (P/V Ratio)} = \frac{\text{(Sales} - \text{Variable Cost)}}{\text{Sales}} \times 100$$

4. Contribution = Sales – Variable Cost

Or

Contribution = Fixed Cost + Profit