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# Cost Accounting & Management

## (B.Com & BBA Sem.III)


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# Cost Accounting & Management

## Meaning and Definition of Cost Accounting

Cost Accounting is a specialised branch of general accounting in which detailed and systematic information's related to cost of goods or services are maintained in such a way as to obtain detailed information about total and per unit cost and guidance for the analysis and control of cost.

According to I.C.M.A. London – "Cost Accounting is the technique and process of ascertainment of cost."

Walter W. Bigg has defined cost accounting as follows: - "Cost Accounting is the provision of such analysis and classification of expenditure as will enable the total cost of any particular unit of production to be ascertained with reasonable degree of accuracy and at the same time to disclose exactly how such cost is constituted." In the words of Harol d J. Wheldon "Costing is the classifying, recording and appropriate allocation of expenditure for the determination of the cost of products or services, and for the presentation of suitably arranged data for the purpose of control and guidance of the management. It concludes the ascertainment of the cost of the every order, job, contract, service or units as may be appropriated. It deals with the cost of production, selling and distribution."

Conclusively, cost accounting may be defined as body of concepts, methods, techniques and procedure used to compute, analyse or estimate the costs profitability and performance of individual products, services or departments and other segment of an enterprise.

Above analysis of definitions given by thinkers can be expressed in proder and real sense that "Cost accounting is the process of accounting for cost from the points 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 the ascertainment of the profitability of activities carried out planned."

In Short "Cost accounting involves a study of those concepts, tools and techniques, which help in ascertaining and analysis cost." It is also concerned with the method of accounting for total cost and per unit cost of product service, order, process or job.

## Objectives of Cost Accounting

The main objectives of cost accounting are as follows:

1. Cost ascertainment – The primary objectives of cost accounting is to determine the cost of production of every unit, job, operation, process, departmental or services. The technique of ascertaining cost is known as 'costing'. In order to determine cost, all the expenses are accumulated, classified and analysed.

2. Cost control – cost control is one of the important objects of cost accounting. To measure the efficiency of the organisation or of the cost centres, the operations involved in the manufacture of product are to be carefully studied. Budgets and standards are to be carefully studied. Budgets and standards for the consumption of materials, use of labour and for expending the overhead are to be set and compared with the overhead are to be set and compared with the actual performance.

3. Cost Reduction – Cost reduction refers to real saving through permanent reduction in cost of a product or services without impairing the quality and affecting its purpose for which it was intended to be used. In the competitive market situations. It is at most important for the organisations to look for activities and search for new technology through research and development activities that can reduce the cost of a product.

4. Ascertainment of profitability - It is the object of cost accounting to ascertain the profit making capacity of that activity planned or being carried out and to compare the actual profits made with their profitability.

5. Determination of selling price – The supply price or the tender price of a product depend upon its total cost plus a margin of profit which the businessman wants to make depending upon the inter-play of factors of demand and supply. Cost Accounting provides detailed instruction about the composition of total cost for the determination of selling price.

6. Providing a basis for business policy and decision making – The objective of cost accounting is to help the management in the formulation of business policy and in decision making. The Gross-profit analysis, the cost-volume profit relationship, the break-even point of sales, and the differential costing method etc. help the management in profit planning and in deciding crucial matters.

7. Compliance to statutory requirements – The Central Government under section 209(i) (d) of the companies Act has made it compulsory for 47 industries to maintain cost accounts. Thus compliance to statutory requirements is also one of the objective of cost accounting.

## Advantage of Cost accounting

I. Management and its Functions:-

(i) Planning – Planning involves policies, procedures, methods, programmes and budgets. These factors seek guidance from cost information for their determination. The budget is usually the most important tool in planning and the budgetary control plays a useful part in the control phases of the management.

(ii) Organisation – The activities of the manufacturing enterprises are grouped into functions like production administration, selling and distribution. The cost of each function is ascertained applying costing techniques and is analysed according to department, process or operation to make them useful for comparative study.

(iii) Motivation – Human beings, unlike machines are guided more by incentives, affections sentiments and emotions. Labour force being an important element in cost of manufacture, is motivated by the incentive plans of remuneration.

(iv) Control – Control is an important advantage of cost accounting. Control ensures the quantitative and qualitative performance of work in the organisation, exposes the management lapses and helps the management to adopt the remedial measures to plug the loopholes before it is too late. Standard costing, Budgetary control and Responsibility accounting are the methods, materials labour, overheads, sales, finance and other allied activities and that actual performances are compared with the budgets and standards so set.

## II Other advantages of Cost Accounting

(i) Control and wastage of material and labour - This system keeps a good check and control on the purchase, storing and issue of materials. The wastage of materials in form of spoilage excessive scraps etc. is revealed and controlled similarly, with the proper recording of labour costs, the inefficiencies do not go unchecked, the idle time, overtime and labour turnover remain within limits and the wastage of time is duly controlled.

(ii) Economy in cost – The cost reduction programmes together with operation research and value techniques contribute a great deal in economising the costs.

(iii) Proper Utilisation of Plant – The proper utilisation of plants and machines to the few and idle capacities are controlled.

(iv) Budgetary Control – With the help of standard costing and budgetary controls. The optimum level of efficiency is set and compared with actual performance. The various help the 'management by exception' which means that the management has to keep an eye only on those variances which are below the norms and not to bother for the organisation as a whole.

(v) Periodical profit and loss A/c – Prepetual inventory system exercises inventory control and helps continuous stock-taking which facilitates preparation of periodical profit & loss A/c.

(vi) Cost Comparison – Cost comparison is necessary for cost control. The comparison of costs of jobs, processes, cost centres etc. between the two periods or the comparison of costs of different firms under inter-firm comparison system helps to control the cost.

## III Advantages to employees

Cost accounting system is useful to the employees also. It is wrong to suppose that exploits the labour class. This system believe in (a) imparting training to workman and to make them efficient (b) introducing incentives plans of remuneration and (c) providing welfare amenities. In the event of a dispute arising, the cost records help to do away with the misunderstandings.

## IV Advantages to Consumers

Cost accounting system provide cost control which leads to reduction in cost of product and services. These help the organisation to offer product and services to the consumers at lower price and at good quality.

## V Advantages to the Government

This system is useful to the Government for deciding the state subsidy to industry and also for economic planning and development by the state. The Government requires various details of cost in formulating the various economic policies, such as tax policy, business policy, EXIM Policies.

## VI Advantage to investors

The bank and it useful to make investment in the companies which employ costing methods.

# Elements of cost

According to ICMA London, "Cost is amount of expenditure (actual or notional) incurred on, or attributable to, a given thing."

The elements of cost are as follows:-

I Material Cost

II Labour Cost

III Expenses

I Material Cost - Material cost is the cost of material of any nature used for the purpose of production of a product or a service. It is worth mentioning that material cost includes cost of procurement, freight inwards, taxes and duties, insurance, etc. directly all reputable to the acquisition. Trade discounts, rebates, duty drawbacks, Refund on account of modvat, cenvat, sales tax and other similar items are deducted in determining the cost of material.

There are two types of material cost.

(i) Direct Material Cost
(ii) Indirect Material Cost

(i) Direct Material Cost – Direct material cost has been defined in cost accounting standard (CASA) as a "Cost of material which can be directly allocated to a cost centre or a cost object in economically feasible way. Direct materials cost includes the following :-

(a) The cost of those materials which enter into and from major part of the product, e.g., timber in furniture making, clay in bricks making, cement, stones etc. in building, yarn for cloth production etc.

(b) Materials especially purchased or for a specific or a particular job, process, or work order.

(c) Material passing from one processor operation to the other, for instance, in the process costing the finished product of a process becomes the direct material for the next.

(d) The primary packing materials, e.g. matchbox for keeping match sticks, cigarette cartoons for keeping cigarette, etc.

(ii) Indirect Materials Cost – Indirect Material cost has been defined in CAS-1 as "the cost of material which cannot be allocated directly to a particular cost centre or cost objected." It includes (a) Lubricating Oil, Fuel, Cotton waste etc. required for operating and maintaining plant and machinery. (b) Small tools.

(C) Stores used for repairs and maintenance besides these, items of small values like thread gum, nails etc, though forming part of the product and thus reckoned as Direct materials, are treated as Indirect Materials for the reasons that it is difficult materials for the reasons that it is difficult to calculate the cost per unit of that material

II Labour cost – According to CAS-1 "Labour Cost means the payment made to the employees, permanent or temporary for their services." Thus labour cost include salaries in wages paid to permanent employees of contractor. Here salaries and wages include all fringe benefits like provident fund contribution, gravity, ESI, Overtime, Incentive bonus, leave encashment, wages for holidays and idle time etc. There are two types of labour cost (i) Direct Labour cost (ii) Indirect Labour cost.

(i) Direct Labour Cost – Direct labour Cost has been expressed by CAS 1 as "The Cost of wages of those workers who are readily identified or linked with a cost centre or cost object." Thus wages paid to workers who are engaged in production process i.e., engaged in converging the shape of the raw material, whose time can be conveniently and economically traced to units of product or service can be referred to as direct wages on direct Labour cost e.g. carpenters for furniture making, weavers for textiles and all workmen engaged in assembly parts, polishing etc. in a motorcar manufacturing concern.

(ii) Indirect Labour Cost – "Indirect Labour Cost is the wages of the employees which are not directly allocable to a particular cost centre." It is the cost of labour not directly engaged in the production operations but engaged to assist or help the production operations, e.g., watchmen, storekeeper inspectors, repair and maintenance workers, etc. The examples of indirect labour cost are

(a) Wages of indirect labour
(b) Wages of idle time
(c) Remuneration of repair and maintenance services.
(d) Workmen's Compensation
(e) Holiday pay
(f) Overtime wages

III Expenses – The expenses as the third elements of cost means the expenses other than material cost and labour cost. It is defined by I.C.M.A London as "the cost of services provided to an undertaking and the notional cost of the use of owned asset." According to CAS-1 "Expenses are other than material cost or labour cost which are involved in activity."

Expenses are of two types:-

(i) Direct Expenses and
(ii) Indirect Expenses

(i) Direct Expenses: - "Direct expenses are the expenses other than direct material or direct labour which can be identified or linked with the cost centre or cost object."

Thus the direct expenses are those expenses which are directly identified with a particular job, process or operation. These expenses are incurred specially on particular job or process and are in no way connected with some other jobs or process. These expenses are also known as chargeable expenses, process expenses, prime cost expenses or productive expenses. The examples are:

(a) Cost of Railway freight, Carriage, etc. incurred on the materials purchased only for a specified job or process.
(b) Hiring charges of a machine, plant etc.
(c) Royalty paid to lessor
(d) Research or experimental expenses
(e) Fees paid to surveyor, architects etc.

(ii) Indirect Expenses: - "Indirect expenses are the expenses other than of the nature of material or labour and cannot be directly allocated to a particular cost centre."

Indirect expenses are those expenses other than indirect material cost and indirect labour cost which cannot be directly identified with a particular job, process or work order but are common to jobs or process. These include.

(a) Factory Expenses
(b) Office and Administration and
(c) Selling and Distribution expenses.

# Bin Card

A Bin card also known as Bin Tag or Stock Card, is a card showing quantitative record of the receipts, issue and closing balances of the material kept in the corresponding bin. The bin card is placed in the Bin or Shelf or is hung over the almirah or the rack otherwise known as 'Bin' separate Bin Card are prepared for each item of stores and if two different materials are kept in one almirah. Two Bin cards, one for each, are prepared, treating the almirah as two bins.

The Specimen form of the Bin card would show the contents of the card. The receipts are entered on the basis of goods received. Note the issues are shown on the basis of store Requisition and the closing balance or, the Bin card shows the balance of the material kept in the Bin. Besides, the name of material, code No, maximum level. Minimum level, ordering level, ordering quantity are also shown on the Bin card for the purpose of material control.

## Difference between Bin card and store Ledger

1. Accounting record – Store ledger is a basic accounting record where Bin card is not an accounting record.

2. Quantity and value – Store ledger records both quantity and value But Bin card records quantity only

3. Maintenance store ledger is maintained in cost accounting Department but Bin card is maintained by the store keeper.

4. Time of Posting – Posting of transaction is done after it takes place but posting is done before the transaction takes place in Bin card.

5. Posting Procedure – Transaction may be summarised and posted periodically but each transaction is posted individually in Bin card.

## Pricing of Materials issued

To know the separate cost of each product or job, correct pricing of materials issued is essential, however, it is a difficult task. The material issued from the store are purchased in different dates and at different prices. Generally the purchase price and the market price also differ. At what rate the materials issued from the store should be priced

The Principal methods of pricing of materials issues are as follows:

A. Cost Price Methods (a) FIFO (b) LIFO
B. Average Cost price method.
   (a) Simple Average method
   (b) Weighted Average method

| FIFO = First in First Out |
|---|

Under this method, the materials first received in the store are the first to be issued, i.e., the order in which the material are received in the store are issued at their cost price in the same order. Thus the FIFO method follows the principle that material received first are issued first. After the first lot or batch of material purchased is exhausted, the next lot is taken for supply. The inventory is priced at the latest cost. It should be noted that the assumption of FIFO is only for accounting purpose i.e., the physical flow of materials need not necessarily be in the order of the flow of costs, though normally materials would be expected to move out of stock an approximately a FIFO basis because oldest stocks are usually used up first.

## Advantages of FIFO

1. Simple and Easy: This method is easy to understand and simple to operate.

2. Logical: It is a logical method because it takes into consideration the normal practice of utilizing first those materials which are received first. Thus it minimizes the deterioration or obsolescence.

3. Valuation of stock at market price – The price of material in hands at the end is found almost equal to the market price of such material.

4. Useful in case of falling prices: This method is useful when prices are falling. This method is also useful when transactions are limited and prices of materials are fairly steady.

5. Issue at purchase price: Under this method materials are issued at purchase price and thus the method recovers the cost price of the materials.

## Disadvantages of FIFO

1. Difficult in storage: It is very difficult to separately store the material purchased at different prices and on different dates.

2. Different price on same date: The price of the materials issued to different jobs on the same date may be different.

3. Difference in cost and market price – As the material is issued on old prices the production cost may not be equal to the market price.

4. Not suitable when price rise: If the prices are necessary in the market, then this method is not suitable.

5. Possibility of clerical errors : If raw materials purchased frequently and it fluctuating price, this method can increase the possibility

LIFO = Last in First Out

Under this method, the materials purchased in the last are issued first on the last are issued first on the cost price. For pricing materials issues, the price of the last purchase is used unless it is fully exhausted when the last lot received is exhausted, the material purchased just before it, it issues. In the meantime if a new lot is received in the store then the immediate issue of material will be made from the recent lot received at the cost at which it is received.

## Advantage of LIFO

1. Easy method: As regards calculation it is an easy method.

2. Issue price near to market price: As the issue price remains almost equal to the market price, the cost price of the product on job can be easily known.

3. Issue at purchase price: The issued material are valued at purchase price, hence the cost is correctly determined and there is no profit or loss.

4. Suitable if prices are increasing: If the prices of materials are increasing the as regard to FIFO method, this method shows less profit and thus results in saving of lax.

## Disadvantage of LIFO

1. Valuation of closing stock: The closing stock is priced at a very old price which may not show the correct position of the business.

2. Less practical: The method is not practical because in practice the material which is purchased first, is issued first.

3. Problem of Storing: much space is needed for separately storing the materials purchased at different prices.

4. Variation in prices: The pricing of materials issued on the same date may vary.

## Simple Average Method

Under this method, for determining the issue price, the quantity of material purchase is not considered. The average price is calculated by adding the price at which materials on different dates were purchased during the period and dividing the total of these prices by the number of prices taken into consideration for calculating the average price. In other words simple average price is calculated by dividing the total of prices of materials in the stock from which materials in the stock from which materials are issued by the number of prices entering in the calculation. The method is suitable when at every time, the material is issued in almost equal quantity and there is not much variation in the purchase price of materials.

## Advantages of Simple Average method

1. Mixed form of price: The method is a mixed form a market price and cost price.

2. Tendency of equality in dates: Due to the calculation of average of different purchase prices, the tendency of equality in different rates is arrived at.

## Disadvantages of simple Average method

1. Unreliable Results: In case of fluctuation in the quantity of material purchased on different dated, the results become unreliable.

2. Calculation Problem: It becomes difficult to calculate the average again and again.

## Weighted Average method

Under this method, for determining the issue price, the quantity of material available in the stock and the price both are considered. In brief, the price both are considered. In brief, the weighted average price in calculated by dividing the total cost of available material on the date of issue, by the total quantity of available material. At this price the material is issued. This method of pricing is suitable for those materials, the price of which fluctuate more.

## Advantages of weighted Average method

(i) Scientific Method: This method is scientific and argumentative because under this method the total cost of the material available in the bin is provided by the total quantity of material. In fact, after reaching the bin, the new and old material mix up i.e., there remains no separate existence in the bin, of the material separately purchased on the different dates.

(ii) Simple calculation: As regards calculation work, this method is simple because the issue price once calculated continues till the new material is purchased.

(iii) Mixed form of price: This method is a mixed form of market price and cost price.

(iv) Appropriate valuation of closing stock: In this method, the balance of the closing stock is shown at appropriate price which can be used in financial accounts also.

## Disadvantages of weighted Average method.

1. Calculation problem: If the material is purchased again and again at short intervals, the calculation work increases.

2. Problem in cost estimation: As the material is issued at average price, the production cost cannot be correctly estimated.

## Methods of wage payment

The methods of wage payment can be classified into:

I. Time Rate System
II. Piece Rate System
III. Incentive Schemes

(A) Premium Bonus Methods
(B) Combination of Time and Piece Rates
(C) Group System of Bonus Payment
(D) Other Incentive Schemes

## Time Rate System

In this system a worker is paid on the basis of time spent for the day or according to the hours of the day, regardless of the output. This system is also known as time work, day work, day wage rate or day rate. The wage rate of the day worker may be fixed on hourly, daily, weekly fortnightly or monthly basis depending on the practice followed in the concern.

The wages are calculated as follows:

$$\text{Wages} = \text{Hours worked} \times \text{Hourly wages Rate}$$

Suitability of this system. This system is suitable in the following cases:

1. Where the articles of output are of artistic taste e.g. drawing or paintings, as in such cases quality and precision are of primary importance.

2. Where the production cannot be measured into units or where standard time cannot be fixed for the working e.g. repairs and maintenance.

3. Where the workers, however efficient he may cannot work at his speed due to faulty machine or equipment or other allied factors.

4. Where work has to undergo several processes and so the work is dependent upon the preceding process for the workers of the succeeding process.

### Advantages of Time Rate System

1. It is one of the oldest methods of wages payment and has proved the test of time due to simplicity in making calculations and recording wages.
2. Workers are assured of steady income of wages.
3. The quality of production improves as the workers are in no hurry to produce many more units at the risk of poor quality and negative of machines and tools.
4. It is suitable for different grades of workers where wages are paid according to different grades.

Disadvantages of Time Rate System

1. As the day wages can be received regardless of the quantity produced, the workers do not feel encouraged to produce more. Initiative is killed for want of incentive.

2. It leads to greater wastage of time on the part of the workers and requires greater supervision of the production work.

3. As the efficient and less efficient work it the same grade are paid equally, the worker efficiency is discounted. The inefficient doesn't try to improve, while the efficient worker leans towards the minus virtue.

4. Workers getting wages without sufficient output to their credit find enough time to plan trade union activities, strikes, etc.

5. The productivity is decreased, the labour cost increases, the job schedules are upset, bottlenecks in productions are created, and the profit ultimately go down.

## II Piece Rate System

The payment of wages under this system is based upon the output of the worker. The rate is fixed per piece of work and the worker is paid according to the piece of work completed or the volume of work done by him irrespective of the time taken by him in completing that work. A workman is free to earn as much as his ability, energy or skill would allow him to produce. This system is suitable for the following:-

1. Where the production can be measured in standard units.

2. Where strict supervision are not possible.

3. Where quality and precision are not of primary.

## Advantages of Piece Rate System

1. It provides initiatives and incentives to the workers to produce more.
2. The productivity increases and cost of production per unit goes down.
3. As there is little wastage of time part of workers, the fixed overhead and resources like plant, machinery and space are well utilized.
4. Workers feel free to work complete with fellow workers, exhibit their efficiency and earn more wages.
5. Less supervision is required over the workers and happy relations are maintained with them.
6. It is easy to calculate the labour cost of products.

## Disadvantages of Piece Rate System

1. In the race to earn more wages by producing more, the quality of products is likely to deteriorate. So it requires strict inspection and quality control.

2. Continuous and increased working for some days may cause fatigue and ill health to the workers.

3. To Speed up production, the machines, tools and equipment's are sometimes not handled with the care that they require and so the workers expose themselves to accidents, besides causing loss of breakdown to the machines, equipment etc.

4. The inefficient workers earning lesser wages starts feeling jealous of other workers with who earn more. This creates unhealthy atmosphere.

5. The workers feel insecure of earnings during the days of ill health, holidays etc.

6. This is not useful for quality products.

7. The spoilage, defectives and wastages of materials increases.

## III Incentive Schemes

Under schemes the following methods are studied:

1. Halsey Premium Scheme
2. Rowan Premium Scheme
3. Taylor's Differential piece rate method.

### Halsey premium scheme

F.A. Halsey, an American Engineer, invented this plan in 1891. Under this plan (i) Time rate is guaranteed (ii) standard time is fixed time is fixed for the job or operations (iii) the workers producing more than the standard, or the workers completing the work in less than the standard time fixed, get bonus in addition to the ordinary time wages (iv) The bonus the premium by whatever name called is 30 to 70 % of the wages of time saved, the usual percent being 50% (v) The remaining of the bonus percentage is shared by the employer.

The formula for calculating total wages under Halsey premium scheme is

Total wages = Time taken × Hourly rate + % premium

## Merits of Halsey Premium Scheme

1. Day wage or the time rate is guaranteed. Even if output is less than the standard, one Get the time wage.
2. It makes distinction between efficient and inefficient workers and induces inefficient to come up to standard.
3. Workers get premium for the output above the standard. It provides the incentives to the workers to produce more.
4. As the premium is not 100% but only 50% or so, the employees feel happy about it as they share the remaining 50%.
5. With increased production, fixed overhead costs per unit are reduced.
6. The scheme is very simple and is understood easily by the workers.

## Demerits of Halsey Premium Scheme

1. A Significant share of the bonus goes to the employers so the workers oppose it.
2. Quality of output suffers as the workers are in haste to save time.
3. Incentive is not so attractive as it is with the piece work.
4. Where the workers start saving more than 50 % of the time they earn premium in huge amounts, which the employers do not relish.

## Taylor Differential Piece rate method

F.W. Taylor, the father as scientific management, introduced this method on the basis of his time, motion and fatigue of workers by suggesting two rates of payment of wages (i) a higher rate to the workers who produce equal to or more than the standard fixed for production during the day, and (ii) A lower rate to the workers who do not achieve the standard.

Taylor's Differential piece rate method has the following characteristics:

1. The standard is set after a careful study of Time, Motion and Fatigue.

2. There are two rates of payment, higher wages rate for these who achieve the standard, and the other lower wages rate for those who work below the standard.

3. There is no guarantee for day wages, as this scheme is worked out purely on piece work basis.

4. The cost per unit of production remains the same for each category of workers.

5. The efficient worker is rewarded while the in efficient is punished.

6. The success of this scheme depends on setting the right standard. If the standard is slightly higher the workers feel a great pinch and object to.

## Budget

A budget is the monetary or quantitative presentation of business plans and policies to be pursued in the future period of time. Some of its definitions are as follows:-

ICMA London – "A budget is a financial statement prepared prior to a predetermined period of time of the policy to be persued that period for the purpose of attaining a given objectives."

Brown & Howard – "A budget is a predetermine statement of management policy during a given period which provides a standard for comparison with the results actually achieved."

George R Terry – "Budget is an estimate of future needs arranged according to orderly basis covering some or all the activities of an enterprise for a definite period of time."

## Characteristics of a budget:

1. It is prepared for a definite future period.
2. It is a special form of statement expressed in quantitative terms which may be in the form of monetary value or physical units.
3. It is prepared with a view to attain a definite objective or target.
4. It express the plans and policies of the management to be pursued in future.
5. It provides a base for measuring the success of actual results.

## Budgeting

Budgeting is a part of management process which includes preparation of budget, Budget control, Budget Co-ordination and all those activities that are related with budget. Some of its definitions are as follows:-

William J. Betty – "Budgeting is a kind of future tense accounting in which the problems of future are met on paper before the transactions actually occur."

Shilinglaw – "Budgeting is the preparation of comprehensive operating and financial plans for specific intervals of time."

Above definitions of budgeting clears that budgeting is a wider process which includes all preparations related to budget, decisions related to various problems arising in budget, decisions related to various problems arising in budget, implementation of budget and control on the basis of budget.

## Budgetary Control

Budgetary control is an important technique of control on business activities by management in which business activities are operated on the basis of pre-prepared budget and thereafter actual results are evaluated in the light of budget estimates. Some important definitions of budgetary control are as follows:

W W Bigg " The term Budgetary control applied to a system of management and accounting control by which all operations and outputs are forecasted as far as possible and the actual results, when known are compared with the budget estimates."

Brown & Howard – "Budgeting control is a system of controlling costs which includes the preparation of budgets, co-ordinating the departments and establishing responsibilities comparing actual performance with the budgeted and acting upon results to achieve maximum profitability."

## Objectives of Budgeting

The main objectives of Budgeting is to assist the management in its main functions of planning, co-ordination and control. In fact, budget is an important instrument of communication through which management communications its and policies and targets to the persons doing work. The objectives of budgeting may be classified into three groups.

I Policy relating objectives –

(i) To express the policies and objectives of the firm in quantitative terms.

(ii) To prepare base for appraisal of work performance.

(iii) To co-ordinate administrative managerial and organisational units of the firm.

(iv) To develop a system of regular appraisal of policies and objectives of the firm.

II Administrative Objectives –

(i) To determine responsibilities of various departments and sub-departments of the firm.

(ii) To establish balance between available funds and estimated expenditure.

(iii) To develop a system of internal control as to ensure efficiency and economy.

(iv) To establish the system of decentralisation.

III Other Objectives –

(i) To classify business planning.

(ii) To for cast in respect of sales, cost of production cash flow, etc.

(iii) To make arrangement for management of efficiency and capacity of various departments.

(iv) To make effective control in stock, cost of production and cash of the firm.

## Objectives of Budgetary Control

Budgetary control is essential for policy planning and control. It also acts as an instrument of co-ordination. The main objectives of budgetary control are as follows:

(i) To assist in policy formulation on the basis of proper and reliable data.

(ii) To ensure planning for future by selling up various budgets.

(iii) To determine short-term and long-term financial and physical targets.

(iv) To operate various cost centres and departments with efficiency and economy.

(v) To classify expenses according to their nature such as direct and indirect expenses etc.

(vi) To help administration as under this system, executive performs their functions according to pre-determined budgets.

(vii) To anticipate capital requirements and to make necessary arrangement fort it.

(viii) To develop co-ordination and co-operation among employees and executives.

(ix) To eliminate wastes and increase in profitability.

(x) To correct the variations from to established standards.

## Importance or Merits or Advantages of Budgeting/ Budgetary Control

There are three important functions of top management – Planning, Co-ordination and control. Budgetary control helps in all those functions and in this context the advantages of budgetary control may be studied under following three heads:

I Budgeting and Planning:

A budget is a plan of the policy to be pusued during the defined period of time to attain a given objective. In other words, planning and budgeting are closely related with each other and in this context following advantages may be mentioned:

1. Action on the basis of well decided plan :-
   Under Budgetary control all actions are guided by well thought out plan because a budget is prepared after a careful study and research.

2. Mechanism for policy Implementation :-
   Budgeting provides a mechanism through which the policies of management can be implemented effectively.

3. Work on the basis of best option :-
   Various available options are considered, while preparing budgets and efforts are made to select the best option. It improves the effectiveness of planning.

4. Communication :-

Budget is an important communication which establishes link between the top management and the operatives. Thus the actual operators can understand the policy of top management more preciously and clearly.

5. Objectivity :

Budgeting expresses all business activities in numerical terms and it develops the quality of objectivity in planning.

II Budgeting and Co-ordination:-

Co-ordination is the essence of management and Budgeting makes the work of co-ordinations simple and sure. Budgeting is useful in co-ordinates in following manner:

(i) Co-ordination in Budget preparation :

While preparing budgets, individual goals, problem and potentiality of all departments are given due consideration and each departmental executive is given an opportunity to present his case. All these aspects and views are co-ordinated in the budget.

(ii) Co-ordination in working :

Budgeting promote co-ordination among policies, plans and actual working.

(iii) Communication and Co-ordination :

Budget is media of communication and on the basis of it each member of management is having perfect and clear-cut knowledge as what is the plan and how when and by whom it can be implemented. Thus, budgetary control helps in maintaining continuous co-ordination on among administration, management and organisation.

III Budgeting and Control:

(i) Control on cost of production – Budgetary control helps in controlling cost of production by determining budgets of different budget centres.

(ii) Control on Liquidity – The Liquidity position of the firm can easily be controlled according to need by the technique of cash budgeting.

(iii) Central on Capital expenditure – Capital budget helps in making control on control expenditure and having best use of available resources capital.

(iv) Effective utilization of Resources- It ensures effective because production is planned according to the availability of these resources.

(v) Standard for measuring performance: Budget provide standards of expected performance, against which actual performance of departments and employees can be compared.

(vi) Feeling of cost consciousness: Budget control helps in developing a feeling of cost consciousness and in restricting expenditures to the minimum.

## Limitations of Budgeting and Budgetary Control

(i) Budgets are based on plan estimates.

(ii) Budgeting is not a substitute of management.

(iii) Operation of a budget plan is not automatic

(iv) Time effect

(v) Prohibitive Cost

(vi) Effects of changing conditions

(vii) Constraints on managerial Initiative.

(viii) Conflicts among functional Executives

## Types of Budget

(i) Fixed Budget –
Fixed Budget is also known as 'Static Budget'. It is prepared for single level of activity and single set of business conditions. According to I.C.M.A. London, "Budget is a Budget which is designed to remain unchanged irrespective of the level of activity actually attained."

(ii) Flexible Budget –
Flexible Budget is that budget which presents costs, revenues and profits at various levels business activity i.e., various volumes of output and sales. According to ICMA London, A flexible budget may be defined as a budget which is designed to change in accordance with the level of activity attained.

(iii) Master Budget –
The master budget is a consolidated summary of the various functional budgets. According to some experts, Budgeted profit and Loss Account and Budgeted Balance sheet may be treated as Master Budget. In brief master Budget depicts the picture of total plans during the budgeted period and covers information relating to production, cost, sales, profit etc.

(iv) Functional Budgets –

They are also known as 'Departmental Budgets' or 'Subsidiary Budgets.' All these budgets are provided in this category which are prepared either on the basis of functions or departments in a business concern. The general classification on of functional budget may be exhibited as follows:

(a) Sales Budget
(b) Production Budget
(c) Cost Budget
  (i) Cost of production budget
  (ii) Administrative cost budget
  (iii) Selling & distribution cost budget
  (iv) R & D Budget

(d) Cash Budget
(e) Capital Expenditure Budget

(v) Zero Based Budget –

Zero Based Budgeting is a method of budgeting in which all expenses must be justified and approved for each new period. Developed by Peter Pyhar in the 1970's Zero-Based Budgeting starts from a "Zero Based" at the beginning of every budget period, analysing needs and costs of every function within and organisation and allocating fund accordingly regardless of how much money has previously been budgeted to any given line items.

## Standard Costing

Standard costing is one of the most important technique of management accounting and control. In this era of competition every manufacturer want that whereas on the one hand the quality of product should be as per standards specified, on the other hand cost of production should be well within control. Standard costing proves useful tool in achieving both these objectives.

## Meaning of Standard

The term 'Standard' refers to a specific measurement or 'pre-determined' scale or measurement Webster's Dictionary has given several meaning understand it as 'Something established as a rule or basis of comparison in measuring or judging quantity quality, value etc. "This something is not Vague but 'established as a rule or basis of comparison". Thus in the context of management accounting standard may be defined as measurable quantity of material, labour and other elements of cost required in the production of pre-determined quality level or technical characteristics.

## Meaning of Standard Cost

Standard cost is a predetermined cost, which is predetermined for the production of goods on the basis of certain specified standards under certain specific conditions.

According to Brown and Howard- "The standard cost is a pre-determined cost which determine what each product or service should cost under given circumstances."

According to ICMA London "Standard cost is defined as a predetermined cost, which is calculated from management's standard of efficient operation and the relevant necessary expenditures. It may be used as a basis for price fixing and for cost control through variance analysis."

According to Cecil Gillespie "Standard cost usually employed are pre-determined operation costs computed to reflect specified quantities priced and level of operation."

On the basis of above definitions it may be summarised as under:

(i) Standard cost is predetermined cost which ought to be under specific working conditions.

(ii) It is determined by correlating standard quantity of material Labour time and machine time and forecast of future market trend for price standard and

(iii) It helps in achieving the objectives of last control and efficiency measurement.

## Meaning of Standard Costing

Standard costing is a process and technique of accounting in which actual cost incurred are compared with pre-determined costs. On the basis of comparison efficiency of operation is determine and necessary corrective measures are taken if there are some variances. Some important definitions of standard costing are as under.

According to H.J. Wheldon "Standard costing is a method of ascertaining the cost where by statistics are prepared to show (a) The standard cost (b) the actual cost (c) the difference between these cost, which is termed as variance."

According to Brown & Howard – "Standard costing is a technique of accounting which compares the standard cost of each product or service with the actual cost, to determine the efficiency of the operations so than any remedial action may be taken immediately."

According to ICMA London – "Standard costing is the preparation and use of standard costs their comparison with actual cost and analysis of variances to show their cause and points of incidence."

On the basis of above definitions it is clear that the techniques of standard costing involves:

(a) The ascertainment of standard costs of various elements of cost viz materials, Labour and overhead.
(b) The comparison of actual cost with pre-determined standard cost
(c) The analysis of variances for ascertaining the reasons for the same.
(d) The location of responsibility for the variances and the corrective measures to be taken.

## Characteristics of standard costing

(i) Determination of standard first of all standards and standard cost of various elements of cost are ascertained separately.

(ii) Computation of Actual cost – After the completion of production actual cost incurred in computed.

(iii) Comparison of standard and Actual costs: The most important feature of standard costing is the comparison of actual cost incurred with standard cost specified.

(iv) Computation of variances – The most important aspect of comparison and analysis of actual cost and standard cost is to find out variances. These variances calculated separately for element of cost.

(v) Ascertainment of Reasons of Variances – If there is variance, different options to overcome these variances are studied and points of incidence of these variances are determined.

(vi) Study of options - After identifying various cause variances are studied and points of incidence of these variances are determined.

(vii) Presentation of Report to the management – After analysis of variances and various options to deal with a report is prepared for management so that necessary corrective actions may be taken and variances may be minimised.

## Objectives of Standard Costing

(i) Increase in efficiency and productivity-

The first objective of standard costing is to improve the quality and minimise the cost so as to face competition effectively. In fact, standard costing is a tool of management control with the help of which efficiency and productivity can be improved and these objectives can be achieved.

(ii) Cost Control – The purpose of determining standard cost and thin to compare it with actual cost is to make effective control on cost.

(iii) Determination of Responsibility: - One important objective of standard costing is to identify the persons or centres responsible for variances so that they may be controlled properly.

(iv) Supplent to Budgetary Control: - Standard costing is also adopted to make Budgetary control a success. In fact management control becomes more effective is Budgetary control and standard costing are introduced simultaneously.

(v) Information to the management: - To provide important information to management is also an objective of standard costing.

(vi) Progressiveness of Management:- One objective of standard costing is to develop the feeling of looking forward among managerial personnel and to make management dynamic and progressive continuously

## Advantages of Standard Costing.

Standard Costing is not useful only to control the cost but also help in production planning and policy formulation. The main advantages of standard costing are as under:

(i) Elimination of the weakness of historical costing: In historical costing actual costs are recorded after they have been incurred and thus they are not of much use in price determination cost control etc. Standard costing eliminate such limitations because, under this system cost data are compiled before production is commenced, are readily available and are in themselves a value guide of management.

(ii) Simple and economic: Standard costing involves a great deal of preliminary work for setting standards but once the standards are fixed. The clerical work of costing is considerably reduced. Thus it provides a simple and economical means of costing.

(iii) Cost Control: Standard costing helps in cost control also. Once the standards are fixed, they are following and analysed constantly. Whenever a variance occurs the reasons are studied and immediate corrective measures are undertaken.

(iv) Cost Consciousness: Standard costing develops an environment of cost consciousness among employees' executives and top management because actual cost is compared with standard cost. If there are variances, the persons or group responsible for that is identified.

(v) Basis of Incentive wages system: All incentives wages plans are based on certain standards, hence, incentive wage payment system can easily be operated on the basis of standard costing.

(vi) Facility in production planning: while adopting standard costing, standard are fixed in respect of material, labour, use of machine, etc. These standard helps in formulating production plan and policies according to capacity and need of the firm.

(vii) Management by exception: The introduction of standard costing system helps in the application of the principle of management by exception'. Variance analysis may point out the areas which are below standard and management can concentrate more on these areas for bringing further improvement.

(viii) Effective delegation of authority: Standard costing makes the delegation of authority easier and more effective because the standard work expected from each person is clearly stated while delegating authority to him.

(ix) Determination of Responsibility: Analysis of variances assists in single out in efficiency and to identify person who are responsible for unfavourable variances.

(x) Basis of price fixation: The cost and price can easily be determined, on the basis of standard costing for preparing price catalogue or submitting tender etc.

(xi) Helpful in budgetary planning: Budgetary planning and control can easily be adopted on the basis of standard costs.

(xii) Facility of use of Information Technology: Standard costing system ensures continuous flow of operating data in addition to specified standard data. On the basis benefits of use of information technology can easily be obtained.

## Disadvantages/Limitations of standard costing

Though standard costing is an important tool of cost control, it has certain practical also. These limitations are as follows:

1. Unsuitable for concerns dealing in non-standardised products. : -
   Standard costing is not much useful in those concerns where non-standardised products are produced or production is undertaken according to customer's specification. In such a case it becomes difficult to set up standard for each job separately.

2. Difficulties in set up standards : -
   The process of setting up standards is a complicated task as it requires technical skills and expertise competence the time and motion studies are required to be undertaken for this purpose, which requires a lot of time and money. Moreover, if wrong standards are determined. The whole purpose of the system would fail.

3. Not suitable for small firms :-
   The system of standard costing may not be suitable for small concerns keeping in view the cost of high degree of skill required in it.

4. Difficulty in fixing Responsibility :
   The responsibility for variances is fixed in the process of standard costing but it is not an easy task. Under many circumstances variances may arise due to various reasons when it becomes difficult to fit the specific responsibility.

5. Changing Business conditions:
   In standard costing standards are fixed under specified conditions. In case these conditions changes, then either standards loose their suitability or they have to be modified.

6. Need of Budgetary control :
   This system can be effective only when budgetary control is also adopted in the concern.

7. Feeling of Dissatisfaction among employees :
   If standards related to labour are fixed at a high level, it may develop are fixed at a high level, it may develop a feeling of dissatisfaction and psychological frustration among employees.

## Absorption Costing and Marginal Costing

There are two important techniques of ascertainment of product cost and profit –

a. Absorption costing or fule costing method and
b. Marginal or Direct costing method
c. Absorption costing is conventional, while marginal costing method has been developed later on according to needs of managerial decisions.

   Absorption costing is a conventional technique of ascertaining cost and profit. It is a practice under which all costs, whether fixed or variable are charged to operations, process or production. Therefore, it is also known as full costing or total casting technique. Under absorption costing first of all prime cost is obtained by adding direct material, direct labour and direct expense. Thereafter factory expenses are added to find out factory cost, administrative cost are added to obtain cost of production and finally selling and distribution expenses are added to find out total cost. Profit is ascertained either on the basis of differences between total cost and sales or by computation as per desired rate of profit on cost or sales.

## Advantage of Absorption costing

(i) Price determination on the basis of full cost under this technique all costs, Fixed and variable, related to production are charged to units manufactured. It helps in proper determination of price.

(ii) Calculation of Gross/net Profit: This method helps in calculation of gross profit and net profit separately in income statement.

(iii) Solution of separation of costs: It solves the problem of separation of costs into fixed and variable costs which cannot be done easily and accurately in many cases.

(iv) Clarification of utilization of production resources: This method clearly discloses efficient or inefficient utilization of production resourced because under absorption or over absorption of factory overheads are clearly indicated in income statement.

(v) Difference between product and period cost – This method distinguishes product cost and period cost it explains that which costs are directly related with production and which are relevant with time factor only.

(vi) Charge of Fixed factory overhead on inventory: Under this method the burden of fixed manufacturing overheads are put on that stock also which is not sold during current period but is produced to have sales in future.

(vii) Feeling of more responsibility among managers: This method helps in developing a sense of responsibility among managers for the cost and services provided to their centres/departments because of proper allocation of fixed factory overheads to these centres.

(viii) Conformity with accrual and matching concept it helps to confirm with accrual and matching concept of accounting because fixed manufacturing overheads on that goods is carried over for the next period which is not sold during current period.

## Limitations of Absorption Costing

(i) Difficulty in Comparison and control of Cost:
Absorption costing is dependent on the level of output because different unit costs are obtained at different levels of output. Generally an increase in the level of output results in reduced unit cost while decrease in output results in reduced unit cost results in an increased cost per unit. It makes comparison and control of cost difficult.

(ii) Difficulty in preparation of Flexible budget:
Generally no distribution is mode between fixed and variable costs in absorption costing and on this ground it is difficult to prepare flexible budget.

(iii) Inclusion of fixed factory cost in cost of production:
Some accountants feel that fixed manufacturing overheads are period cost and therefore should not be included in cost of product.

(iv) Difficulties in Managerial Decisions :
Absorption costing is not very helpful in taking many managerial decisions such as make or buy, acceptance of an order at specified price, minimum price during depression, optimum product mix, closure of some product line etc.

## Marginal costing

Marginal costing is a specific technique of cost analysis in which cost information are presented in such a manner so that it may help the management in cost control and various managerial decisions. In this technique, total cost is divided into fixed and variable components. Fixed expenses remain constant in aggregate amount and do not vary with the increase or decrease in production upto a particular level of output. On the other hand, variable expenses increase or decrease in proportion to increase or decrease in output and remain constant per unit of output. Thus, fixed expenses lead to different costs per unit at different levels of production. It decreases per unit with the decrease in production. In this context, a special technique known as marginal costing has been developed which excludes fixed cost and helps in decision making on the basis of variable or marginal cost.

## Concept of Marginal cost

The term marginal cost is used in two meaning. According to first meaning marginal cost refers to variable cost consist of direct materials, direct labour, variable direct expenses and all variable overheads. In short, Marginal cost is taken as equal to prime cost plus all variable overhead. In other meaning, variable cost is considered in a specific sense i.e., increase or decrease in total cost on account of increase or decrease of output by one unit.

According to I.C.M.A London, “Marginal cost is the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit.” It may be mentioned that a unit may be a single article, a batch or a lot of articles, an order or a stage of production capacity. If change in production is more than a unit, per unit average marginal cost can be obtained by dividing difference in total cost by difference in total unit.

## Meaning of Marginal Costing

Marginal costing is also known as ‘Direct costing’ or variable costing’ Some of its definitions are as follows.

According to Matz. curry & frank, “ Marginal costing is a costing method which charges the product with only those costs that vary directly with volume.”

According to D. Joseph, "Marginal costing is a technique of determining the amount of change in aggregate cost due to an increase in one unit over the existing level of production.

According to ICMA London, "The ascertainment of marginal cost and the effect on profit of change on in volume or type of output by differentiating between fixed cost and variable costs is known as marginal costing."

## Basic characteristics of Marginal costing

The main characteristics of marginal costing are as

(i) Technique of cost analysis and presentation :
Marginal costing is not a separate and independent system of costing. Such as process costing or job costing, but it is a technique of cost analysis and presentation which helps management in taking various managerial decisions.

(ii) Division of Cost into fixed & variables :
An elements of cost production, administration and selling and distribution are divided into fixed and variable components. Even semi variable costs are also classified into fixed and variable.

(iii) Period cost and production cost: fixed cost is treated as period cost and is charged to profit and loss A/c for the period for which it is incurred, whereas variable cost (Marginal costs) is regarded as a cost of product.

(iv) Valuation of stock: The stocks of finished goods and WIP are valued at marginal costs.

(v) Determination of price: Selling price is determine on the basis of marginal cost plus contribution.

(vi) Calculation of Profit: Profit is determined in a special manner. Total marginal cost is deducted from total sales revenue and the balance as contribution. Thereafter, fixed cost is deducted from contribution and the resultant amount is known as profit.

(vii) Recovery of costs: only variable costs are charge production cost. Fixed costs are recovered from contribution.

(viii) Break-even- Analysis – BEP or cost volume profit analysis is an integral part of marginal costing.

### Contribution

Contribution means differences between sales and the variables (marginal) cost of sales. In other word the excess of sales over its variable cost is called contribution.

$$\boxed{\text{Contribution (c) = Sales (s) – Variable Cost (v)}}$$

Or,

$$\boxed{\text{Contribution (c) = Fixed cost (Fc) + Profit (P)}}$$

### Profit volume Ratio P/V Ratio

It is a ratio of contribution to sales and is expressed generally in term of Percentage. It is also known as contribution ratio. It is most important ratio for studying the profitability of operations of a business. The concept of P/V Ratio is also useful to calculate the Break-even-point.

$$\text{P/V Ratio} = \frac{Contribution}{Sales} \times 100 \quad \text{or} \quad \frac{C}{S} \times 100$$

BREAK-EVEN Point

BEP is a point of sales where there is no profit no loss.

$$\text{BEP (in Rs)} = \frac{Fc \times s}{c}$$

$$\text{BEP (in unit)} = \frac{fc}{s-v}$$

$$\text{BEP} = \frac{fc}{\frac{P}{V}\,Ratio}$$

BEP = Sales – Margin of Safely

MOS = Margin of Safely

Margin of safely is concerned with the difference between in sales and BEP. In other words, the excess of sales over BEP is called Margin of Safety (MOS). It is an important indicator of the strength of the business. If the margin of Safety is large the position of the business is sound and it can easily resist the situation of reduction in sales.

$$\text{MOS} = \frac{\text{Profit}}{\frac{P}{V}\,Ratio}$$

MOS (in Rs) = Sales – BEP (in Rs)

MOS (in unit) = Sales – BEP (in units)

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