INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

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Power Point Presentation

ON

STRATEGIC MANAGEMENT ACCOUNTING

MBA III semester

(IARE-R16)

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UNIT-I

Management Accounting Vs Cost Accounting

Definitions of Management Accounting:

According to Anglo-American Council on Productivity:

"Management Accounting is the presentation of accounting information in such a way as to assist management in creation of policy and day-to-day operation of an undertaking."

Robert N.Anthony:

"Management Accounting is concerned with accounting information that is useful to management."

According to Brown and Howard:

"The essential aim of management accounting should be to assist management in decision making and control."

According to J.Batty:

" Management Accounting is the term used to describe the accounting methods, systems and techniques which coupled with special knowledge and ability, assist management in its task of maximizing profits and minimizing losses."

According to T.G.Rose:

"Management Accounting is the adaptation and analysis of accounting information and its diagnosis and explanation in such a way as to assist management."

COST ACCOUNTANCY

- This is the widest of all the terms. It is applications of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and ascertainment of profitability.
- According to the Institute of Cost and Management Accounts, London, "cost accountancy is the application of costing and cost accounting principles, methods, techniques etc., to the science, art and practice of cost control, cost audit and ascertainment of profitability."

Cost Accounting:

- It is a formal system of accounting for costs by means of which costs of products and services are ascertained and controlled.

Costing:

- Costing is the classifying, recording and appropriate allocation of expenditure for the determination of costs of products or services.
- The techniques and processing of ascertainment of costs is known as costing. The technique in costing consists of principles and rules which govern the procedure of ascertaining costs of products or services. This technique is dynamic and changes with time.

Differences between Cost Accounting and Management Accounting

Point of Difference	Cost Accounting	Management Accounting
1. Objective	Its main objective is to provide information in the form of profit and loss account and balance sheet to varies parties interested in the accounting information such as shareholders, creditors, bankers, investors, debenture holders, government etc.	Its main objective is to help the management in the formulation of policies.
2. Scope	It covers only that information which can be measured in terms of money.	Its scope is very wide. It includes budgeting, tax planning, interpretation of financial results etc.

Differences between Cost Accounting and Management Accounting

Point of Difference	Cost Accounting	Management Accounting
3. Nature	It considers both the present and past figures are considered for cost determination.	It deals with figure projections and plans on the basis of past and present cost data.
4. Principles	It has certain principles and procedures and proformas for recording and analyzing data.	No speciific rules and procedures are followed in management accounting. It prepares and presents information as per requirement of management.

5. Usage	This information is useful to both internal and external parties.	The information provided by management accounting is useful only to the management.
6. Status	The status of cost accountant in industries comes after the management accountant.	Management accountant is a senior to cost accountant in industries.
7. Evolution	It has been in use since industrial revolution.	It is relatively a new concept and has developed only in last 30 years.
8. Focus	It is concerned only with cost determination.	It highlights both cost and revenues also.
9. Data	Only Quantitative aspect is considered.	It considers both quantitative and qualitative information.
10. Installation	Costing can be installed without management. Financial accounts are prepared for a particular period of time.	For the installation of management accounting system both financial and cost accounting are required. It supplies the

Classification of Cost for Managerial Use

The Cost may be classified in various ways to serve different purposes. Some of the important classifications are as under:

They are

1.By elements

2. As direct or indirect

3. By functional divisions

4. By departments

5. By product

6. As variable, semi-variable and fixed costs.

7. As expenditure being capital or revenue.

The Cost may be classified into eight categories on the basis of managerial Decisions. They are

1. Marginal cost
2. Out of pocket costs
3. Differential cost
4. Sunk cost
5. Imputed or notional costs
6. Opportunity cost.
7. Replacement cost.
8. Avoidable and Unavoidable cost

1. Marginal Cost

- Marginal cost is the total of variable costs i.e., prime cost plus variable overheads.
- It is based on the distinction between fixed and variable costs.
- Fixed costs are ignored and only variable costs are taken into consideration for determining cost of products and value of work-in-progress and finished goods.

2. Out of Pocket Costs

- This is that portion of the costs which involves payment to outsiders i.e., gives rise to each expenditure as opposed to such costs as depreciation, which do not involve any cash expenditure.
- such costs are relevant for price fixation during recession or when make or buy decision is to be made.

3. Differential Cost

- The change in costs due to change in the level of activity or pattern or method of production is known as differential cost.
- If the change increases the cost, it will be called incremental cost.
- If there is decrease in cost resulting from decrease in output, the difference is known as decremental cost.

4. Sunk Cost

- A sunk cost is an irrecoverable cost and is caused by complete abandonment / rejection / leaving of a plant.
- It is written down value of the abandoned plant less its salvage value. Such costs are not relevant for decision-making and are not affected by increase or decrease in volume / size.
- Thus, expenditure which has taken place and is irrecoverable in a situation, is treated as sunk cost.

- For taking managerial decisions with future implications, a sunk cost is an irrelevant cost.
- If a decision has to be made for replacing the existing plant, the book value of the plant less salvage value(if any) will be a sunk cost and will be irrelevant cost for taking decision of the replacement of the existing plant.

5. Imputed Costs or Notional Costs

- Imputed costs or notional costs have the same meaning.
- The American equivalent term of the British term 'notional cost' is imputed cost.
- These costs are notional in nature and do not involve any cash outlay.
- The Charted Accountants, London defines notional cost as " the value of a benefit where no actual cost is incurred."
- Even though such costs do not involve any cash outlay but are taken into consideration while making managerial decisions.

- **Examples of such costs are: notional / unreal rent charged on business premises owned by the proprietor, interest on capital for which no interest has been paid.**

- **When alternative capital investment projects are being evaluated it is necessary to consider the imputed interest on capital before a decision is arrived as to which is the most profitable project.**

6. Opportunity Cost

- It is the maximum possible alternative earning that might have been earned if the productive capacity or services had been put to some alternative use.
- in simple words, it is the advantage , in measurable terms which has been foregone due to not using the facility in the manner originally planned.
- For example, if an owned building is proposed to be used for a project, the likely rent of building is the opportunity cost which should be taken into consideration while evaluating the profitability of the project.

- Similarly, if the fixed deposit in a bank is withdrawn for financing a new project, the loss of interest on such fixed deposit is the opportunity cost.

7. Replacement Cost

- It is the cost at which there could be purchase of an asset or material identical to that which is being replaced or revalued.
- It is the cost of replacement at current market price.

8. Avoidable and Unavoidable Cost

- Avoidable costs are those which can be eliminated if a particular product or department with which they are directly related, is discontinued.
- For example, salary of the clerks employed in a particular department can be eliminated, if the department is discontinued.
- Unavoidable cost is that cost which will not be eliminated with the discontinuation of a product or department.
- For example, salary of factory manager or factory rent cannot be eliminated even if a product is eliminated.

COST ANALYSIS

An important step in computation and analysis of cost is the classification of costs into different types. Classification helps in better control of the costs and also helps considerably in decision making. Classification of costs can be made according to the following basis.

A. Classification according to elements :- Costs can be classified according to the elements. There are three elements of costing, viz. material, labor and expenses. Total cost of production/ services can be divided into the three elements to fi nd out the contribution of each element in the total costs.

B. Classification according to nature :- **As per this classification, costs can be classified into Direct and Indirect. Direct costs are the costs which are identifiable with the product unit or cost centre while indirect costs are not identifiable with the product unit or cost centre and hence they are to be allocated, apportioned and then absorb in the production units. All elements of costs like material, labor and expenses can be classified into direct and indirect. They are mentioned below.**

i. Direct and Indirect Material :- **Direct material is the material which is identifiable with the product. For example, in a cup of tea, quantity of milk consumed can be identified, quantity of glass in a glass bottle can be identified and so these will be direct materials for these products. Indirect material cannot be identified with the product, for example lubricants, fuel, oil, cotton wastes etc cannot be identified with a given unit of product and hence these are the examples of indirect materials.**

ii. Direct and Indirect Labor :- **Direct labor can be identified with a given unit of product, for example, when wages are paid according to the piece rate, wages per unit can be identified. Similarly wages paid to workers who are directly engaged in the production can also be identified and hence they are direct wages. On the other hand, wages paid to workers like sweepers, gardeners, maintenance workers etc are indirect wages as they cannot be identified with the given unit of production.**

iii. Direct and Indirect Expenses :- **Direct expenses refers to expenses that are specifically incurred and charged for specific or particular job, process, service, cost centre or cost unit. These expenses are also called as chargeable expenses. Examples of these expenses are cost of drawing, design and layout, royalties payable on use of patents, copyrights etc, consultation fees paid to architects, surveyors etc.**

Indirect expenses on the other hand cannot be traced to specific product, job, process, service or cost centre or cost unit. Several examples of indirect expenses can be given like insurance, electricity, rent, salaries, advertising etc. It should be noted that the total of direct expenses is known as 'Prime Cost' while the total of all indirect expenses is known as 'Overheads'.

C. Classification according to behaviour: **- Costs can also be classified according to their behavior. This classification is explained below.**

i. Fixed Costs :- **Out of the total costs, some costs remain fixed irrespective of changes in the production volume. These costs are called as fixed costs. The feature of these costs is**

that the total costs remain same while per unit fixed cost is always variable. Examples of

these costs are salaries, insurance, rent, etc.

ii. Variable Costs :- **These costs are variable in nature, i.e. they change according to the volume of production. Their variability is in the same proportion to the production. For example, if the production units are 2,000 and the variable cost is Rs. 5 per unit, the total variable cost will be Rs. 10,000, if the production units are increased to 5,000 units, the total variable costs will be Rs. 25,000, i.e. the increase is exactly in the same proportion of the production. Another feature of the variable cost is that per unit variable cost remains same while the total variable costs will vary. In the example given above, the per unit variable cost remains Rs. 2 per unit while total variable costs change.**

Examples of variable costs are direct materials, direct labor etc.

iii. Semi-variable Costs :- **Certain costs are partly fixed and partly variable. In other words, they contain the features of both types of costs. These costs are neither totally fixed nor totally variable. Maintenance costs, supervisory costs etc are examples of semi-variable**

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D. Classification according to functions :- **Costs can also be classified according to the functions/ activities. This classification can be done as mentioned below.**

i. Production Costs :- **All costs incurred for production of goods are known as production costs.**

ii. Administrative Costs :- **Costs incurred for administration are known as administrative costs. Examples of these costs are office salaries, printing and stationery, office telephone,**
office rent, office insurance etc.

iii. Selling and Distribution Costs :- **All costs incurred for procuring an order are called as selling costs while all costs incurred for execution of order are distribution costs. Market research expenses, advertising, sales staff salary, sales promotion expenses are some of the examples of selling costs. Transportation expenses incurred on sales, warehouse rent etc are examples of distribution costs.**

iv. Research and Development Costs :- **In the modern days, research and development has become one of the important functions of a business organization. Expenditure incurred for this function can be classified as Research and Development Costs.**

E. Classification according to time : **Costs can also be classified according to time. This classification is explained below.**

I. Historical Costs : **These are the costs which are incurred in the past, i.e. in the past year, past month or even in the last week or yesterday. The historical costs are ascertained after the period is over. In other words it becomes a post-mortem analysis of what has happened in the past. Though historical costs have limited importance, still they can be used for estimating the trends of the future, i.e. they can be effectively used for predicting the future costs.**

II. Predetermined Cost :

These costs relating to the product are computed in advance of production, on the basis of a specification of all the factors affecting cost and cost data. Pre determined costs may be either standard or estimated. Standard Cost is a predetermined calculation of how much cost should be under specific working conditions. It is based on technical studies regarding material, labor and expenses. The main purpose of standard cost is to have some kind of benchmark for comparing the actual performance with the standards. On the other hand, estimated costs are predetermined costs based on past performance and adjusted to the anticipated changes. It can be used in any business

situation or decision making which does not require accurate cost.

F. Classification of costs for Management decision making :- **One of the important function of cost accounting is to present information to the Management for the purpose of decision making. For decision making certain types of costs are relevant. Classification of costs based on the criteria of decision making can be done in the following manner *I. I.Marginal Cost :-* Marginal cost is the change in the aggregate costs due to change in the volume of output by one unit. For example, suppose a manufacturing company produces 10,000 units and the aggregate costs are Rs. 25,000, if 10,001 units are produced the aggregate costs may be Rs. 25,020 which means that the marginal cost is Rs. 20. Marginal cost is also termed as variable cost and hence per unit marginal cost is always same, i.e. per unit marginal cost is always fixed. Marginal cost can be effectively used for decision making in various areas.**

II. Differential Costs : **Differential costs are also known as incremental cost. This cost is the difference in total cost that will arise from the selection of one alternative to the other. In other words, it is an added cost of a change in the level of activity. This type of analysis is useful for taking various decisions like change in the level of activity, adding or dropping a product, change in product mix, make or buy decisions, accepting an export offer and so on.**

III. Opportunity Costs : **It is the value of benefit sacrificed in favour of an alternative course of action. It is the maximum amount that could be obtained at any given point of time if a resource was sold or put to the most valuable alternative use that would be practicable. Opportunity cost of goods or services is measured in terms of revenue which could have been earned by employing that goods or services in some other alternative uses.**

IV. Relevant Cost :

The relevant cost is a cost which is relevant in various decisions of management. Decision making involves consideration of several alternative courses of action. In this process, whatever costs are relevant are to be taken into consideration. In other words, costs which are going to be affected matter the most and these costs are called as relevant costs. Relevant cost is a future cost which is different for different alternatives. It can also be defined as any cost which is affected by the decision on hand. Thus in decision making relevant costs play a vital role.

V. Replacement Cost :

This cost is the cost at which existing items of material or fixed assets can be replaced. Thus this is the cost of replacing existing assets at present or at a future date.

VI. Abnormal Costs :- **It is an unusual or a typical cost whose occurrence is usually not**

regular and is unexpected. This cost arises due to some abnormal situation of production.

Abnormal cost arises due to idle time, may be due to some unexpected heavy breakdown of machinery. They are not taken into consideration while computing cost of production or for decision making.

vII. Controllable Costs :

In cost accounting, cost control and cost reduction are extremely important. In fact, in the competitive environment, cost control and reduction are the key words. Hence it is essential to identify the controllable and uncontrollable costs. Controllable costs are those which can be controlled or influenced by a conscious management action. For example, costs like telephone, printing stationery etc can be controlled while costs like salaries etc cannot be controlled at least in the short run. Generally, direct costs are controllable while uncontrollable costs are beyond the control of an individual in a given period of time.

VIII. Shutdown Cost : **These costs are the costs which are incurred if the operations are shut**

down and they will disappear if the operations are continued. Examples of these costs are costs of sheltering the plant and machinery and construction of sheds for storing exposed property. Computation of shutdown costs is extremely important for taking a decision of continuing or shutting down operations.

IX. Capacity Cost :- **These costs are normally fixed costs. The cost incurred by a company for providing production, administration and selling and distribution capabilities in order to perform various functions. Capacity costs include the costs of plant, machinery and building for production, warehouses and vehicles for distribution and key personnel for administration. These costs are in the nature of long-term costs and are incurred as a result of planning decisions.**

X. Urgent Costs :- **These costs are those which must be incurred in order to continue operations of the fi rm. For example, cost of material and labor must be incurred if production is to take place.**

COST CONCEPTS

COST:

The Institute of Cost and Management Accountants (ICMA) has defined cost as “the amount of expenditure, actual or notional incurred on or attributable to a specified thing or activity.” It is the amount of resources scarified to achieve a specific objective. A cost must be with reference to the purpose for which it is used and the conditions under which it is computed. To take decisions, managers wish to know the cost of something. This something is called a cost unit.

COST UNIT:

A cost unit is anything for which separate measurement of costs if desired. A product, service, department, project or an educational course can all be cost units. Cost units are chosen not for their own sake but to aid decision making. Thus a cost unit is a “quantitative unit or product or service in relation to which costs are ascertained”. The unit to be used at any given situation is that which is most relevant to the purpose of cost ascertainment.

. **COST CENTRE**:

According to ICMA London, cost centre is “a location, person or items of equipment in respect of which costs may be ascertained and related to cost units for control purposes”. It is simply a method by which costs are gathered together, according to their incidence, usually by means of cost centre codes. It is the smallest element of an organization in respect of which costs are charged and ascertained. Maintenance department, a public relation office, a printing machine are all examples of cost centres.

The establishment of cost centres serves two important purposes. Firstly cost ascertainment is made possible by collecting and charging cost to each cost centre. Secondly, cost control is ensured as costs can be more closely looked at and more easily monitored by a responsible official. The setting up of a cost centres depends on numerous factors such as organization of factory, requirement of the costing system and management policy.

MANAGEMENT ACCOUNTING Vs COST ACCOUNTING

- **COST ACCOUNTANCY**

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Financial Accounting

- Accounting is the wider term and includes recording, classifying and summarizing of business transactions in terms of money, the preparation of financial reports, the analysis and interpretation of these reports for the information and guidance of management.
- According to the American Institute of Certified Public Accounts, " Financial Accounting as the art of recording, classifying and summarizing in a significant manner in terms of money transactions and events which in part, at least of financial character and interpreting the results thereof"

American Accounting Association defines accounting as " the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information."

According to Smith and Ashburne,

- "Accounting is the science of recording and classifying business transactions and events, primarily of financial character and art of making significant summaries, analysis and interpretations of those transactions and events and communicating the results to persons who must make decisions or form judgements".

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Differences between Financial Accounting and Cost Accounting

Point of Difference	Financial Accounting	Cost Accounting
1. Purpose	It provides information about the business in a general way. It tells about the profit and loss and financial position of the business to owners and other outside parties.	It provides information to the management for the proper planning, operation, control and decision making.
2. Form of Accounts	**These accounts are kept in such a way as to meet the requirements of companies Act and Income Tax Act.**	**These accounts are generally kept voluntarily to meet the requirements of the management But now Companies Act has made it obligatory to keep cost records in some manufacturing industries.**

Point of Difference	Financial Accounting	Cost Accounting
3.Recording	It classifies, Records, and analyses the transactions in a subjective manner i.e., according to the nature of expenses.	It records the expenditure in an objective manner i.e., according to the purposes for which the costs are incurred.
4. Control	It lays emphasis on the recording aspect without attaching any importance to control.	It provides a detailed system of control for materials, labour and overhead costs with help of standard costing and budgetary control.
5. Periodicity of reporting	It reports operating results and financial position usually at the end of the year.	It gives information through cost reports to the management as and when desired.
6. Analysis of profit	Financial accounts are the accounts of the whole business. They are independent in nature and disclose the net profit or net loss of the business as a whole.	Cost accounting is only a part of the financial accounts and discloses profit or loss of each product, job or service.

Point of Difference	Financial Accounting	Cost Accounting
7. Reporting of costs	The costs are reported in aggregate in financial accounts.	The costs are broken down on a unit basis in cost accounts.
8. Nature of transactions	Financial accounts relate to commercial transactions of the business and include all expenses viz., manufacturing, office , selling and distribution etc. Financial accounts are concerned with external transactions i.e., transactions between business concern on one side and third parties on the other. These transactions form the basis for payment or receipt of cash.	Cost accounts relate to transactions connected with the manufacture of goods and services and include only those expenses which enter into the production. Cost Accounts are concerned with internal transactions which do not form the basis of payment or receipt of cash.
9. Information	Monetary information is only used i.e., only monetary transactions are recorded.	Non-monetary information like units is also used i.e., it deals with monetary as well as non-monetary information.

Point of Difference	Financial Accounting	Cost Accounting
10. Figures	Financial accounts deal mainly with actual facts and figures.	Cost Accounts deal partly with facts and figures and partly with estimates.
11. Reference	In opening a system of financial accounting reference can be made in case of difficulty to the company law, case decisions and to the canons of sound professional practice.	No such reference is possible. Guidance can be had only from a body of conventions followed by cost accountants.
12. Relative efficiency	Financial accounts do not provide information on the relative efficiencies of various workers, plants and machinery.	Cost accounts provide valuable information on the relative efficiencies of various plants and machinery.
13. Stock Valuation	Stocks are valued at cost or market price whichever is less.	Stocks are valued at cost.
14. Type of science	Financial accounting is a positive science because it is subject to legal rigidity with regard to the preparation of the financial statements.	Cost accounting is not only a positive science but also a normative science because of it includes techniques of budgetary control and standard costing.

Financial Accounting Vs Management Accounting

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- **According to Brown and Howard:**

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1. Objective	Its main objective is to provide information in the form of profit and loss account and balance sheet to varies interested parties such as shareholders, creditors, bankers, investors, debenture holders, government etc.	Its main objective is to help the management in formulation of policies and plans.
2. Scope	It covers only that information which can be measured in terms of money.	It considers both qualitative information and other information.
3. Nature	It is concerned almost exclusive with historical records i.e., transactions which have already Taken place.	It represents predetermined and as well as post determined information.
4. Subject Matter	It portrays the position of the business as a whole. It assesses the results of the whole business.	It is concerned with the activities of different units, departments and cost centres.

Point of Difference	Financial Accounting	Management Accounting
5. Focus	Financial accounting reports reveal what had happed in the past.	It takes into account the past events only to the extent they affect the future position.
6. Precision	In financial accounting all transactions are recorded with actual amounts. There is no room for use of appropriate figures.	In management accounting no emphasis is given to actual figures. Sometimes approximate figures are considered more useful than actual figures to know the trends of the business.
7. Statutory Obligation	The preparation of financial accounting is a statutory obligation. Financial statements should be prepared in the formats prescribed by law.	It is optional. It is upto the management whether to instal it or not.
8. Accounting principles	It is governed by generally accepted accounting principles and conventions.	No such set of accounting principles and conventions are followed in management accounting.
9. Reporting	Financial statements prepared under financial accounts are useful to outsiders like creditors, bankers, debenture holders etc.	Reports prepared under management account are useful for internal management only.
10.Period	Financial accounts are prepared for a particular period of time.	It supplies needed information to the management from time to time thought the year.

Point of Difference	Financial Accounting	Management Accounting
11.Communication	Promt And Quick communication of information and keeping upto date are not desired in financial accounting.	In this, immediate and prompt communication of data is very much required.
12. Audit	Financial statements such as profit and loss account and balance sheet are subject to verification. Under companies Act Auditing is compulsory for financial accounting.	It cannot be audited. As it not based on actual figures. It is not possible to get the management accounts audited.
13. Publication	As per companies Act 1956, every registered company should publish it's final statements for the benefit of public. A copy of the same should be filled with registrar of companies.	Statements and reports prepared under management accounting are meant only for internal management only. Hence, they are not published.

DIRECT AND INDIRECT EXPENSES

Direct expenditure also known as chargeable expenses includes all such expenditure other than expenses on direct material and labour that can be directly identified with cost unit examples of direct expenses are architect or surveyors fees. Cost of drawings and patterns, royalty, repairs and maintenance of plant obtained on hire etc.

Indirect expenses are also called overhead. They are also referred to as on cost. They include material, indirect labour and other expenses, which cannot be directly charged to specific cost units. The overheads can be divided into three categories.

DIRECT AND INDIRECT EXPENSES

Factory Overheads:

Factory overheads include all indirect expenses, which are connected with manufacturing of a product. When they are allocated to different cost units they are referred to as factory on cost or works on cost. Examples of factory overheads are salary of factory manager, supervisor's salary, factory rent and rates and factory insurance etc.

Administrative Overheads:

Administrative overheads include all indirect expenses relating to enter price. They are also called as office overheads or office on cost. They include expenses incurred towards formulation of policies, planning and controlling the functions and motivating the personnel of organization.

DIRECT AND INDIRECT EXPENSES

Selling and Distribution Overheads:

Selling and distribution overheads are indirect expenses connected with marketing and sales. Selling expenses are incurred in securing and retaining customers. Salaries and commission of sales managers and salesmen, training expenses, cost of samples, catalogues, price lists, exhibition and demonstrating expenses, market research expenses and expenses incurred on entertaining customers. Distribution expenses are expenses incurred in ensuring that the products are available at all potential points of sale. They include expenses on handling the products from the time they are placed in the Warehouse until they reach their destination. Examples of distribution overheads are cost of warehousing, packing and loading charges etc.

POWER POINT PRESENTATION
ON

COSTING FOR SPECIFIC INDUSTRIES
(Unit-II)

UNIT-II: JOB COSTING

***Job Costing*:** This method of costing is used in Job Order Industries where the production is as per the requirements of the customer. In Job Order industries, the production is not on continuous basis, rather it is only when order from customers is received and that too as per the specifications of the customers. Consequently, each job can be different from the other one. Method used in such type of business organizations is the Job Costing or Job Order Costing. The objective of this method of costing is to work out the cost of each job by preparing the Job Cost Sheet. A job may be a product, unit, batch, sales order, project, contract, service, specific program or any other cost objective that is distinguishable clearly and unique in terms of materials and other services used. The cost of completed job will be the materials used for the job, the direct labor employed for the same and the production overheads and other overheads if any charged to the job.

UNIT-II: JOB COSTING

Features of Job Costing.

It is a specific order costing

- A job is carried out or a product is produced is produced to meet the specific requirements of the order.
- Job costing enables a business to ascertain the cost of a job on the basis of which quotation for the job may be given.
- While computing the cost, direct costs are charged to the job directly as they are traceable to the job.
- Indirect expenses i.e. overheads are charged to the job on some suitable basis.
- Each job completed may be different from other jobs and hence it is difficult to have standardization of controls and therefore more detailed supervision and control is necessary.
- At the end of the accounting period, work in progress may or may not exist.

Methodology used in Job Costing

As discussed above, the objective of job costing is to ascertain the cost of a job that is produced as per the requirements of the customers. Hence it is necessary to identify the costs associated with the job and present it in the form of job cost sheet for showing various types of costs. Various costs are recorded in the following manner.

_ ***Direct Material Costs:*** Material used during the production process of a job and identified with the job is the direct material. The cost of such material consumed is the direct material cost. Direct material cost is identifiable with the job and is charged directly. The source document for ascertaining this cost is the material requisition slip from which the quantity of material consumed can be worked out.

Methodology used in Job Costing

Cost of the same can be worked out according to any method of pricing of the issues like first in first out, last in first out or average method as per the policy of the organization. The actual material cost can be compared with standard cost to find out any variations between the two. However, as each job may be different from the other, standardization is difficult but efforts can be made for the same.

Direct Labor Cost: This cost is also identifiable with a particular job and can be worked out with the help of 'Job Time Tickets' which is a record of time spent by a worker on a particular job. The 'job time ticket' has the record of starting time and completion time of the job and the time required for the job can be worked out easily from the same. Calculation of wages can be done by multiplying the time spent by the hourly rate. Here also standards can be set for the time as well as the rate so that comparison between the standard cost and actual cost can be very useful.

Direct Expenses: **Direct expenses are chargeable directly to the concerned job. The invoices or any other document can be marked with the number of job and thus the amount of direct expenses can be ascertained.**

Overheads: **This is really a challenging task as the overheads are all indirect expenses incurred for the job. Because of their nature, overheads cannot be identified with the job and so they are apportioned to a particular job on some suitable basis. Pre determined rates of absorption of overheads are generally used for charging the overheads. This is done on the basis of the budgeted data. If the predetermined rates are used, under/over absorption of overheads is inevitable and hence rectification of the same becomes necessary.**

Work in Progress: **On the completion of a job, the total cost is worked out by adding the overhead expenses in the direct cost. In other word, the overheads are added to the prime cost. The cost sheet is then marked as 'completed' and proper entries are made in the finished goods ledger. If a job remains incomplete at the end of an accounting period, the total cost incurred on the same becomes the cost of work in progress. The work in progress at the end of the accounting period becomes the closing work in progress and the same becomes the opening work in progress at the beginning of the next accounting period. A separate account for work in progress is maintain**

Advantages of Job Costing

The following are the advantages of job costing.

- **Accurate information is available regarding the cost of the job completed and the profits generated from the same.**
- **Proper records are maintained regarding the material, labor and overheads so that a costing system is built up.**
- **Useful cost data is generated from the point of view of management for proper control and analysis.**

Advantages of Job Costing

- Performance analysis with other jobs is possible by comparing the data of various jobs. However it should be remembered that each job completed may be different from the other.
- If standard costing system is in use, the actual cost of job can be compared with the standard to find out any deviation between the two.
- Some jobs are priced on the basis of cost plus basis. In such cases, a profit margin is added in the cost of the job. In such situation, a customer will be willing to pay the price if the cost data is reliable. Job costing helps in maintaining this reliability and the data made available becomes credible.

Limitations of Job Costing

Job costing suffers from certain limitations.

These are as follows.

- It is said that it is too time consuming and requires detailed record keeping. This makes the method more expensive.
- Record keeping for different jobs may prove complicated.
- Inefficiencies of the organization may be charged to a job though it may not be responsible for the same.
- In spite of the above limitations, it can be said that job costing is an extremely useful method for computation of the cost of a job.
- The limitation of time consuming can be removed by computerization and this can also reduce the complexity of the record keeping.

INTER-PROCESS PROFITS

The output of one process is transferred to the subsequent process at cost price. However sometimes, the transfer is made at cost + certain percentage of profit. This is done when each process is treated as a profit centre. In such cases, the difference between the debit and credit side of the process account represents profit or loss and is transferred to the Profit and Loss Account. The stocks at the end and at the beginning contain an element of unrealized profits, which have to be written back in this method. If the profit element contained in the closing inventory is more than the profit element in the opening inventory, profit will be overstated and vice versa. Profit is realized only on the goods sold, thus to obtain the actual profit the

main task would be to calculate the profit element contained in the inventories. In order to compute the profit element, in closing inventory and to obtain the net realized profit for a period, three columns have to be shown in the ledger for showing the cost, unrealized profit and the transfer price.

Costing /Accounting for by-products

By-products are jointly produced products of minor importance and do not have separate costs until the split off point. They are not produced intentionally but are emerging out of the manufacturing process of the main products. The following methods are used for accounting of by-products. The methods are broadly divided into Non-Cost Methods and Cost Methods.

Non-Cost Methods: **The following methods are included in this category.**

Other income or miscellaneous income method: **Under this method, sales value of by-products is credited to the Profit and Loss Account and no credit is given in the cost accounts. The credit to the profit and loss account is treated as other income or miscellaneous income. No effort is made for ascertaining the cost of the product. No valuation of inventory is made and all costs and expenses are charged to the main product. This is the least scientific method and is used where the sales value of the by-product is negligible.**

II. *Total sales less total cost:* Under this method, sales value of by-product is added to the sales value of the main product. Further the total cost of the main product including the cost of the by-product is deducted from the sales revenue of the main product and by-product. All costs and expenses are charged to the main product.

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III. ***Total cost less sales value of by-product:*** **In this method, the total cost of production is reduced by the sales value of the by-product. This method seems to be more acceptable because like waste and scrap, by-product revenue reduces the cost of major products.**

IV. *Total cost less sales value of by-products after setting off selling and distribution overheads of by-products:* Sales value of the by-product minus the selling and distribution overheads of by product is deducted from the total cost. Selling and distribution overheads are charged against by-products actually sold.

V. *Reverse cost method:* This method is based on the view that the sales value of the by-product contains an element of profit. It is agreed that this element of profit should not be credited to the profit and loss account. The cost of by-product is arrived at by working backwards. Selling price of the by-product is deflated by an assumed gross profit margin. Thus under this method, sales value of the by-product is first reduced by, an estimated profit margin, selling and distribution expenses and then the post split off costs and then the cost of the main product is thus reduced by this net figure.

Cost Methods: The following methods are included in this category.

I. ***Replacement or opportunity cost method:*** **If the by-products are consumed costively, they are valued at the opportunity cost method or replacement cost method. This means the cost which would have been incurred had the by-product been purchased from outside. For example, biogases, which is one of the main by-product of sugar industry and which is used for the factory as a fuel in the boiler is valued at the market value, i.e. the price that would have been paid if it would have been purchased from outside.**

II. *Standard cost method:* Under this method, the by-product is valued at the standard cost

determined for each product. The standard cost may be based on technical assessment. Standard cost of the by-product is credited to the process account of the main product. Accordingly, the cost control of main product can be exercised effectively.

Cost Methods: The following methods are included in this category.

III. *Joint cost proration:* Where the by-product is of some significance, it is appropriate that the joint costs should be apportioned between the main products and by-products on a most suitable and acceptable method. Thus in this method, no distinction is made between the joint product and by-product. Industries, where the by-products are quite important, use this method. For example, in a petroleum refinery, gas was earlier considered as a by-product. Now it has assumed the importance like petrol, diesel etc. and is being treated as joint product. Accordingly, the joint cost is prorated between the joint product and the by-product.

Applications [Merits] of Marginal Costing

Marginal costing is a very useful technique of costing and has great potential for management in various managerial tasks and decision- making process. The applications of marginal costing are discussed in the following paragraphs:

1) ***Cost Control:*** **One of the important challenges in front of the management is the control of cost. In the modern competitive environment, increase in the selling price for improving the profit margin can be dangerous as it may lead to loss of market share. The other way to improve the profit is cost reduction and cost control. Cost control aims at not allowing the cost to rise beyond the present level. Marginal costing technique helps in this task by segregating the costs between variable and fixed.**

While fixed costs remain unchanged irrespective of the production volume, variable costs vary according to the production volume. Certain items of fixed costs are not controllable at the middle management or lower management level. In such situation it will be more advisable to focus on the variable costs for cost control purpose. Since the segregation of costs between fixed and variable is done in the marginal costing, concentration can be made on variable costs rather than fixed cost and in this way unnecessary efforts to control fixed costs can be avoided.

2) *Profit Planning:* Another important application of marginal costing is the area of profit planning. Profit planning, generally known as budget or plan of operation may be defined as the planning of future operations to attain a defined profit goal. The marginal costing technique helps to generate data required for profit planning and decision-making.

For example, computation of profit if there is a change in the product mix, impact on profit if there is a change in the selling price, change in profit if one of the product is discontinued or if there is a introduction of new product, decision regarding the change in the sales mix are some of the areas of profit planning in which necessary information can be generated by marginal costing for decision making. The segregation of costs between fixed and variable is thus extremely useful in profit planning.

Key Factor Analysis: **The management has to prepare a plan after taking into consideration the constraints if any, on the various resources. These constraints are also known as limiting factors or principal budget factors as discussed in the topic of 'Budgets and Budgetary Control'. These key factors may be availability of raw material, availability of skilled labour, machine hours availability, or the market demand of the product. Marginal costing helps the management to decide the best production plan by using the scarce resources in the most beneficial manner and thus optimize the profits.**

For example, if raw material is the key factor and its availability is limited to a particular quantity and the company is manufacturing three products, A, B and C. In such cases marginal costing technique helps to prepare a statement, which shows the amount of contribution per kg of material. The product, which yields highest contribution per kg of raw material, is given the priority and produced to the maximum possible extent. Then the other products are taken up in the order of priority. Thus the resultant product mix will yield highest amount of profit in the given situation.

4. Decision Making: **Managerial decision-making is a very crucial function in any organization. Decision – making should be on the basis of the relevant information. Through the marginal costing technique, information about the cost behaviour is made available in the form of fxied and variable costs. The segregation of costs between fixed and variable helps the management in predicting the cost behaviour in various alternatives. Thus it becomes easy to take decisions. Some of the decisions are to be taken on the basis of comparative cost analysis while in some decisions the resulting income is the deciding factor. Marginal costing helps in generating both the types of information and thus the decision making becomes rational and based on facts rather than based on intuition. Some of the crucial areas of decision-making are mentioned below.**

- **Make or buy decisions**
- **Accepting or rejecting an export offer**
- **Variation in selling price**
- **Variation in product mix**
- **Variation in sales mix**
- **Key factor analysis**
- **Evaluation of different alternatives regarding profit improvement**
- **Closing down/continuation of a division**
- **Capital expenditure decisions.**

5. Break Even Point

The concept of 'Break Even Point' is extremely important for decision making in various areas. This concept is based on the behaviour of costs, i.e. fixed cost and variable costs. As discussed earlier, fixed costs are those costs that remain constant irrespective of the changes in the volume of production.

On the other hand, variable costs are the costs that vary with the level of production. While fixed cost per unit is always variable, variable cost per units is always fixed. In addition to these two types of costs, there are semi variable costs that are partially fixed and partially variable. Semi variable costs thus have the features of both types of costs. They remain fixed up to a certain level of production and after crossing that level, they become variable.

The Break Even Point is a level of production where the total costs are equal to the total revenue, i.e. sales. Thus at the breakeven level, there is neither profit nor loss. Production level below the break-even-point will result into loss while production above break-even point will result in profits. This concept can be better understood with the help of the following table

Particulars	Cost Per Unit (Rs.)	Total Cost (Rs.)
Opening Stock of Direct Raw Material	xx	xxx
Add: Purchases	xx	xxx
Add: Carriage Inwards	xx	xxx
Add: Octroi and Customs	xx	xxx
Less: Closing stock of Direct Material	xx	xxx
COST OF DIRECT MATERIALS CONSUMED	**XXX**	**XXXX**
Add: Direct Wages / Productive Wages	xx	xxx
Add: Direct Expenses/ chargeable expenses	xx	xxx
PRIME COST	**XXX**	**XXXX**

PRIME COST	XXX	XXXX
Add: Works / Factory Overheads		
Indirect wages	xx	xxx
Indirect materials	xx	xxx
Leave wages	xx	xxx
Overtime Premium	xx	xxx
Fuel and power	xx	xxx
Coal and coke	xx	xxx
Factory rent and taxes	xx	xxx
Factory Insurance	xx	xxx
Factory lighting	xx	xxx
supervision	xx	xxx
Works stationery	xx	xxx
Canteen and welfare expenses	xx	xxx
Factory Building repairs	xx	xxx

Haulage	xx	xxx
Works salaries	xx	xxx
Depreciation on Plant & Machinery	xx	xxx
Works expenses	xx	xxx
Gas and water	xx	xxx
Drawing office salaries	xx	xxx
Technical Directors fees	xx	xxx
Laboratory expenses	xx	xxx
Works telephone expenses	xx	xxx
Internal Transport expenses	xx	xxx
Less : Sale of Scrap	xx	xxx
Add: Opening stock of Work-in-progress	xx	xxx
Less: Closing stock of Work-in-progress	xx	xxx
WORKS COST / FACTORY COST	**xxx**	**xxxx**

WORKS COST / FACTORY COST	XXX	XXXXX
Add: Office / Administrative Overheads		
Office salaries	xx	xxx
Directors fees	xx	xxx
Office rent and rates	xx	xxx
Office stationery and printing	xx	xxx
Sundry office expenses	xx	xxx
Depreciation and Repairs on office Equipment	xx	xxx
Depreciation on Office Furniture	xx	xxx
Subscription to Trade Journals	xx	xxx
Office Lighting	xx	xxx
Establishment charges	xx	xxx
Directors Travelling expenses	xx	xxx
Postage and Telegrams	xx	xxx
Legal charges / court expenses	xx	xxx
Audit fees	xx	xxx
COST OF PRODUCTION	XX	XXXX

COST OF PRODUCTION	XX	XXXX
Add: Opening stock of Finished goods	xx	xxx
Less: Closing stock of Finished goods	xx	xxx
COST OF GOODS SOLD	XXX	XXXX
Add: Selling and Distribution Expenses		
Advertising	xx	xxx
Show room expenses	xx	xxx
Bad Debts	xx	xxx
Salesmen's salaries and expenses	xx	xxx
Packing charges	xx	xxx
Carriage outwards / carriage on sales	xx	xxx
Commission of Sales Agents	xx	xxx
Counting house salaries	xx	xxx
Cost of Catalogues	xx	xxx
Delivery van expenses	xx	xxx
Collection charges	xx	xxx
Travelling expenses of salesmen's	xx	xxx

Cost of Tenders	xx	xxx
Warehouse Rent, Insurance and expenses	xx	xxx
Cost of Mailing Literature	xx	xxx
Sales Manager's salaries	xx	xxx
Sales Director's salaries	xx	xxx
Showroom expenses	xx	xxx
Sales office expenses	xx	xxx
Depreciation and Repairs on Delivery Van	xx	xxx
Expenses of Sales Branches	xx	xxx
COST OF SALES / TOTAL COST	XXX	XXXX
PROFIT / LOSS	XX	XXX
SALES	XXX	XXXX

ITEMS NOT INCLUDED IN COST SHEET

1.Cash Discount
2.Interest Paid
3. Preliminary expenses written off
4. Goodwill Written off
5. Provision for Taxation
6. Provision for Bad debts
7. Transfer to Reserve funds
8. Donations
9. Income-tax paid
10. Dividend paid
11. Profit / Loss on sale of Fixed Assets
12. Damages payable at Law etc.

PROCESS COSTING

- Process costing is probably the most widely used method of costing.
- It is used in mass production industries producing standard products such as cement, sugar, steel, oil refining etc. In such industries goods produced are identical and processes are standardized.
- In these industries, for manufacturing a product, the raw material has to pass through several distinct stages of manufacture in a predetermined sequence.
- Each such stage of manufacture is called a”process”.
- The goods produced are identical and all factory processes are standardized.
- Method of cost ascertainment in such industries is known as process costing in which costs are compiled for each process by preparing a separate account of such process.

CHARACTERISTICS OF PROCESS COSTING

1.The production is continuous and the final product is the result of a sequence of processes.

2. Costs are accumulated by processes.

3. The products are standardized and homogeneous.

4. The cost per unit produced is the average cost which is calculated by dividing the total process cost by the number of units produced.

CHARACTERISTICS OF PROCESS COSTING

5. The finished product of each but last process becomes the input for the next process in sequence and that of the last process is transferred to the finished goods stock.

6. The sequence of operations or processes is specific and pre-determined.

7. Some loss of materials in processes (due to chemical action, evaporation etc.,) is unavoidable.

8. Processing of raw materials may give rise to the production of several products.

9. These several products produced from the same raw material may be termed as joint products or by-products.

ADVANTAGES OF PROCESS COSTING

The following are the main advantages of process costing:

1. It is possible to determine process costs periodically at short intervals.
2. Unit cost can be computed weekly or even daily if overhead rates are used on predetermined basis.
3. It is simple and less expensive to find out the process cost.
4. It is possible to have managerial control by evaluating the performance of each process.
5. It is easy to allocate the expenses to processes in order to have accurate costs.
6. It is easy to quote the prices with standardization of process. Standard costing can be established easily in process type of manufacture.

DISADVANTAGES OF PROCESS COSTING

The following are the main disadvantages of Process Costing.

1. Costs obtained at the end of the accounting period are only of historical value and are not very useful for effective control.

2. Work- in- progress is required to be ascertained at the end of an accounting period for calculating the cost of continuous process. Valuation of work- in-progress is generally done on estimated basis which introduces further inaccuracies in total cost.

3. Where different products arise in the same process and common costs are prorated to various cost units. Such individual products' costs may be taken as only approximation and hence not reliable but may be taken as the best.

4. There is a wide scope of errors while calculating average costs. An error in one average cost will be carried through all processes to the valuation of work in process and finished goods.

5. The computation of average cost is more difficult in those cases where more than one type of products are manufactured and a division of cost elements is necessary.

Differences between Job Costing and Process Costing

POINT OF DIFFERENCE	JOB COSTING	PROCESS COSTING
1. Production	Production is against specific orders.	Production is in continuous flow; the products being homogeneous.
2. Cost Determination	Costs are determined for each job separately.	Costs are complied for each process for department on time basis i.e., for production of a given accounting period.
3. Entity	Each job is separate and independent of others.	Products lose their individual entity as they are manufactured in a continuous flow.
4. Unit cost	Total cost of a job is divided by the number of units produced in the job in order to calculate unit coast of a job.	The total cost of each process is divided by the total production for the process to calculate the average cost per unit for the period.

Differences between Job Costing and Process Costing

POINT OF DIFFERENCE	JOB COSTING	PROCESS COSTING
5. Cost Calculation	Costs are complied when the job is completed.	Costs are calculated at the end of the cost period.
6. Transfer	There are usually no transfers of materials or labour from one job to another unless there is a surplus work or excess of production.	Transfer of costs from one process to another is made, as the products moves from one process to another process.
7.Work-in-progress	There may or may not be work-in-progress at the beginning of the accounting period or end of the accounting period.	There is always some work-in-progress at the beginning as well as at the end of accounting period.
8. Control	Proper control is comparatively difficult as each product unit is different and the product is not continuous. Losses and wastages can be controlled.	Proper control is comparatively easier as the production is standardized and is more stable. Only normal losses can be controlled but not abnormal losses and wastages.

Differences between Job Costing and Process Costing

POINT OF DIFFERENCE	JOB COSTING	PROCESS COSTING
9.Forms and Details	It requires more forms and details regarding materials and labour due to the need for the allocation of labour to so many orders and material is issued in bulk to departments.	It requires few forms and less details but a closer analysis of operations is needed.
10. Suitability	It is suitable where the goods are made according to customers' orders, production is intermittent and customers' orders can be identified in the value of the production.	It is suitably employed where goods are made for stock and production is continuous or goods although made to customers' order are owing to the continuous nature of the production, lost sight in the volume of production.

Differences between Job Costing and Process Costing

POINT OF DIFFERENCE	JOB COSTING	PROCESS COSTING
11. Supervision	Supervision is more in the job costing because of difference in jobs.	It requires less supervision because of standardisation of production.
12. Identification	Each job can be identified in respect of other jobs.	Products cannot be identified when they are under processing.
13.Creation of Demand	No need to create demand.	Demand creation is necessary for the products.
14. Investment of capital	Investment of capital is less in respect of Job costing.	Investment of capital is more in respect of Process costing.
15. Reporting	Reporting is possible after completion of job in respect of job.	Reporting is process wise and in respect of time.
16. Diversification	Diversification is possible in respect of Job costing.	Diversification is not possible unless altogether a new set of

APPLICATION OF MARGINAL COSTING

Marginal costing is a very useful technique of costing and has great potential for management in various managerial tasks and decision-making process. The applications of marginal costing are discussed in the following paragraphs:

1) ***Cost Control:***

One of the important challenges in front of the management is the control of cost. In the modern competitive environment, increase in the selling price for improving the profit margin can be dangerous as it may lead to loss of market share. The other way to improve the profit is cost reduction and cost control. Cost control aims at not allowing the cost to rise beyond the present level. Marginal costing technique helps in this task by segregating the costs between variable and fixed. While fixed costs remain unchanged irrespective of the production volume, variable costs vary according to the production volume. Certain items of fixed costs are not controllable at the middle management or lower management level. In such situation it will be more advisable to focus on the variable costs for cost control purpose. Since the segregation of costs between fixed and variable is done in the marginal costing, concentration can be made on variable costs rather than fixed cost and in this way unnecessary efforts to control fixed costs can be avoided.

2) ***Profit Planning:***

Another important application of marginal costing is the area of profit planning. Profit planning, generally known as budget or plan of operation may be defined as the planning of future operations to attain a defined profit goal. The marginal costing technique helps to generate data required for profit planning and decision-making. For example, computation of profit if there is a change in the product mix, impact on profit if there is a change in the selling price, change in profit if one of the product is discontinued or if there is a introduction of new product, decision regarding the change in the sales mix are some of the areas of profit planning in which necessary information can be generated by marginal costing for decision making. The segregation of costs between fixed and variable is thus extremely useful in profit planning.

$$\text{Desired sales} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P /V Ratio}}$$

3. Key Factor Analysis:

The management has to prepare a plan after taking into consideration the constraints if any, on the various resources. These constraints are also known as limiting factors or principal budget factors as discussed in the topic of 'Budgets and Budgetary Control'.

These key factors may be availability of raw material, availability of skilled labour, machine hours availability, or the market demand of the product. Marginal costing helps the management to decide the best production plan by using the scarce resources in the most beneficial manner and thus optimize the profits.

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4. Decision Making:

Managerial decision-making is a very crucial function in any organization. Decision – making should be on the basis of the relevant information. Through the marginal costing technique, information about the cost behaviour is made available in the form of fi xed and variable costs. The segregation of costs between fi xed and variable helps the management in predicting the cost behaviour in various alternatives. Thus it becomes easy to take decisions. Some of the decisions are to be taken on the basis of comparative cost analysis while in some decisions the resulting income is the deciding factor. Marginal costing helps in generating both the types of information and thus the decision making becomes rational and based on facts rather than based on intuition. Some of the crucial areas of decision-making are mentioned below.

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The Break Even Point is a level of production where the total costs are equal to the total revenue, i.e. sales. Thus at the breakeven level, there is neither profit nor loss. Production level below the break-even-point will result into loss while production above break-even point will result in profits.

6. Closing down a plant / Shutdown Decision

A factory may have to case operation for sometime due to various reasons such as labour troubles, material shortage, major break down, market depression etc., this shut down may be of temporary nature and operations are renewed when the situation improves. Shut down costs are classified as follows:

Costs incurred on suspension of operations. These include cost of notifying customers about shut down , retrenchment and lay off costs etc.

Costs incurred during continued shut down such as cost of care and custody of plant and machinery and other equipment etc.

Costs incurred on remaining operations after shut down e.g., cost of recruiting and training new workers time lag in packing up production and sales , additional promotional costs etc.

7. Dropping a product line/ Discontinuance of a product Line:

Another type of decision making in multi-product firm is regarding the dropping of a product line. The following factors should be considered before taking a decision about the dropping of a product line.

The contribution given by the product, this contribution is the different from profit. Profit is arrived at after deducting fixed cost from contribution. Fixed costs are apportioned over different products on some reasonable basis which may not be very much correct. Hence contribution gives a better idea about the profitability of a product as compared to profit.

The capacity utilization i.e., whether the firm is working with full capacity or below normal capacity. In case a firm is having idle capacity, the production of any product which can contribute toward the recovery of fixed cost can be justified.

The availability of product to replace the product which the firm wants to discontinue and which is already accounting for a significant proportion of the total capacity.

The long-term prospects the market for the product.

The effect on sale of other products. In some cases, dropping down of one product may result in heavy decline in sales of other products affecting the overall profitability of the firm.

8. Charging General and Specific Fixed Costs:

Sometimes it is observed that general fixed cost is apportioned to departments or for products.

This may be done for ascertainment of total cost but will not be prudent for decision making.

Any apportionment of general fixed cost s may give misleading results.

However, where fixed costs are specific.

The same may be taken into consideration as a relevant cost.

9. Fixation of Selling Price:

Although the prices are more controlled by market conditions and other economic factors than by decisions of management yet fixation of selling prices is one of the most important functions of management. This function is to be performed

Under normal conditions

In times of competition

In times of trade depression.

In accepting additional orders for utilising idle capacity.

In exporting and exploring new markets.

Selling price below the Marginal cost.

When a new product is introduced into the market.

When foreign market is to be explored to earn foreign exchange.

When the concern has already purchased large quantities of material.

At the time of closure of the business.

When the sales one product at a price below the marginal cost will be pushed up the sales of other profitable products.

When employees cannot be retrenched.

When the goods are perishable in nature.

POWER POINT PRESENTATION

ON

MAKE OR BUY DECISIONS

(UNIT-III)

Determination of marginal costing is the first basic principle of marginal costing. Marginal cost is the additional cost of the production of additional unit. The marginal cost to an economist means the cost of producing one additional unit of output and in this cost fixed costs may be included. In cost accounting and management accounting marginal cost means only variable expenses and it excludes the fixed cost. Hence it can be said that marginal cost means additional variable cost to produce one more unit.

FEATURES OF MARGINAL COSTING:

- Marginal costing is a technique of costing which is used in conjunction with other methods of costing like process or job costing.
- Only marginal costs i.e., variable costs are charged to products. These include direct material, direct labour, direct expenses and variable over heads.
- Fixed costs are treated as period costs and are directly charged to profit and loss account for the period for which they are incurred. They are not charged to products.

- In marginal costing prices are determined on the basis of marginal cost plus contribution.
- Profitability of departments and products is determined with reference to their contribution margin.
- Fixed costs remain constant irrespective of level of activity.
- Cost-volume-profit relationship is fully employed to reveal the state of profitability at various levels of activity.
- It high lights the effect of costs on the level of output planned.
- Break-even point is the prime component of marginal costing technique.

ADVANTAGES OF MARGINAL COSTING:

i) Helps Management in Decision making:

This technique helps the management in taking various decisions. Marginal costing is more useful in taking decisions like price fixation, make or buy, introduction of new product line, selection of product mix etc.

ii) Relationship of net income with sales:

Marginal costing system establishes direct relationship of net income with thesales. The marginal contribution technique provides a better and more logical basis for the fixation of sales prices with intending profits.

iii) Treatment of Overheads simplified:

It reduces the degree of over or under recovery of overheads due to separation of fixed overheads from production cost.

iv)Helps in preparing Flexible Budget:

Marginal costing facilitates the preparation of flexible budget by differentiating variable costs and fixed costs. It also helps in the evaluation of performance of responsible personnel.

ADVANTAGES OF MARGINAL COSTING:

v) Stock Valuation:

Marginal costing inventory is valued at variable cost. Thus, unrealized profits are not taken into account. Under this method stock valuation will be uniform and realistic.

vi)Aid to profit planning:

Marginal costing technique provides data relating to cost-volume-profit relationship. This facilitates profit planning in future.

vii) Helps in pricing:

Marginal costing is very helpful in fixation of selling price of products under various conditions. It gives a better and more logical base for ths fixation of sales price as well as for tendering contracts when the business is at low level.

viii) Profitability Appraisal:

Marginal costing helps the management in evaluating the profitability of alternative operations.

ix) Simply to operate and easy to understand:

Marginal costing is a simple technique. It is very simple to operate and easy to understand. It is constant in nature. Complications involved in allocation, apportionment and absorption of overheads are avoided.

x) Cost control:

In marginal costs are divided into fixed and variable costs. Variable costs are always controllable. Thus greater control may be exercised over these costs. Further, effective control on fixed costs becomes easier by treating them as a whole in the determination of profit.

LIMITATIONS OF MARGINAL COSTING:

1. Practical Difficulty In Dividing Cost:

The whole concept of marginal costing is based on the classification of total cost into fixed and variable cost which is very difficult task. In marginal costing semi-variable and semi-fixed costs are not considered.

2. Time Factor Ignored:

Marginal costing technique does not attach much importance to time factor. If time taken for completing two different jobs is not the same, costs will naturally will be higher for the job which has taken longer time. Though marginal cost may the same for the both jobs.

3. Improper basis of pricing:

Marginal costing gives impression that as long as the price is more than the marginal cost of production is profitable. But it may result in over all losses. In long run the price without covering total cost will not yield profit to the firm.

4. Not suitable to all industries:

Marginal costing technique is not suitable to all types of industries. For example in capital intensive industries fixed cost like depreciation is more. If fixed costs are ignored proper results cannot be ascertained. With the increase of automation the scope of marginal costing is decreasing.

5. Fluctuations in Profits:

Marginal costing technique cannot be applied in industries where there is large stock of work-in-progress. As fixed overheads are not included in the value of stock , firm will get losses in some years. This results in wide fluctuations in profits'

6. Difficulty in fixation of price:

Under marginal costing, selling price is fixed on the basis of contribution. In case of cost plus contract is very difficult to fix price.

7. Under or over absorption:

application of variable overheads depends on estimate and not oactual as such there may be under or absorption.

8. Full claim cannot be claimed:

since stock is valued at marginal cost, in case of fire full amount of loss cannot be recovered from the insurance company.

9. Not suitable for external reporting:

This technique is not suitable for external reporting viz., for tax authorities, where marginal income is not considered to be taxable profit.

10. Significance Lost:

In capital intensive industries fixed costs occupy major portion in the total cost. But marginal costs cover only variable costs. As such, it loses its significance in capital intensive industries.

11. Full information is not given:

Marginal costing does not explain reasons for increase in production or sales.

2. MAKE OR BUY DECISION

- A firm may make some products; parts or tools or sometimes it may buy the same thing from outside. The management must decide which is profitable. In taking such a make or buy decision marginal costing technique helps the management.
- Make or buy decisions become necessary when utilized production facilities exist and the product being produced has a component, which can either be made in the factory itself or purchased from outside market.
- While deciding to make or buy, the cost comparison should be made between the marginal cost of manufacture and price at which the product or component could be obtained from outside. It is profitable to the firm to buy the component from others only when the supplier's price is less than the marginal cost. Fixed costs are excluded on the assumption that they have been already recovered.
- Factors that influence make or Buy Decision:
- In a make or buy decision, the following cost and non-cost factors must be considered specifically
- Cost Factors
- Availability of plant facility.
- Quality and type of item which effects the production schedule.
- The space required for production of item.
- Any special machinery or equipment required.
- Any transportation involved due to the location of the product i.e., the feeder point.
- Cost of acquiring special know-how required for the item.

3. KEY FACTOR OR LIMITING FACTOR

- The limiting factor which prevents an enterprise from earning unlimited profit is known as the key factor. Usually this limiting factor is sales. A concern may not be able to sell as much as it can product. Sometimes a concern cancels all it produces but production is limited due to the shortage of material, lower plant capacity or capital. In such a case, decision has to be taken the choice of the product whose product is to be increased, reduced or stopped. The key factor is also called as limiting factor or principle budge factor.
- When there is no limiting factor, the choice of the product will be on the basis of the highest P/V Ratio. But when there is scarce or limited resources selection of the product will be on the basis of contribution per unit of scarce factor of production. When a limiting is in operation , the contribution per unit of such a factor should be the criterion to judge the profitability of a product. When two or more limiting factors are in operation simultaneously, it is necessary to take all of them into consideration to determine the profitability. When the material is in short supply, profitability is determined by contribution per kg, when labour shortage is there profitability is measured contribution per labour hour.
-

4. SELECTION OF A SUITABLE PRODUCT MIX

- When a factory manufactures more than one product, a problem is faced by the management as to which product mix gives the maximum profits. The best product mix is that which yields the maximum contribution.
- The best product mix is that which yields the maximum contribution.
- The products which give the maximum contribution are to be retained and their production should be increased.
- The products which give comparatively less contribution should be reduced or close down altogether.
- The effect of sales mix can also be seen by comparing the P/V Ratio and Breakeven point.
- The new sales mix will be favourable if it increases P/V Ratio and reduces the breakeven point.
-

5. DIVERSIFICATION OF PRODUCTS

- Sometimes it becomes necessary for a concern to introduce a new product or products in order to utilize the idle capacity or to capture a new market or for other purposes. General fixed costs will however, be charged to the old product / products.
- In order to decide about the profitability of the new product, it is assumed that the manufacture of the new product will not increase fixed costs of the concern.
- If the price realized from the sale of such product is more than its variable cost of production it is worth trying.
- If the data is presented under absorption costing method, the decision will be wrong.
- If with the introduction of new product, there is an increase in the fixed costs, then such specific increase in fixed costs must be deducted from the contribution for making any decision.
- General fixed costs will be charged to the old products.

6. CLOSING DOWN ALL SUSPECTING ACTIVITIES

- The deduction to close down or suspend its activities will depend whether products are making contribution towards fixed costs or not. i.e., whether the contribution is more than the difference in fixed costs by working at normal operations and when the plant or product is closed down or suspended.
- If the business is closed down
- They may be certain fixed costs which could be avoided.
- There will be certain expenses which will have to be incurred at the time of closing the operations like redundancy payments, necessary maintenance of the plant or overhauling of plant on reopening training of personal etc.
- Such costs are associated with closing down of the business and must be taken into consideration before taking any decision.

- **Applications of BEP for various business problems:**
- **MAKE OR BUY DECISION**
- A firm may make some products; parts or tools or sometimes it may buy the same thing from outside. The management must decide which is profitable. In taking such a make or buy decision marginal costing technique helps the management.
- Make or buy decisions become necessary when utilized production facilities exist and the product being produced has a component, which can either be made in the factory itself or purchased from outside market.
- While deciding to make or buy, the cost comparison should be made between the marginal cost of manufacture and price at which the product or component could be obtained from outside. It is profitable to the firm to buy the component from others only when the supplier's price is less than the marginal cost. Fixed costs are excluded on the assumption that they have been already recovered.

- **Factors that influence make or Buy Decision:**
- In a make or buy decision, the following cost and non-cost factors must be considered specifically

1.Cost Factors

- Availability of plant facility.
- Quality and type of item which effects the production schedule.
- The space required for production of item.
- Any special machinery or equipment required.

- Any transportation involved due to the location of the product i.e., the feeder point.
- Cost of acquiring special know-how required for the item.
- Every business process need planning to select, plan, analyse and reengineering and it is essence of operating management. One of the common used quantitative method is process selection is break –even analysis. This helps in identifying what volume of sales and production can make it profit. Process planning involve major issues such as make or buy decision. This make or buy decision refer to a decision such as which components are purchased and which components are manufactured . management is usually confronted with the problem of decision of make or buy of any item. This problem can be solve by a large extent through break-even chart.

2. PRICING DECISION:

- Break-even point is valuable analytical tool to recognize and interpret its results. For management it is useful in pricing determination , expenses control and profitability. Changing the price of a produt would change the total revenue function of the business and this would affect the break-even point and the margin of safety. These factors need to be considered along with market-based factors such as the demand for the product.

3. SALES MIXING DECISION:

- Altering the sales mix in a multi-product environment would tend to alter the total revenue function of the business and also the variable cost function. This would affect the break-even point and margin of safety but by explaining the effects of different sales mixes it is possible to consider their effect on the profitability of the business and this will facilitate decisions regarding the sales mix.

4. PRODUCTION CAPACITY PLANNING:

- We have seen that the cost and revenue relationship do not apply indefinitely but only within the relevant range. As activity is expanded it will eventually be constrained by shortage of one of the factors of production and this factor is known as the limiting factor. While this limitation can be overcome in the long term. In short term maximum profits can be made by maximising contribution per unit of the limiting factor.
- The limiting factor is the major constraint on organizational activity. Here we will merely state that C.V.P. Analysis can facilitate an understanding of the effect upon profit of the limiting factor.

Break-Even Analysis

- **Break-even analysis is a widely used technique to study the CVP relationship.**
- **It is interpreted in narrow as well as broad sense.**

Narrow Meaning:

- **Break-even analysis is concerned with determining break-even point.**
- **Break-even point is that level of production and sales where there is no profit and no loss. At this point total cost is equal to total sales.**

Broad Meaning:

- **When we use in broad sense, break-even analysis is used to determine probable profit /loss at any given level of production or sales.**
- **It also helps to determine the amount or volume of sales to earn a desired amount of profit.**

Assumptions of Break-Even Analysis

The break-even analysis is based on the following eight assumptions:

1. **All costs can be separated into fixed and variable components.**
2. **Variable cost remains constant and total variable cost varies in direct proportion to the volume of production.**
3. **Total fixed cost remains constant.**
4. **Selling price per unit does not change as volume changes.**

5.There is only one product or in the case of multiple products, the sales mix does not change. In other words , when several products are being sold, the sale of various products will always be in some predetermined proportion.

6. There is synchronization between production and sales. In other words , volume of production equals volume of sales.

7. Productivity per worker does not change.

8. There will be no change in the general price level.

9. **Productivity per worker remains mostly unchanged.**

10. **Volume of production is the only factor that influences cost.**

11. **There is a constant demand for the product, it means whenever is produced can be sold out.**

Uses of Break-Even Analysis

1. **It helps in determining the break even point.**
2. **It helps in determining the sales volume to earn a desired profit or return on capital employed.**
3. **It helps in determining the costs and revenue at different levels of output.**
4. **It helps in determining the most profitable sales mix.**
5. **It helps in determining comparative profitability of each product line.**

6. It helps in determining cash requirements at different levels of operation with the help of cash break-even chart.
7. It studies the effect of change in selling price or of price differentiation in different markets. E.g., home market and foreign market.
8. It studies the impact of increase or decrease in in fixed and variable costs on profits.
9. It compares the profitability of various firms.

- **When we use in broad sense, break-even analysis is used to determine probable profit /loss at any given level of production or sales. It also helps to determine the amount or volume of sales to earn a desired amount of profit.**

11. **It studies the effect on profits and berak-even points of high proportion of variable costs with low fixed cost and vice- versa.**

12. **It helps the management decision making e.g., in make or buy decisions, discontinuance of a product line, acceptance of special job. Etc.**

13. **It offers suggestions for shift in sales unit.**

Usefulness of Break-even analysis to the Management Account:

1. Break-even analysis helps the management accountant in forecasting the profit fairly and accurately.
2. It helps in preparing up flexible budgets,
3. It helps in formulating price policy by projecting the effect which different price structures will have on cost and profit.
4. It also assist in performance evaluation for the purpose of management control.
5. It helps in determining the overhead cost to be charged at various levels of production since, overhead rates are generally predetermined on the basis of selected volume of production.

Limitations of Break-Even Analysis

1. **The assumption that all cost can be clearly separated into fixed and variable components is not possible to achieve accurately in practice, there by resulting in inaccurate break-even analysis.**
2. **The assumption that variable cost per unit remains constant and that it gives a straight line chart is also not always true. In practice, many of the variable costs do not observe this tendency. Most of the variable costs, no doubt , move in sympathy with the volume of production but not necessarily in direct proportion to the volume.**

3. The assumption regarding selling prices remaining unchanged as volume changes is also not true. In practice, selling prices do not remain fixed and change prices affects demand.
4. Similarly, the assumption that fixed and cost remains constant is also unrealistic. Fixed costs are constant only within a limited range of output and tend to increase by a sudden jump when additional plant and machinery is introduced.

5. The assumption that only one product is being produced or that product mix will remain unchanged is also not found in practice. The sales of various products manufactured is not always in predetermined proportion.
6. It is assumed that production and sales are synchronized. This is not always so. Sales may fall short of production or may be capable of increase too much production only by effecting a reduction in selling prices.
7. The break-even analysis completely ignores the consideration of capital employed which may be an important factor in the study of profit analysis.

Power Point Presentation
on
Inter-Firm Comparisons
(Unit-III)
By

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INTER-FIRM COMPARISION

Meaning of Inter-firm comparison:

Inter-Firm comparison is a technique, which studies the performances, efficiencies, costs and profits of various concerns in an industry with help of exchange of information in order to have a relative comparison. It involves the process by bringing together a number of identical firms and collecting their business figures and statistics through a neutral organization in which the participating firms repose their full confidence.

The figures under comparison may relate to:

Financial results viz., the position of assets, liabilities, profit, capital employed etc., expressed in terms of financial ratios.

Cost structure of the products viz., material cost, labour cost and overhead cost etc., expressed in terms of cost ratios.

Physical and operational performance such as output or operation per man-hour, expressed in terms of productivity ratios, percentages and so on.

Need for Inter-firm comparison:

Progressive management, the world over has always asked itself the question how is my company performing in comparison to that of others? The published trading and profit and loss accounts and balance sheets along with annual reports provide scanty data for purposeful study and assessment of the performance of a company.

The figures from these reports just indicate in a general way, the profitability, stability, solvency and growth of an organization, but they do not throw light on whether a company has really made the optimum use of all the available resources in men, materials etc. It is the inter-firm comparison that provides the management with a vivid comparative picture of how its operating performance, financial results and product cost structure compare with those of other firms of similar size, nature, industry or trade.

Requirement (prerequisites) of Inter-firm comparison Scheme:

The following are the main requirements while installing a scheme of inter-firm comparison.

1. Adoption of uniform costing:

There must be a sound system of uniform costing in the firm where inter-firm comparison scheme is to be implemented. A uniform manual should also be prepared and distributed among the member units to enable the function of the system efficiently.

2. Organization Responsible:

An organization must be established to run the system efficiently and for better results firms of different sizes in an industry should become member of the organization.

3. Information to be collected:

The nature of information to be collected from the participating firms depends upon the needs of the management, comparative importance of the information and the efficiency of the central body responsible for the collection of the information.

4.Method of Collection and Presentation of Information:

The time and the firm in which the information is to be submitted by the member units must be decided in advance. The various statistical tools for the purpose of collection of data, it's editing, classification, presentation, drawing conclusions and inferences can be used. Ratio analysis for measuring profitability, efficiency and productivity can also be used.

Types of comparisons:

The following three types of comparisons made for this purpose.

1. Comparison of Management Ratio:

The management ratios are those which are linked to sales, profits, and assets of the business. These ratios are not meant to provide management in a nutshell with comparative picture of its operating performance.

2.Comparison of Cost Ratios:

Management may not be satisfied with the ratios calculated in. they would like to go a step further to make inter-firm comparison more meaningful and to find out how they are doing in relation to others as regards the cost of production.

3. Comparison of Technical Data:

This type of comparison will be of special interest to industries working in highly competitive economics. It is visualized that technical comparison will be in the realm of quality of materials used, their utilization, process involved machinery used and certain other technical aspects of production. The following are the main ratios, which are calculated for this purpose .

$$\frac{\text{Quality of Raw Material consumed}}{\text{Man Hours or Machine Hours}}$$

$$\frac{\text{Cost of Raw Material consumed}}{\text{Man Hours or Machine Hours}}$$

$$\frac{\text{Cost of Scrap}}{\text{Cost of Raw Material Consumed}}$$

$$\frac{\text{Quality of Scrap}}{\text{Cost of Raw Material Consumed}}$$

$$\frac{\text{Quality of Scrap}}{\text{Quality of Raw Material Consumed}}$$

$$\frac{\text{Quantity produced}}{\text{Man Hours or Machine Hours}}$$

$$\frac{\text{Cost of Rejected material}}{\text{Cost of production}}$$

$$\frac{\text{Cost of reworking}}{\text{Cost of production}}$$

$$\frac{\text{Loss of Process}}{\text{Cost of Material}}$$

$$\frac{\text{Idle time hours}}{\text{Total Available time}}$$

$$\frac{\text{Overtime Hours}}{\text{Man Hours}}$$

$$\frac{\text{Overtime Hours}}{\text{Man Hours}}$$

$$\frac{\text{Cost of Idle Time}}{\text{Direct Labour Cost}}$$

$$\frac{\text{Power Units Consumed}}{\text{Machine Hours}}$$

$$\frac{\text{Total cost of production}}{\text{Man Hours or Machine Hours}}$$

$$\frac{\text{Quality of Scrap}}{\text{Cost of Raw Material Consumed}}$$

$$\frac{\text{Cost of Machine Maintenance}}{\text{Cost of Production}}$$

$$\frac{\text{Cost of maintenance of other factory assets}}{\text{Cost of Production}}$$

Advantages of Inter- Firm Comparisons:

1.Inter-firm comparison is nothing more than learning. It is for the management that inter-firm comparison has been evolved as a Inter-firm comparison:

2. It encourages managerial efficiency in the organization by technique in industry. The following are the main advantages of pointing out the spots of inefficiencies and thus brings stability in the cost structure and presentation of information.

3. It creates cost consciousness among the participating firms and they are cautious in this respect at all levels of management.

4. It helps the member firms to reduce their costs in case their costs are more as compared to other firms.

5. It increases the productivity by locating the weaknesses and in economies.

6. It provides useful information to management of every member unit to make proper decisions.

7. It helps the government, regulatory agencies and researchers in getting useful data and information to improve policies and conducting depth studies and research.

POWER POINT PRESENTATION ON

BUDGETARY CONTROL (UNIT-IV)

UNIT-IV

Budgetary Control

1. Budgetary control is the process of determining various budgeted figures for the enterprises for the future period and then comparing the budgeted figures with the actual performance for calculating the variances , if any .
2. First of all budgets are prepared and then actual results are recorded.
3. The comparison of Budgeted and Actual Figures will enable the management to find out discrepancies and take remedial measures at a proper time. Hence the budgetary control is a continuous process which helps in planning and co-ordination.
4. It provides a method of control too.
5. A budget is means and a budgetary control is the end-result.

Definitions of Budgetary Control

In the words of Brown and Howard, "Budgetary control is a system of controlling costs which includes the preparation of budgets, coordinating the department and establishing responsibilities, comparing actual performance with standard performance and acting upon results to achieve maximum profitability".

In the words of Wheldon," Budgetary control as "planning in advance of various functions of a business so that the business as a whole is controlled".

Definitions of Budgetary Control

According to J.Batty," Budgetary control as a system which uses budgets as a means of planning and controlling all aspects of producing and/or selling commodities and services."

Welsch relates Budgetary control with-day-to-day control process. According to him, "Budgetary control involves the use of budget and budget reports, throughout the period to co-ordinate , evaluate and control day-to-day operations in accordance with goals specified by the budget."

Objectives of Budgetary Control

The main objectives of budgetary control are given as follows:

1. To ensure planning for future by setting up various budgets. The requirements and expected performance of the enterprise are anticipated.
2. To co-ordinate the activities of the different departments.
3. To operate various cost centers and departments with efficiency and economy.
4. Elimination of wastages and increase in profitability.
5. To anticipate capital expenditure for future.
6. To centralize the control system.
7. Correction of deviations from the established standards.
8. Fixation of responsibility of various individuals in the organisation.

Characteristics of Good Budgeting

1. **A good budget system should involve persons at different levels while preparing the budgets. The subordinates should not feel any imposition on them.**
2. **There should be a proper fixation of authority and responsibility. The delegation of authority should be done in a proper way.**
3. **The targets of budgets should be realistic, if the targets are difficult to be achieved then they will not enthuse the persons concerned.**
4. **A good system of accounting is also essential to make the budgeting successful.**
5. **The budgeting system should have a whole-hearted support of the top management.**
6. **The employees should be imparted budgeting education. There should be meetings and discussions and the targets should be explained to the employees of the concerned.**
7. **A proper reporting system should be introduced., the actual results should be promptly reported so that performance appraisal is undertaken.**

Advantages of Budgetary Control:

1. Maximization of Profit:

- The budgetary control aims at the maximization of profits of the enterprise.
- To achieve this aim, a proper planning and co-ordination of different functions is undertaken.
- There is a proper control over various capital and revenue expenditures.
- The resources are put to the best possible use.

2. Co-Ordination

- The working of the different departments and sectors is properly co-coordinated.
- The budgets of the different departments have a bearing on one another.
- The coordination of various executives and subordinates is necessary for achieving budgeted targets.

3. Specific Aims:

- The plans policies and goals are decided by the top management.
- All efforts are put together to reach the common goal of the organization.
- Every department is given a target to be achieved.
- The efforts are directed towards achieving some specific aims.
- If there is no definite aim then the efforts will be wasted in pursuing different aims.

4.Tool for Measuring Performance

- **By providing targets to various department, budgetary control provides a tool for measuring managerial performance.**
- **The budgeted targets are compared to actual results and deviations are determined.**
- **The performance of each department is reported to the top management.**
- **This system enables the introduction of management by exception.**

5. Economy:

- The planning of expenditure will be systematic and there will be economy in spending.
- The finances will be put to optimum use. The benefits derived for the concern will ultimately extend to the industry and then to national economy.
- The national resources will be used economically and wastage will be eliminated.

6. Determining Weaknesses:

- The deviations in budgeted and actual performance will enable the determation of weak spots.
- Efforts are concentrated on those aspects where performance is less than the stipulated.

7. Corrective Action:

- The management will be able to take corrective measures whenever there is a discrepancy in performance.
- The deviations will be regularly reported so that necessary action is taken at the earliest.
- In the absence of a budgetary control system the deviations can be determined only at the end of the financial period.

8. Consciousness:

- It creates budget consciousness among the employees.
- By fixing targets for the employees,
- they are made conscious of their responsibility.
- Everybody knows what he is expected to do and he continues with his work uninterrupted/ nonstop.

9.Reduces Costs:

- In the present day competitive world budgetary control has a significant role to play.
- Every businessman tries to reduce the cost of production for increasing sales.
- He tries to have those combinations of products where profitability is more.

10. Introduction of Incentive Schemes:

- Budgetary control system also enables the introduction of incentive schemes of remuneration.
- The comparison of budgeted and actual performance will enable the use of such schemes.

Limitations of Budgetary Control

1. Uncertain Future:

- The budgets are prepared for the future period.
- Despite best estimates made for the future, the predictions may not always come true.
- The future is always uncertain and the situation which is presumed to prevail in future may change.
- The change in the future conditions upsets the budgets which have to be prepared on the basis of certain assumptions.

2. Budgetary Revisions Required:

- Budgets are prepared on the assumptions that certain conditions will prevail.
- Because of future uncertainties, assumed conditions may not prevail necessitating the revision of budgetary targets.
- The frequent revision of targets will reduce the value of budgets and revisions involve huge expenditure too.

3. Discourages Efficient Persons:

- Under budgetary control system the targets are given to every person in the organisation.
- The common tendency of the people is to achieve the targets only.
- There may be some efficient persons who can exceed the targets but they will also feel contented by reaching the targets.
- So budgets may serve as constraints on managerial initiatives.

4. Problem of Co-ordination:

- The success of the budgetary control depends upon the co-ordination among different departments.
- The performance of one department affects the results of other department.
- To overcome the problem of co-ordination a budgetary officer is needed.
- Every concern cannot afford to appoint a Budgetary Officer.
- The lack of co-ordination among different departments results in poor performance.

5. Conflict among Different Departments:

- Budgetary control may lead to conflicts among functional departments.
- Every departmental head worries for his department goals without thinking of business goal.
- Every department tries to get maximum allocations of funds and this raises a conflict among different departments.

6.Depends upon Support of Top Management:

- Budgetary control system depends upon the support of top management.
- The management should be enthusiastic for the success of this system and should give full support for it.
- If at any time there is a lack of support from top management then this system will collapse.

BUDGETS AND BUDGETARY CONTROL

Introduction

The first important task in front of the management is to have clearly defined objectives. Objectives are short term as well as long term and they should be defi need in clear terms. It is necessary to prepare a comprehensive plan to transform these objectives into reality and planning without controlling will not be effective and hence there is a need of effective control system. While planning helps an organization to work systematically towards achieving the objectives, controlling helps to review the progress made and to monitor whether the work is progressing as per the plan or not. Budgeting is one such technique that helps in planning as well as controlling. It is a technique of cost accounting with the twin objectives of facilitating planning and ensuring controlling. Various aspects of budgets and budgetary control, the types of budgets and the preparation of the same are discussed in detail in this chapter.

Definitions

- To begin with, let us try to understand the definitions of budget and budgetary control. Budget has been defined by CIMA U.K. as, ‘ A financial and/or quantitative statement prepared prior to a defined period of time, of the policy to be pursued during that period for the purpose of achieving a given objective

- If we analyze the definition, the following features of budget emerge.
- I. A budget is a statement that is always prepared prior to a defined period of time. This means that budget is always prepared for future period and not for the past. For example, a budget for the year 2008-09 regarding the sales will be prepared in the year 2007-08. Another important point is that the time for which it is prepared is certain. Thus a budget may be prepared for next 3 years/1 year/ 6 months/1 month or even for a week, but the point is that the time frame for which it is prepared is certain. It cannot be prepared for indefinite period of time.
- II. Budget is prepared either in quantitative details or monetary details or both. This means that budget will show the planning in terms of rupees or in quantity or both. For example, a production budget will show the production target in number of units and when the target units are multiplied by the anticipated production cost, it will be a production cost budget that is expressed in terms of money Similarly purchase budget is prepared in quantity to show the anticipated purchases in the next year and when the quantity is multiplied by the expected price per unit, it will become a purchase cost budget that is expressed in monetary terms. Some budgets are prepared only in monetary terms, for example, cash budget, capital expenditure budget etc.

III. Every organization has well defined objectives, which are to be achieved in a particular span of time. It is of paramount importance that there should be systematic efforts to bring them into reality. As a part of these efforts, it is necessary to formulate a policy and it is reflected in the budget.

Thus if a firm has to launch a massive drive for recruitment of people, this policy will be reflected in the manpower planning budget as well as other relevant budgets. Thus the policy to be pursued in future for the purpose of achieving well-defined objectives is reflected in the budget.

- **Budgetary Control is actually a means of control in which the actual results are compared with the budgeted results so that appropriate action may be taken with regard to any deviations between the two. Budgetary control has the following stages._ *Developing Budgets:* The fi rst stage in budgetary control is developing various budgets. It will be necessary to identify the budget centers in the organization and budgets will have to develop for each one of them. Thus budgets are developed for functions like purchase, sale, production, manpower planning as well as for cash, capital expenditure, machine hours, labor hours and so on. Utmost care should be taken while developing the budgets. The factors affecting the planning should be studied carefully and budgets should be developed after a thorough study of the same.**

- *Recording Actual Performance:* **There should be a proper system of recording the actual performance achieved. This will facilitate the comparison between the budget and the actual. An effi cient accounting and cost accounting system will help to record the actual performance effectively.**
- *Comparison of Budgeted and Actual Performance:* **One of the most important aspects of budgetary control is the comparison between the budgeted and the actual performance. The objective of such comparison is to fi nd out the deviation between the two and provide the base for taking corrective action.**
- *Corrective Action:* **Taking appropriate corrective action on the basis of the comparison between the budgeted and actual results is the essence of budgeting.**

- A budget is always prepared for future and hence there may be a variation between the budgeted results and actual results. There is a need for investigation of the same and take appropriate action so that the deviations will not repeat in the future. Responsibilities can be fixed on proper persons so that they can be held responsible for any such deviations.

Objectives of Budgeting

- An effective budgeting system plays a crucial role in the success of a business organization. The budgeting system has the following objectives, which are of paramount importance in the overall efficiency and effectiveness of the business organization. These objectives are discussed below.

- *Planning:* Planning is necessary for doing any work in a systematic manner. A well- prepared plan helps the organization to use the scarce resources in an effi cient manner and thus achieving the predetermined targets becomes easy. A budget is always prepared for future period and it lays down targets regarding various aspects like purchase, production, sales, manpower planning etc. This automatically facilitates planning.
- *Co-ordination:* For achieving the predetermined objectives, apart from planning, coordinated efforts are required. Budgeting facilitates coordination in the sense that budgets cannot be developed in isolation. For example, while developing the production budget, the production manager will have to consult the sales manager for sales forecast and purchase manager for the availability of the raw material. Production budget cannot be developed in isolation. Similarly the purchase and sales budget as well as other functional budgets like

- **Benefits of Budgeting:**
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- **Budgeting plays an important role in planning and controlling. It helps in directing the scarce resources to the most productive use and thus ensures overall efficiency in the organization. The benefits derived by an organization from an effective system of budgeting can be summarized as given below.**
- **I. Budgeting facilitates planning of various activities and ensures that the working of the organization is systematic and smooth.**
- **II. Budgeting is a coordinated exercise and hence combines the ideas of different levels of management in preparation of the same.**
- **III. Any budget cannot be prepared in isolation and therefore coordination among various departments is facilitated automatically.**
- **IV. Budgeting helps planning and controlling income and expenditure so as to achieve higher profitability and also act as a guide for various management decisions.**
- **V. Budgeting is an effective means for planning and thus ensures suffi cient availability of working capital and other resources.**
- **VI. It is extremely necessary to evaluate the actual performance with predetermined parameters. Budgeting ensures that there are well-defined parameters and thus the performance is evaluated against these parameters.**
- **VII. As the resources are directed to the most productive use, budgeting helps in reducing the wastages and losses.**
-
- **(Steps involved in the Preparation for) Essentials of Budgetary Control**
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- **A budgetary control is extremely useful for planning and controlling as described above. However, for getting these benefits, sufficient preparation should be made. For complete success, a solid foundation should be laid down and in view of this the following aspects are of crucial importance.**
- **I. *Budget Committee:* For successful implementation of budgetary control system, there is a need of a budget committee. In small or medium size organizations, the budget related work**

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III. Any budget cannot be prepared in isolation and therefore coordination among various departments is facilitated automatically.

- IV. *Preparation of an Organization Chart:* There should be an organization chart that shows clearly defined authorities and responsibilities of various executives. The organization chart will defi ne clearly the functions to be performed by each executive relating to the budget preparation and his relationship with other executives. The organization chart may have to be adjusted to ensure that each budget center is controlled by an appropriate member of the staff.
- V. *Budget Manual:* A budget manual is defi ned by ICMA as ‘ a document which sets out the responsibilities of the person engaged in, the routine of and the forms and records required for budgetary control’.
- The budget manual thus is a schedule, document or booklet, which contains different forms to be used, procedures to be followed, budgeting organization details, and set of instructions to be followed in the budgeting system. It also lists out details of the responsibilities of different persons and the managers involved in the process. A typical budget manual contains the following.
- Objectives and managerial policies of the business concern.
- Internal lines of authorities and responsibilities.
- Functions of the budget committee including the role of budget offi cer.
- Budget period
- Principal budget factor
- Detailed program of budget preparation
- Accounting codes and numbering
- Follow up procedures.

- **VI. *Principal Budget Factor or Key Factor:* A key factor or a principal budget factor [also called as constraint] is that factor the extent of whose infl uence must fi rst be assessed in order to prepare the functional budgets. Normally sales is the key factor or principal budget factor but other factors like production, purchase, skilled labor may also be the key factors. For example, a company has production capacity to produce 30,000 tones per annum but if the sales forecast tells that the market can absorb only 20,000 units, there is no point in producing 30,000 units. Thus the sale is the key factor in this case. On the other hand, if the company has capacity to produce 30,000 units and the market has the capacity to absorb the entire production which means that sales is not the key factor but if raw material is available in limited quantity so that only 25,000 units can be produced, the raw material will become the key factor. The key factor puts restrictions on the other functions and hence it must be considered carefully in advance. So continuous assessment of the business situation**
- **becomes necessary. In all conditions the key factor is the starting point in the process of preparation of budgets. A typical list of some of the key factors is given below.**
- ***Sales:* Consumer demand, shortage of sales staff, inadequate advertising**
- ***Material:* Availability of supply, restrictions on import, *Labor:* Shortage of labor**

***Plant:* Availability of capacity, bottlenecks in key processes**

Management: Lack of capital, pricing policy, shortage of efficient executives, lack of know- how, faulty design of the product etc.

VII. *Establishment of Adequate Accounting Records:* It is essential that the accounting system should be able to record and analyze the transactions involved. A chart of accounts or accounts code should be maintained which may correspond with the budget centres for establishment of budgets and finally control through budgets.

Types of Budgets

- Budgets can be classified as per the following basis.
- On the basis of Area of Operation
- A. Functional Budgets
- B. Master Budget
- On the basis of Capacity Utilization
- A. Fixed Budget
- B. Flexible Budgets
- On the basis of Time
- A. Short Term
- B. Medium Term
- C. Long Term
- On the basis of Conditions
- A. Basic Budget
- B. Current Budget
- These budgets are discussed in detail in the following paragraphs.
- Classification according to Area of Operation

- A. ***Functional Budgets:*** The functional budgets are prepared for each function of the organization. These budgets are normally prepared for a period of one year and then broken down to each month. The following budgets are included in this category.
- ***Sales Budget:*** A Sales Budget shows forecast of expected sales in the future period [the period is well-defined] and expressed in quantity of the product to be sold as well as the monetary value of the same. A Sales Budget may be prepared product wise, territories/area/country wise, customer group wise, salesmen wise as well as time wise like quarter wise, month wise, weekly etc. The following factors are taken into consideration while preparing a sales budget.
- ***Analysis of past sales:*** Analysis of sales for the last 5-10 years will provide valuable information like the long term trend, seasonal trends, cyclical fl uctuations and other relevant information like customer preference analysis, shift in demand, competition and other environmental factors. This information can be used to predict the likely future demand of the product.
- ***Estimates given by the sales staff:*** Sales staff of the business organization works in the Field and hence they know the market situation very well. They have very close interaction with the market and are in a better position to know the demand pattern and other such trends.However, care is to be taken that the subjective element in the sales estimates given by thesales staff should be eliminated to arrive at a realistic sales forecast.

- **A. *Functional Budgets:* The functional budgets are prepared for each function of the organization. These budgets are normally prepared for _ *Market Potential Analysis:* Marketing Research helps any business organization to collect the data regarding markets, demand pattern, customer preferences, market potential and other factors like economic factors and environmental factors. From this analysis, market potential can be worked out which will be used in the sales budget.**
- **_ *Dependent Factor:* Demand of a product is dependent upon certain factors. For example, the demand for petrol and diesel is dependent on the number of vehicles plying though the roads. Analysis of such dependent factor will help to prepare the sales forecast which can be used in the sales budget.**
- ***Production Budget / Material Purchase Budget:***
- **This budget shows the quantity of materials to be purchased during the coming year. For the preparation of this budget, production budget is the starting point if it is the key factor. If the raw material availability is the key factor, it becomes the starting point. The desired closing inventory of the raw materials is added to the requirement as per the production budget and the opening inventory is subtracted from the gross requirements. This budget is prepared in quantity as well as in the monetary terms and helps immensely in planning of the purchases of raw materials. Availability of storage space, financial resources, various levels of materials like maximum, minimum, re-order and economic order quantity are taken into consideration while preparing this budget.**

- ***Cash Budget:***
- **A cash budget is an estimate of cash receipts and cash payments prepared for each month. In this budget all expected payments, revenue as well as capital and all receipts, revenue and capital are taken into consideration. The main purpose of cash budget is to predict the receipts and payments in cash so that the firm will be able to find out the cash balance at the end of the budget period. This will help the firm to know whether there will be surplus cash or**
- **deficit at the end of the budget period. It will help them to plan for either investing the surplus or raise necessary amount to finance the deficit. Cash Budget is prepared in various ways, but the most popular form of the same is by the method of Receipt and Payment method.**
- ***Other Functional Budgets:***
- **In addition to the budgets discussed above, the following are other functional budgets.**
- ***Direct Labour Budget:*** **The labor budget estimates the labor required for smooth and uninterrupted production. The labor budget shows the number of each type or grade of workers required in each period to achieve the budgeted output, budgeted cost of such labor, period wise and period of training necessary for different types of labor.**

- ***Factory Overhead Budget:*** **This budget is prepared for planning of the factory overheads to be incurred during the budget period. In this budget the overheads should be shown department wise so that responsibility can be fixed on proper persons. Classification of factory overheads into fixed and variable components should also be shown in this budget.**
- ***Administrative Overhead Budget:*** **This budget covers the administrative costs for non-manufacturing business activities. The administrative overheads include expenses like office expenses, office salaries, directors' remuneration, legal expenses, audit fees, rent, interest, property taxes, postage, telephone, telegraph etc. These expenses should be classified properly under different headings to determine the responsibilities regarding cost control and reduction.**
- ***Capital Expenditure Budget:*** **Capital expenditure is incurred with a long - term perspective and with the objective of augmenting the earning capacity of the firm in the long run. Capital expenditure results in either acquisition of fixed asset or permanent improvement in the existing fixed assets. Another important feature of capital expenditure is that the amount involved is very heavy and the decision to incur capital expenditure is not reversible. Hence a careful planning is required before decision to incur capital expenditure is taken. In the budget of capital expenditure, apart from the planning of incurring the expenditure, evaluation of the same is also shown. This budget therefore becomes extremely crucial as it not only plans the expenditure but also evaluates the same and helps in arriving at a decision.**
- ***Manpower Planning Budget:*** **This budget shows the requirement of manpower in the budget period. The categories in which manpower is required are also shown in this budget. The requirement of manpower depends on the expansion plans of the organization and also on the expected separations during the budget period.**

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- ***Fixed and Flexible Budgets:*** **The fixed and flexible budgets are discussed in detail in the following paragraphs.**
- ***Fixed Budgets:*** **When a budget is prepared by assuming a fixed percentage of capacity utilization, it is called as a fixed budget. For example, a firm may decide to operate at 90% of its total capacity and prepare a budget showing the projected profit or loss at that capacity. This budget is defined by The Institute of Cost and Management Accountants [U.K.] as ' the budget which is designed to remain unchanged irrespective of the level of activity actually attained. It is based on a single level of activity.' For preparation of this budget, sales forecast will have to be prepared along with the cost estimates. Cost estimates can be prepared by segregating the costs according to their behaviour i.e. fixed and variable. Cost predictions should be made element wise and the projected profit or loss can be worked out by deducting the costs from the sales revenue. Actually in practice, fixed budgets are prepared very rarely. The main reason is that the actual output differs from the budgeted output significantly. Thus if the budget is prepared on the assumption of producing 50, 000 units and actually the number of units produced are 40, 000, the comparison of actual results with the budgeted ones will be unfair and misleading. The budget may reveal the difference between the budgeted costs and actual costs but the reasons for the deviations may not be pointed out. A fixed budget may be prepared when the budgeted output and actual output are quite close and not much deviation exists between the two. In such cases, maximum control can be exercised between the budgeted performance and actual performance.**

- ***Research and Development Cost Budget:*** **This budget is one of the important tools for planning and controlling research and development costs. It helps management in planning the research and development activities well in advance and also about the fairness of the expenditure. Research and development is one of the important activities of any firm and hence proper planning and coordination is required for effectiveness of the same. This budget also helps to plan the requirement of necessary staff for carrying out research and development.**
- **B. *Master Budget:* All the budgets described above are called as 'Functional Budgets' that are prepared for planning of the individual function of the organization. For example, budgets are prepared for Purchase, Sales, Production, Manpower Planning, and so on. A Master Budget which is also called as 'Comprehensive Budget' is a consolidation of all the functional budgets. It shows the projected Profit and Loss Account and Balance Sheet of the business organization. For preparation of this budget, all functional budgets are combined together and the relevant figures are incorporated in preparation of the projected Profit and Loss Account and Balance Sheet. Thus Master Budget is prepared for the entire organization and not for individual functions.**
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- ***Flexible Budgets:*** **A flexible budget is a budget that is prepared for different levels of capacity utilization. It can be called as a series of fixed budgets prepared for different levels of activity. For example, a budget can be prepared for capacity utilization levels of 50%, 60%, 70%, 80%, 90% and 100%. The basic principle of flexible budget is that if a budget is prepared for showing the results at say, 15, 000 units and the actual production is only 12, 000 units, the comparison between the expenditures, budgeted and actual will not be fair as the budget was prepared for 15, 000 units. Therefore a flexible budget is developed for a relevant range of production from 12, 000 units to 15, 000 units. Thus even if the actual production is 12, 000 units, the results will be comparable with the budgeted performance of 12, 000 units. Even if the production slips to 8, 000 units, the manager has a tool that can be used to determine budgeted cost at 9, 000 units of output. The flexible budget thus, provides a reliable basis for comparisons because it is automatically geared to changes in production activity. Thus a flexible budget covers a range of activity, it is flexible i.e. easy to change with variation in production levels and it facilitates performance measurement and evaluation.**
- ***Classification of Budgets According to Time:*** **According to this classification, budgets are divided in the following categories.**
- ***Short Term Budget:*** **Any budget that is prepared for a period up to one year is known as Short Term Budget. Functional budgets are normally prepared for a period of one year and then it is broken down month wise.**

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- ***Medium Term Budget:*** **Budget prepared for a period 1-3 years is Medium Term Budget. Budgets like Capital Expenditure, Manpower Planning are prepared for medium term.**
- ***Long Term Budgets:*** **Any budget exceeding 3 years is known as Long Term Budgets. Master Budget is normally prepared for long term. In the modern days due to uncertainty, very few budgets are prepared for long term.**

ZERO BASE BUDGETING

Zero Base Budgeting: **Zero Base Budgeting is method of budgeting whereby all activities are revaluated each time budget is formulated and every item of expenditure in the budget is fully justified. Thus the Zero Base Budgeting involves from scratch or zero.**

Zero based budgeting is also known as priority based budgeting] actually emerged in the late 1960s as an attempt to overcome the limitations of incremental budgeting. This approach requires that all activities are justified and prioritized before decisions are taken relating to the amount of resources allocated to each activity. In incremental budgeting or traditional budgeting, previous year's figures are taken as base and based on the same the budgeted figures for the next year are worked out. Thus the previous year is taken as the base for preparation of the budget. However the main limitation of this system of budgeting is that an activity is continued in the future only because it is being continued in the past. Hence in Zero Based Budgeting, the beginning activity and

- **function is reviewed thoroughly before sanctioning the same and all expenditures are analyzed and sanctioned only if they are justified. Besides adopting a 'Zero Based' approach, the Zero Based Budgeting also focuses on programs or activities instead of functional departments based on line items, which is a feature of traditional budgeting. It is an extension of program budgeting. In program budgeting, programs are identified and goals are developed for the organization for the particular program. By inserting decision packages in the system and ranking the packages, the analysis is strengthened and priorities are determined.**
- ***Applications of Zero Based Budgeting:*** **The following stages/steps are involved in the application of Zero Based Budgeting.**
- **Each separate activity of the organization is identified and is called as a decision package. Decision package is actually nothing but a document that identifies and describes an activity in such a manner that it can be evaluated by the management and rank against other activities competing for limited resources and decide whether to sanction the same or not.**
- **It should be ensured that each decision package is justified in the sense it should be ascertained whether the package is consistent with the goal of the organization or not.**

- If the package is consistent with the overall objectives of the organization, the cost of minimum efforts required to sustain the decision should be determined.
- Alternatives for each decision package are considered in order to select better and cheaper
- options.

  Based on the cost and benefit analysis a particular decision package/s should be selected and resources are allocated to the selected package.
- *Benefits from Zero Based Budgeting:* ZBB was fi rst introduced by Peter A. Pyhrr, a staff control manager at Texas Instruments Corporation, U.S.A. He developed this technique and implemented it for the first time during the year 1969-70 in Texas in the private sector and popularized its wider use. He wrote an article on ZBB in Harvard Business Review and later wrote a book on the same. The ZBB concept was first applied in the State of Georgia, U.S.A. when Mr. Jimmy Carter was the Governor of the State. Later after becoming the President of U.S.A. Mr. Carter introduced and implemented the ZBB in the country in the year 1987.
- ZBB has a wide application not only in the Government Departments but also in the private sector in a variety of business. In India, the ZBB was applied in the State of Maharashtra in 80s and early 90s. Benefits from ZBB can be summarized in the following manner.

1. ZBB facilitates review of various activities right from the scratch and a detailed cost benefit study is conducted for each activity. Thus an activity is continued only if the cost benefit study is favourable. This ensures that an activity will not be continued merely because it was conducted in the previous year.

2. A detailed cost benefit analysis results in efficient allocation of resources and consequently wastages and obsolescence is eliminated.
3. A lot of brainstorming is required for evaluating cost and benefits arising from an activity and this results into generation of new ideas and also a sense of involvement of the staff.
4. ZBB facilitates improvement in communication and co-ordination amongst the staff.
5. Awareness amongst the managers about the input costs is created which helps the organization to become cost conscious.
6. An exhaustive documentation is necessary for the implementation of this system and it automatically leads to record building.

Limitations of Zero Based Budgeting:

The following are the limitations of Zero Based Budgeting.

1. **It is a very detailed procedure and naturally if time consuming and lot of paper work is involved in the same.**
2. **Cost involved in preparation and implementation of this system is very high.**
3. **Morale of staff may be very low as they might feel threatened if a particular activity is discontinued.**
4. **Ranking of activities and decision-making may become subjective at times.**
5. **It may not advisable to apply this method when there are non- financial considerations, such as ethical and social responsibility because this will dictate rejecting a budget claim on low ranking projects.**

Performance Budgeting:

It is budgetary system where the input costs are related to the performance i.e. the end results. This budgeting is used extensively in the Government and Public Sector Undertakings. It is essentially a projection of the Government activities and expenditure thereon for the budget period.

This budgeting starts with the broad classification of expenditure according to functions such as education, health, irrigation, social welfare etc. Each of the functions is then classified into programs sub classified into activities or projects. The main features of performance budgeting are as follows. Classification into functions, programs or activities Specification of objectives for each program Establishing suitable methods for measurement of work as far as possible.

Fixation of work targets for each program. Objectives of each program are ascertained clearly and then the resources are applied after specifying them clearly. The results expected from such activities are also laid down. Annual, quarterly and monthly targets are determined for the entire organization. These targets are broken down for each activity centre. The next step is to set up various productivity or performance ratios and finally target for each program activity is fixed. The targets are compared with the actual results achieved. Thus the procedures for the performance budgets include allocation of resources, execution of the budget and periodic reporting at regular intervals. The budgets are initially compiled by the various agencies such as Government Department, public undertakings etc. Thereafter these budgets move on to the authorities responsible for reviewing the performance budgets. Once the higher authorities decide about the funds, the amount sanctioned is communicated and the work is started. It is the duty of these agencies to start the work in time, to ensure the regular fl ow of expenditure, against the physical targets, prevent over runs under spending and furnish report to the higher authorities regarding the physical progress achieved. In the final phase of performance budgetary process, progress reports are to be submitted periodically to higher authorities to indicate broadly, the physical performance to be achieved, the expenditure incurred and the variances together with explanations for the variances.

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POWER POINT PRESENTATION

ON

STANDARD COSTING

(UNIT-V)

UNIT-V: STANDARD COSTING

Definitions of Standard Costing:

According to Backer and Jocobsen, "Standard cost is the amount of firm thinks a product or operation of a process for a period of time should cost, based upon certain assumed conditions of efficiency, economic conditions and other factors".

According to Brown and Howard, standard costing may be defined as "a technique of cost accounting which compares the standard cost of each product or service with actual cost to determine the efficiency of the operation so that any remedial action may be taken immediately."

According to The Terminology of Cost Accountancy defines Standard costing as "the preparation and use of standard costs, their comparison with actual costs, and the analysis of variance to their causes and points of incidence".

According to London Institute of Cost and Works Accounts, standard costing as "an estimate cost, prepared in advance of production or supply correlating a technical specification of material and labour to the price and wage rates estimated for a selected period of time within a prescribed set of working conditions".

ADVANTAGES OF STANDARD COSTING:

1. Facilitates Cost Control:

Every costing system aims at cost control and cost reduction. Standard costing helps in achieving these aims. The standards are being constantly analysed and an effort is made to improve efficiency. Whenever a variance occurs the reasons are studied and immediate corrective measures are undertaken. The action taken in spotting weak points enables cost control system.

2. Eliminating Inefficiencies:

The setting of standard for different elements of cost requires a detailed study of different aspects. The standards are differently set for manufacturing, administrative and selling expenditure. Improved methods are used for setting these standards. The determination of manufacturing expenses will require time and motion study for labour and effective control devices for materials etc. Similar studies will be needed for finding other expenses. All these studies will make it possible to eliminate inefficiencies at different steps. The whole effort will give an improved costing system and will enable better service to the consumer.

3. Helpful in Taking important Decisions:

Standard costing provides useful information to the management in taking important decisions. The problem created by inflation, rising prices etc. can be effectively tackled with the help of standard costing. It can also be used to provide incentive plans for employees, etc

limitations of Standard Costing

Standard costing cannot be used in those concerns where non-standard products are produced. If the production is undertaken according to customer's specifications then each job will involve different amount of expenditure. Under such circumstances it is not possible to set up standards for every job. Standard costing can be used only in those concerns where standard products are manufactured.

The process of setting up standards is a different task as it requires technical skill. The time and motion study is required to be undertaken for this purpose. These studies require a lot of time and money.

There are no inset circumstances to be considered for fixing standards. The conditions under which standards are fixed do not remain static. With the change circumstances the standards are also to be revised. The revision of standards is a costly affair. In case the standards are not revised the same become impracticable.

limitations of Standard Costing

This system is expensive and small concerns may not afford to bear the cost. For small concerns the utility from this system may be less than the cost involved in it.

The fixing of responsibility is not an easy task. The variances are to be classified into controllable and uncontrollable variances. The responsibility can be fixed only for controllable variances. The determination of controllable and uncontrollable variances will be a problem. The variances may be controllable at one point of time and may become uncontrollable at another point of time. The problem is faced whenever a responsibility is to be fixed.

The industries liable for frequent technological changes will not be suitable for standard costing system. The change in production process will require a revision of standard. A frequent revision of standard will be costly. So this system will not be useful for industries where methods and techniques for production are fast changing.

Features of Standard Cost and Standard Costing

The following are the features of standard cost:

- **Standard cost is a pre planned or pre-determined cost. This means that the standard cost is determined even before the commencement of production. For example, if a firm is planning to launch a product in the year 2009, the standard cost of the same will be determined in the year 2008.**
- **Standard cost is not an estimated cost. There is a difference between saying what would be the cost and what should be the cost. Standard cost is a planned cost and it is a cost that should be the actual cost of production.**
- **It is calculated after taking into consideration the management's standard of efficient operation. Thus standard cost fixed on the assumption of 80% efficiency will be different from what it will be if the assumption is of 90% efficiency.**
- **Standard cost can be used as a basis for price fixation as well as for exercising control over the cost.**
- **Standard Costing is a technique of costing rather than a method and has the following features:**
- **Standard costing involves setting of standards for various elements of cost. Thus standards are set for material costs, labour costs and overhead costs. Setting of standard is the heart of standard costing and so this work is done very carefully. Setting of wrong standards will defeat the very purpose of standard costing. Standards are not only set for costs, but also for sales and profits. The objective behind setting of standards is to have a basis for comparison between the standard performance and the actual performance.**

Features of Standard Cost and Standard Costing

- Another feature of standard costing is to continuously record the actual performance against the standards so that comparison between the two can be done easily.
- Standard costing cannot be used in those concerns where non-standard products are produced. If the production is undertaken according to customer's specifications then each job will involve different amount of expenditure. Under such circumstances it is not possible to set up standards for every job. Standard costing can be used only in those concerns where standard products are manufactured.
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- **The industries liable for frequent technological changes will not be suitable for standard costing system. The change in production process will require a revision of standard. A frequent revision of standard will be costly. So this system will not be useful for industries where methods and techniques for production are fast changing.**

_ Standard costing ensures that there is a constant comparison between the standards and actual and the difference between the two is worked out. The difference is known as variance' and it is to be analysed further to find out the reasons behind the same.

_ After the ascertaining of the variances, analyzing them to find out the reasons for the variances and taking corrective action in order to ensure that the variances are not repeated, are the two important actions of management. Thus standard costing helps immensely in evaluation of performance of the organization.

_ Estimated costs should not be confused with standard costs. Though both of them are future costs, there is a fundamental difference between the two. Estimated cost is more or less a reasonable assessment of what the cost will be in future while on the other hand, standard cost is a pre planned cost in the sense it denotes what the cost ought to be. Estimated costs are developed on the basis of projections based on past performance as well as expected future trends. Standard costs are pre determined in a scientific manner through technical analysis regarding the material consumption and time and motion study for determining labour requirements. Estimated costs may not help management in decision making as they are not scientifically pre determined costs but standard costs are decided after a comprehensive study and analysis of all relevant factors and hence provide reliable measures for product costing, product pricing, planning, co-ordination and cost control as well as reduction purposes. Under estimated costing, the cost is estimated in advance and is based on the assumption

that costs are more or less free to move and that what is made is the best estimate of the cost. Under standard costing, a cost is established which is based on the assumption that cost will not be allowed to move freely but will be controlled as far as possible so that the actual cost will be close to the standard cost as far as possible and any variation between the standard and actual cost will be capable of reasonable explanation.

VARIANCE ANALYSIS

Computation of Variances of Standard Cost and Standard Costing

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- **It is calculated after taking into consideration the management's standard of efficient operation. Thus standard cost fixed on the assumption of 80% efficiency will be different from what it will be if the assumption is of 90% efficiency.**
- **Standard cost can be used as a basis for price fixation as well as for exercising control over the cost.**
- **Standard Costing is a technique of costing rather than a method and has the following features:**
- **Standard costing involves setting of standards for various elements of cost. Thus standards are set for material costs, labour costs and overhead costs. Setting of standard is the heart of standard costing and so this work is done very carefully. Setting of wrong standards will defeat the very purpose of standard costing. Standards are not only set for costs, but also for sales and profits. The objective behind setting of standards is to have a basis for comparison between the standard performance and the actual performance.**
- **Another feature of standard costing is to continuously record the actual performance against the standards so that comparison between the two can be done easily.**
- **of Standard Costing**

VARIANCE ANALYSIS

Computation of Variances of Standard Cost and Standard Costing

- Standard costing cannot be used in those concerns where non-standard products are produced. If the production is undertaken according to customer's specifications then each job will involve different amount of expenditure. Under such circumstances it is not possible to set up standards for every job. Standard costing can be used only in those concerns where standard products are manufactured.
- The process of setting up standards is a different task as it requires technical skill. The time and motion study is required to be undertaken for this purpose. These studies require a lot of time and money.
- There are no inset circumstances to be considered for fixing standards. The conditions under which standards are fixed do not remain static. With the change circumstances the standards are also to be revised. The revision of standards is a costly affair. In case the standards are not revised the same become impracticable.
- This system is expensive and small concerns may not afford to bear the cost. For small concerns the utility from this system may be less than the cost involved in it.

VARIANCE ANALYSIS

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VARIANCE ANALYSIS

Computation of Variances of Standard Cost and Standard Costing

- The fixing of responsibility is not an easy task. The variances are to be classified into controllable and uncontrollable variances. The responsibility can be fixed only for controllable variances. The determination of controllable and uncontrollable variances will be a problem. The variances may be controllable at one point of time and may become uncontrollable at another point of time. The problem is faced whenever a responsibility is to be fixed.
- The industries liable for frequent technological changes will not be suitable for standard costing system. The change in production process will require a revision of standard. A frequent revision of standard will be costly. So this system will not be useful for industries where methods and techniques for production are fast changing.

Computation of Variances

After setting the standards and standard costs for various elements of cost, the next important step is to compute variances for each element of cost. Variance is the difference between the standard cost and the actual cost. In other words it is the difference between what the cost should have been and what is the actual cost. Element wise computation of variances is given in the following paragraphs.

A] *Material Variances:* In the material variances, the main objective is to find out the difference between the standard cost of material used for actual production and actual cost of material used. Thus the main variance in this category is the cost variance, which is thereafter broken down into other variances. These variances are given below.

I] *Material Cost Variance:* As mentioned above, this variance shows the difference between the standard cost of material consumed for actual production and the actual cost. The following formula is used for computation of this variance.

2) Material Price Variance: **One of the reasons for difference between the standard material cost and actual material cost is the difference between the standard price and actual price.**

Material Price Variance measures the difference between the standard price and actual price with reference to the actual quantity consumed. The computation is as shown below:

Material Price Variance: **Actual Quantity [Standard Price – Actual Price]**

3) Material Quantity [Usage] Variance: **This variance measures the difference between the**

standard quantity of material consumed for actual production and the actual quantity consumed and the same is multiplied by standard price. The computation is as shown below.

4) Material Mix Variance: **In case of several products, two or more types of raw materials are mixed to produce the fi nal product. In such cases, standard proportion of mixture is decided in advance.**

For example, in manufacturing one unit of product 'P', material A and B may have to be mixed in a standard proportion of 3:2. This is called as a standard mix. However, when the actual production begins, the actual proportion of mix may have to be changed due to several reasons like non-availability of a particular material etc. In such cases material mix variance arises.

- **Material Mix Variance = Standard Cost of Standard Mix – Standard Cost of Actual Mix**

Material Yield Variance:

In any manufacturing process, some unavoidable loss always takes place. Thus if the input is 100, output may be 95, 5 units being normal or unavoidable loss. The normal loss is always anticipated and taken into consideration while determining the standard quantity. Yield variance arises when the actual loss is more or less than the normal loss. The computation of yield variance is as given below.

- **Material Yield Variance = SYR [Actual Yield – Standard Yield]**

SYR = Standard Yield Rate, i.e. standard cost per unit of standard output.

Reconciliation: **Quantity Variance = Mix Variance + Yield Variance.**

B] *Labour Variances:* Like the material variances, labour variances arise due to the difference between the standard labour cost for actual production and the actual labour cost. The following variances are computed in case of direct labour.

I] *Labour Cost Variance:* This variance is the main variance in case of labour and arises due to the difference between the standard labour cost for actual production and the actual labour cost. The following formula is used for computation of this variance.

II] *Labour Rate Variance:* One of the reasons for labour cost variance is the difference between the standard rate of wages and actual wages rate. The labour rate variance indicates the difference between the standard labour rate and the actual labour rate paid. The formula for computation is as under.

***Labour Rate Variance:* Actual Hours Paid [Standard Rate – Actual Rate]**

This variance will be favourable if the actual rate paid is less than the standard rate. The labour rate variance is that portion of direct labour cost variance, which is due to the difference between

the labour rates.

III] *Labour Efficiency Variance:* It is of paramount importance that efficiency of labour is measured. For doing this, the actual time taken by the workers should be compared with the standard time allowed for the job. The standard time allowed for a particular job is decided with the help of time and motion study. The efficiency variance is computed with the help of the following formula.

Labour Efficiency Variance = Standard Rate [Standard Hours for Actual Output – Actual Hours worked]

This variance will be favourable is the actual time taken is less than the standard time.

The mix variance is computed in the following manner.

IV] *Labour Mix Variance or Gang Composition Variance:* This variance is similar to the material mix variance and is computed in the same manner. In doing a particular job, there may be a particular combination of labour force, which may consist of skilled, semi skilled and unskilled workers. However due to some practical diffi culties, this composition may have to be changed. How much is the loss caused due to this change or how much is the gain due to this change is indicated by this variance. The computation is done with the help of the following formula.

Labour Mix Variance = Standard Cost of Standard Mix – Standard Cost of Actual Mix.

V] *Labour Yield Variance:* This variance indicates the difference between the actual output and the standard output based on actual hours. In other words, a comparison is made between the actual production achieved and the production that should have been achieved in actual number of working hours. The variance will be favourable is the actual output achieved is more than the standard output. The computation is done in the following manner.

Labour Yield Variance = Average Standard Wage Rate Per Unit [Actual Output – Standard Output]

VI] *Idle Time Variance:* This variance indicates the loss caused due to abnormal idle time. While fixing the standard time, normal idle time is taken into consideration. However if the actual idle time is more than the standard/normal idle time, it is called as abnormal idle time. This variance will be always adverse and will be computed as shown below.

Idle Time Variance = Abnormal Idle Time X Standard Rate.

C] ***Overhead Variances:*** The overhead variances show the difference between the standard overhead cost and the actual overhead cost. In case of direct material and direct labour variances, there is no question of dividing them into fixed and variable as the direct material and direct labour costs are variable. However, in case of overheads, it is necessary to divide them into fixed and variable for computation of variances. We will take up the fixed overhead variances first and then the variable overhead variances. The fixed overhead variances are discussed in the following paragraphs.

I] ***Fixed Overhead Variances:*** The following variances are computed in case of fixed overheads.

A. ***Fixed Overhead Cost Variance:*** This variance indicates the difference between the standard fixed overheads for actual production and the actual fixed overheads incurred. Actually this variance indicates the under/over absorbed fixed overheads. If the actual overheads incurred are more than the standard fixed overheads, it indicates the under absorption of fixed overheads and the variance is favourable. On the other hand, if the actual overheads incurred are more than the standard fixed overheads, it indicates the over absorption of fixed overheads and the variance is adverse. The following formula is used for computation of this variance.

Fixed Overhead Cost Variance: Standard Fixed Overheads for Actual Production – Actual Fixed Overheads.

B. ***Fixed Overhead Expenditure/Budget Variance:*** This variance indicates the difference between the budgeted fixed overheads and the actual fixed overhead expenses. If the actual fixed overheads are more than the budgeted fixed overheads, it is an adverse variance as it means overspending as compared to the budgeted amount. On the other hand, if the actual fixed overheads are less than the budgeted fixed overheads, it is a favourable variance. This

_ D] ***Fixed Overhead Efficiency Variance:*** It is that portion of volume variance which arises due to the difference between the output actually achieved and the output which should have been achieved in the actual hours worked. This variance will be favourable it the actual production is more than the standard production in actual hours. The formula for computation of this variance is as follows:

Fixed Overhead Efficiency Variance: Standard Rate [Standard Production – Actual Production]

E] ***Fixed Overhead Capacity Variance:*** This variance is also that portion of volume variance, which arises due to the difference between the capacity utilization, i.e. the capacity actually utilized and the budgeted capacity. If the capacity utilization is more than the budgeted capacity, the variance is favourable, otherwise it will be adverse. The formula is as follows:

Fixed Overheads Capacity Variance: Standard Rate [Standard Quantity – Budgeted Quantity]

Reconciliation II = Volume Variance = Efficiency Variance + Capacity Variance

F] ***Fixed Overhead Revised Capacity Variance:*** This variance indicates the difference in capacity utilization due to working for more or less number of days than the budgeted one. The computation of this variance is done by using the following formula.

Fixed Overhead Revised Capacity Variance = Standard Rate [Standard Quantity – Revised Budgeted Quantity]

G] ***Fixed Overheads Calendar Variance:*** This variance indicates the difference between the budgeted quantity of production and actual quantity of production achieved arising due to the difference in the number of days worked and budgeted. The formula for computation of this variance is as follows.

Fixed Overheads Calendar Variance = Standard Rate [Budgeted Quantity – Revised Budgeted Quantity]

Fixed Overhead Cost Variance: Standard Fixed Overheads for Actual Production – Actual Fixed Overheads.

B. ***Fixed Overhead Expenditure/Budget Variance:*** This variance indicates the difference between the budgeted fixed overheads and the actual fixed overhead expenses. If the actual fixed overheads are more than the budgeted fixed overheads, it is an adverse variance as it means overspending as compared to the budgeted amount. On the other hand, if the actual fixed overheads are less than the budgeted fixed overheads, it is a favourable variance. This

variance is computed with the help of the following formula.

Fixed Overhead Expenditure Variance: Budgeted Fixed Overheads – Actual Fixed

Overheads

C] ***Fixed Overheads Volume Variance:*** This variance indicates the under/over absorption of fixed overheads due to the difference in the budgeted quantity of production and actual quantity of production. If the actual quantity produced is more than the budgeted one, this variance will be favourable but it will indicate over absorption of fi xed overheads. On the other hand, if the actual quantity produced is less than the budgeted one, it indicates adverse variance and there will be under absorption of overheads. The formula for computation of this variance is as shown below:

Fixed Overhead Volume Variance: Standard Rate [Budgeted Quantity – Actual Quantity]

Reconciliation I = Fixed Overhead Cost Variance = Expenditure Variance + Volume Variance

_ ***Fixed Overhead Cost Variance:*** This variance indicates the difference between the standard fixed overheads for actual production and the actual fixed overheads incurred. Actually this variance indicates the under/over absorbed fixed overheads. If the actual overheads incurred are more than the standard fixed overheads, it indicates the under absorption of fixed overheads and the variance is favourable. On the other hand, if the actual overheads incurred are more than the standard fixed overheads, it indicates the over absorption of fixed overheads and the variance is adverse. The following formula is used for computation of this variance.

Fixed Overhead Cost Variance: Standard Fixed Overheads for Actual Production – Actual Fixed Overheads.

B. ***Fixed Overhead Expenditure/Budget Variance:*** This variance indicates the difference between the budgeted fixed overheads and the actual fixed overhead expenses. If the actual fixed overheads are more than the budgeted fixed overheads, it is an adverse variance as it means overspending as compared to the budgeted amount. On the other hand, if the actual fixed overheads are less than the budgeted fixed overheads, it is a favourable variance. This

variance is computed with the help of the following formula.

C] *Fixed Overheads Volume Variance:* This variance indicates the under/over absorption of fixed overheads due to the difference in the budgeted quantity of production and actual quantity of production. If the actual quantity produced is more than the budgeted one, this variance will be favourable but it will indicate over absorption of fi xed overheads. On the other hand, if the actual quantity produced is less than the budgeted one, it indicates adverse variance and there will be under absorption of overheads. The formula for computation of this variance is as shown below:

Fixed Overhead Volume Variance: **Standard Rate [Budgeted Quantity – Actual Quantity]**

Reconciliation I = Fixed Overhead Cost Variance = Expenditure Variance + Volume Variance

_ II] ***Variable Overhead Variances:*** The following variances are computed in case of variable overheads.

A] ***Variable Overhead Cost Variance:*** This variance indicates the difference between the standard variable overheads for actual overheads and the actual overheads. The difference between the two arises due to the variation between the budgeted and actual quantity. The formula for the computation of this variance is as follows:

Variable Overhead Cost Variance = Standard Variable Overheads for Actual Production – Actual Variable Overheads.

B] ***Variable Overheads Expenditure Variance:*** This variance indicates the difference between the standard variable overheads to be charged to the standard production and the actual variable overheads. If the actual overheads are less than the standard variable overheads, the variance is favourable, otherwise it is adverse. The formula for the computation is as follows:

Variable Overhead Expenditure Variance = Standard Variable Overheads for Standard Production – Actual Variable Overheads.

C] ***Variable Overheads Efficiency Variance:*** It indicates the efficiency by comparing between the output actually achieved and the output that should have been achieved in the actual hours worked. [Standard Production] This variance will be favourable if the actual output achieved is more than the standard output. The formula for computation is given below:

Variable Overheads Efficiency Variance: Standard Rate [Standard Quantity – Actual Quantity]

Important note: All the formulae mentioned above are with reference to the quantity. All overhead variances can also be computed with relation to number of hours. In one of thIs illustrations, this is demonstrated.

Overhead Cost Variance: **This variance indicates the difference between the standard fixed overheads for actual production and the actual fixed overheads incurred. Actually this variance indicates the under/over absorbed fixed overheads. If the actual overheads incurred are more than the standard fixed overheads, it indicates the under absorption of fixed overheads and the variance is favourable. On the other hand, if the actual overheads incurred are more than the standard fixed overheads, it indicates the over absorption of fixed overheads and the variance is adverse. The following formula is used for computation of this variance.**

Fixed Overhead Cost Variance: **Standard Fixed Overheads for Actual Production – Actual**

Fixed Overheads.

B. ***Fixed Overhead Expenditure/Budget Variance:*** **This variance indicates the difference between the budgeted fixed overheads and the actual fixed overhead expenses. If the actual fixed overheads are more than the budgeted fixed overheads, it is an adverse variance as it means overspending as compared to the budgeted amount. On the other hand, if the actual fixed overheads are less than the budgeted fixed overheads, it is a favourable variance. This**

variance is computed with the help of the following formula.

Fixed Overhead Expenditure Variance: **Budgeted Fixed Overheads – Actual Fixed**

Overheads

C] ***Fixed Overheads Volume Variance:*** **This variance indicates the under/over absorption of fixed overheads due to the difference in the budgeted quantity of production and actual quantity of production. If the actual quantity produced is more than the budgeted one, this variance will be favourable but it will indicate over absorption of fixed overheads. On the other hand, if the actual quantity produced is less than the budgeted one, it indicates adverse variance and there will be under absorption of overheads. The formula for computation of this variance is as shown below:**

Fixed Overhead Volume Variance: **Standard Rate [Budgeted Quantity – Actual Quantity]**

Reconciliation I = Fixed Overhead Cost Variance = Expenditure Variance + Volume Variance

Steps in Budgetary Control / Essentials of Budgetary Control

1. **Organization for Budgetary Control:**

- **The proper organisation is essential for the successful preparation, maintenance and administration of budgets.**
- **A budget committee is formed which comprises the departmental heads of various departments.**
- **All the functional heads are entrusted with the responsibility of ensuring proper implementation of their respective departmental budgets.**

- As per the organisation chart the Chief Executive is the overall incharge of budgetary system.
- He constitutes a budget committee for preparing realistic budgets.
- A budget officer is the convener of the budget committee who co-ordinates the budgets of different departments.
- The managers of different departments are made responsible for their departmental budgets.

2. Budget Centres

- A budget centre is that part of the organisation for which the budget is prepared.
- A budget centre may a department , section of a department or any other part of the department.
- The establishment of budget centres is essential for covering all parts of the organisation.

- The budget centres are also necessary for cost control purposes.
- The appraisal of the performance of different parts of the organisation becomes easy when different centers are established.

3. Budget Manual

- A budget manual is a document which spells out the duties and the also responsibilities of the various excutives concerned with the budgets.
- It specifies the relations among various functionaries.
- A budget matter covers the following matters:

- A budget manual clearly defines the objectives of budgetary control system.
- It also gives the benefits and principles of the system.
- The duties and responsibilities of various persons dealing with preparation and execution of budgets are also given in a budget manual. It enables the management to know of persons dealing with various aspects of budgets and clarify their duties and responsibilities.

- It gives information about the sanctioning authorities of various budgets.
- The specimen forms and number of copies to be used for preparing budget reports will also be stated. Budget centres involved should be clearly stated.
- The length of various budget periods and control points be clearly given.

- The procedure to be followed in the entire system should be clearly stated.
- A method of accounting to beused for various expenditures should also be stated in the manual.

4. Budget Officer

- The Chief Executive who is at the top of the organisation, appoints some person as budget officer.
- The budget officer is empowered to scrutinize the budgets prepared by different functional heads and to make changes in them, if the situation so demands.
- The actual performance of different departments is communicated to the budget officer.

- He determines the deviations in the budgets and takes Necessary steps to rectify the deficiencies, if any.
- He works as coordinator among the different departments and monitors the relevant information.
- He also informs the top management about the performance of different departments.

5. Budget Committee

- In small scale concerns, the accountant is made responsible for the preparation and implementation of budgets.
- In large scale concerns a committee known as Budget committee is formed.
- The heads of important departments are made members of this committee. The committee is responsible for preparation and execution of budgets.

- The members of this committee put up the case of their respective departments and help the committee to take collective decisions, if necessary.
- The Budget officer acts as co-ordinator of this committee.

6. Budget Period

- A budget period is the length of time for which a budget is prepared.
- The budget period depends upon a nuber of factors.
- It may be different for different industries or even it may be different in the same industry or business.
- the budget period depends upon the following considerations:

- The type of budget i.e., sales budget, production budget, raw materials purchase budget, capital expenditure budget. A capital expenditure budget may be for a longer period i.e., 3 to 5 years; purchase and sale budgets may be for one year.
- The nature of demand for the products.
- The timings for the availability of the finances.

- The economic situation of the cycles.
- The length of trade cycles.

All the above mentioned factors are taken into account while fixing the period of budgets.

7. Determination of key factor:

- The budgets are prepared for all functional areas.
- These budgets are inter-dependent and inter-related.
- A proper co-ordination among different departments is necessary for making the budgetary control a success.
- The constraints on sombudgets may have an effect on other budgets too.
- A factor which influences all other budgets is known as key factor or principle factor.

- There will be a limitation on the quantity of goods a concern may sell.
- In this case, sales will be a key factor and all other budgets will be prepared by keeping in view the amount of goods the concern will be able to sell.

Material Cost Variance

- **The difference between Actual Material cost and standard material cost is known as Material cost variance.**
- **It arises due to change in price of materials and variations in quality of materials. It is also known as Total Variance. It is calculated as follows:**
- **Material Cost Variance= Standard Material Cost – Actual Material Cost.**

MATERIAL PRICE VARIANCE

- It is that part of material cost variance which is due to difference the actual price paid and the standard price specified for the material.
- It represents the difference between he standard cost of materials used and actual cost of materials used.
- Material Price Variance=

Actual Quantity(Standard Price-Actual Price)

- If the Standard price is more than actual price, the variance would be favourable.
- If the Actual price is more than Standard price, the variance would be Adverse.
- Material price variance may arise due to the following reasons:

Causes for Materials price Variance

1. **Fluctuating in market price.**
2. **Inefficiency in buying.**
3. **Change in price policies.**
4. **Emergency purchase leading to rise in prices.**
5. **Untimely purchases.**
6. **Carelessness in use of materials.**
7. **Change in methods of production.**
8. **In correct of setting standards**

9. Changes in basic prices of materials.
10. Failure to purchase materials at proper time.
11. Failure to get discount on purchases.
12. Loss due to pilferage.
13. Use of material mix other than standard mix.

Material Usage Variance

- **It is also known as Quantity variance.**
- **It is that part of material cost variance which is due to difference between the standard quantity specified and actual quantity of materials used.**
- **The difference between standard quantity and actual quantity is multiplied with standard price of materials and the resulting figure will be material usage variance.**
- **The Material Usage Variance is calculated as follows:**
- **Material Usage Variance= S.R(S.Q-A.Q)**

Causes for Material Usage Variance

1. Careless in the use of materials handled by workers and production personnel.
2. Loss due to pilferage.
3. Use of material mix other than the standard mix.
4. Inefficient inspection of raw materials.
5. Defective production necessitating the use of additional materials.
6. Accounting errors.

7. Non-standards substitutes used.

8. Defective equipments and tools.

9. Excessive wastage, scrap, spoilage, leakage etc.

10. Change in product mix or composition used in the process.

11. Actual Yield is different from standard Yield.

12. Changes in working methodology not yet incorporated in standard.

Material Mix Variance

- It is the sub variance of material usage variance.
- It arises if a different blend of mix of material is used than specified.
- when two or more materials are used in the manufacture of a product , the difference between the standard composition and actual composition of material mix is the material mix variance.

Causes for Material Mix Variance

1. Using expensive/cheaper substitutes.
2. Short supply of material.
3. In efficiency of production department in mixing the materials.
4. Change in the quality of the product.

Material Yield Variance

- It is the difference between actual yield and standard yield.
- This is the sub variance of material usage variance.
- this variance measures the abnormal loss or saving materials.
- This variance is particularly important in the use of process industries where certain percentage of loss of materials is inevitable.
- If actual loss differs from standard loss of materials yield variance will arise.

Causes for Materials Yield Variance

1. Lower yield due to non-standard material.
2. Use of inferior quality materials.
3. Pilferage of materials.
4. Failure to return excess materials to the stores.
5. Accounting errors.
6. Rigid inspecting, resulting more rejections requiring additional materials.

7. Increased rate of scrap than anticipated.

8. Inefficient production methods.

9. Inaccurate standards.

10. Substandard equipment.

Material Yield variance is calculated as follows:

M.Y.V= Std.Rate x (Actual Yield- Std.Yield)

Std. Rate= Standard cost of std.mix/ Net standard output.

In this variance it should be remembered that when actual yield is more than standard yield, the variance is favourable.

LABOUR VARIANCES

1.Labour Cost Variance

- Labour cost variance is the difference between the standard direct wages specified and actual wages paid.
- Labour cost variance is also known as direct labour cost variance.
- Labour cost variance is the function of labour rate of pay and total labour efficiency or labour time variance.
- It arises due to a change in either wage rate or in time or both.
- Labour cost variance is calculated as follows:

Labour Cost Variance= standard Labour Cost –Actual Labour Cost.

- If standard cost of labour is higher, the variance is favorable and vice versa.

2. Labour Rate or Pay Variance

- Labour rate variance is the direct result of the wages paid at a rate different from the standard rate.
- Labour rate variance is the difference between the standard rate specified and the actual rate paid.
- It is also known as Labour Pay Variance or Wage Rate Variance.

Causes for Labour Rate Variance:

1. Change in basic wage rate or piece work rate.
2. General rise in wage rate.
3. Higher or lower rate paid to causal labour.
4. Employing a worker mix different from the standard mix which was originally planned.
5. Improper planning of overtime and bonus.
6. wrong setting of standard rates of labour.
7. New workers being paid different rates from the standard rates.

8.Different rates being paid to workers employed for seasonal work or excessive work load.

9. **Inclusion of overtime wages in the standard rate but allowing an excessive amount of overtime work.**

10. Faulty recruitment of workers.

Labour Rate variance is calculated as follows:

Labour Rate Variance= Actual Time(standard Rate- Actual Rate)

- ***If standard rate is more than actual rate , the variance will be favorable.***
- ***If actual rate is more than standard rate, the variance will be unfavorable.***

3. Labour Efficiency Variance

- **Labour efficiency variance is the difference between the standard hours allowed and the actual hours worked for the volume of output achieved.**
- **This variance is also known as labour quantity variance or Labour spending variance or Labour usage variance or Labour time variance.**

Causes of Labour Efficiency Variance

1. Poor quality of raw materials.
2. Lack of proper supervision on workers.
3. Insufficient training, incorrect instructions.
4. Bad working conditions.
5. Defective machinery and equipment.
6. Higher labour turnover.
7. Low Employee morale
8. More ideal time than normal.
9. Workers dissatisfaction.
10. Fixation of incorrect standards.
11. Use of non-standard materials requiring more time to complete work.
12. Absence of maintenance upto standard level.

Labour Efficiency Variance is calculated as follows:

Labour Efficiency Variance=

Standard wage rate(Standard Time-Actual Time)

- **This variance reflects the efficiency or inefficiency of the workers.**
- **If standard time is more than actual time the variance is said to be favourable.**
- **If the actual time is more than standard time , the variance is said to be unfavourable.**

Definitions of Variance Analysis

- Variance Analysis is defined by I.C.M.A.London as " that part of variance accounting which relates to the analysis into constituent parts of variances between Planned and actual performance."
- The difference between the actual cost and standard cost is variance.
- If actual cost is more than standard cost this is a sign of efficiency and the difference is termed as Favourable variance or Positive variance.
- If standard cost is more than actual cost this is a sign of inefficiency and the difference is termed as Unfavourable variance or Negative variance.
- The favourable and unfavourable variances are also known as credit and debit variances respectively.

Objectives of Variance Analysis

- To evaluate individual performance by highlighting the difference in terms of costs between attained performance and desired performance.
- To assign the responsibilities to individuals to motivate them to achieve the performance targets.
- The three principle objectives of variance analysis are (1) Performance (2) Evaluation (3) Management by exception.

Advantages of Variance Analysis

1. Variance analysis is an important tool of cost control and cost reduction.
2. It helps the management to apply the principle of management by exception.
3. Variance analysis reveals the efficiency of performance of the business concern.
4. It helps the management to maximize the profit by analyzing the variances taking corrective steps.
5. Variance analysis helps in preparing business plans for various periods.
6. It creates consciousness among the staff and develops team spirit among them.
7. By controlling costs, variance analysis boosts the profits of the organization.

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