

Cost and Management Accounting

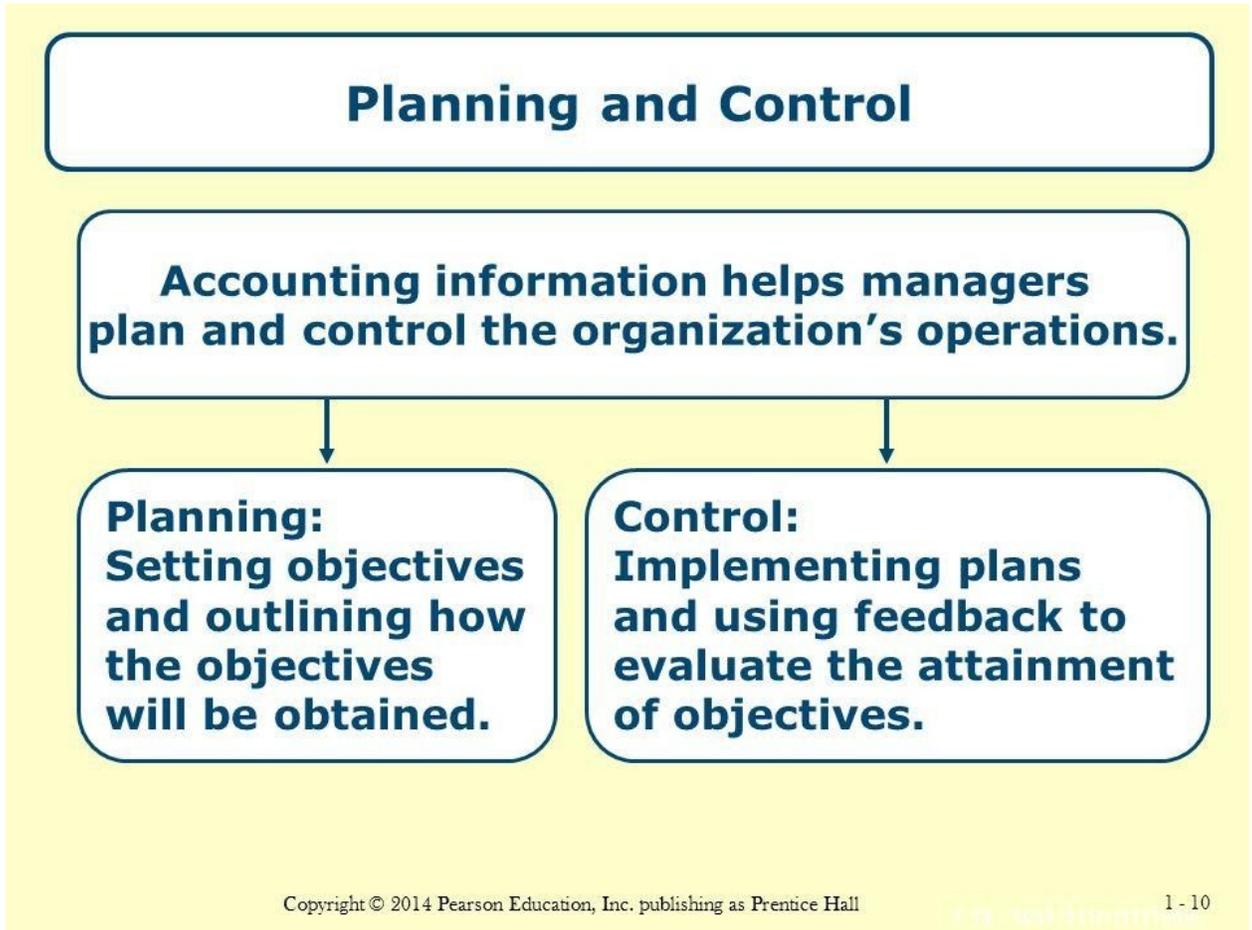
Unit – 1

Introduction to Cost and Management Accounting

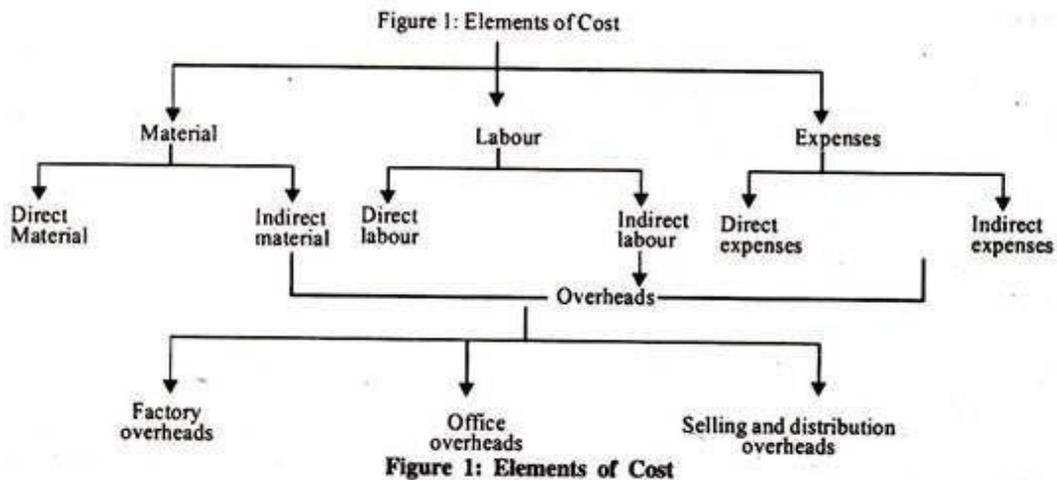
- **MANAGEMENT ACCOUNTING VS COST ACCOUNTING VS FINANCIAL ACCOUNTING**

Basis of Distinction	Cost Accounting	Management Accounting	Financial Accounting
1. Meaning	Cost Accounting is the process of accounting for costs, from the very starting till the end of the reporting period. Reports are prepared at the end of the period in order to ascertain where the cost can be reduced or controlled.	Management Accounting refers to the application of the accounting principles and financial management to create, protect, preserve and increase the value of an organization for its stakeholders.	Financial Accounting is the art of recording, classifying, and summarising the monetary transactions and events in a manner useful for the stakeholders to interpret the results thereof.
2. Nature	It records quantitative aspect only.	It records quantitative as well as qualitative aspects.	It records quantitative aspects only.
3. Objective	It basically records the cost of producing a product or providing a service in which the business primarily deals.	It is performed in order to help the management make decisions by providing the relevant information.	It is undertaken to prepare Profit and Loss Account and Balance Sheet for presentation to shareholders and other external users.
4. Recording of Data	Data is recorded using both, past and present figures.	It is focused on the projection of data for the future.	It records Historical data.
5. Rules and Regulations	It follows certain principles and procedures for recording costs.	It does not follow any specific rules and regulations.	It follows Accounting Principles, Accounting Standards and Indian Accounting Standards.
6. Development	It developed after the industrial revolution.	It developed to address the need of modern business world.	It developed before all other forms of accounting.
7. Users of Information	It is generally used by internal management.	The information accumulated through management accounting is used by owners, employees, creditors, researchers, etc.	It is used by shareholders, customers, regulatory authorities, etc.

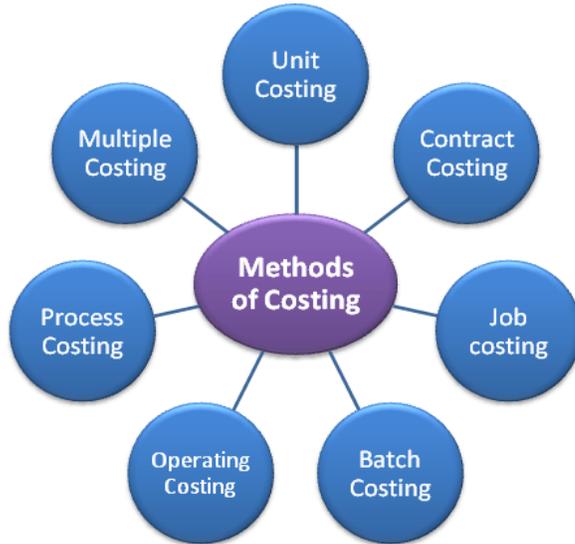
- **ROLE OF ACCOUNTING INFORMATION**



- **COST CONCEPTS AND USES**



METHODS OF COSTING



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Meaning & Definition of Direct Expenses

“Direct”, as the word suggests, are those expenses **directly related and assigned to the primary business operations** of a business. In general, they relate to the purchase and production of goods and services.

Examples of Direct Expenses

- Wages
- Factory rent
- Cost of raw material
- Premises renting
- Carriage inwards**
- Fuel, etc.**

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Meaning of Indirect Expenses

Unlike direct, indirect expenses are **not directly related and assigned to the core business operations** of a firm. They are also known as Opex or operating expenses.

Indirect expenses are necessary to keep the business up and running, but they can't be directly related to the cost of the core revenue-generating products or services.

Examples of Indirect Expenses

- Salaries
- Telephone bills
- Printing & Stationery
- Legal & Accounting charges
- Carriage outwards**

DIFFERENCE BETWEEN ALLOCATION AND APPORTIONMENT OF OVERHEADS

BASIS OF DIFFERENCE	ALLOCATION OF OVERHEADS	APPORTIONMENT OF OVERHEADS
MEANING	Allocation is the process of identification of overheads with cost centers.	Apportionment is done in case of those overhead items which cannot be wholly allocated to a particular department.
NATURE OF COSTS	Assignment of particular cost to a particular department or cost center is called as allocation.	These costs are common to various departments and cannot be charged to a particular department or cost center.
PROPORTIONS OF COSTS	Allocation deals with whole items of costs.	Apportionment deals with proportions of items of costs.
BASIS FOR APPORTIONMENT OR ALLOCATION	No base is required for allocation of cost to a department, it is a direct process.	An equitable base is required for Apportionment of cost to the production or services department.
APPLIES	When the overhead costs are related to	When the overhead costs are related to different departments.

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	specific or single departments.	
EXAMPLES	Salary paid to the employees of the maintenance department, can be allocated to that department.	Wages paid to the head of the factory, rent of factory, electricity, etc. cannot be charged to a particular department, and then these can be apportioned amongst various departments.

S. No.	Basis of apportionment	Overheads
1.	Floor area occupied	Rent and rates, taxes, heating and lighting, repairs and maintenance of building, accident prevention cost
2.	Number of workers employed	Canteen expenses, welfare expenses, recreation expenses, time keeping, supervision, etc.
3.	Direct wages	Contribution to provident fund, contribution to Employees State Insurance Schemes, Compensation to workers, etc.
4.	Value of assets	Depreciation, insurance, repairs and maintenance of plant and machinery, fire insurance, etc.
5.	No. of light points	Lighting
6.	Horse power, machine hours, machine capacities, kilowatt hours	Power
7.	Material cost or number of requisitions	Stores overheads
8.	No. of labour hours	Salary of inspectors, salaries of supervisors and other administrative expenses
9.	Weight, volume, ton, km, etc.	Delivery expenses
10.	Technical estimates	Power/steam consumption, internal transport, lighting, managerial salaries
11.	Sales or total cost	Audit fees

Machine Hour Rate

Machine hour rate is calculated by dividing the total overheads of machine by the number of effective machine hours worked during a particular period. For this purpose the overheads may be divided into fixed and variable overheads.

What is the formula of machine hour rate?

The formula used in computing the rate is:

If factory overhead is Rs 3, 00,000 and total machine hours are 1,500, the machine hour rate is Rs 200 per machine hour ($\text{Rs } 3,00,000 \div 1500 \text{ hours}$)

Calculation of Machine Hour Rate		
Machine No. 51	Period: January 2019 Working Hours: 100	
Standing Charges:	\$	\$
Allocated Machine No. 21 for the month	100	
Hourly rate of standing charges		1.00
$\$100 / 100 \text{ Hours} = \1	100	
Machine Charges:		
(i) Depreciation:		
Hourly rate of depreciation:		
$(\text{Original cost} - \text{Scrap value}) / \text{Hours of working life}$		
$\$6,000 - 1,000 / 5,000 \text{ Hours}$	1.00	
(ii) Repairs and maintenance:		
Hourly rate = Estimated cost over working life / Hours of Working life		
$\$1,250 / 5,000 \text{ Hours}$	0.25	
(iii) Power consumed: 10 units per hour at \$0.10 per unit	1.00	
Hourly rate of machine charges		2.25
Machine Hour Rate		3.25

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Unit – 2

Costing for Specific Industries

JOB COSTING VS. PROCESS COSTING

Job costing is each job carried out during an assignment or project. Process costing is the total cost of the operations carried out in the complete project. Knowing the differences is key to implementing the best cost reporting.

Accounting Definition	Job costing is an accounting method of tracking all the costs and revenue associated with a unique project.	Process costing is an accounting method deployed when there is mass production of similar products by collecting and assigning manufacturing costs to the units produced.
Manufacturing-Production	Customized.	Standardized (Mass Produced).
Assignment	Calculating the cost of each complete job.	Cost is determined by the process and by the number of products produced.
Cost Calculation Basis	The cost calculation is done based on the job.	The cost calculation is done based on the process.

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Cost Transfer	Costs cannot be transferred.	Costs can be transferred across processes.
Individuality	Each job is different, meaning all products have individual job costing.	Products that are produced in large volumes lack individuality.
Industry	Works best for industries that customize products based on customer needs.	Suitable process for industries with mass production.
Losses	Losses cannot be segregated from the process.	Businesses can categorize losses into two types: Process losses and product losses.
WIP (Work in Progress)	WIP reporting might be possible.	Consistent WIP reporting.
Size of Job	Small production units.	Large production units.
Record Keeping	Job costing requires manual recording expenses for each task.	Record-keeping for process costing is an efficient activity.

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Meaning of unit costing

- ▶ Unit costing is a method of costing based on units of production. It is also known as 'output' or 'single' costing
- ▶ The output is measured in convenient physical units
- ▶ It is a simple method of costing employed in industries where the production is continuous, uniform and is of only a single product or of essentially one product in two or more grades.
- ▶ Units of output being identical, the costs are measured by a common unit
- ▶ Collieries, quarries, brick works, dairies, breweries, sugar mills, cement works, paper mills and iron foundries are some of the industries employing unit costing

COST SHEET FORMAT

COST SHEET AS ON		(NO. OF UNITS PRODUCED:	
PARTICULARS		TOTAL ₹	Per unit ₹
	Opening Stock of Raw materials	xxx	
Add:	Purchase of Raw Materials	xxx	
Add:	Carriage Inwards	xxx	
		xxx	
Less:	Closing Stock of Raw materials	xxx	
Less:	Materials Returned	xxx	
	DIRECT MATERIALS CONSUMED	xxx	xxx
Add:	Direct Labour	xxx	xxx
Add:	Direct Expenses	xxx	xxx
	PRIME COST	xxx	xxx
Add:	Factory /Works expenses / works on cost	xxx	
Add:	Opening Stock of work in progress (WIP)	xxx	
		xxx	
Less:	Closing Stock of work in progress (WIP)	xxx	
Less:	Sale of Salvage (if any)	xxx	
	WORKS COST or FACTORY COST	xxx	xxx
Add:	Office and Administration Expenses	xxx	xxx
	COST OF PRODUCTION	xxx	xxx
Add:	Opening Stock of finished goods	xxx	
Less:	Closing Stock of finished goods	xxx	
	(No. of units x Cost of production per unit*)	xxx	
	COST OF GOODS SOLD	xxx	xxx
Add:	Selling and Distribution expenses	xxx	xxx
	COST OF SALES / TOTAL COST	xxx	xxx
Add:	Profits(Positive figure)/Loss (Negative Figure)	xxx	xxx
	SALES	xxx	xxx

- PROCESS COSTING

Solution

Process X Account

Dr.				Cr.			
	Qnt.	Rate	Amount		Qnt.	Rate	Amount
		Rs.	Rs.		Rs.	Rs.	
To Units introduced	10,000	0.50	5,000	By Normal Loss			
" Materials			6,000	Scrap - 5% of			
" Wages			7,000	10,000	500	0.08	40
" Manufacturing Expenses			2,000	" Process Y A/c (output transferred)	9,500	2.10	19,960
	10,000		20,000		10,000		20,000

Process Y Account

Dr.				Cr.			
	Qnt.	Rate	Amount		Qnt.	Rate	Amount
		Rs.	Rs.		Rs.	Rs.	
To Process X A/c	9,500	2.10	19,960	By Normal Loss			
" Materials			3,000	Scrap 10% of	950	0.10	95
" Wages			4,000	9,500			
" Manufacturing Expenses			2,000	" Abnormal Loss	50	3.376	169
				" Output transferred to Finished Stock A/c	8,500	3.376	28,696
	9,500		28,960		9,500		28,960

Working Notes :

Process X Cost per unit = $\frac{\text{Total Cost} - \text{Value of Scrap}}{\text{Normal Production}} = \frac{20,000 - 40}{9,500} = \text{Rs. } 2.101 \text{ approx.}$

Process Y Cost per unit = $\frac{28,960 - 95}{9,500 - 950} = \frac{28,865}{8,550} = \text{Rs. } 3.376$

Normal loss and Abnormal Loss

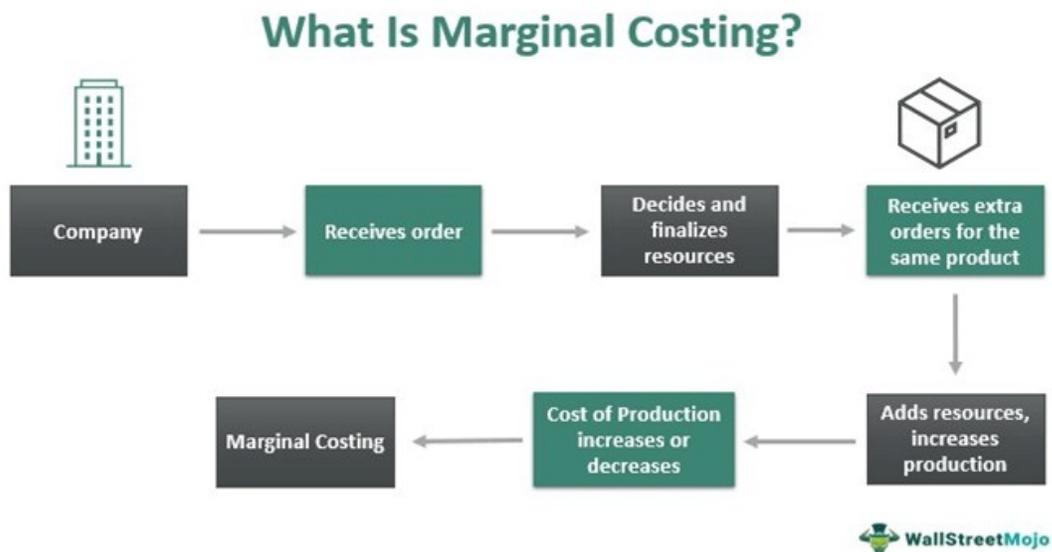
bases	Normal loss	Abnormal loss
1. source	It arises due to internal factors	It arises due to external factor.
2. nature	It is recurring in nature.	It is accidental in nature.
3. Estimation	It can be estimated in advance from the past experience.	It cannot be estimated in advance.
4. Access to insurance	It is not insurable loss.	It is insurance loss.
5. avoidance	It is unavoidable loss.	It is avoidable.

Unit-3

Marginal Costing

Introduction

Marginal costing in economics and managerial accounting refers to an increase or decrease in the total cost of production due to a change in the quantity of the desired output. It is variable, depending on the inclusion of resources required to produce or deliver additional unit(s) of a product or service.



APPLICATION OF MARGINAL COSTING FOR DECISION-MAKING

Marginal costing technique is frequently used for short-term decision-making. Marginal costing technique helps short-term decision-making in the following areas —

- (a) Profit planning and selection of profitable product-mix.
- (b) Problems of limiting factor
- (c) Performance evaluation
- (d) Fixation of selling price
- (e) Accepting additional order and capacity utilization
- (f) To make or buy
- (g) Alternative methods of manufacture
- (h) Closing down or suspending activities

PROFIT PLANNING

- ⌚ Budget & budgetary control
- ⌚ Marginal costing
- ⌚ CVP and break even point
- ⌚ Comparative cost analysis
- ⌚ ROCE

Marginal costing Income Statement for the period

Sales		XXXX
opening inventory - <u>at variable production cost</u>	xxx	
Variable Production cost:		
Direct materials	xxx	
Direct labour	xxx	
Variable Production overheads	xxx	
less: closing inventory at variable production cost	(xxx)	
Variable/marginal Production cost of sales	<u>(xxx)</u>	
Variable selling and distribution cost	(xx)	
Variable cost of sales	<u>(xx)</u>	(xxx)
Contribution margin		xxx
Fixed costs:		
Fixed Production overheads	(xx)	
Administration costs (usually 100% fixed)	(xx)	
Selling and Distribution fixed cost	(xx)	
		<u>(xx)</u>
Profit		<u><u>xx</u></u>

Make or Buy Decisions

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Unit - 4

Break Even Analysis

DEFINITION OF BREAK-EVEN POINT ▪ At the breakeven point of a business, income is equal to expense and therefore there is no gain or loss. ▪

According to Matz, Curry and Frank “Break Even Analysis indicates at what level cost and revenue are in equilibrium.”

Thus, it is the minimum point of production where total costs are recovered. Therefore, at break-even point.

Sales Revenue – Total Cost

$$\text{Break-even point (units)} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}}$$

$$\text{Break-even point (sales value)} = \frac{\text{Fixed Cost}}{\text{P/V ratio}}$$

Assumptions Underlying Break-Even Analysis:

The break-even analysis is based on certain assumptions.

They are:

- (i) All costs can be separated into fixed and variable components,
- (ii) Fixed costs will remain constant at all volumes of output,
- (iii) Variable costs will fluctuate in direct proportion to volume of output,
- (v) Product-mix will remain unchanged,
- (vi) The number of units of sales will coincide with the units produced so that there is no opening or closing stock,
- (vii) Productivity per worker will remain unchanged,
- viii) There will be no change in the general price level.

Limitations of Break-Even Analysis:

1. Break-even analysis is based on the assumption that all costs and expenses can be clearly separated into fixed and variable components. In practice, however, it may not be possible to achieve a clear-cut division of costs into fixed and variable types.
2. It assumes that fixed costs remain constant at all levels of activity. It should be noted that fixed costs tend to vary beyond a certain level of activity.
3. It assumes that variable costs vary proportionately with the volume of output. In practice, they move, no doubt, in sympathy with volume of output, but not necessarily in direct

proportions.

4. The assumption that selling price remains unchanged gives a straight revenue line which may not be true. Selling price of a product depends upon certain factors like market demand and supply, competition etc., so it, too, hardly remains constant.

5. The assumption that only one product is produced or that product mix will remain unchanged is difficult to find in practice.

Application of Break-Even Analysis:

Break-even concept can be used to formulate different policies in a business enterprise. Some of these applications are,

- ✓ Determination of profit at different levels of sales
- ✓ To find the level of output to get the desired profit
- ✓ Determination of Margin of Safety
- ✓ Calculation of selling price with given BEP
- Effect of price reduction on sales volume
- ✓ Effect of changes in Sales Mix
- ✓ Effect of fixed cost or variable cost changes on sales volume
- ✓ Selection of most profitable alternative
- ✓ Make or Buy decisions
- ✓ Drop and / or Add

decisions Uses of Break Even

Analysis

➤ It provides detailed and clearly understandable information: A break even analysis depicts the information in a coherent manner and will give the whole idea about the relationship or behaviour of the variables: costs, selling price, volume of output and the profits of the firm.

➤ BE analysis depicts profitability of the products: Beside the break-even point, where the business is in no profit and no loss situation, BE chart also depicts the profitability of different products and thus helps in managerial decisions regarding shut down or continuation of a product or the business as a whole

. ➤ It shows the effect of changes in cost and selling price on profits: BE analysis demonstrates very clearly the effects of changes in fixed cost, variable cost and selling price on profits of the firm for different levels of outputs and thus helps the management in taking decisions accordingly.

➤ It helps in cost control: The BE analysis shows fixed costs graphically in the total cost of the product, and if the fixed costs are high, the management can take the corrective actions to control the cost like elimination of wastage, improved efficiency etc.

➤ BE analysis helps in ascertaining comparative efficiency of the plants can be analysed: The BE chart can be employed for analyzing comparative plant efficiencies. The efficiency of output at a particular plant is shown by the angle of incidence made at the intersection of total sales line and total variable cost line.

➤ It helps in forecasting and long-term planning: Break even analysis shows the association among the variables namely, cost, selling price and volume graphically which helps in forecasting, long term planning and stability

Graphical Representation of Break Even Analysis:

The graphical representation of the BE analysis is done with the help of BE chart also known as CVP chart or graph. It is a very useful device for presenting to the management the information showing the effects of changes in costs and revenues for varying levels of output, on profits. It is an elementary form of profit graph which is easily understandable. With the help of a graph, thousands of words can be very well explained. When the relationship of cost, volume of output, and profit is plotted graphically, the obtained picture or diagram, is called break even chart. The chart shows not only the point where the total costs and total revenues would break even or

becomes equal but also it presents the behaviour of cost, revenues, and profits at different levels of output. In other words, a BE chart is a pictorial representation of relationship between costs, volume, selling price and profits of a firm and shows graphically the effect of changes in any of these variables on the profitability of the firm.

Break Even Analysis and Break-even charts are important tools for profit planning. There are three ways to improve profits, namely

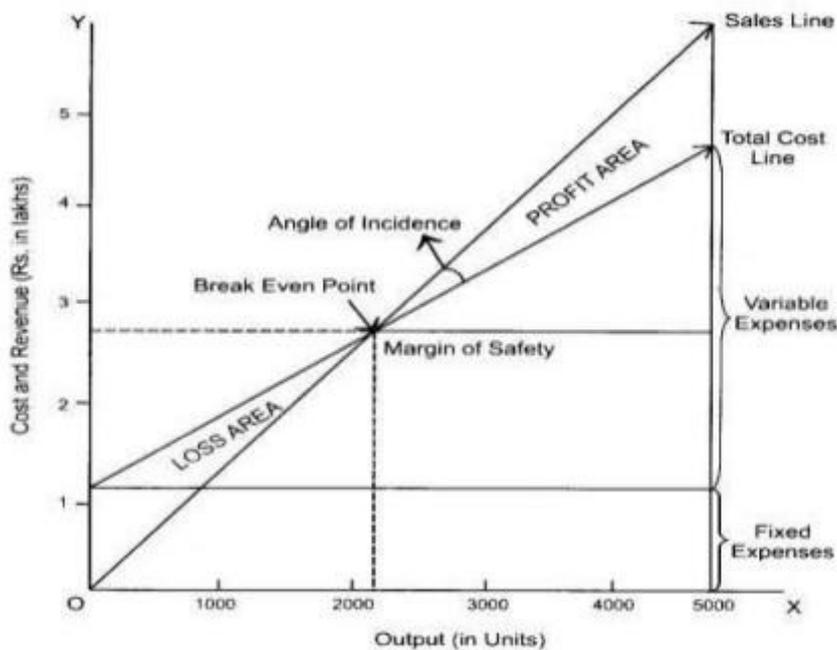
- I. Increasing the volume of sales i.e. revenue by increase in output or
- II. increase in selling price.
- III. Reducing the variable expenses III. Reducing the fixed expenses. Break Even Analysis is made through Graphical Charts

Break Even Chart indicates approximate profit or loss at different levels of sales volume within a limited range.

The break-even charts show fixed and variable costs and sales revenue so that profit or loss at any given level of Production or sales can be ascertained. Construction of a break-even chart: Steps involved in construction of a break-even chart are

- I. Select a scale of/for sale (units) on horizontal axis
- II. . Select a scale for costs and revenues on vertical axis

- III. . Draw the total cost line, starting from the point on the vertical axis which represent fixed costs.
- IV. . Draw the sale line, starting from the point of origin (zero) and finishing at point of maximum sales.
- V. The sales line will cut total cost line at the point where the total cost equal to total revenues
- VI. The point of intersection of two lines is called break-even point i.e. the point of no profit no loss
- VII. The lines drawn from intersection to horizontal axis and vertical axis gives the sales value and number of units produced at break-even point
- VIII. The loss is shown if the production is less than the break-even point and profit is shown if the production is more than the break-even point
- IX. The total sales minus break-even sales represents Margin of Safety



A break-even chart shows graphically the factors which are:

- The probable profits or losses of the firm at different levels of output.
- The relationship between Variable cost and fixed cost
- The level of output at which the firm break evens i.e. the level of break-even point.
- The margin of safety.
- The angle of incidence i.e. the angle made by the total sales line and total cost line at the break- even point. A large angle of incidence shows high rate of profit and vice – versa
- The level of contribution or P/V ratio if required may also be shown.

COMPONENTS IN BREAK EVEN ANALYSIS MECHANICS OF BREAK EVEN ANALYSIS(BEA):

i. Graphical Method:

Shows a linear break-even analysis. When price of a product remains the same, the organization expands its production, thus, total revenue is linear to the output.

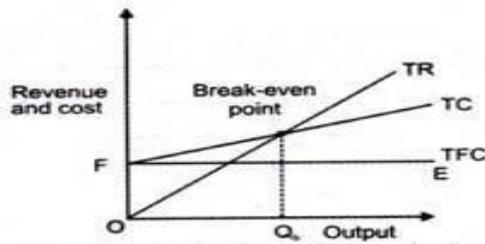


Figure-17: Graphical Method of Break-Even Analysis

ii. Algebraic Method:

Helps in decision making problems of the organization. We know that profit is equal to difference between total revenue and total cost.

$$\pi = TR -$$

$$TC$$

$$P \cdot Q$$

iii. Contribution Analysis:

Contribution is the difference between total revenue and variable costs.

iv. Profit volume (PV) ratio:

Refers to another method to find break-even point. The formula for profit volume ratio is: PV

$$\text{ratio} = (S - V) / S \cdot 100$$

S = Selling price

V = Variable

costs

v. Margin of Safety:

The margin of safety is defined as a difference between sales at a break-even point and total actual sales. This term was given by Benjamin Graham and David Dodd in their

UNIT –V
BUDGETARY CONTROL AND VARIANCE ANALYSIS

Meaning and Definition:

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Budget:

In a view of Keller & Ferrara , “a budget is a plan of action to achieve stated objectives based on predetermined series of related assumptions.”

One can elicit the explicit characteristics of budget after observing the above definitions. They

are...

- It is mainly a forecasting and controlling device.
- It is prepared in advance before the actual operation of the company or project.
- It is in connection with a definite future period.
- Before implementation, it is to be approved by the management.
- It also shows capital to be employed during the period.

Budgetary Control:

, “Budgetary control is the establishment of budgets relating to the responsibilities of executives of a policy and the continuous comparison of the actual with the budgeted results, either to secure by individual action, the objective of the policy or to provide a basis for its revision.”

The main features of budgetary control are:

- Establishment of budgets for each purpose of the business.
- Revision of budget in view of changes in conditions.
- Comparison of actual performances with the budget on a continuous basis.
- Taking suitable remedial action, wherever necessary.
- Analysis of variations of actual performance from that of the budgeted performance to know the reasons thereof.

BUDGETARY CONTROL PROCESS

The process of controlling budgets can be broken down into several steps:

- Establishing actual position
- Comparing actual with budget
- Calculating variances
- Establishing reasons for variances
- Taking action to exert control

Step 1 – Establish Actual Position

All organisations have some form of an accounting system which records their income and expenditure. Depending on the system, budgets will be identified by some form of budget code. Income and expenditure is then recorded against the budget code. This enables budget holders to identify their actual budget position at any point in time.

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This information is normally provided in the financial management report. The style and content of the report will vary from one organisation to another and will be dependent on the financial system used. To establish the actual position, the budget holder will need to examine and understand the financial information available. They will need to know how current the information is and adjust it for any outstanding transactions. These may include debtors and creditors. The budget holder will also need to know if any part of their budget has been “committed” – i.e. if goods and services have been ordered but not yet received.

Therefore, depending on the organisation, establishing the actual position may require information from several different sources.

Step 2 – Compare Actual with Budget

After completing Step 1, the information gathered needs to be compared to the budgeted figures set at the beginning of the financial year. This comparison should be simple if the actual income and expenditure headings match those that were originally set.

The difference between the actual income and expenditure and the budgeted income and expenditure is called a “variance”. Variance analysis is an important technique in the budgetary control process.

Step 3 – Calculating Variances

In the context of budgetary control, the term variance refers to the difference between actual and budget (planned) income and expenditure. An example of a variance is shown as follows:

Step 4 – Establish Reasons for Variances

There are several reasons that can account for differences found between the budgeted and actual expenditure.

The reasons for variances may include:

Error Incorrect figures entered on the accounting system

Delays Delays in entering information on the accounting system Often incorrect budget profiles are entered, v

Profiling relevance to the pattern of actual expenditure and income (e.g. no account taken of seasonal fluctua

Poor budgeting Little consideration given to initial budget preparation

Unplanned changes For example, increases and decreases in demand for services, or introduction of new legislation

Step 5 – Take Action

Budgets can only be controlled if corrective action is taken in response to the variances. Sometimes the explanation for the variance results in no action being required. For example, timing differences. This is where the variance will diminish over time as the actual income and expenditure figures naturally match up with the budget. Variances that arise because of fundamental changes, such as an increase in demand for a service, require action. This is necessary to regain budgetary control.

Objectives of Budgetary Control:

The objectives may be summarized as follows:

- 1) Planning:** Detailed plans relating to production, sales, raw-material requirements, labour needs, capital additions, etc. are drawn out.
- 2) Co-ordination:** Budgeting plays a significant role in establishing and maintaining coordination. Budgeting assists managers in coordinating their efforts so that problems of the business are solved in harmony with the objectives of its divisions.
- 3) Measurement of Success:** Budgets present a useful means of informing managers how well they are performing in meeting targets they have previously helped to set.
- 4) Motivation:** Budget is always considered a useful tool for encouraging managers to complete things in line with the business objectives.
- 5) Communication:** A budget serves as a means of communicating information within a firm.
- 6) Control:** Control is essential to make sure that plans and objectives laid down in the budget are being achieved. Control,

Advantages of Budgetary control:

In the light of above discussion one can see that, coordination and control help the planning. These are the advantages of budgetary control. But this tool offers many other advantages as follows:

1. This system provides basic policies for initiatives.
2. It enables the management to perform business in the most professional manner because budgets are prepared to get the optimum use of resources and the objectives framed.
3. It ensures team work and thus encourages the spirit of support and mutual understanding among the staff.
4. It increases production efficiency, eliminates waste and controls the costs.
5. It shows to the management where action is needed to remedy a position.
6. Budgeting also aids in obtaining bank credit.
7. It reviews the present situation and pinpoints the changes which are necessary.
8. With its help, tasks such as like planning, coordination and control happen effectively and efficiently.
9. It involves an advance planning which is looked upon with support by many credit agencies as a marker of sound management.

Limitations of Budgetary control:

1. It tends to bring about rigidity in operation, which is harmful. As budget estimates are quantitative expression of all relevant data, there is a tendency to attach

some sort of rigidity or finality to them.

2. It being expensive is beyond the capacity of small undertakings. The mechanism of budgeting system is a detailed process involving too much time and costs.

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3. Budgeting cannot take the position of management but it is only an instrument of management. 'The budget should be considered not as a master, but as a servant.' It is totally misconception to think that the introduction of budgeting alone is enough to ensure success and to security of future profits.
4. It sometimes leads to produce conflicts among the managers as each of them tries to take credit to achieve the budget targets.
5. Simple preparation of budget will not ensure its proper implementation. If it is not implemented properly, it may lower morale.
6. The installation and function of a budgetary control system is a costly affair as it requires employing the specialized staff and involves other expenditure which small companies may find difficult to incur.

Essentials of Effective Budgeting:

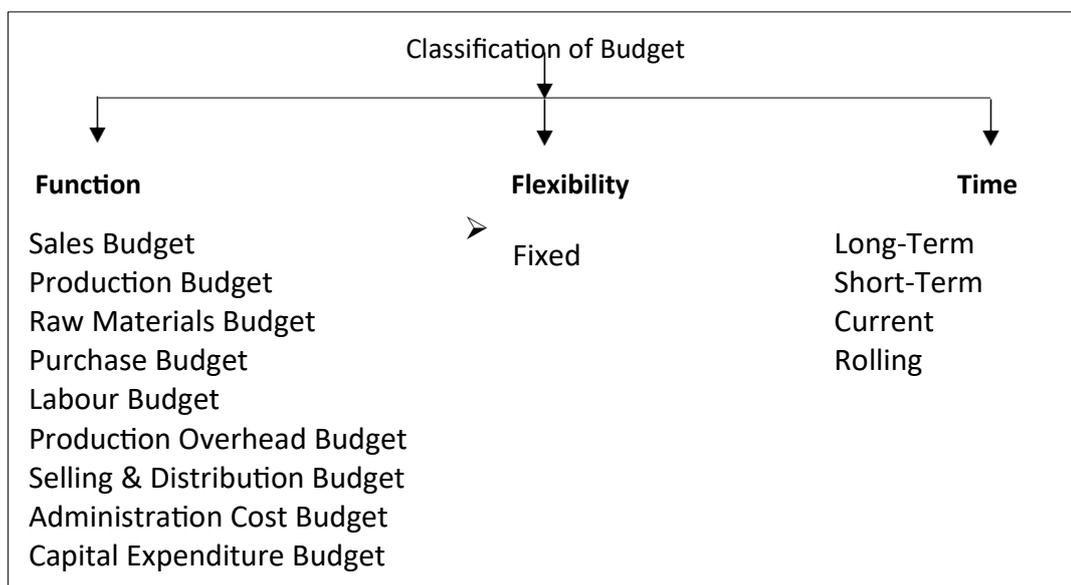
- 1) **Support of top management:** If the budget structure is to be made successful, the consideration by every member of the management not only is fully supported but also the impulsion and direction should also come from the top management. No control system can be effective unless the organization is convinced that the management considers the system to be important.
- 2) **Team Work:** This is an essential requirement, if the budgets are ready from "the bottom up" in a grass root manner. The top management must understand and give enthusiastic support to the system. In fact, it requires education and participation at all levels. The benefits of budgeting need to be sold to all.
- 3) **Realistic Objectives:** The budget figures should be realistic and represent logically attainable goals. The responsible executives should agree that the budget goals are reasonable and attainable.
- 4) **Excellent Reporting System:** Reports comparing budget and actual results should be promptly prepared and special attention focused on significant exceptions i.e. figures that are significantly different from expected. An effective budgeting system also requires the presence of a proper feed-back system.
- 5) **Structure of Budget team:** This team receives the forecasts and targets of each department as well as periodic reports and confirms the final acceptable targets in form of Master Budget. The team also approves the departmental budgets.
- 6) **Well defined Business Policies:** All budgets reveal that the business policies formulated by the higher level management. In other words, budgets should always be after taking into account the policies set for particular department or function. But for this purpose, policies should be precise and clearly defined as well as free from any ambiguity.
- 7) **Integration with Standard Costing System:** Where standard costing system is also used, it should be completely integrated with the budget programme, in respect of both budget preparation and variance analysis.
- 8) **Inspirational Approach:** All the employees or staff other than executives should be strongly and properly inspired towards budgeting system. Human beings by nature do not like any pressure and they dislike or even rebel against anything forced upon them.

Classification of Budget:

The extent of budgeting activity varies from firm to firm. In a smaller firm there may be a sales forecast, a production budget, or a cash budget. Larger firms generally prepare a master budget. Budgets can be classified into different ways from different points of view. The following are the important basis for classification:

Functional Classification:

SALES BUDGET:



The sales budget is an estimate of total sales which may be articulated in financial or quantitative terms. It normally forms the fundamental basis on which all other budgets are constructed.

- Study of past sales to determine trends in the market.
- Estimates made by salesman various markets of company products.
- Changes of business policy and method.
- Government policy, controls, rules and Guidelines etc.
- Potential market and availability of material and supply.

PRODUCTION BUDGET:

The production budget is prepared on the basis of estimated production for budget period. Usually, the production budget is based on the sales budget. Production may be computed as follows: $\text{Units to be produced} = \text{Desired closing stock of finished goods} + \text{Budgeted sales} - \text{Beginning stock of finished goods}$.

PRODUCTION COST BUDGET:

This budget shows the estimated cost of production. The production budget demonstrates the capacity of production. These capacities of production are expressed in terms of cost in production cost budget. The cost of production is shown in detail in respect of material cost, labour cost and factory overhead.

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RAW-MATERIAL BUDGET:

Direct Materials budget is prepared with an intention to determine standard material cost per unit and consequently it involves quantities to be used and the rate per unit.

PURCHASE BUDGET:

Strategic planning of purchases offers one of the most important areas of reduction cost in many concerns. This will consist of direct and indirect material and services. The purchasing budget may be expressed in terms of quantity or money.



LABOUR BUDGET:

Human resources are highly expensive item in the operation of an enterprise. Hence, like other factors of production, the management should find out in advance personnel requirements for various jobs in the enterprise.

PRODUCTION OVERHEAD BUDGET:

The manufacturing overhead budget includes direct material, direct labour and indirect expenses. The production overhead budget represents the estimate of all the production overhead i.e. fixed, variable, semi-variable to be incurred

SELLING AND DISTRIBUTION COST BUDGET:

The Selling and Distribution Cost budget is estimating of the cost of selling, advertising, delivery of goods to customers etc. throughout the budget period.

ADMINISTRATION COST BUDGET:

This budget includes the administrative costs for non-manufacturing business activities like directors fees, managing directors' salaries, office lightings, heating and air condition etc.

CAPITAL- EXPENDITURE BUDGET:

This budget stands for the expenditure on all fixed assets for the duration of the budget period.

CASH BUDGET:

The cash budget is a sketch of the business estimated cash inflows and outflows over a specific period of time. Cash budget is one of the most important and one of the last to be prepared.

FIXED AND FLEXIBLE BUDGET:

1. FIXED BUDGET:

- A fixed budget is prepared for one level of output and one set of condition. This is a budget in which targets are tightly fixed. It is known as a static budget.

2. FLEXIBLE BUDGET:

This is a dynamic budget. In comparison with a fixed budget, a flexible budget is one “which is designed to change in relation to the level of activity attained.”

Flexible budgeting has been developed with the objective of changing the budget figures so that they may correspond with the actual output achieved.

Flexible budget may prove more useful in the following conditions:

- Where the level of activity varies from period to period.

TIME BUDGET:

With regard to time, budgets may be classified into four categories:

- (a) Long-term Budget:** These budgets are prepared on the basis of long-term projection and portray a long-range planning. These budgets generally cover plans for three to ten years.
- (b) Short-term Budget:** In this budget forecasts and plans are given in respect of its operations for a period of about one to five years.
- (c) Current Budgets:** These budgets cover a very short period, may be a month or a quarter or maximum one year.
- (d) Rolling Budgets:** A few companies follow the practice of preparing a rolling or progressive budget.

MASTER BUDGET:

The master budget is a review budget which combines all functional budgets and it may take the form of Financial Statements at the end of budget period. It is also called the operating budget.

Performance Budgeting (PB):

Meaning:

The term performance implies results or outputs. ‘ A performance budget is one which presents the purposes and objectives for which funds are required, the costs of the programmes proposed for achieving those objectives, and quantitative data measuring the accomplishments and work performed under programme. Thus, PB is a technique of presenting budgets for costs and revenues in terms of functions, programmes and activities and correlating the physical and financial aspects of the individual items comprising the budget.

Steps in Performing Budgeting (PB):

- ✓ Establishment of performance targets
- ✓ Establishment of responsibility centre

- ✓ Estimating financial requirements
- ✓ Comparison of actual with budgeted performance

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- ✓ Reporting and action

Zero Base Budgeting:

The 'Zero-Base' refers to a 'nil-budget' as the starting point. It starts with a presumption that the budget for the next period is 'zero' until the demand for a function, process, or project is not justified for single penny. The assumption is that without such justification, no expenditure will be allowed. In effect, each manager or functional head is required to carry out cost-benefit analysis of each of the activities, etc. under his control and for which he is responsible.

Procedure of Zero-base Budgeting:

- (1) Determination of the objective: the business objectives.
- (2) **Degree at the ZBB is to be introduced:**
- (3) Growth of Decision units:
- (4) Growth of Decision packages:
- (5) **Assessment and Grading of decision packages:**
- (6) **Allotment of money through Budgets:**

VARIANCE ANALYSIS

Control can be said to be of 3 steps:-

Establishment of Standards.

* Evaluation of Activity.

Taking Corrective Action (if any).

The first step has given rise to the concept of standard costing.

Standard costing can be applied to any facet of management especially in relation to production and labour & over head cost.

Standard recipe, standard food cost, standard yield, standard man-hours, time & motion study, are all outcomes of standard costing,

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Standard costing is also known as pre-costing i.e. costing before the event.

When actual operation is undertaken i.e. the *second* step which is evaluation of activity there are some variations which happen which in management terms is

termed as variances. Variances can be Adverse and Favourable.

This analysis and taking corrective action is the management function which is known as Variance Analysis.

Any cost function which *can* be budgeted *can* be subjected to Variance Analysis viz.:-
Sales.

Marketing.

Labour.

* Material.

Overhead.

* Profit.

Material Variance can be classified into:-

Material Price Variance

This type of variance occurs when the materials are supplied at different prices over a period (accounting cycle). This type of price variance does not occur much in hotels where tender purchase is followed and food materials are supplied at a uniform price over a period of time.

The mathematical calculation is as follows:- $(\text{Standard Price} - \text{Actual Price}) \times \text{Actual Quantity}$

Material Usage Variance

This type of Variance is very common in hotel operations, as much of the materials are fabricated by human beings who are more susceptible to errors. (In other organized industries a lot of machines are used for fabricating materials).

The mathematical calculation is as follows:-

$(\text{Standard Material} - \text{Actual Material used}) \times \text{Actual Price}$.

Labour variance can be classified as under:

1) Labour rate variance : is the difference between the standard and actual rate of pay, multiplied by the actual hours.

The formula being $(\text{Standard rate} - \text{Actual rate}) \times \text{actual hours worked}$.

2) Labour efficiency variance : is due to actual efficiency being different from that expected and is calculated as the difference between actual hours worked and the hours which should have been worked to produce the actual output.

The formula is $(\text{Standard hours of actual output} - \text{Actual hours}) \times \text{Standard rate}$.

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Overhead variances are as follows

1) Over head variance is the difference between standard overhead cost for actual output and the actual overhead cost incurred.

The formula for computing the variance is as follows: Overhead recovered

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–Actual Overhead.

2) Fixed overhead Variance is the difference between the standard fixed overhead for actual output and the actual fixed overhead incurred. The formula is as follows: Fixed overhead recovered –Actual over head.

Sales Variance

The technique of variance analysis can be effectively used for the purpose of analyzing sales variance. Sales variance can be used to identify the reasons for divergence between budgeted and actual performance so that adequate control measures may be taken.

There are two methods for calculating sales variances:

1) On the basis of turn over (sales) and the formula is : Budgeted sales - Actual sales.

2) On the basis of profit margin and the formula is : Budgeted profit – Actual profit.

As far as F & B Operation is concerned we are mainly concerned about Material Variance which is food material.

Similarly labour and overhead variances could be calculated and analysed but strictly it is an area of the Human Resource Department (Labour) & Maintenance Department (Overhead). In small organizations it may be handled by the Sectional Manager also.

Advantages of Variance Analysis or Standard Costing

It gives a standard for measurement.

* It gives an objective to be achieved.

* It has given birth to the concepts of:

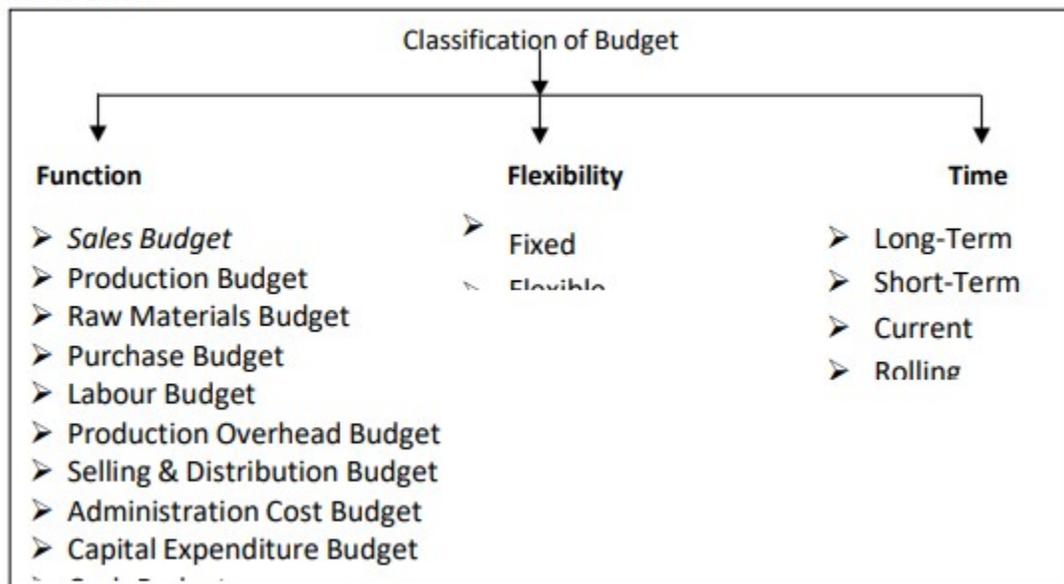
1. Standard Purchase Specification
2. Standard Recipe
3. Standard yield
4. Standard Portion Cost

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Disadvantages of Variance Analysis / Standard Cost

- * Discourages Creativity. Expensive and time consuming.
- * Cannot be accurately measured in multi-product operations where the same ingredient is used in many products.
- * It is a step done after the job where rectification is only possible for future events.
- * Unutilized portions of food cannot be effectively reutilized.

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- BUDGETARY CONTROL PROCESS, ADVANTAGES AND DISADVANTAGES

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BUDGETARY CONTROL

Budgetary control is the process of preparing budgets for the future period, comparing the standards set by budget with the actual performance, finding out the reasons for the differences in performance and taking corrective actions.

TYPES OF CONTROL

Operational Budget

Cash Flow Budget

Capital Expenditure Budget

3 STEPS PROCESS

PREPARE
BUDGETS

COMPARE
WITH
ACTUALS

CORRECTIVE
ACTIONS

ADVANTAGES

- Effective tool for measuring the performance
- Identify weak areas
- Improvement measures
- Brings efficiency
- Brings discipline
- Improve coordination
- Simple tool
- Performance on track

DISADVANTAGES

- Future uncertainty reduces the value of budget control
- It makes talented employees complacent and overburdens the less talented ones.
- Conflicting departmental goals.

- VARIANCE ANALYSIS

VARIANCE ANALYSIS

VARIANCE ANALYSIS deals with an analysis of deviations in the budgeted and actual financial performance of a company.

IMPORTANCE

- Helps managers in making efficient, detailed & forward-looking budgetary decisions.
- Acts as a control mechanism.
- Facilitates assigning responsibility & engages control mechanism on depts.

LIMITATIONS

- Based on financial results which are released much later.
- Budgeting exercise may be loosely done which is bound to deviate from the actual numbers.

Formula:- Actual Income/Expense – Budgeted Income/Expense

LIST OF VARIANCES

1. Sales Quantity Variance
2. Sales Mix Variance
3. Sales Price Variance
4. Raw Material Price Variance
5. Raw Material Usage Variance
6. Raw Material Mix Variance
7. Labor Rate Variance
8. Labor Efficiency Variance
9. Fixed Overhead Expenditure Variance
10. Variable Overhead Expenditure Variance

