

## Unit 3 Cost Control Techniques

### Cost Control Concept

Cost control is associated with;

- a. maintaining the costs as per the set standards/budget
- b. Achieving the predetermined costs
- c. Laying down a target, ascertain actual adherence to standards
- d. As a preventive function that is applicable to items of costs which have standards /Budget
- e. Achievement of budgetary control and standard costing

There are certain factors that influence cost reduction and control.

## Unit 3 Cost Control Techniques

### Marginal Costing;

Marginal costing is a technique that focuses on analyzing the costs and profits of each unit of output. This technique separates fixed and variable costs and calculates the contribution margin for each unit. The contribution margin is the difference between the selling price and the variable cost of each unit. Marginal costing helps managers to make decisions about pricing, sales volume, and product mix.

The term marginal cost implies the additional cost involved in producing an extra unit of output, which can be reckoned by total variable cost assigned to one unit. It can be calculated as;

$$\text{Marginal Cost} = \text{Direct Material} + \text{Direct Labor} + \text{Direct Expenses} + \text{Variable Overheads}$$

### Uses of Marginal Costing;

Marginal Costing assists the managers in taking multiple business decisions, such as replacement of machines, discontinuing a product or service, etc. It also helps the management in ascertaining the appropriate level of activity, through break even analysis, that reflect the impact of increasing or decreasing production level, on the company's overall profit.

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### Cost Volume Profit Analysis;

Cost-Volume-Profit analysis is a technique for studying the relationship between cost, volume and profit.

Profits of an undertaking depend upon a large number of factors. But the most important of these factors are the cost of manufacture, volume of sales and the selling prices of the products.

The CVP analysis may be used in determining the break-even-point.

Fixation of selling prices.

Selecting the suitable product/sales mix.

Profit planning and maintaining a desired level of profit.

Determining the optimum level of activity.

Evaluating the performance.

Taking many other decisions involving alternative choices such as make or buy decision, accept or reject decisions etc.

There are certain assumptions that are required to be made for the cost volume profit analysis.

## Unit 3 Cost Control Techniques

### Concept of Break Even

Break Even means the volume of production or sales where there is no profit or loss.

Break Even Point is the volume of production or sales where total costs are equal to revenue. It helps in finding out the relationship of costs and revenues to output. In understanding the breakeven point, cost, volume and profit are always used. When no. of units are expressed on X-axis and costs and revenues are expressed on Y-axis, three lines are drawn i.e., fixed cost line, total cost line and total sales line. In the above graph we find there is an intersection point of the total sales line and total cost line and from that intersection point if a perpendicular is drawn to X-axis, we find break even units.

Similarly, from the same intersection point a parallel line is drawn to X-axis so that it cuts Y-axis, where we find Break Even point in terms of value.

Break Even point is the point where neither profit or losses are made.

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### Profit Volume Ratio and Margin of Safety

Profit Volume Ratio (P/V Ratio) is the ratio of contribution and sales.

It is generally expressed in percentage. It exhibits % of contribution included in sales.

i.e.  $P/V \text{ Ratio} = \text{Contribution per Unit} / \text{Sales} \times 100$ . It indicates the effect on profit for a given change in sales.

P / V ratio is also used in making the following type of calculations;

- a. Calculation of Break even point.
- b. Calculation of profit at a given level of sales.
- c. Calculation of the volume of sales required to earn a given profit.
- d. Calculation of profit when margin of safety is given.
- e. Calculation of the volume of sales required to maintain the present level of profit if selling price is reduced.

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### Margin of Safety(MS)

Margin of safety is the difference between actual sales and the break- even sales.

Margin of safety also represents excess of output over break even point output.

At break-even point, no profit is earned, and only fixed expenses are covered.

Margin of safety is some thing more than break-even point which normally includes profit.

Margin of safety (MS) = Present sales – Break- even sales.

Margin of safety = Profit ÷ PV ratio

Margin or Safety (in Units) = Profit ÷ Contribution per unit

Margin of Safety can be expressed as a percentage of sales ie.,  $(MS \times 100) \div \text{total sales}$ .

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### Margin of Safety

Higher the MS, more the profit.

At BEP MS is nil. If MS is small, then reduction in sales or production would lead to loss.

MS can be increased by:

Increase in the level of production or sales and utilizing the unused capacity; increase the selling price; reduce the fixed or variable costs or substitute the existing products with more profitable products.

## Unit 3 Cost Control Techniques

### Budgets and Budgetary Control

Budget means a financial and quantitative statement prepared and approved prior to a defined period of time. It is plan of expected achievements based on most efficient operating standards in effect. It may be considered as a guide.

#### Purpose

1. Planning – It helps in combining ideas of different management levels. So that maximum profitability is achieved.
2. Co-ordination – It brings different people together in accomplishing the organizational goals.
3. Control – It helps in comparing the actual results with the estimates and putting controls wherever required.



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### Budgetary Control

It is a system of planning and controlling costs. It helps in comparing the actual results with budgeted estimates to secure by individual action the objective of that policy or to provide basis for its revision.

#### Steps in budgetary control

1. **ESTABLISHMENT OF BUDGETS** – Budgets are prepared for each division and are well co-ordinated with each other to prepare the master budget of a firm.
2. **MEASUREMENT OF ACTUAL PERFORMANCE** – The actual results are measured to compare with the budgets.
3. **COMPARISON AND VARIANCES** – The actual results after comparing with standards, deviations are work out known as variances.
4. **ANALYSIS OF CAUSES OF VARIATION** – The deviations between budgeted and actual results are studied and analysed help in taking the right action in right time.

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### Types of Budget

- ❖ **FLEXIBLE BUDGET** – Flexible Budget estimates cost of several level of activities. Instead of one estimates it contains several estimates in different assumed circumstances. The construction of flexible budget is similar to fixed budget is based on cost and other business operations at one level, the flexible budget consider several operations. The essence of flexible budget is the presentation of estimated cost data in a manner that permits their determination at various levels of volume. This means that all costs must be identified into fixed and variable. Fixed cost remain unchanged. They are fixed for a relevant range of volume for a given budget period. Variable cost fluctuate in direct proportion to the activity/ volume within relevant range for a given budget period. Mixed cost contains both fixed and variable element.

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### Types of Budget

- ❖ **CASH BUDGET** – A Cash Budget is a projected cash transaction in future that is utilized in controlling actual receipts and payments by mending for the variances. It starts with a given 'Cash Balance' which may be either big or small. But the said balance is, in any case, desired to be 'the optimum balance'. The sign of optimality for a given cash balance is obviously its ability to produce the highest rate of return for the minimum cost for mainly the said cash balance. The main aim of Cash Budget is to ascertain whether there is excess or deficit of cash. It involves different steps. i. The First element is selection of time period to be covered which is known as planning horizon. This coverage will differ from firm to firm depending upon its nature and degree of accuracy. ii. The Second element is the factors affecting the cash flows. Non cash items such as, depreciation are excluded from Cash Budget. The cash flow is affected by two factors operating and financial. The operating category includes cash flow generated by operations of the firm and are known as operating cash flows. The other category is known as financial cash flow.

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### VARIANCE ANALYSIS

The process of analysis variances by sub-dividing the total variance in such a way that management can assign responsibility for off-standard performance.

Interpretation of Variances: Each variance is interpreted accordingly and by “interpretation” we mean making a decision whether the variance is favourably or unfavorable and attaching responsibility.

- When actual cost is less than the standard cost, the difference is considered “FAVOURABLE” or CREDIT VARIANCE.
- On the other hand when the actual cost exceeds the standard cost, the difference is termed as UNFAVOURABLE or a DEBIT VARIANCE.
- Ordinarily, a favourable variance is a sign of efficiency of the organisation whereas an unfavourable variance is a sign of inefficiency.

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### VARIANCE ANALYSIS

#### Classification

##### Controllable and Uncontrolled Variances

Variance is said to be controllable if it is identified as the primary responsibility of a particular person or department. The excessive use of materials or labour hours than the standards can be attributable to a particular person.

When the variations are due to the factors beyond the control of the concerned person or department, it is said to be uncontrolled. The rise in prices of materials, increase in wage rates, Govt. restrictions etc., are the examples of uncontrollable variance.

These factors are not within the control of the management and the responsibility of the variance cannot be assigned to any particular person or division.

The division of variance into controllable and uncontrollable is important from the view point of management as it can place more emphasis on controllable variance and thus facilitates to the principle of management by exception.

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### VARIANCE ANALYSIS

Variances can be further divided into;

#### a. Cost variances

In the manufacturing function, cost variances are classified on the basis of the elements of cost viz. material, labor and expense variances. In cost analysis the standard cost of each element of cost is reconciled with actual cost and difference is called cost variance or total variance.

The cost variance has two components:

- ✓ Price Variance; and
- ✓ Volume variance.

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### VARIANCE ANALYSIS

#### b. Sales variances.

Cost variances are supported by sales variances and they are a part of comprehensive information presented to the Management.

There are two approaches used in calculating sales variances;

(i) Turnover method or Sales Value; and

(ii) Profit / Sales Margin Method

In the sales value method, variances are calculated on the basis of the figure of the pre-determined sales and actual sales whereas in sales margin method, calculation of variances is done on the basis of the figures of predetermined profit and actual profit.

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### VARIANCE ANALYSIS

As the first method fails to measure the effect/impact of deviations of actual sales from planned sales, the management is usually interested in the sales margin approach.

Management is usually interested in knowing to what extent actual sales margin differed from budgeted sales margin – and not on why budgeted sales differed from actual sales, therefore sales margin approach is preferable.