Module 15 : Standard Costing and Variance Analysis

Lecture 1 : Standard Costing and Variance Analysis

Objectives

In this lecture you will learn the following

- Definition of standard.
- Steps in standard costing.
- Types of standards.
- Variance.
- Types of variance.
- Variance Analysis.
- Advantages & disadvantages of Std costing.

Standard

- It's a norm or bench mark.
- It is useful for comparison.
- it may indicate minimum quality.
- Eg. Standard of passing.

Standard Cost

- An estimated or pre-determined cost of performing an operation or producing a good or service, under normal conditions.
- It is used as a basis for cost control through variance analysis.

It is chosen to serve as a benchmark in the standard costing/ budgetary control system. It is a budget for the production of one unit of product or service.

It is a pre-determined cost which is calculated from management's standards of efficient operation and the relevant necessary expenditure.

Standard Costing

It is a cost accounting technique for cost control where standard costs are determined and compared with actual costs, to initiate corrective action.

- It is a control method involving the preparation of detailed cost and sales budgets.
- A management tool used to facilitate management by exception.

Steps in Standard Costing

Steps in Standard Costing

Set the standard cost

- A standard quantity is predetermined and standard price per unit is estimated.
- Budgeted cost is calculated by using standard cost.

- **Record the actual cost**
  - Calculate actual quantity and cost incurred giving full details.

- **Variance Analysis**
  - Comparison of the actual cost with the budgeted cost.
  - The cost variance is used in controlling cost.
  - Take suitable corrective action.
  - Fix responsibilities to ensure compliance
  - Create effective control system.
  - Resetting the budget, if required.

Types of standards

Ideal Standards :

These represents the level of performance attainable when prices for material and labour are most favorable, when the highest output is achieved with the best equipment and layout and when maximum efficiency in utilization of resources results in maximum output with minimum cost.

Normal Standards :

These are the standards that may be achieved under normal operating conditions. The normal activity has been defined as number of standard hours which will produce normal efficiency sufficient goods to meet the average sales demand over a term of years.

Basic or Bogey standards :

These standards are use only when they are likely to remain constant or unaltered over long period. According to this standard, a base year is chosen for comparison purposes in the same way as statistician use price indices.

When basic standards are in use, variances are not calculated as the difference between standard and actual cost. Instead, the actual cost is expressed as a percentage of basic cost.

Current Standard :

These standards reflect the management's anticipation of what actual cost will be for the current period. These are the costs which the business will incur if the anticipated prices are paid for goods and services and the usage corresponds to that believed to be necessary to produce the planned output.

Variance

- The difference between standard cost and actual cost of the actual output is defined as Variance. A variance may be favourable or unfavourable.
- If the actual cost is less than the standard cost, the variance is favourable and if the actual cost is more than the standard cost, the variance will be unfavourable.
- It is not enough to know the figures of these variances in fact it is required to trace their origin and causes of occurrence for taking necessary remedial steps to reduce / eliminate them.

Variance - Types

The purpose of standard costing reports is to investigate the reasons for significant variances so as to identify the problems and take corrective action. Variances are broadly of two types, namely, controllable and uncontrollable.

Controllable Variance

Controllable variances are those which can be controlled by the departmental heads whereas uncontrollable variances are those which are beyond their control. If uncontrollable variances are of significant nature and are persistent, the standards may need revision.

Variance Analysis

Variance analysis is the dividing of the cost variance into its components to know their causes, so that

one can approach for corrective measures.

Variances of Efficiency :

Variance arising due to the effectiveness in use of material quantities, labour hours. Here actual quantities are compared with predetermined standards.

Variances of Price Rates :

Variances arising due to change in unit material prices, standard labour hour rates and standard allowances for indirect costs. Here actual prices are compared with predetermined ones.

Variances of Due to Volume :

Variance due to effect of difference between actual activity and the level of activity estimated when the standard was set.

Reasons of Material Variance

- Change in Basic price.
- Fail to purchase anticipated standard quantities at appropriate price.
- Use of sub-standard material.
- Ineffective use of materials.
- Pilferage.

Material Variance

- Material Cost Variance = (Standard Quantity X Standard Price) – (Actual Qty X Act Price)

- Material Price Variance = Actual Quantity (Standard Price - Actual Price)

- Material Usage Variance = Standard Price (Standard Quantity - Actual Quantity)

Reasons of Labour Variance

- **Time Related Issues**.
- Change in design and quality standard.
- Low Motivation.
- Poor working conditions.
- Improper scheduling/placement of labour.
- Inadequate Training.

- **Rate Related Issues.**
- Increments / high labour wages.
- Overtime.

- Labour shortage leading to higher rates.
- Union agreement.

Labour Variance

- **Labour Cost Variance** = (Standard Hrs X Standard Rate Per Hour) –(Actual Hrs X Actual Rate Per Hour)
- **Labour Rate Variance** = Actual Hrs (Standard Rate - Actual Rate)
- **Labour efficiency Variance** = Standard Rate (Std Hrs - Actual Hrs worked)
- **Idle Time Variance** = Idle Hours X Std Rate

Reasons of Overheads Variance

- Under or over absorption of fixed overheads.
- Fall in demand/ Improper planning.
- Breakdowns /Power Failure.
- Labour issues.
- Inflation.
- Lack of planning.
- Lack of cost control.

Variable Overheads (OH) Variance

- **Variable OH Cost Variance** = (Standard Hrs X Standard Variable OH Rate) – Actual OH Cost

Variable OH Variance

- **Variable OH Expenditure Variance** = (Actual Hrs X Standard Variable OH Rate) – Actual OH Cost
- **Variable OH Efficiency Variance** = (Standard Hrs - Actual Hrs) X Standard Variable OH Rate

Fixed Overheads (OH) Variance

- Fixed OH Cost Variance = Absorbed OH – Actual OH
- Absorbed OH = Actual Units * Standard OH Rate per unit

Fixed OH Variance

- Fixed OH Expenditure Variance = Budgeted OH – Actual OH
- Fixed OH Volume Variance = Absorbed OH – Budgeted OH

Reasons of Sales Variance

- Change in price.
- Change in Market size.
- Change in Market share.

Sales Variances

- **Sales Value Variance** = Budgeted Sales – Actual Sales
- **Sales Price Variance** = Actual Quantity (Actual Price - Budgeted Price)
- **Sales Volume Variance** = Budgeted Price (Actual Quantity - Budgeted Quantity)

Advantages of Standard Costing

Advantages

- Basis for sensible cost comparisons.
- Employment of management by exception.
- Means of performance evaluation for employees.
- Result in more stable product cost.

Disadvantages of Standard Costing

Disadvantages

- Too comprehensive hence time-consuming.
- Precise estimation of prices or rates is difficult.
- Requires continuous revision with frequent changes in technology/ market trends.
- Focus on cost minimization rather than quality or innovation.

Material Variance

- Material Cost Variance
- Material Price Variance
- Material Usage Variance
- Can we sub-divide Usage Variance?
- What are its causes, when we have more than one Raw Material?

Material Variance

- Material Cost Variance
- Material Price Variance
- Material Usage Variance
- Material Yield Variance
- Material Mix Variance
- Material Cost Variance = (Standard Quantity X Standard Price) – (Actual Qty X Act Price)
- Material Price Variance = Actual Quantity (Standard Price - Actual Price)
- Material Usage Variance = Standard Price (Standard Quantity - Actual Quantity)
- Material Yield Variance = (Std Input Qty - Actual Input Qty) * Std Price of Std Input
- Material Mix Variance = Standard Price (Revised Standard Quantity - Actual Quantity)

Fixed Overheads (OH) Variance

- Fixed OH Cost Variance = Absorbed OH – Actual OH
- Absorbed OH = Actual Units * Standard OH Rate per unit

Fixed OH Variance

- Fixed OH Expenditure Variance = Budgeted OH – Actual OH
- Fixed OH Volume Variance = Absorbed OH – Budgeted OH

Material Variance

- F OH Cost Variance
- F OH Expenditure Variance
- F OH Volume Variance
- Can we sub-divide Volume Variance?
- What are its causes, why may volume vary?

Fixed OH Variance

- Fixed OH Efficiency Variance = Standard OH Rate per hour (Standard Hrs - Actual Hrs)
- Fixed OH Capacity Variance = Standard OH Rate per hour (Budgeted Hrs - Actual Hrs)