# STANDARD COSTING

By

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# Standard Costs

- Standard costs are benchmarks based on standards established in advance for (1) the quantity of resources that should be consumed by each product or other unit of output and (2) the price of these resources
- The unit standard cost for a particular input = standard price x standard quantity

# Definition of Standard Cost

- **Target costs for each operation that can be use built up to produce a product standard cost**

**Definition of standard cost according to the CIMA London, “predetermined cost which is calculated from management’s standards of efficient operations and relevant necessary expenditure.” They are the predetermined costs on technical estimate of material labor and overhead for a selected period of time and for prescribed set of working conditions.**

# Advantages of Standard Costing

1. To measure efficiency
2. To fix prices and formulate policies
3. For Effective cost control
4. Management by exception
5. Valuation of stocks
6. Cost consciousness

# Limitations of Standard Costing System

- Traditional standard costing tend to focus too much on cost minimization rather increasing product quality or customer service. Standard costing system can cause dysfunctional behaviour in a JIT/FMS environment . e.g buying the least expensive material of a given quality in order to avoid a material price variance may result in using a vendor whose delivery capabilities are not consistent with JIT

# Types of Standards

- **Ideal standards**
  - Standards that demand maximum efficiency
  - Can only be achieved if everything operates perfectly
  - Minimum costs that are possible under the most efficient operating condition
- **Currently attainable standards**
  - Can be achieved under efficient operating condition
  - These standards are demanding but achievable
  - Allowance is made for normal breakdowns, interruptions and differing skill levels

# Types of Standards (cont.)

- **Basic standard**
  - Constant standards that are left unchanged over long periods. Main advantage: a base is provided for a comparison with actual costs through a period of years with the same stand and efficiency trends can be established over time
  - Disadvantages: not very useful when changes occur in method so f production, price levels
- **Kaizen standards**
  - Continuous improvement standards that reflect a planned improvement
  - Currently attainable and have a cost reduction focus

# ANALYSIS OF VARIANCE

Variances are analyzed in respect of:

1. Direct material

2. Direct labor

3. Overheads:- a. Variable overheads
   b. Fixed overheads

**Rules of Thumb method-**

Based on experience, intuition and judgment, managers may develop some rules which guide them in investigation decision. This method has its own limitations because of its rule of thumb nature.

**Cost- benefit analysis –**

Since not all variances are investigated by management, therefore decisions to investigate can also be taken by cost benefit analysis.

**Use of statistical quality control –**

SQC can also be applied by the firm in deciding whether to investigate a variance. The key to SQC is a control chart.

# Basic Variance Analysis

- Direct Material Variance
  - Material Price Variance
  - Material Quantity Variance
- Direct Labour Cost Variance
  - Labour Rate Variance
  - Labour Efficiency Variance
- Variable Overhead Variance
- Fixed Overhead Variance

# Direct Material Variance

- **Total direct material cost variance =SC – AC**
- **(SP x SQ) – (AP x AC)**
- **Price Variance**
- **Quantity (Usage ) Variance**

# Direct material price variance

- **Formula: (SP – AP) AQ**
- **AQ = actual quantity purchased**
- **The material price variance should be recorded at the time materials are purchased. This permits:**
  - **Early recognition of the variance**
  - **Carrying materials in inventory at standard cost**

# Material Price Variance

- May not always indicate the efficiency of purchasing department
- Possible causes:
  - a change in market condition causing a general price increase for the type of material used
  - failure by the purchasing department to seek the most advantageous sources of supply
  - purchase of inferior quality materials which may lead to inferior product quality or more wastage
- Other department may be responsible for all or part of price variance

# Direct material quantity variance

- Formula: (SQ – AQ) SP
- Normally controllable by the manager of the appropriate production responsibility centre
- Common causes include:
  - careless handling of materials
  - purchase of inferior quality materials
  - pilferage
  - changes in quality control requirements
  - changes in method of production

# Direct Labour Variance

- Direct Labour Rate Variance
- Direct Labour Efficiency Variance

# Direct Labour Rate Variance

- Formula: (SR – AR) AH
- Least subject to control by management
- Possible causes
  - Due to a negotiated increase in wage rates not yet having been reflected in the standard wage rate
  - A standard is used that represents a single average rate for a given operation performed by workers who are paid at several different rates

# Direct Labour Efficiency Variance

- Formula: SR (AH – SH)
- Normally controllable by the manager of the appropriate production responsibility centre
- Possible causes:
  - Use of inferior quality materials
  - Different grades of labour
  - failure to maintain machinery
  - The introduction of new equipment
  - Changes in the production processes, poor production scheduling

# Variable Overhead Variance

- **Variable Overhead Spending Variance**
- **Variable Overhead Efficiency Variance**

# Variable Overhead Variance

- Total Variable Overhead Variance is the difference between the standard variable overhead charged to production and the actual variable overhead incurred
- **Overhead Spending Variance**
  - Formula: AH (AR – SR)
- **Overhead Efficiency Variance**
  - Formula: SR (AH – SH)

# Variable overhead spending Variance

- Need to compare actual expenditure for each individual item of variable overhead expenditure against the budget
- Variable overhead expenditure variance is equal to the difference between the budgeted flexed variable for the actual direct labours hours of input (BFVO) and the actual variable overhead costs incurred(AVO)

# Variable overhead efficiency Variance

- Arise because more or less of input (direct labour hours) were required for actual production
- Variable overhead efficiency variance is the difference between the standard hours of output (SH) and the actual hours of input (AH) multiplied by the standard variable overhead rate

# Fixed Overhead Variance

- Total fixed overhead variance
- Fixed overhead expenditure variance
- Volume variance

# ADVANCE VARIENCE ANALYSIS

# Material Mix Variance

- This is that portion of usage variance which is due to the difference between the standard and actual composition of mixture.
- **Material Mixture Variance** = Standard price [Actual quantity in standard mix (i.e. RSQ) – Actual quantity]
- **Revised Standard quantity** = Total actual quantity consumed $\times \frac{\text{Standard quantity of particular material}}{\text{Total standard quantity of all the materials}}$

# Mix and Yield Variance

- For direct materials the sum of the mix and yield variances equals the material usage variance
- For direct labour, the sum is the labour efficiency variance

# Material Usage Variance

- This is that portion of material cost variance which is due to the difference between the standard quantity of actual production and the actual quantity used.

- ***Formula:***

- ***Material Usage Variance = Standard price (Standard quantity – Actual quantity)***


THANK
YOU