Standard Costing & Variance Analysis
A standard cost is a carefully predetermined estimated unit cost of a particular product/service. It is usually a standard cost per unit of production, or per unit of service rendered, or per routine task completed, or standard cost per LKR 1 of sale.

A standard cost per unit of production might include administration, selling and distribution cost also in addition to production cost. But in many organizations, the assessment of standard cost is confined to production cost only.

Hence, most of the organizations tend to set standard cost and conduct variance analysis based on production cost.
Setting & Monitoring Standard Cost

Setting and monitoring of standard cost within the organization involves following steps;

- Setting the standards
- Ascertaining the actual results
- Comparing standards and actual costs to determine the variances
- Investigating the variances and taking appropriate actions where necessary
Setting Standard Cost (Contd.)

The responsibility for setting standard cost should be shared among managers who are able to provide the necessary information about levels of expected efficiency, prices and overhead costs.

Standard costs are usually revised in once a year to allow for the new overhead budget, inflation in price and any changes in expected efficiency of material usage or labor.

The number of people are concerned with setting standards will depend on the size and the nature of the business, but it is ideal to get involve not the maximum number of people but the people who can make maximum contribution.
In a large organization, following people usually involves in setting standards.

**The production Controller:** He will give the details of production requirements in terms of material, labor and overhead.

**The buyer:** He will prepare the schedules of prices and give details of market price trends.

**The personnel Manager:** He will provide labor rates of pay and possible forecast of any changes in rates.

**The Time Study Engineer:** He will calculate standard times for the many operations involved.

**The Cost Accountant:** He will provide all necessary cost figures such as labor requirements, overhead recovery rates etc. However his main function will be to co-ordinate the activities of the committee, so that the standards set will be as accurate as possible and to present the standards and standard cost statements in the most meaningful manner.
Budgeted costs, in contrasts, are total rather than unit costs, and whereas it is possible to have budgeting without standard costs, it is not possible to have standard cost system without a total cost budgeting system. In practice, the terms “budgeted costs” and “standard cost” might be used interchangeably.

**Standard Cost Card**

*Product: Prizma, No.3304*

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Rs.</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A 6 kg at Rs. 20/= per kg</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>B 2 kg at Rs. 30/= per kg</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>C 1 liter at Rs. 40/= per liter</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>20</td>
<td>240</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Item Description</th>
<th>Rs.</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade I: 3 Hours at Rs. 40/= per hour</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Grade II: 5 Hours at Rs. 54/= per hour</td>
<td>270</td>
<td>390</td>
</tr>
<tr>
<td>Variable production overhead: 8 hours at Rs. 10/=</td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Fixed Production Overhead: 8 hours at Rs. 30/= per hour</td>
<td></td>
<td>240</td>
</tr>
<tr>
<td>Standard full Cost</td>
<td></td>
<td>950</td>
</tr>
</tbody>
</table>
Advantages of Standard Costing

The implementation of a system of standard costing has many advantages.

- Standard costs provide a yardstick against the actual cost.
- The setting of standards involves determining the best materials and methods, which may lead to economies.
- A target of efficiency is set for employees to reach and cost consciousness is stimulated.
- Variances can be calculated which enable the principle of “Management by Exception” to be operated.
- Costing procedures are often simplified.
- Standard costs provide a valuable aid to management in determining prices and formulating policies.
Variance Analysis

Variances highlights the situation of management by exception where actual results are not as planned, whether better or worse. Variances represents the difference between standard and actual for each element of cost and sometimes for sales.

- When actual results are better than expected, a favorable variance arises.
- Even when actual results are not up to the expectation, an adverse variance occurs.

Variances can pinpoint responsibilities of the respective line managers which assists in ascertaining results to determine whether they are good or bad. Different variances are used in different industries, but it will be discussed only those that are frequently used in practice.
Variance Analysis

- Variances
  - Cost Variances
    - Direct Material Variances
    - Direct Labor Variances
    - Overhead Variances
  - Sales Variances
    - Sales Price Variances
    - Sales Volume Variances
      - Variable Overhead Variances
      - Fixed Overhead Variances
      - Sales Mix Variances
      - Sales Quantity Variances
Variance Analysis

Variable Overhead Cost Variance
  - Variable Overhead Expenditure Variance
  - Variable Overhead Efficiency Variance

Fixed Overhead Cost Variances
  - Fixed Overhead Expenditure Variances
  - Fixed Overhead Volume Variance
    - Fixed Overhead Capacity Variances
    - Fixed Overhead Efficiency Variances
Variance Analysis

Sales Value Variances

Sales Price Variances
Sales Volume Variance

Sales Mix Variances
Sales Quantity Variances
Summary

DMCV = **DMPV** + **DMQV**

DMCV = (Actual cost of material – Standard cost of material)

   = (AP*AQ) – (SP*SQ)

**DMPV** = AQ (SP-AP)

**DMQV** = SP (SQ-AQ)

DM Mix Var. = SP [AQ(standard mix) – AQ(actual mix)]

DM Yield Var. = SP(SY-AY)

DLCV = **DLRV** + **DLEV** + Idle Time Variance

DLCV = (Actual cost of labour – Standard cost of labour)

   = (AR*AH) – (SR*SH)

**DLRV** = AH(SR-AR)

**DLEV** = SR(AH-SH)

Idle Time Variance = Idle Time (hours)*SR
Summary

VOHCV = VOH Ex. V + VOH Ef. V  or  
VOHCV = (Actual VOH – Standard VOH)

VOH Ex. V = (Actual VOH) – (AH*VOAR)
VOH Ef. V = VOAR (SH-AH)

VOAR = Budgeted VOH/Budgeted Hours(Units)

FOHCV = FOH Ex. V + FOH Volume V  or  
FOHCV = (Actual FOH – Standard FOH)

FOH Ex. V = (Actual FOH) – (Budgeted FOH)
FOH Volume V = (Budgeted FOH) – (SH*FOAR)

FOH Ef. V = FOAR (SH-AH)
FOH Capacity V = (Budgeted FOH) – (AH*FOAR)