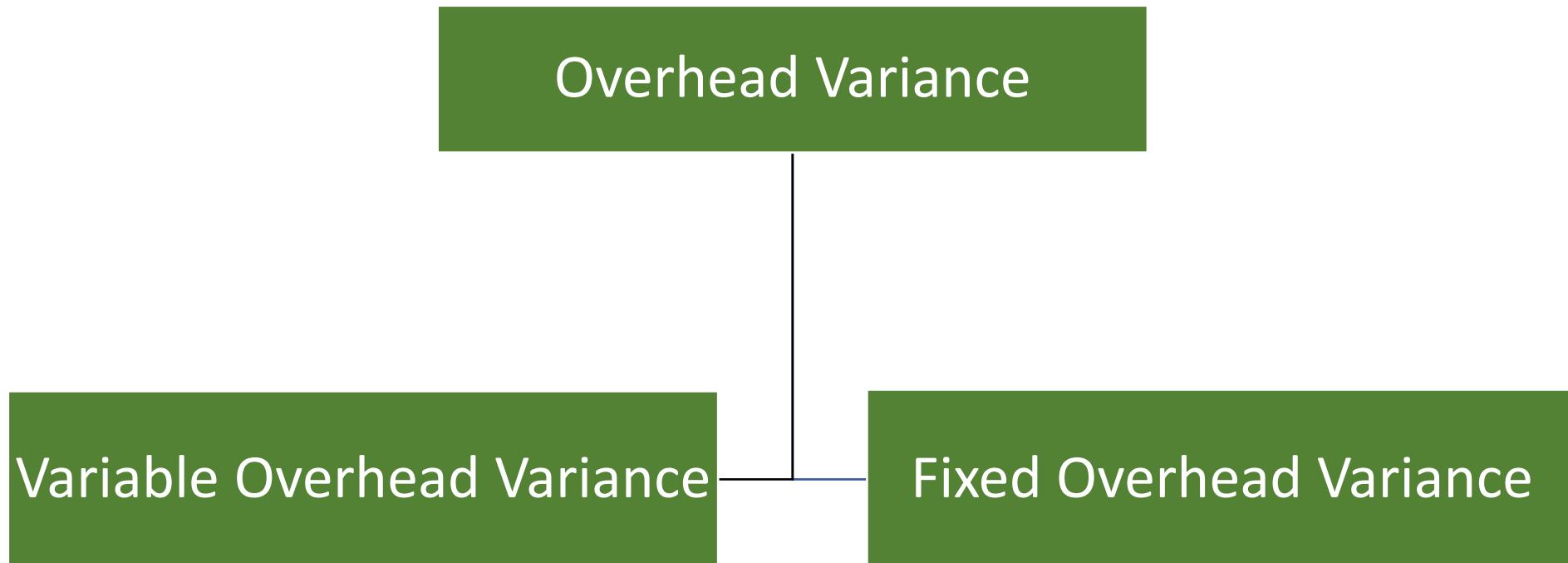


Standard Costing & Variance Analysis

Overhead Variances

- The term overhead includes indirect materials, indirect labour and indirect expenses.
- It may relate to factory, office or selling and distribution overheads.



Standard overhead rate per unit

Budgeted overheads

$$= \dots \dots \dots \dots$$

Budgeted output

Standard overheads rate per hour

Budgeted overheads

$$= \dots \dots \dots \dots$$

Budgeted hours

Standard hours for actual output

Budgeted hours

$$= \dots \dots \dots * \text{Actual output}$$

Budgeted output

Standard output for actual time

Budgeted output

$$= \dots \dots \dots * \text{Actual hours}$$

Budgeted hours

Recovered or Absorbed overheads

= Standard rate per unit * Actual output

=Standard rate per hour * Standard hours for actual output

Budgeted overheads (is for budgeted time or budgeted output)

= Standard rate per unit * budgeted output

= Standard rate per hour * Budgeted hours

Standard overheads (Is for actual time or budgeted output in actual time)

=Standard rate per unit * Standard output for actual time

= Standard rate per hour * Actual Hours

Actual overheads

= Actual rate per unit * Actual output

=Actual rate per hour * Actual hours

Overhead Cost Variance (OCV)

- It is the difference between standard overheads for actual output i.e. recovered overheads and actual overheads.
- It is the total of both fixed and variable overhead variances

=Absorbed/Recovered overheads- Actual overheads

= (Standard hours for actual output* Standard overhead absorption rate)- Actual overheads

Variable overhead cost variances (VOCV)

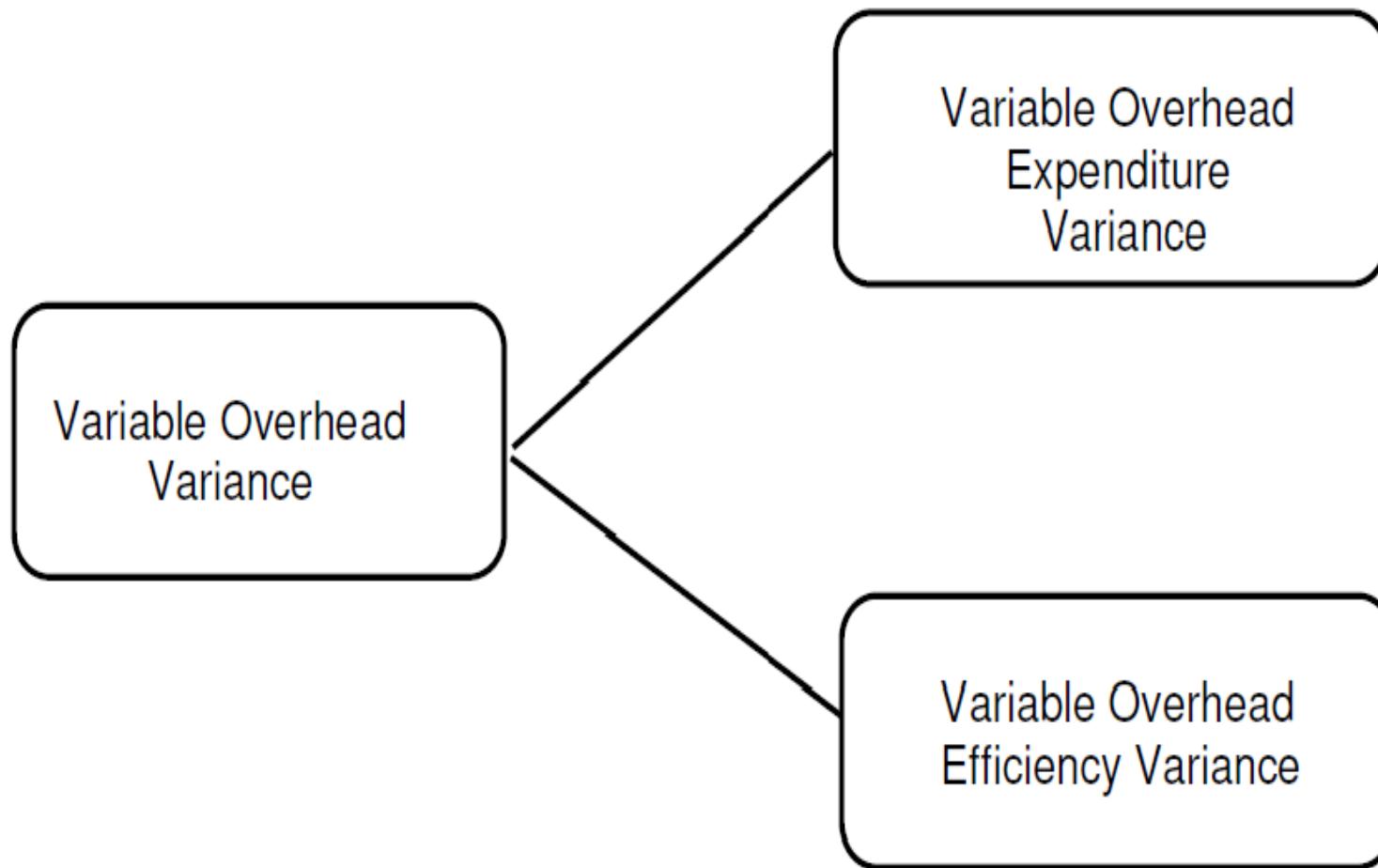
- It is the difference between absorbed variable overheads and the actual variable overheads.

= (Standard hours for actual output * Standard variable overhead rate) - Actual overhead cost

= (Absorbed variable overheads - Actual Variable overheads)

= (Absorbed VO - Actual VO)

- The variable overhead cost variance is usually calculated in total only since variable overheads vary according to output and not according to time, hence, there is only one variance.
- However, some accountants argue that certain variable overhead may vary according to time also, hence variable overhead efficiency and expenditure variance arise and it can be calculated if information relating to actual time taken and allowed is given



Variable Overhead Expenditure Variance

- It is the difference between actual variable overhead expenditure incurred and the standard variable overheads set in for a particular period
- Also called as spending variance or Budget variance

=**Standard variable overheads for actual time- Actual VO**

= **Actual Hours (Standard Variable Overhead Rate per Hour – Actual Variable Overhead Rate per Hour)**

= **Standard VO- Actual VO**

Variable Overhead Efficiency Variance

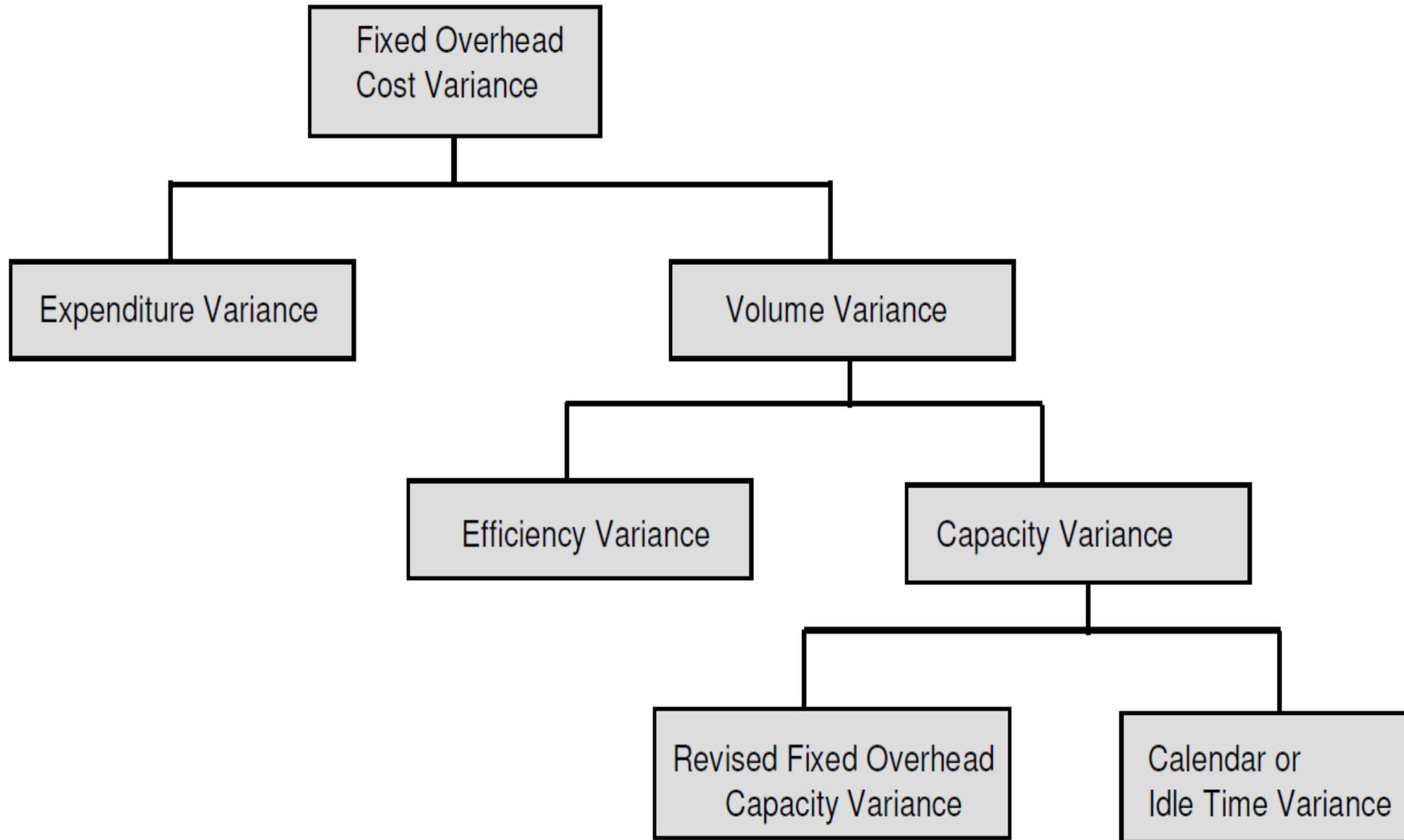
- This variance arises because of the difference between standard hours allowed for actual output and actual hours.

= **(Standard variable overheads on actual production - Standard variable overheads for actual time)**

= **(Standard Time for Actual Production × Standard Variable Overhead Rate per Hour) – (Actual Hours Worked × Standard Variable Overhead Rate per Hour)**

= **Recovered /Absorbed VO- Standard VO**

Variable Cost Variance= V O Expenditure Variance+ V O Efficiency variance



Fixed Overhead Variances

- Fixed overheads do not vary with the production but vary with time and hence there will be different rates of overhead expenses per unit at different levels of production.
- The standards in respect of fixed overheads may be set according to rate per unit or per hour

Fixed Overhead Cost variance (FOCV)

- Fixed overhead cost variance is the difference between the standard overheads recovered (or absorbed for actual output) and the actual fixed overhead cost incurred

=Recovered/ Absorbed Fixed Overheads-Actual Fixed Overheads

= (Std. hours for actual output* Std Fixed overhead rate)-Actual Fixed Overheads

Fixed Overheads Expenditure or Budget Variance

- If higher or lower amount of overheads have been incurred in comparison to the standard fixed for the same production during the same period it will result in expenditure variance.
- It is the difference between actual expenditure and budget expenditure
- If actual is more, it will result in adverse variance and vice versa.

= **Budgeted overheads- Actual overheads**

Fixed Overhead Volume Variance

- If the same amount of overheads have been incurred for a higher or lower production than the standard production during the same period it will result in volume variance
- It is a result of difference in the volume of production at the standard rate
- It is the difference between fixed overheads absorbed on actual output and those on budgeted output

=Absorbed /Recovered Fixed Overheads- Budgeted fixed Overheads

Fixed Overhead Cost Variance= Fixed Overheads Expenditure Variance+ Fixed Overhead Volume Variance

Fixed Overhead Efficiency Variance

- Is that portion of volume variance which reflects the increased or reduced output arising from efficiency above or below the standard which is expected
- The efficiency with which the productive operations are carried out with the aid of utilised facilities is pointed out by this variance
- The cause of this variance can be variations in the method of production, efficiency of machines, quality of materials used, efficiency of tooling and working conditions, improper handling of materials, machines, improper supervision and inspection etc.

= Recovered Fixed Overheads- Standard Fixed Overheads

= (Std. hours for actual output-Actual hours) * Std Rate

- **Fixed Overhead Capacity Variance**
- Is that portion of the volume variance which is due to working at higher or lower capacity usage than the standard.
- Actual capacity of the machine or plant may vary from the planned capacity or expected capacity due to idle time, strikes, lock outs, breakdown, labour shortage, absenteeism etc. it may also be due to overtime work. Change in number of shifts of one or more machines etc.
- The variance is an indicator of the degree of utilisation of available capacity.

= **Standard Fixed overheads- Budgeted Fixed Overheads**

= **(Actual hours worked- Budgeted hours) * Std Rate**

Calendar Variance

- Is that portion of volume variance which is due to the difference between the number of working days in the budget period over the number of actual working days in the period to which the budget is applied.
- It arises only under exceptional cases because normal holidays are taken into account while laying the standards
- Generally, this variance is adverse because of extra holidays, but if there are extra working days then this variance can be favourable

= **(Revised Budgeted Hours-Budgeted hours) * Std rate per hour**

Revised Budgeted Hours= Budgeted Hours* Actual no. of Days

Budgeted Days

- When calendar variance is to be calculated, the method of calculating capacity variance is modified

Revised Capacity Variance

= (Actual No. of working days- Std. No. of working days) * Std. rate per day

=Standard Overheads- Revised Budgeted overheads

Revised Budgeted Overheads= Revised budgeted hours* Std. rate per hour