

PLANNING & OPERATIONAL VARIANCE

When the current environmental conditions are different from the anticipated environmental conditions (prevailing at the time of setting standard or plans) the use of routine analysis of variance for measuring managerial performance is not desirable / suitable. The variance analysis can be useful for measuring managerial performance if the variances computed are determined on the basis of revised targets / standards based on current actual environmental conditions.

In order to deal with the above situation i.e. to measure managerial performance with reference to material, labour and sales variances, it is necessary to compute the Planning and Operational Variances.

A Planning Variance simply compares a revised standard to the original standard.

An Operational Variance simply compares the actual results against the revised amount.

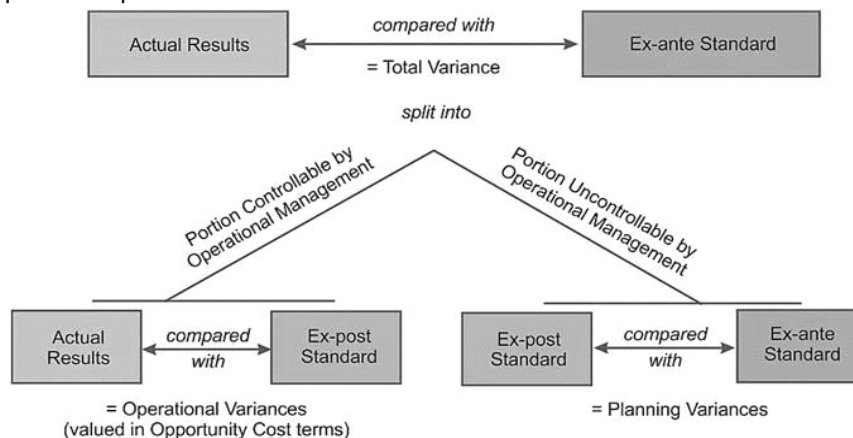
Operating Variances would be calculated after the planning variances have been established and are thus a realistic way of assessing performance.

- Planning Variance

Classification of variances caused by *ex-ante* budget allowances being changed to an *ex post* basis. Also, known as a revision variance.

- Operational Variance

Classification of variances in which non-standard performance is defined as being that which differs from an *ex post* standard. Operational variances can relate to any element of the standard product specification.

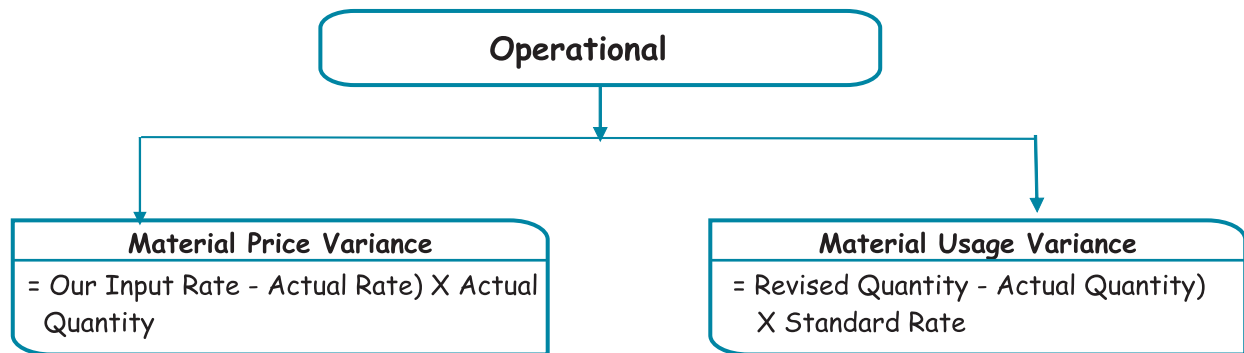


- Standard *ex ante*

Before the event. An *ex ante* budget or standard is set before a period of activity commences.

- Standard, *ex post*

After the event. An *ex post* budget, or standard, is set after the end of a period of activity, when it can represent the optimum achievable level of performance in the conditions which were experienced. Thus, the budget can be flexed, and standards can reflect factors such as unanticipated changes in technology and in price levels. This approach may be used in conjunction with sophisticated cost and revenue modelling to determine how far both the plan and the achieved results differed from the performance that would have been expected in the circumstances which were experienced.

**Question 35:**

In the case of Material Purchase Price Variance, suppose the Standard Price of Raw Material determined was Rs 5.00 per unit, the General Market Price per unit at the time of purchase was Rs 5.20 and Actual Price paid per unit was Rs5.18 on the purchase of say 10,000 units of Raw Material.

In this case the variances to be computed should be:

Material Purchase Price Variance

Planning Variance*:

= (Standard Price p.u. - General Market Price p.u.) x Actual Quantity Purchased

= (Rs5.00 - Rs5.20) x 10,000 units

= Rs 2,000 (A)

* uncontrollable

Operational Variance:

= (General Market Price p.u. - Actual Price Paid p.u.) x Actual Quantity Purchased

= (Rs5.20 - Rs5.18) x 10,000 units

= Rs200 (F)

In the case of Material Usage Variance, suppose the Standard Quantity per unit be 5 Kgs., Actual Production units be 250 and Actual Quantity of Material used is 1,450 kgs. Standard Cost of Material per Kg. was 1. Because of shortage of Skilled Labour it was felt necessary to use Unskilled Labour and that increased Material Usage by 20%. The variances to be computed to deal with the current environmental conditions will be:

Material Usage Variance

Planning Variance*:

= (Original Std. Qty in Kgs - Revised Std. Qty in Kgs) x Standard Price per Kg.

= (1,250 Kgs. - 1,500 Kgs) x Rs 1

= Rs 250 (A)

* Uncontrollable

Operational Variance (Controllable):

= (Revised Standard Qty in Kgs. - Actual Qty Used in Kgs.) x Std. Price per Kg

= (1,500 Kgs. - 1,450 Kgs.) x Rs 1

= Rs 50 (F)

Question 36:

Managing Director of Petro KL (PTKLL) thinks that Standard Costing has little to offer in the reporting of material variances due to frequently change in prices of materials.

PTKLL can utilise one of the two equally suitable raw materials and always plan to utilize the raw material which will lead to cheapest total production costs. However PTKLL is frequently trapped by price changes and the material actually used often provides, after the event, to have been more expensive than the alternative which was originally rejected.

During the last accounting period, to produce a unit of "P" PTKLL could use either 2.50kg of "PG" or 2.5 kg of "PD". PTKLL planned to use "PG" as it appeared it would be cheaper of the two and plans were based on a cost of "PG" of Rs 1.50 per kg. Due to market movements the actual prices changed and if PTKLL had purchased efficiently the cost would have been:

"PG" Rs 2.25 per kg

"PD" Rs 2.00 per kg

Production of "P" was 1,000 units and usage of "PG" amounted to 2,700 kg at a local cost of Rs 6,480/-

Required:

Calculate the material variance for "P" by:

- (i) Traditional Variance Analysis; and
- (ii) An approach which distinguishes between Planning and Operational Variances

Solution:**Computation of Variances:****Traditional Variance (Actual vs Original Budget)**

Usage Variance	= (Standard Quantity - Actual Quantity) x Std Prices
	= (2,500 - 2,700 kg) x Rs 1.5
	= 300 (A)
Price Variance	= (Standard Price - Actual Price) x Actual Quantity
	= (Rs 1.5 - Rs 2.40) x 2,700 kg
	= 2,430 (A)
Total Variance	= 300 (A) + 2,430 (A) = Rs 2,730 (A)

Operational Variance (Actual vs Revised)

Usage Variance	= (Standard Quantity - Actual Quantity) x Std Prices
	= (2,500 - 2,700 kg) x Rs 2.25
	= 450 (A)
Price Variance	= (Standard Price - Actual Price) x Actual Quantity
	= (Rs 2.25 - Rs 2.40) x 2,700 kg
	= 405 (A)
Total Variance	= 450 (A) + 405 (A) = Rs 855 (A)

Planning Variance (Revised vs Original Budget)

Controllable Variance = (Rs 2.00 - Rs 2.25) × 2,500 kg
= 625 (A)

Uncontrollable Variance = (Rs 1.50 - Rs 2.00) × 2,500 kg
= 1,250 (A)

Total Variance = 625 (A) + 1,250 (A) = Rs 1,875 (A)

Traditional Variance = Operational Variance + Planning Variance
= 855 (A) + 1,875 (A)
= 2,730 (A)

Note: A **Planning Variance** simply compares a revised standard to the original standard. An **Operational Variance** simply compares the actual results against the revised amount. **Controllable Variances** are those variances which arises due to inefficiency of a cost centre/ department. **Uncontrollable Variances** are those variances which arises due to factors beyond the control of management or concerned department of the organisation.

Question 37: (Similar Question Nov'20)

NZSCO Ltd uses standard costing system for manufacturing its single product "ANZ". Standard Cost Card per unit is as follows:

	Amount (Rs)
Direct Material (1 kg per unit)	20
Direct Labour (6 hours @ Rs 8 per hour)	48
Variable Overheads	24

Actual and Budgeted Activity Levels in units for the month of Feb are:

	Budget	Actual
Production	50,000	52,000

Actual Variable Costs for the month of Feb are given as under:

	Amount (Rs)
Direct Material	10,65,600
Direct Labour (3,00,000 hours)	24,42,000
Variable Overheads	12,28,000

Required:

Interpret Direct Labour Rate and Efficiency Variances.

Student Notes: