

B.Com Sem IV

Sub: CMA-II

TOPIC:

L-1, D.B. Variance analysis / standard costing.

P-1

Variance analysis is concerned with difference of standard cost and actual cost. Standard cost of a product is determined with the past records and observations. It is cost which is scientifically estimated for a product before production begins. But, when actual production is carried out the cost may differ from the pre-determined standard cost. So, if there is difference of standard cost and actual cost — standard cost and actual cost — standard cost difference Variance. That is called difference variance. This variance ~~is~~ ^{or} difference is applicable to material cost, labour cost and also overhead cost.

So, we will have three variance analysis — one is material cost, another is labour cost and other one is overhead cost.

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Now, we will discuss material cost variance.

Material cost variance is difference between total ^{Std} material cost and total actual material cost. We can write:

$$TSMC (-) TAMC = \text{Mat Cost Variance.}$$

We can write:

$$TSMC = S\& \times SP \times AO$$

$$TAMC = A\& \times AP \times AO$$

S& → Standard Qty,

SP → Standard Price,

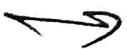
AO → Actual Output.

A& → Actual Qty.

AP → Actual Price.

Say - an example:

	<u>Std</u>	<u>Actual</u>
Material per unit of output	2 kg	2.20 kg
price per kg	Rs. 14	15



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Here we can calculate Material cost variance as follows:

TSMC \rightarrow Total Standard material Cost

$$= SQ \times SP \times A.O$$

$$= 2 \text{ kg} \times \text{Rs. } 14 \times 100 \text{ units}$$

$$= \text{Rs. } 2800$$

TAAC \rightarrow Total Actual Mat Cost.

$$= A.Q \times A.P \times A.O$$

$$= 2.2 \text{ kg} \times \text{Rs. } 15 \times 100 \text{ units}$$

$$= \text{Rs. } 3300$$

So, you see total standard cost is Rs. 2800 whereas total actual cost is Rs. 3300.

Now, there is a difference of Rs. 500 ($\text{Rs. } 3300 - \text{Rs. } 2800$). This is Variance.

Now, this variance is of two types
 → favourable and adverse (unfavourable).

If standard cost is more than Actual
 \rightarrow Favourable.

If standard cost is less than Actual
 \rightarrow Adverse.
 Here, the case is Adverse, because standard

(a)

is R. 2800 whereas actual is R. 3300.

This happens because the materials are not properly used and excess materials are used than the standard usage, or even it may happen that the preparation of material is done at more price than standard price, or it may happen in both the cases that is in price and also in qty.

That is why we say material price variance is sum total of two other variances i.e. material quantity variance and material price variance.

Now material quantity variance

$$= (S\& - A\&) \times S P \times A O$$

$$= (2 kg - 2.20 kg) \times R. 14 \times 100 \text{ units}$$

$$= - 0.20 (kg \times R. 14 \times 100 \text{ units})$$

$$= R. 280$$

$$[(S\& \times A O) - (A\& \times A O)] \times SP$$

$$= [(2 kg \times 100) - (2.20 kg \times 100)] \times R. 14$$

$$= (-)R. 280$$

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Material Price Variance =

$$\begin{aligned} & (SP - AP) \times A Q \\ &= (Rs. 14 - Rs. 15) \times 10 \text{ units} \times 2.20 \text{ kg} \\ &= (-) Rs. 01 \times 220 \text{ kg} \\ &= Rs. 220 (-) \\ &\text{Now, see total material cost variance} \\ &= \text{Mat usage variance} + \text{mat price variance} \\ &= (-) Rs. 280 + (-) Rs. 220 \\ &= (-) Rs. 500 \text{ proved.} \end{aligned}$$

Thanks.

AB,