



B.Com Honours

Semester IV

Calicut University

APPLIED COSTING AND CONTROL

Course Code: COM4CJ204 • Module 4 Notes

Module IV: Cost Control, Variance Analysis, & Budgeting

Standard costing evaluates operational performance by comparing actual costs against predetermined benchmark standards, isolating variances for managerial action.

Unit 14: Standard Costing vs. Historical Costing & Estimated Costs

Standard Cost: Scientifically predetermined cost of what a product **should** cost under efficient operations.

Estimated Cost: Assessment of what a product **will** cost based on past historical trends.

Unit 15: Material Variance Analysis Formulas & Interrelationships

1. Direct Material Cost Variance (MCV):

$$\text{MCV} = (\text{SQ} \times \text{SP}) - (\text{AQ} \times \text{AP}) = \text{MPV} + \text{MQV}$$

2. Material Price Variance (MPV):

$$\text{MPV} = \text{AQ} \times (\text{SP} - \text{AP})$$

3. Material Quantity / Usage Variance (MQV):

$$\text{MQV} = \text{SP} \times (\text{SQ} - \text{AQ}) = \text{MMV} + \text{MYV}$$

Unit 16: Budgetary Control – Flexible Budget, Master Budget, & ZBB

Flexible Budget: Budget designed to adjust dynamically to different operational capacity levels (e.g., 60%, 80%, 100% capacity).

Zero-Based Budgeting (ZBB): Budgeting method requiring every operational expense to be justified from a "zero base" for each new period without relying on historical baselines.

Practical Problem 2 (Direct Material Variance Solved Computation): Standard cost specifications for 1 unit of finished product:

Material A: 4 kg @ Rs. 10 per kg = Rs. 40; Material B: 6 kg @ Rs. 20 per kg = Rs. 120. (Total Standard Input = 10 kg).

Actual Production & Consumption for 100 units of finished output:

Material A: 450 kg @ Rs. 12 per kg = Rs. 5,400; Material B: 550 kg @ Rs. 18 per kg = Rs. 9,900. (Total Actual Input = 1,000 kg). Calculate (a) Standard Quantity (SQ) for actual output, (b) Material Cost Variance (MCV), (c) Material Price Variance (MPV), and (d) Material Usage Variance (MQV) for both materials.

Step-by-Step Solved Material Variance Table:

- 1. Standard Quantity (SQ) for Actual Output (100 units):**
 $\text{SQ(A)} = 100 \text{ units} \times 4 \text{ kg} = 400 \text{ kg}$; $\text{SQ(B)} = 100 \text{ units} \times 6 \text{ kg} = 600 \text{ kg}$.
- 2. Material Cost Variance (MCV = Standard Cost - Actual Cost):**
 $\text{MCV(A)} = (400 \times 10) - (450 \times 12) = 4,000 - 5,400 = \text{Rs. 1,400 Adverse (A)}$.

$MCV(B) = (600 \times 20) - (550 \times 18) = 12,000 - 9,900 = \text{Rs. 2,100 Favourable (F)}.$

Total MCV = 1,400 (A) + 2,100 (F) = Rs. 700 Favourable (F)

- **3. Material Price Variance [MPV = AQ × (SP - AP)]:**

$MPV(A) = 450 \times (10 - 12) = \text{Rs. 900 Adverse (A)}.$

$MPV(B) = 550 \times (20 - 18) = \text{Rs. 1,100 Favourable (F)}.$

Total MPV = 900 (A) + 1,100 (F) = Rs. 200 Favourable (F)

- **4. Material Usage Variance [MQV = SP × (SQ - AQ)]:**

$MQV(A) = 10 \times (400 - 450) = \text{Rs. 500 Adverse (A)}.$

$MQV(B) = 20 \times (600 - 550) = \text{Rs. 1,000 Favourable (F)}.$

Total MQV = 500 (A) + 1,000 (F) = Rs. 500 Favourable (F)

- **5. Verification Check (MCV = MPV + MQV):**

700 (F) = 200 (F) + 500 (F) → Perfect Verification Match!

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