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Standard Costing & Variance Analysis

AAT Level III
Management Accounting and Finance (MAF)

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CHAPTER 02
PLANNING AND CONTROLLING VIA VARIANCES

Standard cost

It is predetermined cost agreed early under specified working condition.

Variance

The difference between the standard cost and the actual cost incurred during the particular time period.

Types of Standards

1. **Basic standard**
   It is established for use of long period of time which remains unchanged for many years is known as basic standard. Therefore this standard could not be used to show the current condition. Therefore it is useful to establish the current standard.

2. **Current standard**
   It is established considering the current conditions for the certain period of time.

3. **Ideal standard**
   This standard is attainable only at idealistic conditions. Here it is based on the conditions that there are no machine breakdowns, no raw material wastages & etc. it is practically unattainable and it is frequently not used but this is useful for investigation or development process.

4. **Attainable standard**
   It is established considering the provision for machinery breakdowns, normal losses & etc.

Formulas of cost variances

1) **Direct material variances**

❖ **Direct material price variance**

Standard price/kg × actual kg purchased	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

❖ **Direct material usage variance**

Standard kg/unit × actual units produced	XXX
Actual kg used	(XXX)
	XXX/(XXX)
(×)Standard price/kg	XX
Favorable/Adverse	XXX/(XXX)

❖ **Direct material cost variance**

Standard cost/unit× actual units produced	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

2) Direct labour variances

❖ **Direct labour rate variance**

Standard rate/hour × actual hours paid	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

❖ **Direct material efficiency variance**

Standard hours/unit × actual units produced	XXX
Actual hours worked	(XXX)
	XXX/(XXX)
(×)Standard rate/hour	XX
Favorable/Adverse	XXX/(XXX)

❖ **Idle time variance**

Idle time hours × standard rate/hour

❖ **Direct labour cost variance**

Standard cost/unit× actual units produced	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

3) Variable production overhead variances

❖ Variable production overhead expenditure variance

Standard rate/hour × actual hours worked	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

❖ Variable production overhead efficiency variance

Standard hours/unit × actual units produced	XXX
Actual hours worked	(XXX)
	XXX/(XXX)
(×)Standard expenditure/hour	XX
Favorable/Adverse	XXX/(XXX)

❖ Variable production overhead cost variance

Standard cost/unit× actual units produced	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

4) Fixed production overhead variances

❖ Fixed production overhead expenditure variance

Budgeted expenditure	XXX
Actual expenditure	(XXX)
Favorable/Adverse	XXX/(XXX)

❖ Fixed production overhead volume variance

Budgeted production	XXX
Actual production	(XXX)
	XXX/(XXX)
(×)Standard cost/unit	XX
Favorable/Adverse	XXX/(XXX)

❖ Fixed production overhead cost variance

Standard cost/unit× actual units produced	XXX
Actual cost incurred	(XXX)
Favorable/Adverse	XXX/(XXX)

Question 01:

ABC Company manufactures product X and assumes that standard cost per unit as follows.

▪ Direct material A	(2kg @Rs.5)	10
▪ Direct material B	(1kg @Rs.30)	30
▪ Direct labour	(2hours @Rs.30)	60
▪ Variable POH	(2hours @Rs.15)	30
▪ Fixed POH	(2hours @Rs.25)	50
▪ Selling price		200

The budgeted production and sales quantity is 2000 units

The budgeted fixed production overhead is Rest. 100,000

Actual information of product X is given below

- Sales and production – 1600 units
- Sales revenue – Rs.300000
- Direct material purchased and used
  1. A – 5000 kg for Rs.18000
  2. B – 2000 kg for Rs.50000
- Direct labour – 5000 hours for Rs.108000 including 500 hours idle time
- Variable POH – Rs.75000
- Fixed POH – RS.75000

You are required to calculate,

- Direct material variances
- Direct labour variances
- Variable POH variances
- Fixed POH variances

Question 02:

SEZ Company manufactures product P and assumes that standard cost per unit as follows.

▪ Direct material A	(1.5kg @Rs.20)	30
▪ Direct material B	(4.5kg @Rs.40)	180
▪ Direct material C	(3kg @Rs.10)	30
▪ Direct labour	(4hours @Rs.38)	152
▪ Variable POH	(4hours @Rs.30)	120
▪ Fixed POH	(4hours @Rs.50)	200

The budgeted production and sales quantity is 3000 units

The budgeted fixed production overhead is RS. 600,000

Actual information of product X is given below.

- Sales and production – 2800 units
- Direct material purchased and used
    1. A – 6000 kg for Rs.138000
    2. B – 12000 kg for Rs.441000
    3. C – 9000kg for Rs.135000
- Direct labour – 12000 hours for Rs.318000 including 800 hours idle time
- Variable POH – Rs.201600
- Fixed POH – RS.720000

You are required to calculate,

- Direct material variances
- Direct labour variances
- Variable POH variances
- Fixed POH variances

Formulas of sales variances

1) Price variances

- **Sales price variance**

Standard price/unit	XXX
Actual price/unit	(XXX)
	XXX
(×)Actual units sold	XX
Favorable/Adverse	XXX/(XXX)

- **Sales volume variance**

Budgeted sales units	XXX
Actual sales units	(XXX)
	XXX/(XXX)
(×)Standard price/unit	XX
Favorable/Adverse	XXX/(XXX)

- **Sales value variance**

Budgeted sales revenue	XXX
Actual sales revenue	(XXX)
Favorable/Adverse	XXX/(XXX)

2) Margin variances

❖ **Sales price margin variance**

Standard price margin/unit	XXX
Actual price margin/unit	(XXX)
	XXX
(×)Actual units sold	XX
Favorable/Adverse	XXX/(XXX)

❖ **Sales volume margin variance**

Budgeted sales units	XXX
Actual sales units	(XXX)
	XXX/(XXX)
(×)Standard price margin/unit	XX
Favorable/Adverse	XXX/(XXX)

❖ **Sales value margin variance**

Budgeted sales revenue margin	XXX
Actual sales revenue margin	(XXX)
Favorable/Adverse	XXX/(XXX)

Question 01:

The company produces and sells X & Y. the following information is given below.

Product	Budgeted			Actual		
	Units	Selling price	Unit cost	Units	Selling price	Unit cost
X	1000	100	80	1050	98	82
Y	1500	110	95	1400	111	96

You are required to calculate,

- Price variances
- Margin variances