

Chapter 14

Performance Measure & Variance Analysis

1. Standard Costing

Direct Materials Price & Quantity Variance

Direct Labor Rate & Efficiency Variance

2. Flex Budgets & Profit Variance Reports

Flexible Budget Variances

Sales Volume Variances

Standard Costing - Example

Touchstone Co. manufactures a number of grandfather clocks. One of these products, a rustic grandfather clock, requires an expensive hardwood. During a recent month, the company manufactured 9,000 clocks using 6,200 meters of hardwood. The hardwood cost the company \$23,560. The company's standards for one clock are 0.6 meters of hardwood, at a cost of \$4.05 per meter.

Required:

1. What cost for wood should have been incurred to make 9,000 rustic grandfather clocks? How much greater or less is this than the cost that was incurred?
2. Break down the difference computed in (1) above into a materials price variance and a materials quantity variance.

Standard Costing - Example

Touchstone Co. produces frozen meals for a number of local grocers. One of the company's products is a frozen pasta. During the most recent week, the company prepared 6,000 of these meals, using 1,150 direct labor-hours. The company paid these direct labor workers a total of \$11,500 for this work, or \$10 per hour. According to the standard cost card for this meal, it should require 0.20 direct labor-hours at a cost of \$9.50 per hour.

Required:

Break down the labor rate variance and a labor efficiency variance.

Standard Costing - Example

The direct materials and direct labor standards for one bottle of Organic Vegetable Juice are given below:

	Standard Quantity	Standard Price	Standard Cost
Direct materials	7.2 grams	\$2.50 per gram	\$18.00
Direct labor	24 minutes	\$10.00 per hour	\$4.00

During the most recent month, the following activity was recorded:

- 20,000 grams of material were purchased at a cost of \$2.40 per gram.
- Only 16,000 grams of the material was used to produce 2,000 bottles of Juice .
- 900 hours of direct labor time were recorded at a total labor cost of \$10,800.

Required:

1. Compute the direct materials price and quantity variances for the month.
2. Compute the direct labor rate and efficiency variances for the month.
3. Prepare the appropriate journal entries for parts 1 and 2 above.

Standard Costing – Example

Assume that Touchstone Company had the standard costs reflected below:

Standard Cost Card:
Direct materials:
Material A: 4 pounds \$25 per pound
Material B: 1 pound 40 per pound
Direct labor: 5 hours 40 per hour

In a given month, the company used 3,450 pounds of Material A to manufacture 920 units. The company paid \$28.50 per pound during the month to purchase Material A. At the beginning of the month, the company had 50 pounds of Material A on hand. At the end of the month, the company had only 30 pounds of Material A in its warehouse. Touchstone used 4,200 direct labor hours during the month, at an average cost of \$41.50 per hour.

Required:

1. The purchase-price variance for Material A & The usage variance for Material A.
2. The direct labor rate variance & The direct labor efficiency variance.

Standard Costing – Example

Information regarding Touchstone Company's direct labor cost for the month follows:

Direct labor hourly rate paid	\$28.5
Total standard direct labor hours for units produced this period	11,000
Direct labor hours actually worked	10,800
Direct labor rate variance	\$16,000 favorable

Required:

1. Standard direct labor wage rate per hour
2. Direct labor efficiency variance

Standard Costing – Example

Touchstone Company had the following direct materials costs for the manufacturing of product T in a given month:

Actual purchase price per pound of direct materials	\$7.50
Standard direct materials allowed for units of product T produced	2,100 pounds
Decrease in direct materials inventory	100 pounds
Direct materials used in production	2,300 pounds
Standard price per pound of material	\$7.25

Required

Direct materials purchase-price variance and its direct materials usage variance?

Flex Budgets & Profit Variance Reports - Example

	Actual Results		Master (Static) Budget
Unit Sales	150,000 units		200,000 units
Sales	750,000		900,000
<u>Variable Costs</u>	<u>405,000</u>		<u>540,000</u>
Contribution Margin	345,000		360,000
Fixed Costs	<u>180,000</u>		<u>150,000</u>
<u>Operating Income</u>	<u>\$ 165,000</u>		<u>\$ 210,000</u>

Required:

- a. Total master (static) budget variance
- b. Flexible-budget variance.
 - i. In terms of Operating Income
 - ii. In terms of Variable Cost
- c. Sales volume variance,
 - i. In terms of operating income
 - ii. In terms of contribution margin.
- d. Selling price variance.

Flex Budgets & Profit Variance Reports - Example

You have been asked to provide a analysis of financial performance for the year just ended. You obtain the following information that pertains to the company's sole product:

	Actual Results	Master (Static) Budget
Units sold	50,000	55,000
Sales	\$ 600,000	\$ 660,000
Variable Costs	\$ 280,000	\$ 330,000
Fixed Costs	\$ 150,000	\$ 180,000

Required

1. What was the actual operating income for the period?
2. Total master (static) budget variance
3. Flexible-budget variance.
 - i. In terms of operating Income
 - ii. In terms of variable Cost
4. Sales volume variance,
 - i. In terms of operating income
 - ii. In terms of contribution margin.
5. Selling price variance.