Flexible Budgets and

Standard Costing Variance Analysis

Static Budgets and Performance Reports



CheeseCo

	Static Budget	Actual Results	Variances
Machine hours	10,000	8,000	2,000 U
Variable costs			
Indirect labor	\$ 40,000	\$ 34,000	\$6,000 F
Indirect materials	30,000	25,500	4,500 F
Power	5,000	3,800	1,200 F
Fixed costs			
Depreciation	12,000	12,000	0
Insurance	2,000	2,050	50 U
Total overhead costs	\$ 89,000	\$ 77,350	\$11,650 F

Preparing a Flexible Budget



	Cost	Total	FI	jets	
	Formula	Fixed	8,000	10,000	12,000
	per Hour	Cost	Hours	Hours	Hours
Machine hours			8,000	10,000	12,000
Variable costs					
Indirect labor	\$ 4.00		\$ 32,000	\$ 40,000	\$ 48,000
Indirect material	3.00		24,000	30,000	36,000
Power	0.50		4,000	5,000	6,000
Total variable cost	\$ 7.50	•	\$ 60,000	\$ 75,000	\$ 90,000
Fixed costs					
Depreciation		\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
Insurance		2,000	2,000	2,000	2,000
Total fixed cost			\$ 14,000	\$ 14,000	\$ 14,000
Total overhead costs			\$ 74,000	\$ 89,000	\$ 104,000

Flexible Budget Performance Report

CheeseCo

	Cost Formula per Hour	Total Fixed Cost	Flexible Budget	Actual Results	Variances	
Machine hours			8,000	8,000	0	
Variable costs Indirect labor Indirect material Power Total variable cost	\$ 4.00 3.00 0.50 \$ 7.50		\$ 32,000 24,000 4,000 \$ 60,000	\$ 34,000 25,500 3,800 \$ 63,300	\$ 2,000 U 1,500 U 200 F \$ 3,300 U	
Fixed costs Depreciation Insurance Total fixed cost Total overhead costs		\$ 12,000 2,000	\$ 12,000 2,000 \$ 14,000 \$ 74,000	\$ 12,000 2,050 \$ 14,050 \$ 77,350	\$ 0 50 U 50 U \$ 3,350 U	

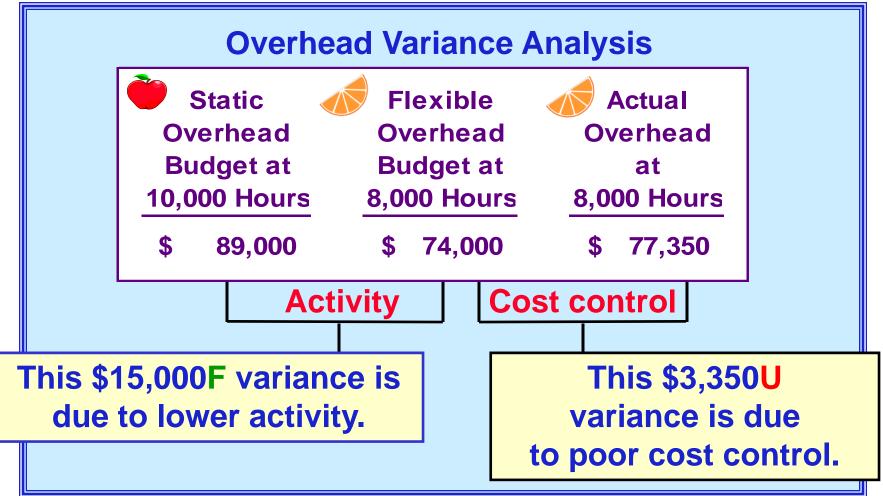
Static Budgets and Performance



	Static Budget	Actual Results	Variances	
Machine hours	10,000	8,000	2,000 U	
Variable costs				
Indirect labor	\$ 40,000	\$ 34,000	\$6,000 F	
Indirect materials	30,000	25,500	4,500 F	
Power	5,000	3,800	1,200 F	
Fixed costs				
Depreciation	12,000	12,000	0	
Insurance	2,000	2,050	50 U	
Total overhead costs	\$ 89,000	\$ 77,350	\$11,650 F	

Flexible Budget Performance Report





Standard Cost Card – Variable Production Cost

A standard cost card for one unit of product might look like this:

Inputs	A Standard Quantity or Hours	B Standard Price or Rate	A x B Standard Cost per Unit	
Direct materials Direct labor Variable mfg. overhead Total standard unit cost	3.0 lbs. 2.5 hours 2.5 hours	\$ 4.00 per lb. 14.00 per hour 3.00 per hour	\$ 12.00 35.00 7.50 \$ 54.50	

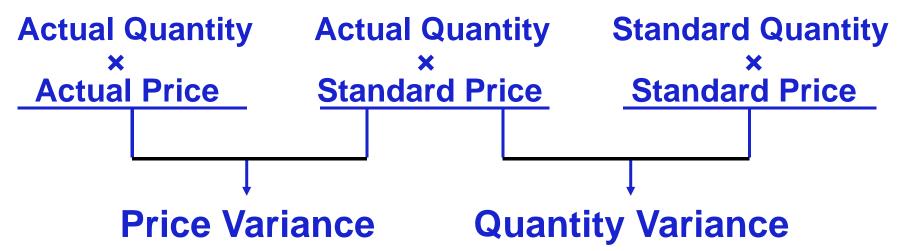
7

Standards vs. Budgets





A General Model for Variance Analysis

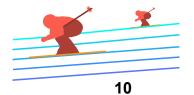


Material Variances Example

Glacier Peak Outfitters has the following direct material standard for the fiberfill in its mountain parka.

0.1 kg. of fiberfill per parka at \$5.00 per kg.

Last month 210 kgs of fiberfill were purchased and used to make 2,000 parkas. The material cost a total of \$1,029.



Material Variances Summary

Actual Quantity

×

Actual Price

210 kgs.

X

\$4.90 per kg.

= \$1,029

Actual Quantity ×

Standard Price

210 kgs.

X

\$5.00 per kg.

= \$1,050

Standard Quantity

x

Standard Price

200 kgs.

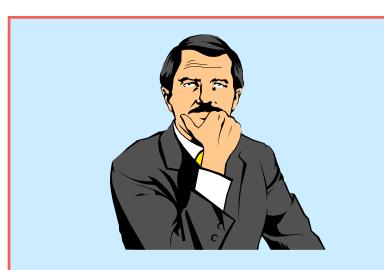
X

\$5.00 per kg.

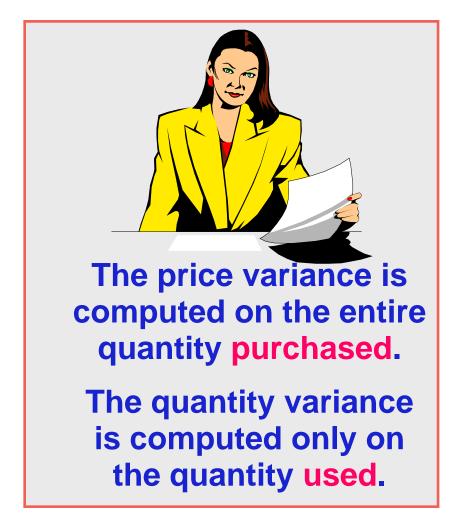
= \$1,000

Price variance \$21 favorable Quantity variance \$50 unfavorable

Material Variances



Hanson purchased and used 1,700 pounds. How are the variances computed if the amount purchased differs from the amount used?



Responsibility for Material Variances

Materials Quantity Variance



Materials Price Variance



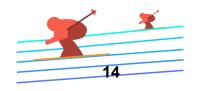
The standard price is used to compute the quantity variance so that the production manager is not held responsible for the purchasing manager's performance.

Labor Variances Example

Glacier Peak Outfitters has the following direct labor standard for its mountain parka.

1.2 standard hours per parka at \$10.00 per hour

Last month, employees actually worked 2,500 hours at a total labor cost of \$26,250 to make 2,000 parkas.



Labor Variances Summary

Actual Hours

X

Actual Rate

2,500 hours

X

\$10.50 per hour

= \$26,250

Actual Hours

×

Standard Rate

2,500 hours

X

\$10.00 per hour.

= \$25,000

Standard Hours

Standard Rate

2,400 hours

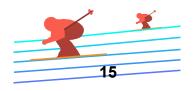
X

\$10.00 per hour

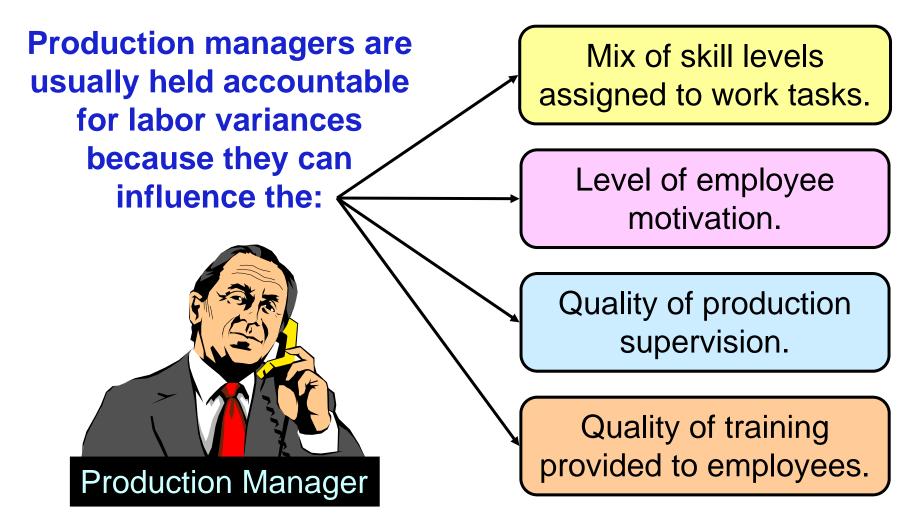
= \$24,000

Rate variance \$1,250 unfavorable

Efficiency variance \$1,000 unfavorable



Responsibility for Labor Variances

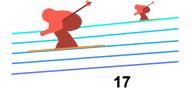


Variable Manufacturing Overhead Variances Example

Glacier Peak Outfitters has the following direct variable manufacturing overhead labor standard for its mountain parka.

1.2 standard hours per parka at \$4.00 per hour

Last month, employees actually worked 2,500 hours to make 2,000 parkas. Actual variable manufacturing overhead for the month was \$10,500.



Variable Manufacturing Overhead Variances Summary

Actual Hours

X

Actual Rate

2,500 hours

X

\$4.20 per hour

= \$10,500

Actual Hours

×

Standard Rate

2,500 hours

X

\$4.00 per hour

= \$10,000

Standard Hours

×

Standard Rate

2,400 hours

X

\$4.00 per hour

= \$9,600

18

Spending variance \$500 unfavorable

Efficiency variance \$400 unfavorable

Advantages of Standard Costs

Management by exception

Promotes economy and efficiency



Simplified bookkeeping

Enhances responsibility accounting

Potential Problems with Standard Costs

Emphasizing standards may exclude other important objectives.

Standard cost reports may not be timely.

Invalid assumptions about the relationship between labor cost and output.

Potential
Problems

Favorable
variances may
be misinterpreted.

Emphasis on negative may impact morale.

Continuous improvement may be more important than meeting standards.

Variable Overhead Variances – Example,

Actual Variable Overhead Incurred

\$6,740

Flexible Budget for Variable Overhead at Actual Hours

3,300 hours

X

\$2.00 per hour

\$6,600

Flexible Budget for Variable Overhead at Standard Hours

3,200 hours

X

\$2.00 per hour

\$6,400

Spending variance \$140 unfavorable

Efficiency variance \$200 unfavorable

\$340 unfavorable flexible budget total variance

Overhead Rates and Overhead Analysis – Example



ColaCo prepared this flexible budget for overhead:

Machine	_	Total Variable		Variable		Total		Fixed	
Hours		Variable Overhead		Overhead Rate		Fixed Overhead		Overhead Rate	
3,000	\$	6,000	\$	2.00	\$	9,000	\$	3.00	
4,000		8,000		2.00		9,000		2.25	

Overhead Variances and Under- or Overapplied Overhead Cost

