

Flexible Budgets and Performance Analysis

Chapter 9

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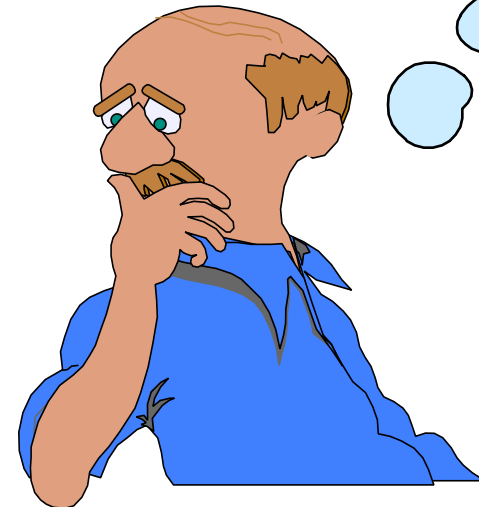
Characteristics of Flexible Budgets

Planning budgets are prepared for a single, **planned level** of activity.

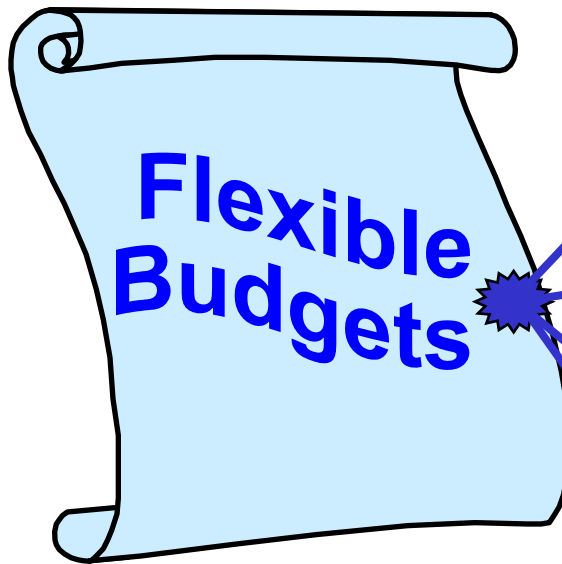
Performance evaluation is difficult when actual activity differs from the planned level of activity.



Hmm! Comparing static planning budgets with actual costs is like comparing apples and oranges.



Characteristics of Flexible Budgets



May be prepared for any activity level in the relevant range.

Show costs that should have been incurred at the actual level of activity, enabling “apples to apples” cost comparisons.

Help managers control costs.

Improve performance evaluation.

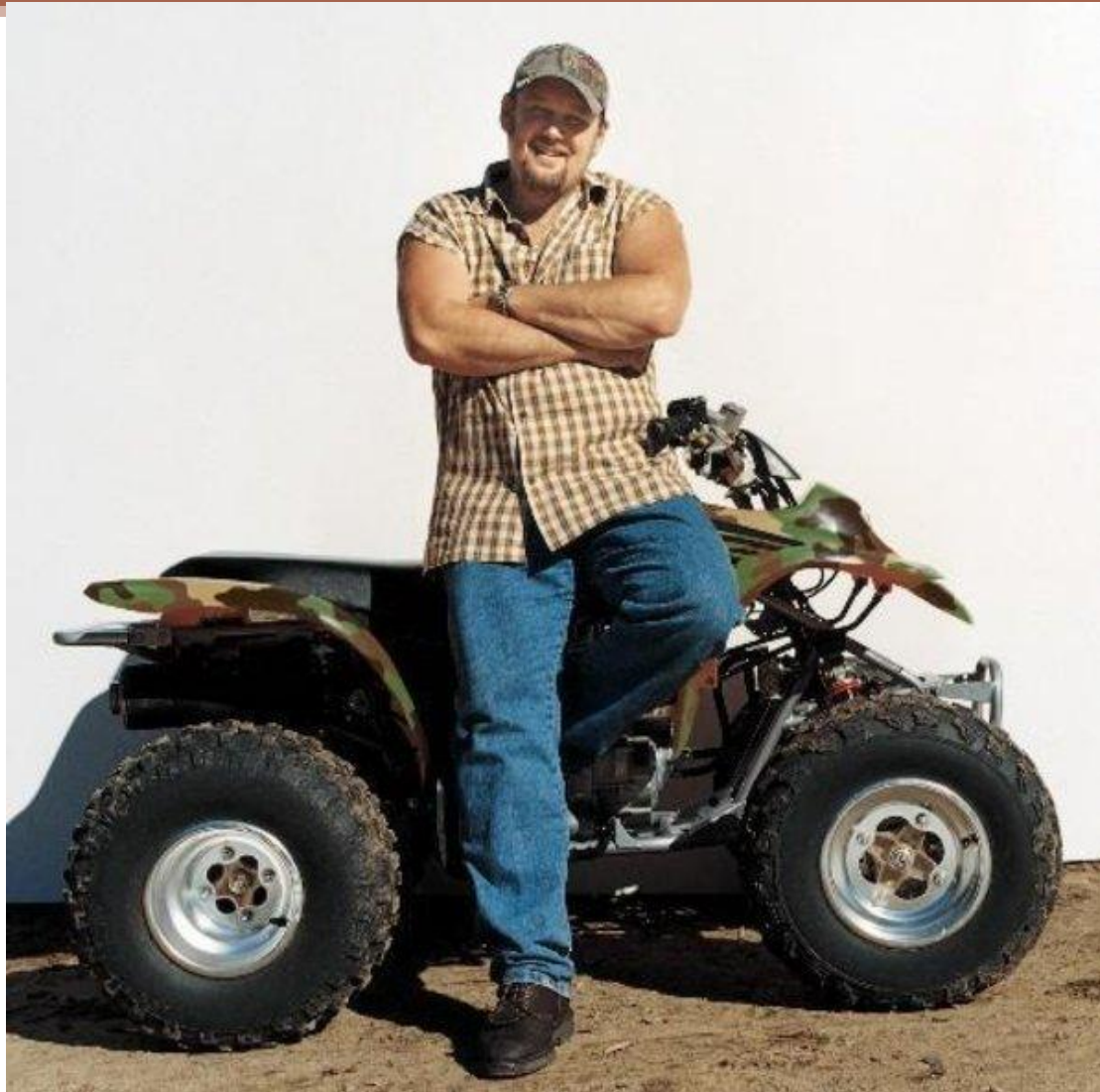
Let's look at Larry's Lawn Service.

Deficiencies of the Static Planning Budget

Larry's Lawn Service provides lawn care in a planned community where all lawns are approximately the same size. At the end of May, Larry prepared his June budget based on mowing 500 lawns. Since all of the lawns are similar in size, Larry felt that the number of lawns mowed in a month would be the best way to measure overall activity for his business.



Larry's Budget →



Not this guy !!

Deficiencies of the Static Planning Budget

Larry's Planning Budget

Larry's Lawn Service For the Month Ended June 30		
	Revenue/Cost Formulas	Planning Budget
Number of lawns (Q)		500
Revenue	(\$75Q)	\$ 37,500
Expenses:		
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000
Gasoline and supplies	(\$9Q)	4,500
Equipment maintenance	(\$3Q)	1,500
Office and shop utilities	(\$1,000)	1,000
Office and shop rent	(\$2,000)	2,000
Equipment Depreciation	(\$2,500)	2,500
Insurance	(\$1,000)	1,000
Total expenses		32,500
Net operating income		\$ 5,000


Deficiencies of the Static Planning Budget

Larry's Actual Results

Larry's Lawn Service For the Month Ended June 30	
	Actual Results
Number of lawns	550
Revenue	\$ 43,000
Expenses:	
Wages and salaries	\$ 23,500
Gasoline and supplies	5,100
Equipment maintenance	1,300
Office and shop utilities	950
Office and shop rent	2,000
Equipment Depreciation	2,500
Insurance	1,200
Total expenses	36,550
Net operating income	\$ 6,450

Deficiencies of the Static Planning Budget

Larry's Actual Results Compared with the Planning Budget

Larry's Lawn Service For the Month Ended June 30				
	Revenue/Cost Formulas	Planning Budget 	Actual Results	Variances
Number of lawns (Q)		500	550	
Revenue	(\$75Q)	\$ 37,500	\$ 43,000	\$ 5,500 F
Expenses:				
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 23,500	\$ 3,500 U
Gasoline and supplies	(\$9Q)	4,500	5,100	600 U
Equipment maintenance	(\$3Q)	1,500	1,300	200 F
Office and shop utilities	(\$1,000)	1,000	950	50 F
Office and shop rent	(\$2,000)	2,000	2,000	-
Equipment Depreciation	(\$2,500)	2,500	2,500	-
Insurance	(\$1,000)	1,000	1,200	200 U
Total expenses		32,500	36,550	4,050 U
Net operating income		\$ 5,000	\$ 6,450	\$ 1,450 F

Deficiencies of the Static Planning Budget

Larry's Actual Results Compared with the Planning Budget

F = Favorable variance that occurs when actual revenue is greater than budgeted revenue.


	Revenue/Cost Formulas	Planning Budget	Actual Results	Variances
Number of lawns (Q)		500	550	
Revenue	(\$75Q)	\$ 37,500	\$ 43,000	\$ 5,500 F
Expenses:				
				\$ 3,500 U
				600 U
				200 F
Office and shop utilities	(\$1,000)	1,000	950	50 F
				200 U
Total expenses		4,000	4,050	50 U
Net operating income		\$ 5,000	\$ 6,450	\$ 1,450 F

U = Unfavorable variance that occurs when actual costs are greater than budgeted costs.

F = Favorable variance that occurs when actual costs are less than budgeted costs.

Deficiencies of the Static Planning Budget

Larry's Actual Results Compared with the Planning Budget

Larry's Lawn Service For the Month Ended June 30				
Revenue/Cost Formulas	Planning Budget	 Actual Results	Variances	
Number of lawns (Q)	500	550		
Revenue (\$75Q)	\$ 37,500	\$ 43,000	\$ 5,500	F
Expenses:				
			\$ 3,500	U
			600	U
			200	F
Office and shop utilities (\$1,000)	1,000	950	50	F
			200	U
Total			4,050	U
Net operating income	\$ 5,000	\$ 6,450	\$ 1,450	F

Since these variances are **unfavorable**, has Larry done a poor job controlling costs?

Since these variances are **favorable**, has Larry done a good job controlling costs?

Deficiencies of the Static Planning Budget

I don't think I can answer the questions using a static budget.

Actual activity is above planned activity.

So, shouldn't the variable costs be higher if actual activity is higher?



Deficiencies of the Static Planning Budget

- The relevant question is . . .
“How much of the cost variances are due to higher activity and how much are due to cost control?”
- To answer the question, we must **flex** the budget to the actual level of activity.

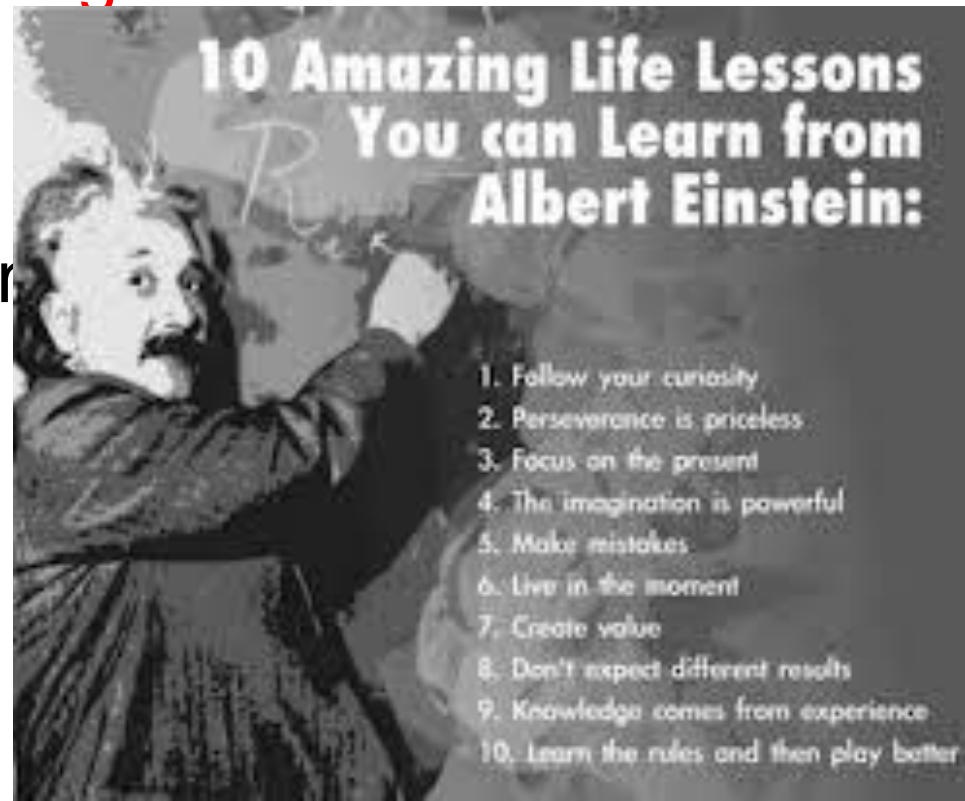


How a Flexible Budget Works

To **flex** a budget, we need to know that:

▫ **Total variable** costs **change** in direct proportion to changes in activity.

▫ **Total fixed** costs remain **unchanged** within the relevant range.



How a Flexible Budget Works

Let's prepare a
flexible budget
for Larry's Lawn
Service.



Preparing a Flexible Budget

Larry's Flexible Budget

Larry's Lawn Service For the Month Ended June 30		At 550 lawns
	Revenue/Cost Formulas	Flexible Budget
Number of lawns (Q)		550
Revenue	(\$75Q)	\$ 41,250
Expenses:		
Wages and salaries	(\$5,000 + \$30Q)	\$ 21,500
Gasoline and supplies	(\$9Q)	4,950
Equipment maintenance	(\$3Q)	1,650
Office and shop utilities	(\$1,000)	1,000
Office and shop rent	(\$2,000)	2,000
Equipment Depreciation	(\$2,500)	2,500
Insurance	(\$1,000)	1,000
Total expenses		34,600
Net operating income		\$ 6,650

Quick Check ✓

What should the total wages and salaries cost be in a flexible budget for 600 lawns?

- a. \$18,000.
- b. \$20,000.
- c. \$23,000.
- d. \$25,000.



Quick Check ✓

What should the total wages and salaries cost be in a flexible budget for 600 lawns?

- a. \$18,000.
- b. \$20,000.
- c. \$23,000.
- d. \$25,000.



Total wages and salaries cost

$$= \$5,000 + (\$30 \text{ per lawn} \times 600 \text{ lawns})$$

$$\$5,000 + \$18,000 = \$23,000$$

Activity Variances

Planning
budget revenues
and expenses

Flexible
budget revenues
and expenses

The differences between
the budget amounts are
called activity variances.

Activity Variances

Let's use **flexible** budgeting concepts to compute activity variances for Larry's Lawn Service.



Activity Variances

Larry's Flexible Budget Compared with the Planning Budget

Larry's Lawn Service For the Month Ended June 30				
	Revenue/Cost Formulas	Planning Budget	Flexible Budget	Activity Variances
Number of lawns (Q)		500	550	
Revenue	(\$75Q)	\$ 37,500	\$ 41,250	\$ 3,750 F
Expenses:				
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 21,500	\$ 1,500 U
Gasoline and supplies	(\$9Q)	4,500	4,950	450 U
Equipment maintenance	(\$3Q)	1,500	1,650	150 U
Office and shop utilities	(\$1,000)	1,000	1,000	-
Office and shop rent	(\$2,000)	2,000	2,000	-
Equipment Depreciation	(\$2,500)	2,500	2,500	-
Insurance	(\$1,000)	1,000	1,000	-
Total expenses		32,500	34,600	2,100 U
Net operating income		\$ 5,000	\$ 6,650	\$ 1,650 F

Activity Variances

Larry's Flexible Budget Compared with the Planning Budget

Activity and revenue increase by 10 percent, but net operating income increases by more than 10 percent due to the presence of fixed costs.

	Revenue/Cost Formulas	Planning Budget	Flexible Budget	Activity Variances
Number of lawns (Q)		500	550	
Revenue	(\$75Q)	\$ 37,500	\$ 41,250	\$ 3,750 F
Expenses:				
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 21,500	\$ 1,500 U
Gasoline and supplies	(\$9Q)	4,500	4,950	450 U
Equipment maintenance	(\$3Q)	1,500	1,650	150 U
Office and shop utilities	(\$1,000)	1,000	1,000	-
Office and shop rent	(\$2,000)	2,000	2,000	-
Equipment Depreciation	(\$2,500)	2,500	2,500	-
Insurance	(\$1,000)	1,000	1,000	-
Total expenses		32,500	34,600	2,100 U
Net operating income		\$ 5,000	\$ 6,650	\$ 1,650 F

Revenue and Spending Variances

Flexible budget revenue

Actual revenue

The difference is a revenue variance.

Flexible budget cost

Actual cost

The difference is a spending variance.



Revenue and Spending Variances

Now, let's use **flexible** budgeting concepts to compute revenue and spending variances for Larry's Lawn Service.





Revenue and Spending Variances

Larry's Flexible Budget Compared with the Actual Results

Larry's Lawn Service For the Month Ended June 30				\$1,750 favorable revenue variance
Revenue/Cost Formulas	Flexible Budget 	Actual Results 	Revenue and Spending Variances	
Number of lawns (Q)	550	550		
Revenue	(\$75Q) \$ 41,250	\$ 43,000	\$ 1,750	F
Expenses:				
Wages and salaries	(\$5,000 + \$30Q) \$ 21,500	\$ 23,500	\$ 2,000	U
Gasoline and supplies	(\$9Q) 4,950	5,100	150	U
Equipment maintenance	(\$3Q) 1,650	1,300	350	F
Office and shop utilities	(\$1,000) 1,000	950	50	F
Office and shop rent	(\$2,000) 2,000	2,000	-	
Equipment Depreciation	(\$2,500) 2,500	2,500	-	
Insurance	(\$1,000) 1,000	1,200	200	U
Total expenses	34,600	36,550	1,950	U
Net operating income	\$ 6,650	\$ 6,450	\$ 200	U

Revenue and Spending Variances

Larry's Flexible Budget Compared with the Actual Results

Larry's Lawn Service For the Month Ended June 30				Spending variances
	Revenue/Cost Formulas	Flexible Budget 	Actual Results 	Revenue and Spending Variances
Number of lawns (Q)		550	550	
Revenue	(\$75Q)	\$ 41,250	\$ 43,000	\$ 1,750 F
Expenses:				
Wages and salaries	(\$5,000 + \$30Q)	\$ 21,500	\$ 23,500	\$ 2,000 U
Gasoline and supplies	(\$9Q)	4,950	5,100	150 U
Equipment maintenance	(\$3Q)	1,650	1,300	350 F
Office and shop utilities	(\$1,000)	1,000	950	50 F
Office and shop rent	(\$2,000)	2,000	2,000	-
Equipment Depreciation	(\$2,500)	2,500	2,500	-
Insurance	(\$1,000)	1,000	1,200	200 U
Total expenses		34,600	36,550	1,950 U
Net operating income		\$ 6,650	\$ 6,450	\$ 200 U

A Performance Report Combining Activity and Revenue and Spending Variances

Now, let's use **flexible** budgeting concepts to combine the revenue and spending variances reports for Larry's Lawn Service.



A Performance Report Combining Activity and Revenue and Spending Variances

Larry's Lawn Service Flexible Budget Performance Report For the Month Ended June 30

	Revenue/Cost Formulas	Planning Budget	Activity Variances	Flexible Budget	Revenue and Spending Variances	Actual Results
Number of lawns (Q)		500		550		550
Revenue	(\$75Q)	\$ 37,500	\$ 3,750 F	\$ 41,250	\$ 1,750 F	\$ 43,000
Expenses:						
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 1,500 U	\$ 21,500	\$ 2,000 U	\$ 23,500
Gasoline and supplies	(\$9Q)	4,500	450 U	4,950	150 U	5,100
Equipment maintenance	(\$3Q)	1,500	150 U	1,650	350 F	1,300
Office and shop utilities	(\$1,000)	1,000	-	1,000	50 F	950
Office and shop rent	(\$2,000)	2,000	-	2,000	-	2,000
Equipment Depreciation	(\$2,500)	2,500	-	2,500	-	2,500
Insurance	(\$1,000)	1,000	-	1,000	200 U	1,200
Total expenses		32,500	2,100 U	34,600	1,950 U	36,550
Net operating income		\$ 5,000	\$ 1,650 F	\$ 6,650	\$ 200 U	\$ 6,450



A Performance Report Combining Activity and Revenue and Spending Variances

Larry's Lawn Service Flexible Budget Performance Report For the Month Ended June 30

	Revenue/Cost Formulas	Planning Budget	Activity Variances	Flexible Budget	Revenue and Spending Variances	Actual Results
Number of lawns (Q)		500		550		550
Revenue	(\$75Q)	\$ 37,500	\$ 3,750 F	\$ 41,250	\$ 1,750 F	\$ 43,000
Expenses:						
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 1,500 U	\$ 21,500	\$ 2,000 U	\$ 23,500
Gasoline and supplies	(\$9Q)	4,500	450 U	4,950	150 U	5,100
Equipment maintenance	(\$3Q)	1,500	150 U	1,650	350 F	1,300
Office and shop utilities	(\$1,000)	1,000	-	1,000	50 F	950
Office and shop rent	(\$2,000)	2,000	-	2,000	-	2,000
Equipment Depreciation	(\$2,500)	2,500	-	2,500	-	2,500
Insurance	(\$1,000)	1,000	-	1,000	200 U	1,200
Total expenses		32,500	2,100 U	34,600	1,950 U	36,550
Net operating income		\$ 5,000	\$ 1,650 F	\$ 6,650	\$ 200 U	\$ 6,450

50 lawns × \$75 per lawn



50 lawns × \$30 per lawn

A Performance Report Combining Activity and Revenue and Spending Variances

Larry's Lawn Service Flexible Budget Performance Report For the Month Ended June 30

	Revenue/Cost Formulas	Planning Budget	Activity Variances	Flexible Budget	Revenue and Spending Variances	Actual Results
Number of lawns (Q)		500		550		550
Revenue	(\$75Q)	\$ 37,500	\$ 3,750 F	\$ 41,250	\$ 1,750 F	\$ 43,000
Expenses:						
Wages and salaries	(\$5,000 + \$30Q)	\$ 20,000	\$ 1,500 U	\$ 21,500	\$ 2,000 U	\$ 23,500
Gasoline and supplies	(\$9Q)	4,500	450 U	4,950	150 U	5,100
Equipment maintenance	(\$3Q)	1,500	150 U	1,650	350 F	1,300
Office and shop utilities	(\$1,000)	1,000	-	1,000	50 F	950
Office and shop rent	(\$2,000)	2,000	-	2,000	-	2,000
Equipment Depreciation	(\$2,500)	2,500	-	2,500	-	2,500
Insurance	(\$1,000)	1,000	-	1,000	200 U	1,200
Total expenses		32,500	2,100 U	34,600	1,950 U	36,550
Net operating income		\$ 5,000	\$ 1,650 F	\$ 6,650	\$ 200 U	\$ 6,450



\$43,000 actual - \$41,250 budget

Performance Reports in Non-Profit Organizations

Non-profit organizations may receive funding from sources other than the sale of goods and services, so revenues may consist of both fixed and variable elements.

State funding



Tuition and fees



Donations



Endowments



Universities

Performance Reports in Cost Centers

Performance reports are often prepared for cost centers. These reports should be prepared using the same principles discussed so far, except for the fact that these reports will not contain revenue or net operating income variances.



Some Common Errors

The most common errors when preparing performance reports are to implicitly assume that:

1. All costs are fixed, or that;
2. All costs are variable.



Assume all costs are fixed.



Common Error 1: Assuming All Costs Are Fixed

Faulty Analysis Comparing Budgeted Amounts to Actual Amounts

Larry's Lawn Service			
For the Month Ended June 30			
	Planning Budget	Actual Results	Variances
Number of lawns	<u>500</u>	<u>550</u>	
Revenue	<u>\$ 37,500</u>	<u>\$ 43,000</u>	<u>\$ 5,500</u> F
Expenses:			
Wages and salaries	\$ 20,000	\$ 23,500	\$ 3,500 U
Gasoline and supplies	4,500	5,100	600 U
Equipment maintenance	1,500	1,300	200 F
Office and shop utilities	1,000	950	50 F
Office and shop rent	2,000	2,000	-
Equipment Depreciation	2,500	2,500	-
Insurance	1,000	1,200	200 U
Total expenses	<u>32,500</u>	<u>36,550</u>	<u>4,050</u> U
Net operating income	<u>\$ 5,000</u>	<u>\$ 6,450</u>	<u>\$ 1,450</u> F

Common Error 2: Assuming All Costs Are Variable

Faulty Analysis that Assumes All Budget Items Are Variable

Larry's Lawn Service For the Month Ended June 30				
	Planning Budget	Planning Budget × 110%	Actual Results	Variances
Number of lawns	500		550	
Revenue	\$ 37,500	\$ 41,250	\$ 43,000	\$ 1,750 F
Expenses:				
Wages and salaries	\$ 20,000	\$ 22,000	\$ 23,500	\$ 1,500 U
Gasoline and supplies	4,500	4,950	5,100	150 U
Equipment maintenance	1,500	1,650	1,300	350 F
Office and shop utilities	1,000	1,100	950	150 F
Office and shop rent	2,000	2,200	2,000	200 F
Equipment Depreciation	2,500	2,750	2,500	250 F
Insurance	1,000	1,100	1,200	100 U
Total expenses	32,500	35,750	36,550	800 U
Net operating income	\$ 5,000	\$ 5,500	\$ 6,450	\$ 950 F

End of Chapter 9

