

# ACC 550 Hampshire Company Case Study

## Section I: Cost-Volume-Profit Analysis

The Hampshire Company manufactures umbrellas that sell for $12.50 each. In 2014, the company made and sold 60,000 umbrellas. The company had fixed manufacturing costs of $216,000. It also had fixed costs for administration of $79,525. The per-unit costs of each umbrella are as follows:

Direct Materials: $3.00

Direct Labor: $1.50

Variable Manufacturing Overhead: $0.40

Variable Selling Expenses: $1.10

Using the information above, perform a cost-volume-profit (CVP) analysis by completing the steps below. All CVP calculations should be completed in the [Hampshire Company Spreadsheet](http://snhu-media.snhu.edu/files/course_repository/graduate/acc/acc550/acc_550_hampshire_company_spreadsheet.xlsx). **Note: The CVP analysis satisfies Part A of Section I.**

1. Compute net income before tax.
2. Compute the unit contribution margin in dollars and the contribution margin ratio for one umbrella.
3. Calculate the break-even point in units and dollars of revenue. Note: This is a required part of the CVP analysis and satisfies Part C of Section I.
4. Calculate the margin of safety:
5. In units
6. In sales dollars
7. As a percentage
8. Calculate the degree of operating leverage.
9. Assume that sales will increase by 20% in 2015. Calculate the percentage of before-tax income for this increase. Provide calculations to prove that your percentage increase is correct based on the operating leverage calculated in step 5.
10. Compute the number of umbrellas that Hampshire is required to sell if it plans to earn $120,000 in income before taxes by using the target income formula. Proof your calculation.
11. A company that specializes in tours in England has offered to purchase 5,000 umbrellas at $11 each from Hampshire. The variable selling costs of these additional units will be $1.30 as opposed to $1.10 per unit. Also, this production activity will incur another $15,000 of fixed administrative costs. Should Hampshire agree to sell these additional 5,000 umbrellas to the touring business? Provide calculations to support your decision.

Additionally, complete Parts B and D of Section I as outlined in the Final Project Guidelines and Rubric document.

## Section II: Inventory Management

The information below represents the beginning and ending inventory amounts along with the production and sales for the month in umbrella units.

Beginning Inventory: 0 Umbrellas

Production: 80,000 Umbrellas

Sales: 60,000 Umbrellas

Ending Inventory: 20,000 Umbrellas

Using the information provided above and the costs and sales information provided in Section I, complete the following in the Hampshire Company Spreadsheet in order to assist you in responding to all components of Section II:

* Prepare a variable costing income statement.
* Prepare an absorption costing income statement.

Additionally, complete Parts A through E of Section II as outlined in the Final Project Guidelines and Rubric document.

## Section III: Benchmarking

The management of the Hampshire Company would like to implement benchmarking. Standard costs have been established and are presented below. You will want to complete a variance analysis to include efficiency and price variances for materials (cloth and handle assemblies) and labor based on the following data:

Units Produced = 80,000

Units Sold = 60,000

**Direct Materials Purchased and Used**

Actual yards of cloth purchased and used: 128,000

Actual price incurred per yard: $1.25

Actual handles purchased and used: 80,808

Actual price per handle/rib/stretcher assembly: $0.99

**Direct Manufacturing Labor Used**

Actual direct labor hours used: 15,748

Actual price per hour: $7.62

Direct labor costs: $120,000

**Standard Rates**

Standard labor hours per unit: 0.20

Standard labor price per hour: $7.50

Yards material per unit: 1.50

Standard price per yard: $1.15

Handle/rib/stretcher assembly per unit: 1

Standard price per handle assembly: $1.05

Companies can use variance analysis and benchmarking to measure performance within their own company and against competitors. This can be done by setting standards/budgets and comparing a completed variance analysis to results from prior periods or comparing them to competitors’ results. Using the information provided above, complete the following calculations (steps 1 and 2) in the Hampshire Company Spreadsheet. This will assist you in responding to all components of Section III.

1. Calculate price variances for material and labor and denote whether they are favorable or unfavorable.
2. Calculate efficiency variances for material and labor and denote whether they are favorable or unfavorable.

In order to measure performance and make use of the variance analysis completed, management understands the need to compare results with their competitors. Following the steps outlined below, you will research benchmarking and propose the most effective approach for your company. Respond to Parts A through C of Section III as outlined in the Final Project Guidelines and Rubric document.

## Section IV: Alternative Costing Method

Hampshire has always produced stick umbrellas. However, it is considering expanding its production to include collapsible umbrellas. This consideration has been spurred by Tours Today, a touring company that is interested in providing its customers with collapsible umbrellas imprinted with its logo. The management at Hampshire is currently working out a deal with the touring company to produce 3,000 collapsible umbrellas and believes it can sell those umbrellas for $14.00 each. Here are the costs that can be directly traced to this special order:

Direct Materials: $9,300

Direct Labor Hours: 600

Hourly Rate of Direct labor: $8.00

In the traditional costing approach, overhead is applied at the rate of $24.60 per labor hour. This expansion in production will add additional overhead costs. The total overhead costs (assuming production of the stick and collapsible umbrellas) to include the cost pools and cost drivers are provided in Table 2.

An alternative costing method that might benefit Hampshire is the implementation of activity-based costing (ABC)*.* Hampshire would like to implement an ABC approach to analyze the production of this special order of collapsible umbrellas. The controller has assembled the following information:

|  | **Stick** | **Collapsible** |
| --- | --- | --- |
| Units Sold | 60,000 | 3,000 |
| Selling Price | $12.50 | $14.00 |
| Direct Material Cost per Unit | $3 | $3.10 |
| Direct Labor Cost per Hour | $7.50 | $8.00 |
| Variable Manufacturing Overhead | $0.40 | $0.40 |
| Variable Selling Costs | $1.10 | $1.10 |
| Labor Hours per Unit | 0.2 | 0.2 |
| Sales Orders | 120 | 1 |
| Purchase Orders | 50 | 3 |
| Production Runs | 45 | 6 |
| Material Moves | 86 | 10 |
| Machine Setups | 130 | 6 |
| Machine Hours | 525 | 32 |
| Inspections | 200 | 10 |
| Shipments | 60 | 3 |

Table 1: Direct Cost Information and Activities

| **Activity** | **Activity Cost** | **Activity Cost Driver** |
| --- | --- | --- |
| Order Processing | $35,000 | Number of Sales Orders |
| Purchasing | $36,000 | Number of Purchase Orders |
| Material Handing | $28,000 | Material Moves |
| Machine Setup | $14,000 | Machine Setups |
| Production | $99,000 | Production Runs |
| Assembly | $80,000 | Machine Hours |
| Inspecting | $11,000 | Number of Inspections |
| Shipping | $7,500 | Number of Shipments |

Table 2: Activity Cost Pools and Cost Drivers

Another alternative to traditional costing and ABC is time-driven activity-based costing (TDABC). You will need to determine which of these three methods would be the best approach for the Hampshire Company. The following article may assist you in your analysis: [Time-Driven Activity-Based Costing](http://costandprofitability.com/TDABC_Kaplan.pdf). Additionally, you may want to use the [Shapiro Library](http://libguides.snhu.edu/home) to conduct further research on the three methods. You will need to defend your position when answering the prompts for the written portion of this section.

Using the information provided above, complete the following in the Hampshire Company Spreadsheet in order to assist you in responding to all components of Section IV:

1. Calculate the allocation rates for each cost driver using ABC.
2. Use the traditional costing approach to calculate the total cost and the unit cost of the stick and collapsible umbrellas.
3. Use ABC to compute the total costs and the unit cost for the stick and collapsible umbrellas.
4. Compute the difference between the product cost per stick and collapsible umbrellas using the unit cost that you computed with the traditional approach and the one that you computed using ABC.

Based on your calculations from steps 1–4, respond to Parts A through C in Section IV as outlined in the Final Project Guidelines and Rubric document.

## Section V: Memo to Management

The management of the Hampshire Company is very interested in measuring performance. They would like you to recommend a strategy to increase business performance. They are not sure whether they should focus on product differentiation or cost leadership. Research additional performance tools to include the balanced scorecard. During your research, consider what performance measurements you would use based on the four perspectives. Provide examples.

In your recommendation, you will want to include the outcome of your previous quantitative analysis and research performed related to cost-volume-profit (CVP), variable and absorption costing, just-in-time (JIT), standard costs, variances, and benchmarking. You will want to review key points and make recommendations based on your current research and prior analysis completed and research performed.

Your two- to three-page memo to management must be submitted as a Word document and must include your responses to Parts A through C of Section V as outlined in the Final Project Guidelines and Rubric document.