Managerial Accounting

Chapter 3

Cost-Volume-Profit Analysis

Cost-Volume-Profit Assumptions and Terminology

1. Changes in the level of revenues and costs Arise only because of changes in the number of Product (or service) units produced and sold.

2. Total costs can be divided into a fixed component and a component that is variable with respect to the level of output.

Cost-Volume-Profit Assumptions and Terminology

3. When graphed, the behavior of total revenues and total costs is linear (straight-line) in relation to output units within the relevant range (and time period).

4. The unit selling price, unit variable costs, and fixed costs are known and constant.

Cost-Volume-Profit Assumptions and Terminology

5. The analysis either covers a single product or assumes that the sales mix when multiple products are sold will remain constant as the level of total units sold changes.

6. All revenues and costs can be added and compared without taking into account the time value of money.

Cost-Volume-Profit Analysis

BEP = Total Revenues = Total Costs

BEP = Fixed Cost ÷ Contribution Margin

Cost-Volume-Profit Analysis

EX.1 Assume that the Pants Shop can purchase pants for $32 from a local factory; other variable costs amount to $10 per unit.

The local factory allows the Pants Shop to return all unsold pants and receive a full $32 refund per pair of pants within one year. The average selling price per pair of pants is $70 and total fixed costs amount to $84,000.

Cost-Volume-Profit Analysis

How much revenue will the business receive if 2,500 units are sold?

$$2{,}500 \times \$70 = \$175{,}000$$

How much variable costs will the business incur?

$$2{,}500 \times \$42 = \$105{,}000$$

$$\$175{,}000 - 105{,}000 - 84{,}000 = (\$14{,}000)$$

Cost-Volume-Profit Analysis

What is the contribution margin per unit?

$70 – $42 = $28 contribution margin per unit

What is the total contribution margin when 2,500 pairs of pants are sold?

2,500 × $28 = $70,000

Graph Method