

Contribution margin and break even analysis

[Business](#), [Accounting](#)



Many factors come into play in determining business success. One of them is the financial factor. For a company to set financial goals it is crucial that its management know in detail the products or services they sell or provide. This is the analysis of two different scenarios at Aunt Connie's Cookies Simulation (University of Phoenix, 2011) and the financial performance of Jamestown Electric Supply Company (Heiter, et. al. 2008). During both analysis I applied concepts like fixed and variable costs, contribution margin, break-even point, indifference point, and operating leverage.

Aunt Connie's Cookies Scenario Simulation The Aunt Connie's brand grew successfully producing Lemon Creme and Mint cookies. Maria Villanueva is the current chief executive officer of this family-owned company (University of Phoenix, 2011). She faces critical decisions to make because both the lemon creme and mint cookies prices increased and sales volume decreased. Maria should apply several accounting concepts to reach her goal of increasing sales and revenue for the company. Some opportunities and challenges lined up for Aunt Connie's Cookies like large bulk orders and the buyout of a competitor's factory (University of Phoenix, 2011).

A confectioner commissioned Aunt Connie's Cookies to fill a bulk order of one million packages of the Real Mint cookies delivered in one month's time. The stipulations of the order weigh greatly on the company as the confectioner will only pay \$1.20 per package, which is much cheaper than the mass market selling at \$1.50 per packet. Rejecting the order may seem foolish as Aunt Connie's Cookies has the capacity to produce the order, and could be missing out on a good opportunity if she declines to fill the order (University of Phoenix, 2011).

In deciding which cookie's production to reduce, Maria took into account the concepts of contribution margin, unit contribution margin, and operating profits. This decision was necessary to create sufficient capacity to accommodate the mint cookies bulk order. The contribution margin is the amount of money that remains from the revenue obtained after sales to pay for fixed expenses and to contribute to the operating profits after deducting variable expenses. Alternatively, the unit contribution margin of each unit sales, in this case each pack of cookies adds to profit.

Finally, operating profit is the profit earned from a company's core business operations, also known as earnings before interest and tax (EBIT). Maria calculated the contribution margin and the unit contribution margin for each type of cookie, determined to reduce the production of lemon creme cookies and to increase the production capacity for the bulk order of real mint cookies. Maria can sell mint cookies at \$1.20 per package, below the selling price of \$1.50 because the real mint cookies provide a greater total contribution margin and that the lemon cream cookies provides a greater unit contribution margin.

Maria knew that Aunt Connie's Cookies should produce more of the cookies with the greater contribution margin per unit to maximize the shop's operating profit. If the scenario changed, and the bulk order was for lemon cookies, Maria would have to turn over the order to the confectioner. The unit contribution margin for the lemon cookies is smaller and Maria would have to increase the production capacity to make the same operating profit

as for the mint cookies, to the point of going beyond the factory's production capacity. Maria faced the opportunity to buy a peanut butter cookie plant.

She could use this plant to make more lemon creme cookies because the near-term demand exceeded 600, 000 packs. The challenge for Maria is to make a decision about going forward or not with this business (University of Phoenix, 2011). If the new plant has a break-even volume of creme cookies of 650, 000 packs, Maria must ensure that Aunt Connie's Cookie shop sales the same amount of packs or more. If the business sales less, it will make a loss, if it sells more, it will be a profit. The break-even point in volume is the point where the plant's fixed expenses are covered.

In the case that Maria considers Aunt Connie's Cookie shop cannot sell that much, she may ensure viability of the plant by (1) trying to reduce the fixed costs (e. g. renegotiating rent, reducing telephone bills, insurance, etc.), (2) trying to reduce variable costs (e. g. purchasing at lower cost the ingredients used to make cookies), or (3) increasing the selling price of the cookies. Any of these strategies can reduce the break-even point in volume. In the worst of the scenarios, Maria should not buy the peanut butter cookie plant. Key Learning Points.

During the simulation I applied several concepts such as contribution margin, break-even point, fixed and variable costs, indifference point, and operating leverage. All these concepts interrelate and form part of the cost volume profit analysis tool. The application of these concepts by managers help organizations attain good financial performance. Cost volume profit analysis (CVP analysis) is a powerful tool that can help managers in understanding

better the relationship that exists among the cost, the volume, and the profit in a business.

Managers can make good business decision if they concentrate in trying to understand the interaction that exists among (1) the prices of product or services, (2) the level of activity, (3) the volume of product , (4) the variable cost per unit, (4) the total fixed costs and (5) and the mixture of the product or services. Business decision may be about changes to company's pricing policy, selection of a marketing strategy to use, choosing which products to manufacture or services to provide, and even about the acquisition of new companies. The break-even point (BEP) is one element of CVP analysis.

BEP is the level of output at which the profit is zero. Break even analysis helps managers determine how far sales can decline before their companies start to lose money. The indifference point is the volume at which costs for both labor-intensive operations and equipment intensive operations are equal. When volumes increase, revenues increase. However, the presence of lower variable costs per unit in equipment-intensive operations ensures that the operating profits increase more significantly when compared to labor-intensive operations.

Equipment-intensive operations have higher fixed costs and lower variable costs per unit when compared to labor -intensive operations. Jamestown Electric Supply Company. Jamestown Electric Supply Company has been in business for 45 years. The company designs, manufactures, and delivers electrical supplies in various forms to different type of businesses.

Jamestown invested heavily in research and development of automotive

electronic technology to provide its customers with modern functionality, safety, and performance.

Jamestown products have outstanding features that create competitive advantage to commodities that customers regard as standard features on all automobiles. Jamestown has hundreds of diverse contracts with different divisions and plants of each of the major automobile manufacturers. Most of the contracts show good gross profit margin on sales, but others do not show acceptable bottom-line profits or show no profit. Although Jamestown's sales continue to rise, profit declined in the period under analysis from 2003 to 2007 as showed on Exhibit One.

Jamestown top managers believe that if sales growth remained positive, the problems with the profit would resolve. Warehousing and shipping managers think that customer service expenses are out of control and causing significant cost increases for the company. Jamestown customer services include overnight delivery of electronic component products, just-in-time inventory deliveries to client's plants, warehousing of client parts, special part support services, and many other customer services designed to gain and maintain clients. Exhibit One. Jamestown Electric Supply Company Income Statements for 2003 to 2007.

Electric Supply Company financial performance is in jeopardy and top management have to change its customer service policy and marketing strategy after carefully analyzing the information obtained after performing a CVP analysis. The focus of the analysis should be in understanding the

relationship between product price, volume, per unit variable cost, and the mix of products sold by Jamestown Electric.

Calculating the contribution margin on the products which Jamestown Electric sales will allow management to know more in detail how much each unit sale will contribute to the company profit. Calculating the break-even point will provide information about which products do not bring either profit or loss, and about how far sales can decrease before Jamestown Electric starts to lose money. James Electric product cost structure has a higher percentage of variable costs than in fixed costs, which involves less operating leverage or risk. One of the options management should consider is to closely monitor the variable expenses incurred by customer service in order to increase the company profits.

Jamestown Electrical Supply Company management will definitely benefit from setting a regular schedule to analyze contribution margins either monthly or quarterly to track product margin performance more accurately. Conclusion Managers can help their organizations achieve a good financial performance when they apply basic accounting concepts in their business strategic plans. Knowing the existing relationship between these concepts contribute to ensure their organization's financial success.