

## Break Even Analysis

You can use simple break-even analysis to determine the minimum amount of volume you need to do to pay all the bills. If you determine that you can at least break even, you can use the formula to estimate sales goals and formulate marketing efforts to achieve these goals. If at any time you need assistance, contact a GRSBDC counselor who can guide you through the process.

### 1. Add up fixed expenses.

This includes every expense you must pay to open your doors for business regardless of whether you have any sales or not. Fixed costs remain relatively constant as the quantity produced or sold varies. This would include rent, electricity, indirect labor (base salaries), loan payments, phone, etc.

### 2. Calculate your variable costs percentage.

This includes expenses that vary directly with sales and would include cost-of-goods-sold (CoGS), sales commissions, credit card fees, direct labor (e.g., manufacturers), etc. Some expenses are fixed up to a certain point and then become variable. For example, a store could require a minimum payroll to simply open the doors and then as the sales level fluctuates part-time help could be called in or sent home. The part-time flexible payroll could be categorized as variable.

For example:

Cost of Goods Sold	38%
Commissions	7%
<u>Direct Labor</u>	<u>8%</u>
<b>Total Variable Cost Percentage</b>	<b>53%</b>

### 3. Simple Calculation

If your fixed costs are \$3000 per month and your variable costs are 53%, break-even is calculated as follows:

$$\begin{aligned} \text{Contribution margin} &= 1 - \text{variable cost \%} \\ &= 1 - .53 = .47 \\ \text{Break-even \$ volume} &= \text{Fixed costs} / \text{Contribution margin} \\ &= \$3000 / .47 = \$6382.98 \end{aligned}$$

If your goal is to make a \$1000 profit, add that amount to fixed costs:

$$(\$3000 + \$1000) / .47 = \$8510.63$$

Seemingly minor changes in expenses or prices can have a significant impact on the dollar volume a small business must achieve. Break-even analysis is often shown in graphic format:

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