

KPI

Mini-Series

for School Nutrition Programs

Break-Even Point

Objective: Calculate break-even point to determine financial feasibility of a new program, make better financial decisions, and create annual benchmark goals.

Preparation Checklist

Instructions: The following tasks are necessary for presenting the trainings. Keep track of the progress by checking off tasks as they are completed. (Items may vary according to needs of particular lessons.)

Task	Person Responsible	Completion Date	✓
<p>Reserve equipment and gather supplies as needed for use on the day of class (6 weeks prior).</p> <p>Roster of participants attending for instructor Participants' sign-in sheets</p> <p>Task to do before the training Print handouts and activities for each participant Print activity answer keys for each participant to pass out at the end of the lesson</p> <p>List of equipment and supplies needed Microphone (preferably wireless) Calculators Pens, pencils, note paper, self-adhesive notes, (each table) Chart paper and markers</p>	Instructor		

Objective: Calculate break-even point to determine financial feasibility of a new program, make better financial decisions, and create annual benchmark goals.

SAY: Hello, everyone. Welcome to the Key Performance Indicators (KPI) lesson on break-even point. You will learn how to calculate break-even point, how to apply the information to determine financial feasibility of a new program, make better financial decisions, and create annual benchmark goals for the school nutrition program.

ASK: Can someone tell me what break-even point is?

DO: Wait for participants to respond.

FEEDBACK: Break-even point (BEP) is the point at which revenues and expenditures are equal. BEP is the amount of revenue (sales or income) needed to cover fixed and variable costs. When revenues exceed expenditures, excess revenue or an increase in fund balance occurs. When expenditures exceed revenues, a loss or a decrease in fund balance occurs.

ASK: Why would you want to calculate break-even point in your school?

DO: Wait for participants to respond.

FEEDBACK: Knowing the status of the school nutrition (SN) program regarding the BEP allows an SN director to gauge whether the program is self-sufficient and to make changes as needed. The BEP can be used to determine if starting an initiative (i.e., a supper program, an after-school snack program, etc.) will be financially feasible.

ASK: How often should you calculate break-even point?

DO: Wait for participants to respond.

FEEDBACK: Break-even point can be calculated monthly and annually.

SAY: The information needed to calculate break-even point can be found on a revenue and expenditure report known as the statement of activities report. This report is usually prepared at the end of the month by the SN office or the school business office. You will need the revenue, fixed costs, variable costs, and the contribution margin.

Fixed costs are those that do not vary with sales volume or number of customers served but stay fixed over time. The most common fixed costs are central office costs, manager's salary, basic telephone charges, core staff (not including substitute cost), and trash removal (unless by weight).

SAY: **Variable costs** are those that change with sales volume or number of customers served. The most common variable costs are food, supplies, paper goods, and some labor (temporary and part-time).

Contribution margin is the percent of revenue that can be used to cover fixed costs. For example, if the contribution margin is 46%, then 46 cents of every dollar in revenue goes to pay the fixed costs.

Use the following formulas to calculate break-even point*:

$$\begin{aligned} \text{BEP} &= \frac{\text{Fixed Costs}}{\text{Contribution Margin}} = \frac{\text{Fixed Costs}}{1 - (\text{Variable Cost} / \text{Revenue})} \\ &= \frac{\text{Fixed Costs}}{1 - \text{Variable Cost \%}} \end{aligned}$$

Note: When you have an operation within parentheses, do that calculation first. Then complete the remaining calculation.

*Charter and non-public schools that participate in the National School Lunch Program (NSLP) may use vended food service management companies, and this would not be calculated the same way. Please consult with your State agency child nutrition authorities for guidance.

ASK: Does anyone have any questions before we complete an activity? The activity may help to answer some of your questions.

DO: Wait for participants to respond. Answer all questions to the best of your ability. If you do not know the answer, tell the participants that you will need to research the answer and will get back to them.

Distribute copies of the **Calculating Break-Even Point** worksheet. Give them about five (5) minutes to complete the activity. Walk around to help anyone who may have questions or need help. At the end of the five minutes, go over the answers. Ask for volunteers to give their answers if time allows. Explain how to calculate BEP if someone does not understand.

Calculating Break-Even Point

Instructions: Using the information in the following table, calculate BEP using the formulas previously discussed. Answer the three questions. You will have five minutes to complete the activity.

Item	Revenues	Fixed Costs	Variable Costs
Revenue for the Period	\$130,450		
Food Cost			\$52,000
Labor Cost (Core Staff)		\$40,000	
Benefit Cost		\$15,000	
General Supplies/Paper Supplies Cost			\$22,000
Totals	\$130,450	\$55,000	\$74,000

$$\frac{\text{Fixed Costs}}{1 - (\text{Variable Costs} / \text{Revenue})} = \frac{\$55,000}{1 - (\$74,000 / \$130,450)} = \frac{\$55,000}{.43} =$$

ASK: What is the break-even point? _____
 What is the contribution margin? _____
 What does the contribution margin mean? _____

Calculating Break-Even Point Answer Key

Item	Revenues	Fixed Costs	Variable Costs
Revenue for the Period	\$130,450		
Food Cost			\$52,000
Labor Cost (Core Staff)		\$40,000	
Benefit Cost		\$15,000	
General Supplies/Paper Supplies Cost			\$22,000
Totals	\$130,450	\$55,000	\$74,000

$$\frac{\text{Fixed Costs}}{1 - (\text{Variable Costs}/\text{Revenue})} = \frac{\$55,000}{1 - (\$74,000/\$130,450)} = \frac{\$55,000}{.43} = \underline{\underline{\$127,906.98}}$$

ASK: What is the break-even point? **\$127,906.98**

What is the contribution margin? **.43**

What does the contribution margin mean? **It means that 43 cents of every dollar in revenue goes toward paying the fixed costs.**

SAY: The break-even point can be used to determine if starting an initiative (i.e., a supper program, an afterschool snack program, etc.) will be financially feasible. Trends in BEP over time can indicate directions for improvement for making better financial decisions. The BEP can be calculated annually to create annual benchmark goals. School nutrition programs are expected to be self-sustaining. Therefore, school nutrition programs are expected to, at a minimum, break-even.

An important concept to keep in mind is the impact of increasing participation or the number of meals served on fixed and variable costs. Increasing volume if fixed costs are high will lower the BEP. Increasing volume, if variable costs are high, will raise the BEP. For example, if food costs are too high and participation increases, the financial position of the SN program will worsen. However, if labor costs are too high and participation increases, the financial position of the SN program should improve.

DO: Distribute copies of the handout **Factors That Influence Break-Even Point**.

SAY: The handout **Factors That Influence Break-Even Point** is a list of some of the revenues and expenditures that can affect your break-even point.

Factors That Influence Break-Even Point

Changes in Revenue

- Federal sources
- State sources
- Local sources
- Student meal sales
- Adult meal sales
- Contract meal sales
- Nonprogram food sales
- Miscellaneous other revenue
- Interest
- Fund transfer-in
- Uncollected revenue

Changes in Expenditures

- Food production supplies
- Salaries and wages
- Employee benefits
- Purchased food products
- USDA Foods used
- General operating supplies
- Purchased services
- Property operation
- Miscellaneous other expenditures
- Capital assets
- Indirect costs
- Fund transfer-out

ASK: Do you have any questions about cost as a percentage of revenue and how to calculate it?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

SAY: Thank you for participating in today's training. I hope you will take this information back to your school and begin to use it.

References

- Institute of Child Nutrition. (2018). *Essential KPIs for school nutrition success*. University, Mississippi: Author.
- U.S. Department of Agriculture. (2015). *Professional standards for school nutrition professionals*. <https://www.fns.usda.gov/school-meals-professional-standards>
- U.S. Department of Agriculture, Food and Nutrition Service. (2019). *Food distribution program: Value of donated foods* (July 1, 2019 - June 30, 2020). <https://www.fns.usda.gov/usda-fis/fr-081219>
- U.S. Department of Agriculture, Food and Nutrition Service. (2019). *National school lunch, special milk, and school breakfast programs, national average payments/maximum reimbursement rates*. <https://www.federalregister.gov/documents/2019/08/07/2019-16903/national-school-lunch-special-milk-and-school-breakfast-programs-national-average-paymentsmaximum#p-31>



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