

KPI

Mini-Series

for School Nutrition Programs

Cost as a Percentage of Revenue

Objective: Calculate cost as a percentage of revenue or operating ratios to analyze food cost or labor cost.

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 cost as a percentage of revenue or operating ratios to analyze food cost or labor cost.

SAY: Hello, everyone. Welcome to the KPI lesson on cost as a percentage of revenue, often referred to as operating ratios and how it relates expenses to revenue. When calculating operating ratios, cost is usually analyzed in terms of food cost or labor cost.

Operating ratios help school nutrition (SN) directors evaluate and monitor their operations. These ratios are useful to management because they allow a comparison of actual results against anticipated operational plans. Some examples are food cost percentage and labor cost percentage.

Food cost percentage: School nutrition directors rely on this ratio to determine whether expenditures for purchased food are reasonable and consistent with benchmarks.

Labor cost percentage: This percentage is useful to SN directors as a benchmark for making comparisons from school-to-school within a district, or district-to-district within a State or region.

ASK: How often should these percentages be calculated?

DO: Allow time for participants to respond.

FEEDBACK: They should be calculated monthly.

SAY: SN program revenues should meet or exceed total expenditures, making a program self-supporting. The goal for labor cost plus benefits should be kept at or below 40% of total revenues.

The following are not industry standards but some benchmarks observed in the School Lunch and Breakfast Cost Study-II Final Report (2008):

- Food costs = 38% of total cost
- Labor costs = 46% of total cost
- Other costs = 16% of total cost

Cost as a percentage of revenue is an important tool in annual budget development and monthly operations monitoring. When expenditures are calculated as a percentage of total revenue, they can be compared to budget projections, to the previous month's percentages, to a previous year's figures, to industry standards, and similar schools for the same period. Trends and directions for improvement can be identified so that better financial decisions are made. All expenditures can be calculated as a percentage of total revenue.

Let's look at how food cost percentage is calculated.

SAY: A school nutrition program has a total revenue of \$130,450 for the month of October and a food costs of \$52,000 for the same month. Using the following formula, we can determine the relationship of food cost to total revenue.

$$\frac{\text{Cost of Purchased Food}}{\text{Total Revenue}} \times 100 = \text{Food Cost Percentage}$$

$$\frac{\$52,000}{\$130,450} \times 100 = 0.3986 \text{ or } 40\%$$

This operation has a 40% food cost in relation to total revenue for the month. That means that \$0.40 of every revenue dollar was spent for food in the month of October.

We can look at labor costs the same way. The school district has a payroll, including benefits and other related labor expenses, of \$55,000. Using the following formula, we can determine the relationship of labor cost to total revenue.

$$\frac{\text{Payroll, Benefits, and Other Related Labor Expenses}}{\text{Total Revenue}} \times 100 = \text{Labor Cost Percentage}$$

$$\frac{\$55,000}{\$130,450} \times 100 = 0.4216 \text{ or } 42\%$$

This tells the school nutrition director that \$0.42 of every revenue dollar was spent for labor and benefits for the month of October.

ASK: Does anyone have any questions concerning how to calculate these percentages?

DO: Allow time for participants to respond. Answer all questions to the best of your ability. If there is a question you do not know the answer to, tell the participant that you will have to get back to them with an answer.

SAY: The revenue data can be found on the statement of activities (also known as the revenue and expenditure statement or income statement). The statement of activities report identifies revenues, expenditures, and fund balance for the current period, the previous period, and year-to-date. It is usually prepared at the end of the month by the school nutrition office or school business office.

DO: Distribute copies of worksheet **Calculating Cost as a Percentage of Revenue**. Ask the participants to complete this worksheet.

SAY: Let's complete an activity to see what you have learned. Look at the **Calculating Cost as a Percentage of Revenue** activity worksheet.

Calculating Cost as a Percentage of Revenue

Instructions: Using the information in the table, calculate the cost as a percentage of revenue for Anywhere School District to determine how the school district is doing. Carry the answers out four places behind the decimal. You will have about five minutes to complete the activity.

Expenditure (Cost) Source	Costs/ Expenditures	÷	Revenue	=	Percentage of Revenue
Salaries and Wages	\$40,000	÷	\$130,450	=	
Employee Benefits	\$15,000	÷	\$130,450	=	
Purchased Food	\$40,000	÷	\$130,450	=	
USDA Foods	\$12,000	÷	\$130,450	=	
Food Production/ Cleaning Supplies	\$22,000	÷	\$130,450	=	
Total Expenditures		÷	\$130,450	=	

Calculating Cost as a Percentage of Revenue Answer Key

Expenditure (Cost) Source	Costs/ Expenditures	÷	Revenue	=	Percentage of Revenue
Salaries and Wages	\$40,000	÷	\$130,450	=	0.3066
Employee Benefits	\$15,000	÷	\$130,450	=	0.1150
Purchased Food	\$40,000	÷	\$130,450	=	0.3066
USDA Foods	\$12,000	÷	\$130,450	=	0.0920
Food Production/ Cleaning Supplies	\$22,000	÷	\$130,450	=	0.1686
Total Expenditures	\$129,000	÷	\$130,450	=	0.9889

ASK: If a goal of no more than 40% labor costs (including benefits) to revenue is recommended, how is Anywhere School District doing on their percentage of revenue?

FEEDBACK: If you look at salaries and wages, they are doing fine. However, when you include employee benefits, the percentage is 42 percent. The SN director of this school district might want to either re-examine staffing, see if they can increase participation, or raise revenue.

DO: Distribute copies of the handout **Factors That Influence Cost Percentage**.

SAY: Let's look at the handout **Factors That Influence Cost Percentage**. This handout lists some of the things that can affect food and labor cost percentages.

Factors That Influence Cost Percentage

There are many factors that can influence cost percentage to revenue. A higher than expected food cost percentage may occur due to:

- Incorrect portion control
- Overproduction and food waste
- Inaccurate inventories due to counting or valuation errors
- Not fully utilizing USDA Foods allotments
- Theft
- High food costs
- Inefficient menu planning
- Use of pre-prepared and packaged foods versus “scratch” ingredients
- Inaccurate meal counting and claiming
- Unexpected expenses (such as fuel surcharges) due to the differences between states and/or regions

A lower than expected food cost percentage should be investigated. While it may mean cost control methods are working better than expected, it could also indicate:

- Inaccurate inventories
- Inaccurate reporting
- Inadequate portion sizes
- Unpaid invoices

A higher than expected labor cost percentage may occur due to:

- The differences in labor expenditures between states and/or regions, or
- Excess labor hours being allocated for the number of meals served.

A lower than expected labor cost percentage may occur due to inadequate staffing, which leads to poor service.

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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