

## Do You Know If You're Charging the Right Price?

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***Calculating the overhead percentage for your business is critical to pricing your goods and services profitably and operating your business successfully.***

Competitive pricing is always a hot button issue with business owners. They know competitive prices will attract customers and that price is often the first piece of information buyers collect. So they rationalize that if they can make a favorable first impression on price, increased sales and loyal customers will follow. What they fail to realize is that price conscious consumers are not always loyal customers. They often choose the lowest price over anything else the business owner can offer.

Many business owners establish prices without understanding or analyzing their own costs of doing business. They use their lowest competitor's price as a benchmark and make the assumption that they can sell their good or service at or below this price. They justify this by saying, "I'm as good as my competition or better." What they do not understand is that costs and profit margins are different for every business. What works well for one competitor may actually yield a loss for another. Still, business owners will justify their pricing decision by saying, "I'll raise my price later, after I have customers," or "I'll make up for my lower price with increased volume." All too often though, this does not happen. Price sensitive customers resist price increases by shopping elsewhere, and competitors fight back with lower prices leaving business owners that follow a competitive pricing strategy in a no win situation.

In order to compete effectively, business owners need to have a basic understanding

of their costs and a procedure for capturing these costs in their selling price. Although most owners can relate to individual costs because they see an invoice or write a check, many lack a systematic approach for capturing their combined costs in the selling price of a good or service. Their biggest challenge occurs when they try to factor in overhead expenses. Many of these costs are not easily attributable to a particular product or service (i.e. indirect labor, insurance, rent, utilities, etc.) and they often get assigned disproportionately or are overlooked entirely when pricing a good or service.

Pricing starts with a formal review of all business expenses, which includes separating these expenses into three categories: direct labor, direct materials and overhead costs. These costs are considered either billable or non-billable activities. Overhead costs are non-billable activities and are factored into a selling price as a percentage of the direct labor cost, which is a billable activity. During the review process, the business owner will become acutely aware of the costs associated with doing business and begin looking at different ways to manage them.

Calculating an "overhead percentage" is the most effective way to capture overhead costs in the selling price. This percentage provides a means to allocate these expenses proportionately to the direct labor dollars billed to each customer. It is calculated in a seven-step procedure that separates employee time into direct and indirect labor,

identifies available workdays and billable direct labor hours, and isolates overhead expenses. In order to calculate an overhead percentage, business owners must become familiar with the terminology used in the seven-step procedure and be able to differentiate between billable (income producing) and non-billable (non-income producing) activities.

## Pricing terminology

The important terms to remember are:

- **Business expenses:** all expenses found on the Income Statement (also called the Profit and Loss Statement).
- **Overhead expenses:** all costs found on the income statement except for direct labor, direct materials, and costs attributable to outside subcontractors. (Note: If it can be billed directly to a customer's account it should not be considered an overhead expense.). Overhead expenses are absorbed by the business and factored into the selling price as a percentage of the direct labor cost. They include indirect costs such as accounting, advertising, depreciation, indirect labor, insurance, interest, legal fees, rent, repairs, supplies, taxes, telephone, travel, and utilities.
- **Direct labor:** labor used to produce goods and services purchased by customers. These man-hours are directly attributable to customer activity (billable).
- **Indirect labor:** labor used to provide supporting services to the business such as accounting, clerical, custodial, customer services, management, purchasing, sales, and warehousing. These man-hours support business functions but are not directly chargeable to the customer (non-billable).
- **Direct materials:** materials used in the final product or service purchased by

customers. These materials are charged directly to the customer's account (billable).

- **Overhead percentage:** ratio between direct labor and overhead expenses. This percentage is used to allocate overhead expenses proportionately to direct labor dollars billed to customers.

## Calculating the overhead percentage

The overhead percentage is calculated using the following seven-step procedure:

**Step 1: Determine "average" hourly wage paid to direct labor employees** - classify each employee's work contribution or portion thereof, as either direct or indirect labor. Determine the hourly wage rate paid to each direct labor employee including the business owner if applicable. Total the hourly wage rates and divide by the number of employees counted.

**Step 2: Estimate direct labor workdays available in the calendar year** - calculate the number of direct labor workdays in a calendar year by subtracting the average number of days that direct labor employees will not be present for work because of weekends, holidays, vacations and miscellaneous (e.g. injury, personal, sickness, etc). Count only direct labor employees. Do not include any indirect labor employees in this estimate.

**Step 3: Estimate billable direct labor hours for work year** - multiply available direct labor workdays by the scheduled 8-hour workday minus the average number of *daily* non-billable direct labor hours. Non-billable direct labor hours include company paid lunches, breaks, meetings, training classes, cleanup, etc. that a customer is not expected to pay for directly.

**Step 4: Estimate billable direct labor dollars for work year** - multiply billable direct labor hours by average direct labor wage.

**Step 5: Estimate non-billable direct labor dollars for work year** - subtract billable hours from the total man-hours available in a work year, which is 2088 hours. The remainder equals the non-billable direct labor hours. Multiply this number by the average direct labor rate to arrive at the non-billable direct labor dollars. These costs are absorbed by the company and must be passed on to the customer through the overhead percentage.

**Step 6: Estimate all overhead expenses for work year to include non-billable direct labor** - Refer to actual or proforma income statement, total all the business expenses shown. Deduct the cost of billable direct labor, direct materials, and costs attributable to outside subcontractors that can be billed directly to a customer's account. Do not deduct the cost of non-billable direct labor. Adjust total for inflation and projected price changes that will occur in labor and materials for the coming year.

**Step 7: Calculate the annual overhead percentage** - divide the overhead expense (Step 6) by the billable direct labor dollars (Step 4).

### Using the overhead percentage

After calculating the overhead percentage and using it for the first time to determine their selling price, most business owners find that they should be charging a higher price than what they are currently charging. Even when they re-calculate the overhead percentage a second or third time, after

making adjustments to lower their costs or increase their direct labor, they still may find it necessary to increase their price. This occurs because the bulk of their overhead costs will remain relatively constant and previously, they did not factor all of them into the selling price. In using the overhead percentage, business owners find it to be an invaluable tool. By using it, they get a deeper understanding of their business expenses and learn how to price their goods and services profitably.

### Conclusion

Failure to take all business expenses into consideration when pricing goods and services is a key problem for many business owners. They often lack a methodology for doing this, and many times will choose to ignore or overlook some of their costs to price their goods and services competitively. Using the "overhead percentage" ensures that they will take all of their business expenses into account and helps highlight the impact that their day-to-day management decisions have on selling prices. After using the overhead percentage, their reaction is often one of surprise and disbelief – "I couldn't charge those prices if I wanted too!" Perhaps this is true, but when they know where their prices should be, they can begin the process of taking corrective action to either increase their prices or look at alternatives to decrease their costs. Such action is necessary to operate their business profitably and successfully.

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**Practical Exercises:** Using the terminology and steps outlined above, the two exercises below demonstrate how to calculate an overhead percentage and use it to compute a selling price.

### Exercise #1: Calculating the Overhead Percentage for a Service Business

Jones Painting Company is a small service business that provides painting and related services to commercial and residential customers. In addition to the owner, there are four direct labor employees. The employees are paid union scale, which is \$20.00/hr, and the owner is paid \$25.00/hr.

Normally, the company does not schedule weekend work. It recognizes 10 holidays each year. It also provides each employee and the owner with 10 paid vacation days. Employees and the owner average one unscheduled absence per month. In a typical 8-hour workday, employees' average 2 hours in non-billable activities and the owner averages 4 hours.

The company has budgeted \$400,000 for all business expenses found on its income statement for the current calendar year. This includes \$80,000 for direct materials and \$10,000 for subcontractors.

Required:

1. What is the average direct labor wage paid per hour?

Employee 1	\$20.00
Employee 2	\$20.00
Employee 3	\$20.00
Employee 4	\$20.00
Owner	<u>\$25.00</u>
	\$105.00 / 5 employees = \$21.00/hr

2. How many workdays are available to Jones Painting Company in the above scenario?

Calendar days	=	365
Less non-work days:		
Weekends	-104	
Holidays	-10	
Vacation	-10	
Personal	<u>-12</u>	
Non-work days	=	<u>-136</u>
Workdays available	=	229

3. What is the total number of direct labor man-hours projected to be billed during the work year for the owner and employees?

Total workdays available	=	229
Scheduled work hours	<u>x</u>	<u>8</u>
Hours available per employee	=	1,832
Number of employees	<u>x</u>	<u>5</u>
Total hours available	=	9,160
Less non-billable time*	<u>-</u>	<u>2,748</u>
Billable direct labor hours	=	6,412



## Exercise #2: Calculating the Price of a Product

Countryside Specialties is a small specialty food business that creates new recipes for bread, cake and drink products and then packages the required dry ingredients for sale to specialty food and drink shops, gourmet coffee shops and large department stores. The owner is currently preparing to introduce a new lemon poppy seed muffin mix and needs assistance pricing it.

The company has four direct labor employees including the owner. Two employees are paid \$6.00/hr, one employee is paid \$7.00/hr and the owner is paid \$13.00/hr. Because of the seasonal nature of its business, the company averages 165 non-work days per year. On typical workdays, employees' average 6 hours and the owner averages 2 hours in production related activities. The company's projected cash outlay for the coming 12 months will be \$197,944. This includes \$75,000 for direct materials, \$35,600 for direct labor including the owner's contribution, \$21,944 in owner's salary and \$65,400 in other business expenses.

The owner has determined that one batch of muffin mix will require 4 man-hours of production time and will produce 120 units. Ingredients and packaging materials will cost \$.73 per unit.

Required:

1. What is the average direct labor wage paid per hour?

Employee 1 -	\$6.00
Employee 2 -	\$6.00
Employee 3 -	\$7.00
Owner -	<u>\$13.00</u>
	\$32.00/ 4 employees = \$8.00/hr

2. How many workdays are available to Countryside Specialties, assuming there are 365 days in this calendar year?

Calendar days	=	365
Less non-workdays	=	<u>-165</u>
Total workdays available	=	200

3. What is the total number of direct labor man-hours projected to be billed during the work year for the owner and employees?

Total workdays available	=	200
Scheduled work hours	=	<u>x 8</u>
Hours available per employee	=	1,600
Number of employees	=	<u>x 4</u>
Total hours available	=	6,400
Less non-billable time*	=	<u>-2,400</u>
Billable direct labor hours	=	4,000

\*Note: Each employee averages 2 non-billable hours per day x 200 workdays  
Owner averages 6 non-billable hours per day x 200 workdays

$$2 \text{ hrs} \times 200 \text{ workdays} \times 3 \text{ employees} = 1,200 \text{ hours}$$

6 hrs x 200 workdays x 1 owner = 1,200 hours  
Non-billable direct labor hours = 2,400 hours

4. What is the projected overhead dollar expense for the work year?

Projected cash outlay for 12 months = \$197,944  
Less:  
Direct labor - \$35,600  
Direct materials - \$75,000  
Projected overhead expense \$87,344

5. What is the annual overhead percentage for Countryside Specialties?

$\frac{\text{Yearly overhead expense}}{\text{Yearly direct labor cost}} = \text{Annual overhead percentage}$

$\frac{\$87,344}{\$35,600} = 2.453$  or 245%

6. What will one package of lemon poppy seed muffin mix cost to produce?

Average direct labor rate = \$8.00/m-hr  
Overhead rate @ 245% = \$19.60/m-hr  
Direct labor cost = \$27.60/m-hr

4 man-hours per batch = 240 minutes / 120 units per batch = 2 minutes per unit

Direct labor cost/minute (\$27.60 / 60 minutes) = \$.46 x 2 minutes = \$.92  
Direct material costs = \$.73  
Per unit cost of muffin mix = \$1.65

7. What should Countryside Specialties selling price of this muffin mix be if the company wants a 25% gross margin on sales?

Margin on selling price = \$1.65 / .75 = \$2.20