

## PRICING LESSON OVERVIEW

In this assignment, you will learn how to price items in your restaurant. You will learn how to price based on food cost and then adjust for items that can command higher or lower margins. You will explore price elasticity of demand and cross-elasticity of demand among products. You will conclude the assignment by setting prices in your restaurant to achieve a profit goal.

### **ABOUT PRICING IN THE SIMULATION MODEL**

Pricing behaviors in the simulation are driven by customers and costs, just as in the real world. The simulation contains models of hundreds of individual potential customers. Each of these has a specific “price sensitivity” as well as preferences for entrees and beverages. The more price sensitive a customer is, the less likely she will be to buy a given product at a given price.

The simulation determines the cost of the entrees and beverages you offer based on the ingredients required. On the Menu Design screen, you can see a complete list of ingredients for each dish and its total cost. In this simulation, your cost of ingredients does not vary over time.

### **STRATEGIES FOR PRICING**

The goal of pricing in a restaurant is to maximize profit in the context of all the other managerial decisions you’ve made: staffing, layout, menu design, etc. While this goal sounds simple, the effect of price on customer purchase decisions is very complex. The simulation model lets you explore and understand these effects as you operate your simulated restaurant. Pricing decisions are also driven by cost. At the most basic level, items must be priced above cost in order to make money.

#### **Choosing an Overall Price Level**

When customers consider dining at a restaurant, they scan the menu or a restaurant guide to get a feel for the overall price level of the offerings. If they feel dining there will be too expensive, they will look for another restaurant. In the simulation, potential customers will enter your restaurant and stop to look at the menu. If they cannot find entrees and beverages that they want, at a price they are willing to pay, they will turn around and leave. They will also comment that they think the prices are too high.

#### **Understanding Cost and Margin**

Margin is the difference between the price you charge for a meal and its cost (or food cost).

$$\text{Margin} = \text{Price} - \text{Food Cost}$$

Margin is often expressed as a percentage of price.

$$\text{Margin \%} = (\text{Price} - \text{Food Cost}) / \text{Price} \times 100$$

Food cost is also often analyzed as a percentage of price.

$$\text{Food Cost \%} = \text{Food Cost} / \text{Price} \times 100$$

In a typical restaurant, prices might be set so that the margin % is 70% and the food cost is 30%. This means that the restaurant makes \$7 on a \$10 dish that costs \$3. Although the \$7 sounds high, that margin must cover a number of fixed expenses such as rent, staffing, etc.

Because customers perception of value dictates what they will pay for an item, the ultimate margins you can charge will vary from item to item. For example, you can often charge \$2.00 for a cup of coffee with a food cost of \$0.20. The margin on this item is 90% and the food cost is 10%. Conversely, an entree with high meat content might have a food cost of \$10 but only be able to command a price of \$25 for a margin of 60% and a food cost of 40%.

This behavior is built into the simulation. You will find that different items will support different margins. Understanding and exploiting this fact is critical to success in the restaurant business.

### **Maximizing Margin: What is Price Elasticity of Demand?**

Basic economics teaches us that as price goes up demand goes down. This is reflected in the simulation. As you increase the price of item, customers will start to comment that the price is too high and stop buying it. In planning a price change, you need to estimate how much demand will change for a given price change. This is called the price elasticity of demand.

For a price increase, if the resulting % increase in the margin is greater than the % decrease in volume, then your overall margin from the product will increase. For example, if I sell 10 cups of coffee at \$2 each and a cost of \$0.20 each, then my total margin is  $10 \times \$1.80 = \$18$ . If I now raise the price to \$2.50 but my volume falls to 5 units, then my total margin is  $5 \times \$2.30 = \$11.50$ . In this case the elasticity of demand was high (i.e., my volume dropped sharply) so my price increase was a bad idea. In the simulation, you have all the data necessary to analyze, in the manner above, any price changes you make.

### **Impact of Price on Other Products: Cross-Elasticity**

An additional effect makes pricing even more complicated in businesses like a restaurant business. Often a change in price on one item will effect the sales of another. This is called cross-elasticity of demand. For example, a restaurant sells hamburgers and hot dogs. If the restaurant doubles it's price on hamburgers, it may well see in an increase in hot dog sales as customers opt for the better value.

In the simulation, this effect is carefully modeled. As a result, when you make price changes, you should pay attention to total margin across all products and look for possible drops in volume of some products as you get increases in volume for other products.

### **STRATEGIES FOR REACHING THE GOAL**

- 1) Begin by looking for entrees with relatively high dollar food cost. If they are not selling well, try lowering prices to see if sales increase.
- 2) Find entrees with relatively low dollar food costs. Try raising prices on those entrees until customers complain.
- 3) As a general strategy, if zero customers have complained about a price, you may have room to increase price and margin. Be careful that the increase in price has not had a large negative impact on volume.