# Chapter 1
# Introduction

## ■ Chapter Outline

1.1 Microeconomics: The Allocation of Scarce Resources
- Trade-Offs
- Who Makes the Decisions
- How Prices Determine Allocations
  - Application: Twinkie Tax

1.2 Models
- Application: Income Threshold Model and China

Simplifications by Assumption
- Testing Theories
- Maximizing Subject to Constraints
- Positive Versus Normative

1.3 Uses of Microeconomic Models

## ■ Teaching Tips

You might begin the first class by discussing with the students the role of the intermediate microeconomics class in the larger curriculum. Encourage the students to be interactive by asking questions, bringing in examples from the newspaper, and questioning concepts that seem untrue or unrealistic. For many professors, a primary goal of the course is to get students to think like economists. The material in Chapter 1 should help the students to understand what is required to do so. You might want to ask your students the policy questions listed below as a kind of pre-test. Simply ask them to write down the best answer they can for now, and then put their answers away. You can then return to these answers later in the semester.

Some suggested policy questions (be sure to only ask questions that you will address later in the course):

1. How do minimum wages affect wages, employment, and unemployment?

2. Is the consumer price index (CPI) a good measure of inflation?

3. Why do stores offer coupons instead of simply reducing the price by the value of the coupon?

4. Why is the price of electricity regulated in most areas?

5. Why do some workers prefer set wages rather than commissions, even if they might make more working on commission?

6. Agree or disagree: We should strive to be a zero pollution society.

On a more pragmatic level, I stress to the students that success in the class is heavily dependent on their approach to the material. Specifically, I emphasize that memorization is an extremely ineffective tool for studying economics and that students who memorize material are very prone to confusion and "drawing a blank" on exams. I try to persuade them that a much better approach is to press for understanding. I also stress that understanding usually comes only through active engagement with the material, both in class and out. The problems in the text, as well as the additional problems available in this manual and the Study Guide, will benefit the students in this regard. The conceptual and technical questions throughout these problem sets are designed to facilitate student understanding.

I also emphasize the importance of coming to class regularly. Paul Romer's article, "Do Students Go to Class? Should They?" in the *Journal of Economic Perspectives* (vol. 7, no. 3, Summer 1993:167–74) shows that perfect class attendance is worth between one and two grade points, and attendance at all rather than half of classes is worth between 0.67 and 1.24 grade points. Referring to this evidence might add some weight to your argument.

Finally, I recommend that all students bring a protractor and a few colored pencils to class to aid their note taking. One of the most frequent problems for students who are struggling is sloppy lecture notes. A protractor is great for drawing lines and curves and has the added benefit of being transparent. Colored pencils are a big help when students are taking notes on graphs with many different lines, such as income and substitution effects and long- and short-run cost.

Chapter 1 serves as an introduction to the text as well as a refresher of some basic economic concepts and definitions. This is a good chapter to get started on during the first day, as most students will not have read it before class. It will give you the opportunity to get a feeling for the students' recall of these basic concepts.

I usually start by asking the class for a definition of economics. If you get several suggestions that do not include the concept of scarcity, consider writing them on the board. Ask the class if they can think of what central idea is missing from the definitions given. The discussion of scarcity and the questions of what, how, and for whom to produce should lead you directly into a discussion of the role of prices as an allocation mechanism.

In the discussion of prices and markets, I try to get the students to offer examples from recent events where prices have risen or fallen sharply. Another possibility is to ask the students why some prices are so high (e.g., professional athletes' salaries) and others are so low (computer disks). Ideally, you will end up in a discussion of the demand-driven nature of a market economy and the ways in which supply and demand interact to allocate resources. I also like to talk briefly about market failure and why the United States is a mixed economy rather than a pure market economy. The application on the Twinkie tax in Chapter 1 is a good example for discussion purposes.

When discussing allocation of goods and services, an effective counterpoint to the market system is consideration of the centrally planned economy and the changes in Eastern Europe. Many students have very little knowledge of how centrally planned economies operate, the difficulties they face in meeting the demands of their citizens, and how these difficulties relate to the current political changes.

The discussion of economic models is very important. Most students do not have a sound understanding of the construction and purpose of an economic model. Stress the point that economic models are allegories used to describe behaviors and outcomes that would otherwise be unnecessarily complicated. Rather than try to duplicate the actual phenomenon, economists use models to make predictions about the behavior of

firms and individuals. Perhaps the most important point to make regarding models is that they are simplified through the use of assumptions. You might choose a typical market and describe the wide variety of complex interactions that would have to be quantified in order to produce a complete model. Then describe the circumstances under which a very simple economic model can make satisfactory predictions (where "satisfactory" can be defined a number of ways, such as the coefficient of determination in a regression model). You may also want to discuss interactions that are too difficult to model and why. For example, modeling behavior in unstable political climates is difficult because of the large influence of events that cannot be forecast. Finally, you might discuss the use of models to test theories and make predictions. Often students have a somewhat jaded view of economists and their predictions. I like to point out that while predictions often turn out to be incorrect, the error can frequently be traced to incorrect assumptions made at the time of the prediction. For example, suppose a forecasting model is constructed to predict baseball game attendance. Assuming a bright sunny day, attendance at a baseball game is predicted to be 40,000. If only 10,000 fans show up on game day, it could be that the model is bad, but it could also be that the weather is cool with a steady rain. In this case the assumption, not the model, was flawed.

Chapter 1 also introduces the difference between positive and normative economics. It does not take long to cover, and a brief discussion of this point is worth the time. You might begin by asking students the distinction between positive and normative problems. I often find that students either do not know at all or are very unsure about their responses. To get the class thinking, use current societal problems as discussion points. Ask the class what would be a fair price for an AIDS vaccine. The variety of responses shows the normative nature of the question, but there is no disagreement that the vaccine should be produced in the least costly way possible, regardless of how the gains are shared. Note that most problems have both positive and normative aspects and that by separating objective issues from subjective ones, we can more easily understand and approach the problems and find effective solutions. The text example of the wisdom of food price controls in Africa during droughts makes this point well.

When covering Section 1.3 (Uses of Microeconomic Models), you might discuss the effect of sub-prime mortgages on the housing market, or draw on examples from your own experience or current events that require the use of models. I like to draw the distinction between structural models that may be used, for example, to determine an elasticity, and forecasting models that emphasize predictive power over theoretical correctness. If the students' backgrounds in statistics are weak, you may have to keep this discussion at a broad conceptual level. This section provides a great opportunity to make the subject matter come alive for the students.

This text is designed to be used in courses where calculus is a prerequisite. I find that, even though students have all taken calculus, they don't remember much of it. I find it useful to spend some time reviewing the rules of algebra and the basics of calculus, particularly second derivatives and partial derivatives, as these may not have been covered in the introductory calculus course.

## ■ Discussion Questions

1. If water is needed to survive and diamonds are simply for jewelry, then why are diamonds so expensive and water so inexpensive?

2. Discuss the positive and normative aspects of the economics of the Food Stamp program.

3. Are prices the best way to allocate pharmaceutical products?

4. Suppose you wanted to build a model to predict hurricanes. Which would be better, a model that resulted in more false-positive predictions (storm is predicted but does not occur), or more false negatives (storm occurs but is not predicted)? Why?

5. What assumptions might you make to simplify the task of building an economic model of the grape market?