

**Part I. Preliminaries****Chapter 1: Introduction****Main Concepts and Learning Objectives**

This chapter provides an overview of the purpose of this textbook: to help students develop a solid understanding of microeconomics, including both the content of microeconomics and the tools needed to undertake microeconomic analyses.

Understanding the content of microeconomics will equip students to understand:

- the major resource allocation questions that must be addressed by every society (what to produce, how to produce these goods and services, and who should enjoy these goods and services),
- two primary strategies for addressing these questions (markets and government policies), and the interplay between these two strategies, and
- the critical difference between fact-based positive analysis and value-based normative analysis.

Microeconomic analyses are employed in businesses (customer analysis, sales forecasting, financial planning), finance (analysis of factors that influence corporate profits and, therefore, stock prices), and public policy design and evaluation. Students may, in the future, undertake their own microeconomic analyses, or they may be “consumers” who will base important decisions on forecasts or analyses prepared by others. In either event, understanding the tools needed to conduct microeconomic analyses will strengthen the quality of their decisions. These tools include:

- implementing the scientific method,
- constructing, employing and assessing the quality of mathematical models, and
- locating and using data, in conjunction with sound econometric techniques to test models.

This textbook will provide examples in which economists have used the first and third skills. It will focus on helping students to develop the second skill. Students may, initially, believe that this tool is completely new. However, we all use models to structure our decision-making processes – probably on a daily basis. Several examples are provided in this chapter.

Specifically, students who master the material presented in this chapter will be able to provide examples of:

1. policy issues that involve resource allocation questions (What, How, Who).
2. policy controversies that focus on choices between centralized and decentralized decision-making
3. well-defined markets, and issues that complicate market definitions
4. positive and normative statements
5. models used in everyday decision-making

## **Potential Student Challenges**

1. Students may not have concrete ideas about productive resources and potential substitutions among productive resources. It may be helpful to list:
  - resources that are needed to produce goods include railroads, steel mills, etc. (Description of the input/output table employed by Soviet planners could help clarify these ideas.)
  - inputs that can be used to produce electricity (natural gas, coal, wind, etc.)
  - strategies to produce comfortable room temperatures (natural gas, electricity, coal, insulation or sweaters)
2. Clear grasp of introductory microeconomics concepts is essential for success in this class. An early just-in-time training-style homework assignment can help students remember these ideas (from their introductory classes) and alert students that the intermediate class will require problem-solving and algebra skills.

## **Answers to End-of-Chapter Questions**

### 1.1

- a. These responses should include things typically only available from government: public safety provision (police force, fire department, coast guard, etc.), certain licenses (for hunting, driving, selling liquor, etc.), and certain social services.
- b. Almost all consumer goods fall into this category; clothing, entertainment, furniture, and food items are all good examples.
- c. Anything that can be received from government or purchased in the marketplace would be an acceptable answer: education, environmental protection, charitable programs, adjudication/arbitration, etc.
- d. There are many examples of goods not distributed in response to a price mechanism and not distributed by government. One example would be a lottery for a place in line to buy the hottest new toy (note that the student should understand that *the place in line* is the good, not the toy). Also, licenses, accreditations or memberships that are not granted by the government are good examples.

### 1.2

- a. *Normative*. This statement is prescriptive in nature. Words like “should” or “ought” are good indicators of a normative statement.
- b. *Positive*. This is a testable hypothesis; one could scientifically investigate the relationship between time worked and the existence of an income tax.
- c. *Normative*. Positive statements can be confirmed or denied without having to rely on a set of values. Confirming or denying this statement would require establishing what improves well-being, which undoubtedly requires an appeal to a set of values.

- d. *Positive*. This statement represents a testable hypothesis. Although one might typically hear this sort of statement from someone who endorses exercise, this statement itself does not.
- e. *Normative*. This statement is clearly stating a value judgment. What one believes to be *good* or *bad* depends on one's values.
- f. *Positive*. This statement is a testable hypothesis. It makes a claim about what *is*, *was*, or *will be* true.
- g. *Normative*. This statement is stating a value judgment; we could not test this statement without first agreeing on what it means to be *better off*.

Answers to the following questions will vary but should be well supported.

### 1.3

Anytime an individual makes any decision, he or she is trying to reach some goal—most often happiness. To choose *A* over *B* implies that the happiness that results from choosing *A* (its benefits minus the cost of choosing it) must exceed the happiness that results from choosing *B*. If choice *B* created more net happiness, then the individual would have chosen it. It is easily seen, therefore, that any human decision can be described in terms of costs and benefits. Sometimes, however, the costs and benefits are of a type that would be difficult to capture in a scientific way. For example, many costs and benefits are emotional in nature. Costs of some decisions may involve things like stress, anxiety, guilt, or anger; benefits may involve things like involve relief, comfort, relaxation, or love. So while all human decisions can be discussed in economic terms, many would, due to the nature of the costs and benefits involved, be difficult to analyze empirically.

### 1.4

Peter's statements are not a theory but merely a set of assertions. In making these claims, it does not seem that Peter is attempting to explain the nature or cause of an observed phenomenon. His statements, as presented, cannot be scientifically verified or falsified because they do not apply to all human actions. No single observed action or set of observed actions would have to be consistent with Peter's beliefs even if his beliefs were true. An observed rational decision, for example, does not necessarily cast doubt on his beliefs as stated, and an observed irrational decision does not necessarily strengthen the case for her beliefs. These beliefs may be helpful to Peter if they help him sleep at night, but because his statements do not attempt to explain observed phenomena and cannot be supported by observed phenomena, his beliefs are not scientifically useful.

### 1.5

A model is a simplified representation of a how some part of the world works. Statement *A* is a model of weather at sea. Because statement *C* attempts to describe a simplification of a cause-and-effect relationship, it can be considered a model. Statement *E* likewise paints a picture of a simplified cause-and-effect relationship, making it a model. All three of these statements are of the type "when one thing happens, another thing follows from it," which is similar to economic reasoning of this sort: "when a good's price falls,

consumers buy more of it.” The other statements (*B & D*) do not make an attempt at representing how things work.

### 1.6

It is always fair to say that people are motivated by self interest, as any action, even charitable actions, can be described in terms of a benefit to the individual. However, as in the example of charitable giving, our interests are not always material in nature. The decision to exercise or play video games has little to do with material gain (for most people, excluding professional athletes and game testers). The decision to spend time with family and friends also does not lead directly to material gain. However, when it comes to the decisions most often discussed in economics, this assumption is probably not too problematic. If an individual faced a choice between one sweater or two equal sweaters (for the same price), most often the consumer would choose to have two sweaters—or more material goods. In other words, when it comes to material goods, people will more often prefer to have *more* rather than *less*.

### 1.7

Both of these experiments can be considered natural experiments in the sense that they occur outside of a laboratory. The experimental design in *A* is problematic; many variables that affect how much people drive (besides rain) are not controlled because Seattle and Los Angeles are very different cities. Further, individuals were not placed randomly in either of the two cities. People who like the rain (and presumably mind driving in it less) may choose to live in Seattle, whereas people who hate the rain might choose to live in Los Angeles. The experiment described in *B* would produce a more reliable conclusion. Because it focuses on only one city, Manitoba, many variables like average distance traveled, typical road conditions and driver preferences are naturally controlled. Both experiments rely on the questionable assumption that gasoline sales on a day accurately reflect the amount of driving that takes place on that day.

### 1.8

Student responses will vary, but the most common answers will involve the following costs of attending university: being in class takes up time, so one gives up the opportunities to earn money, relax, spend time with friends and family, etc.; books and tuition cost money, so one gives up the opportunity to consume more goods right now; living in a dorm can be uncomfortable and frustrating, so one gives up the comfort of living on one’s own (or at one’s parents’ house). These costs are endured in order to enjoy the benefits of a college education, which include things like increased future income, better ability to take care of one’s health, better parenting skills, and a feeling of accomplishment.

### 1.9

Most responses will be acceptable so long as they involve making incremental changes to a course of action. Marginal thinking works best when the *margin* is clearly understood—when all costs and benefits of a decision are easily observable. Marginal thinking when this is not the case can lead to bad decisions. A good example of this would be a cigarette smoker who is trying to quit. He or she might think that, *on the margin*, smoking is not

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really all that bad for one's health. After all, what real damage, over the course of a lifetime, can *one* cigarette do? However, if each cigarette smoked makes the next cigarette harder to resist, then the *true* marginal cost of the next cigarette also includes part of the negative health effects of all future cigarettes. This true understanding of the cost of the next cigarette makes it less likely to be a good choice.

1.10

Some good examples include a person who bought a hybrid car because of generous tax rebates, a child who studied diligently because he was promised money for good grades or pulled on a loose tooth all day to get money from the Tooth Fairy, a student that choose one university over another because of a scholarship offer, or a person who recycles beer and wine bottles to receive a deposit refund (in provinces that require bottle deposits ).