

# **Principles of Microeconomics**



*Libby Rittenberg*  
*Tim Tregarthen*

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## About the Authors

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### Libby Rittenberg

Libby Rittenberg has been a Professor of Economics at Colorado College in Colorado Springs since 1989. She teaches principles of economics, intermediate macroeconomic theory, comparative economic systems, and international political economy. She received her B. A. in economics-mathematics and Spanish from Simmons College and her Ph.D. in economics from Rutgers University.

**Figure 1.**



Prior to joining the faculty at Colorado College, she taught at Lafayette College and at the Rutgers University Graduate School of Management. She served as a Fulbright Scholar in Istanbul, Turkey, and as a research economist at Mathematica, Inc. in Princeton, New Jersey.

Dr. Rittenberg specializes in the internationally oriented areas of economics, with numerous articles in journals and books on comparative and development economics. Much of her work focuses on transition issues and on the Turkish economy.

She has been very involved in study abroad education and has directed programs in central Europe and Turkey.

### Tim Tregarthen

There is one word that captures the essence of Dr. Timothy Tregarthen—inspiring. Tim was first diagnosed with multiple sclerosis (MS) in 1975. Yet, he continued a remarkable academic career of teaching and research. In 1996, he published the first edition of his principles of economics textbook to great acclaim, and it became widely used in colleges around the country. That same year, MS made him wheelchair-bound. The disease forced his retirement from teaching at the University of Colorado at Colorado Springs in 1998. He lost the use of his arms in 2001 and has been quadriplegic ever since. In 2002, Tim’s doctor expected him to die.

He was placed in the Pikes Peak Hospice program and was twice given his last rites by his priest. UCCS Chancellor Shockley-Zalabak says, “I really thought that Tim would die in hospice. That’s what the doctors told me, and I really believed that. I remember one day they called me and told me to try to come see him. They didn’t expect him to live through the night.”

Not only did he live through the night, but he eventually recovered to the point that he moved from hospice to a long-term care facility. There, he never let his disease get him down. In fact, he turned back to his love of writing and teaching for inspiration. He obtained a voice-activated computer, recruited a coauthor, Libby Rittenberg of Colorado College, and turned his attention to revising his principles of economics book. Flat World Knowledge is honored to publish a new, first edition relaunch of this wonderful book, and proud to bring Tim’s incredible talents as a teacher back to life for future generations of students to learn from.

In addition to completing the rewrite of his textbook, Tim recently completed an autobiography about the thirty-two years he has had MS, titled *Suffering, Faith, and Wildflowers*. He is nearing completion of a novel, *Cool Luck*, based on the life of a friend. It is the story of a young couple facing the husband’s diagnosis of ALS—Lou Gehrig’s disease. Remarkably, in 2007, he was able to return to the classroom at UCCS, where he had taught economics for twenty-seven years. In January of 2009, Tim married Dinora Montenegro (now Dinora Tregarthen); the couple lives in San Gabriel, California.

Perhaps Tim’s approach to life is best summed up by an observation by UCCS English Professor Thomas Naperierkowski: “One of the remarkable things is, heck, I can wake up with a headache and be a pretty grouchy character, but given his physical trials, which he faces every minute of his life these days, I’ve never seen him grouchy, I’ve never seen him cranky.” Carry on, Tim.

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## Preface

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Greek philosopher Heraclitis said over 2500 years ago that “Nothing endures but change.” Forecasting is a tricky business, but this sentiment strikes us as being as safe a bet as one can make. Change—rapid change—underlies all our lives. As we were completing this textbook, the world entered a period of marked economic uncertainty that led many students, and indeed people from all walks of life, to tune into economic events as never before to try to understand the economic world around them. So, while we as economists have the public’s attention, we see an opportunity to share economics principles and the economic way of thinking in a way that emphasizes their relevance to today’s world. We use applications from sports, politics, campus life, current events, and other familiar settings to illustrate the links between theoretical principles and common experiences. Because of the increasingly global nature of economic activity, we also recognize the need for a clear and consistent international focus throughout an economics text. In addition, we have tried to provide a sense of the intellectual excitement of the field and an appreciation for the gains it has made, as well as an awareness of the challenges that lie ahead.

To ensure students realize that economics is a unified discipline and not a bewildering array of seemingly unrelated topics, we develop the presentation of microeconomics and of macroeconomics around integrating themes.

The integrating theme for microeconomics is the marginal decision rule, a simple approach to choices that maximize the value of some objective. Following its presentation in an early microeconomics chapter, the marginal decision rule becomes an integrating device throughout the discussion of microeconomics. Instead of a hodgepodge of rules for different market conditions, we give a single rule that can be applied within any market setting.

The integrating theme for macroeconomics is the model of aggregate demand and aggregate supply. Following its presentation in an early macroeconomics chapter, this model allows us to look at both short-run and long-run concepts and to address a variety of policy issues and debates.

Recognizing that a course in economics may seem daunting to some students, we have tried to make the writing clear and engaging. Clarity comes in part from the intuitive presentation style, but we have also integrated a number of pedagogical features that we believe make learning economic concepts and principles easier and more fun. These features are very student-focused.

The chapters themselves are written using a “modular” format. In particular, chapters generally consist of three main content sections that break down a particular topic into manageable parts. Each content section contains not only an exposition of the material at hand but also learning objectives, summaries, examples, and problems. Each

chapter is introduced with a story to motivate the material and each chapter ends with a wrap-up and additional problems. Our goal is to encourage active learning by including many examples and many problems of different types.

A tour of the features available for each chapter may give a better sense of what we mean:

- **Start Up**—Chapter introductions set the stage for each chapter with an example that we hope will motivate readers to study the material that follows. These essays, on topics such as the value of a college degree in the labor market or how policy makers reacted to a particular economic recession, lend themselves to the type of analysis explained in the chapter. We often refer to these examples later in the text to demonstrate the link between theory and reality.
- **Learning Objectives**—These succinct statements are guides to the content of each section. Instructors can use them as a snapshot of the important points of the section. After completing the section, students can return to the learning objectives to check if they have mastered the material.
- **Heads Up!**—These notes throughout the text warn of common errors and explain how to avoid making them. After our combined teaching experience of more than fifty years, we have seen the same mistakes made by many students. This feature provides additional clarification and shows students how to navigate possibly treacherous waters.
- **Key Takeaways**—These statements review the main points covered in each content section.
- **Key Terms**—Defined within the text, students can review them in context, a process that enhances learning.
- **Try It!** questions—These problems, which appear at the end of each content section and which are answered completely in the text, give students the opportunity to be active learners. They are designed to give students a clear signal as to whether they understand the material before they go on to the next topic.
- **Cases in Point**—These essays included at the end of each content section illustrate the influence of economic forces on real issues and real people. Unlike other texts that use boxed features to present interesting new material or newspaper articles, we have written each case ourselves to integrate them more clearly with the rest of the text.
- **Summary**—In a few paragraphs, the information presented in the chapter is pulled together in a way that allows for a quick review of the material.
- **End-of-chapter concept and numerical problems**—These are bountiful and are



intended to check understanding, to promote discussion of the issues raised in the chapter, and to engage students in critical thinking about the material. Included are not only general review questions to test basic understanding but also examples drawn from the news and from results of economics research. Some have students working with real-world data.

- Chapter quizzes—Each chapter also includes online, supplementary multiple choice questions that provide students with feedback on both correct and incorrect responses. These provide yet another way for students to test themselves on the material.

## **Additional Material for Instructors**

The authors have been personally involved in the generation of a huge *Test Bank* that includes multiple choice, true/false, and short essays questions. These questions are scored in terms of level of difficulty and include multiple ways of testing the material.

The *Solutions Manual*, with which the authors were also involved, contains answers for all concept and numerical problems found at the end of each text chapter.

The *PowerPoint Slides* include all the exhibits contained in the text to allow ease of use in class.

We hope that users will find this text an engaging and enjoyable way of becoming acquainted with economics principles and that mastery of the material will lead to looking at the world in a deeper and more meaningful way. We welcome all feedback.

Libby Rittenberg

Timothy Tregarthen

# Chapter 1. Economics: The Study of Choice

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## Start Up: Economics in the News

2008 seemed to be the year of economic news. From the worst financial crisis since the Great Depression to the possibility of a global recession, to gyrating gasoline and food prices, and to plunging housing prices, economic questions were the primary factors in the presidential campaign of 2008 and dominated the news generally.

What causes the prices of some good to rise while the prices of some other goods fall? Price determination is one of the things that we will study in this book. We will also consider factors that lead an economy to fall into a recession—and the attempts to limit it.

While the investigation of these problems surely falls within the province of economics, economics encompasses a far broader range of issues. Ultimately, economics is the study of choice. Because choices range over every imaginable aspect of human experience, so does economics. Economists have investigated the nature of family life, the arts, education, crime, sports, job creation—the list is virtually endless because so much of our lives involves making choices.

How do individuals make choices: Would you like better grades? More time to relax? More time watching movies? Getting better grades probably requires more time studying, and perhaps less relaxation and entertainment. Not only must we make choices as individuals, we must make choices as a society. Do we want a cleaner environment? Faster economic growth? Both may be desirable, but efforts to clean up the environment may conflict with faster economic growth. Society must make choices.

Economics is defined less by the subjects economists investigate than by the way in which economists investigate them. Economists have a way of looking at the world that differs from the way scholars in other disciplines look at the world. It is the *economic way of thinking*; this chapter introduces that way of thinking.

## 1.1. Defining Economics

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### LEARNING OBJECTIVES

1. Define economics.
2. Explain the concepts of scarcity and opportunity cost and how they relate to the definition of economics.
3. Understand the three fundamental economic questions: What should be produced? How should goods and services be produced? For whom should goods and services be produced?

**Economics** is a social science that examines how people choose among the alternatives available to them. It is social because it involves people and their behavior. It is a science because it uses, as much as possible, a scientific approach in its investigation of choices.

### Scarcity, Choice, and Cost

All choices mean that one alternative is selected over another. Selecting among alternatives involves three ideas central to economics: scarcity, choice, and opportunity cost.

#### Scarcity

Our resources are limited. At any one time, we have only so much land, so many factories, so much oil, so many people. But our wants, our desires for the things that we can produce with those resources, are unlimited. We would always like more and better housing, more and better education—more and better of practically everything.

If our resources were also unlimited, we could say yes to each of our wants—and there would be no economics. Because our resources are limited, we cannot say yes to everything. To say yes to one thing requires that we say no to another. Whether we like it or not, we must make choices.

Our unlimited wants are continually colliding with the limits of our resources, forcing us to pick some activities and to reject others. **Scarcity** is the condition of having to choose among alternatives. A **scarce good** is one for which the choice of one

alternative requires that another be given up.

Consider a parcel of land. The parcel presents us with several alternative uses. We could build a house on it. We could put a gas station on it. We could create a small park on it. We could leave the land undeveloped in order to be able to make a decision later as to how it should be used.

Suppose we have decided the land should be used for housing. Should it be a large and expensive house or several modest ones? Suppose it is to be a large and expensive house. Who should live in the house? If the Lees live in it, the Nguyens cannot. There are alternative uses of the land both in the sense of the type of use and also in the sense of who gets to use it. The fact that land is scarce means that society must make choices concerning its use.

Virtually everything is scarce. Consider the air we breathe, which is available in huge quantity at no charge to us. Could it possibly be scarce?

The test of whether air is scarce is whether it has alternative uses. What uses can we make of the air? We breathe it. We pollute it when we drive our cars, heat our houses, or operate our factories. In effect, one use of the air is as a garbage dump. We certainly need the air to breathe. But just as certainly, we choose to dump garbage in it. Those two uses are clearly alternatives to each other. The more garbage we dump in the air, the less desirable—and healthy—it will be to breathe. If we decide we want to breathe cleaner air, we must limit the activities that generate pollution. Air is a scarce good because it has alternative uses.

Not all goods, however, confront us with such choices. A **free good** is one for which the choice of one use does not require that we give up another. One example of a free good is gravity. The fact that gravity is holding you to the earth does not mean that your neighbor is forced to drift up into space! One person's use of gravity is not an alternative to another person's use.

There are not many free goods. Outer space, for example, was a free good when the only use we made of it was to gaze at it. But now, our use of space has reached the point where one use can be an alternative to another. Conflicts have already arisen over the allocation of orbital slots for communications satellites. Thus, even parts of outer space are scarce. Space will surely become more scarce as we find new ways to use it. Scarcity characterizes virtually everything. Consequently, the scope of economics is wide indeed.

## Scarcity and the Fundamental Economic Questions

The choices we confront as a result of scarcity raise three sets of issues. Every economy must answer the following questions:

1. **What should be produced?** Using the economy's scarce resources to produce

one thing requires giving up another. Producing better education, for example, may require cutting back on other services, such as health care. A decision to preserve a wilderness area requires giving up other uses of the land. Every society must decide what it will produce with its scarce resources.

2. **How should goods and services be produced?** There are all sorts of choices to be made in determining how goods and services should be produced. Should a firm employ a few skilled or a lot of unskilled workers? Should it produce in its own country or should it use foreign plants? Should manufacturing firms use new or recycled raw materials to make their products?
3. **For whom should goods and services be produced?** If a good or service is produced, a decision must be made about who will get it. A decision to have one person or group receive a good or service usually means it will not be available to someone else. For example, representatives of the poorest nations on earth often complain that energy consumption per person in the United States is 17 *times* greater than energy consumption per person in the world's 62 poorest countries. Critics argue that the world's energy should be more evenly allocated. Should it? That is a "for whom" question.

Every economy must determine what should be produced, how it should be produced, and for whom it should be produced. We shall return to these questions again and again.

## Opportunity Cost

It is within the context of scarcity that economists define what is perhaps the most important concept in all of economics, the concept of opportunity cost. **Opportunity cost** is the value of the best alternative forgone in making any choice.

The opportunity cost to you of reading the remainder of this chapter will be the value of the best other use to which you could have put your time. If you choose to spend \$20 on a potted plant, you have simultaneously chosen to give up the benefits of spending the \$20 on pizzas or a paperback book or a night at the movies. If the book is the most valuable of those alternatives, then the opportunity cost of the plant is the value of the enjoyment you otherwise expected to receive from the book.

The concept of opportunity cost must not be confused with the purchase price of an item. Consider the cost of a college or university education. That includes the value of the best alternative use of money spent for tuition, fees, and books. But the most important cost of a college education is the value of the forgone alternative uses of time spent studying and attending class instead of using the time in some other endeavor. Students sacrifice that time in hopes of even greater earnings in the future or because they place a value on the opportunity to learn. Or consider the cost of going to the doctor. Part of that cost is the value of the best alternative use of the money required to see the doctor. But, the cost also includes the value of the best alternative

use of the time required to see the doctor. The essential thing to see in the concept of opportunity cost is found in the name of the concept. Opportunity cost is the value of the best opportunity forgone in a particular choice. It is not simply the amount spent on that choice.

The concepts of scarcity, choice, and opportunity cost are at the heart of economics. A good is scarce if the choice of one alternative requires that another be given up. The existence of alternative uses forces us to make choices. The opportunity cost of any choice is the value of the best alternative forgone in making it.

## KEY TAKEAWAYS

- Economics is a social science that examines how people choose among the alternatives available to them.
- Scarcity implies that we must give up one alternative in selecting another. A good that is not scarce is a free good.
- The three fundamental economic questions are: What should be produced? How should goods and services be produced? For whom should goods and services be produced?
- Every choice has an opportunity cost and opportunity costs affect the choices people make. The opportunity cost of any choice is the value of the best alternative that had to be forgone in making that choice.

## TRY IT !

Identify the elements of scarcity, choice, and opportunity cost in each of the following:

1. The Environmental Protection Agency is considering an order that a 500-acre area on the outskirts of a large city be preserved in its natural state, because the area is home to a rodent that is considered an endangered species. Developers had planned to build a housing development on the land.
2. The manager of an automobile assembly plant is considering whether to produce cars or sport utility vehicles (SUVs) next month. Assume that the quantities of labor and other materials required would be the same for either type of production.
3. A young man who went to work as a nurses' aide after graduating from high school leaves his job to go to college, where he will obtain training as a

### Case in Point: The Rising Cost of Energy

**Figure 1.1.**



Oil is an exhaustible resource. The oil we burn today will not be available for use in the future. Part of the opportunity cost of our consumption of goods such as gasoline that are produced from oil includes the value people in the future might have placed on oil we use today.

It appears that the cost of our use of oil may be rising. We have been using “light crude,” the oil found in the ground in deposits that can be readily tapped. As light crude becomes more scarce, the world may need to turn to so-called “heavy crude,” the crude oil that is found in the sandy soil of places such as Canada and Venezuela. That oil exists in such abundance that it propels Venezuela to the top of the world list of available oil. Saudi Arabia moves to the second position; Canada is third.

The difficulty with the oil mixed in the sand is that extracting it is far more costly than light crude, both in terms of the expenditures required and in terms of the environmental damage that mining it creates. Northern Alberta, in Canada, boasts a Florida-sized area whose sandy soils are rich in crude oil. Some of that oil is 1,200 feet underground. Extracting it requires pumping steam into the oily sand and then pumping up the resultant oily syrup. That syrup is then placed into huge, industrial-sized washing machines that separate crude oil. What is left over is toxic and will be placed in huge lakes that are being created by digging pits in the

ground 200 feet deep. The oil produced from these sands has become important—Alberta is the largest foreign supplier of oil to the United States.

Sands that are closer to the surface are removed by bulldozers and giant cranes; the forest over it is cleared away. The oily sand is then hauled off in two-story dump trucks which, when filled, weigh more than a Boeing 747. Total SA, a French company, is leading the race to develop Canada's oil. Jean Luc-Guiziou, the president of Total SA's Canadian operations, says that the extraordinarily costly process of extracting heavy crude is something the world is going to have to get used to. "The light crude undiscovered today is getting scarcer and scarcer," he told *The Wall Street Journal*. "We have to accept the reality of geoscience, which is that the next generation of oil resources will be heavier."

Already, Total SA has clear-cut thousands of acres of forest land in order to gain access to the oily sand below. The process of extracting heavy crude oil costs the company \$25 a barrel—compared to the \$6 per barrel cost of extracting and refining light crude. Extracting heavy crude generates three times as much greenhouse gas per barrel as does light crude. By 2015, Fort McMurray, the small (population 61,000) town that has become the headquarters of Northern Alberta's crude oil boom, will emit more greenhouse gas than the entire country of Denmark (population 5.4 million). Canada will exceed its greenhouse gas quota set by the Kyoto Accords—an international treaty aimed at limiting global warming—largely as a result of developing its heavy crude deposits.

No one even considered the extraction of heavy crude when light crude was cheap. In the late 1990s, oil cost just \$12 per barrel, and deposits of heavy crude such as those in Canada attracted little attention. By mid-2006, oil sold for more than \$70 per barrel, and Canada's heavy crude was suddenly a hot commodity. "It moved from being just an interesting experiment in northern Canada to really this is the future source of oil supply," Greg Stringham of the Canadian Association of Petroleum Producers told Al Jazeera.

Alberta's energy minister, Greg Melchin, defends the province's decision to proceed with the exploitation of its oily sand. "There is a cost to it, but the benefits are substantially greater," he insists.

Not everyone agrees. George Poitras, a member of the Mikisew Cree tribe, lives downstream from the oil sands development. "You see a lot of the land dug up, a lot of the boreal forest struck down and it's upsetting, it fills me with rage," he says. Diana Gibson of the Parkland Institute, an environmental advocacy group, says that you can see the environmental damage generated by the extraction of oil sands around Fort McMurray



from the moon. “What we are going to be having is destruction of very, very valuable ecosystems, and permanent pollution,” she says.

## ANSWERS TO TRY IT! PROBLEMS

1. The 500-acre area is scarce because it has alternative uses: preservation in its natural state or a site for homes. A choice must be made between these uses. The opportunity cost of preserving the land in its natural state is the forgone value of the land as a housing development. The opportunity cost of using the land as a housing development is the forgone value of preserving the land.
2. The scarce resources are the plant and the labor at the plant. The manager must choose between producing cars and producing SUVs. The opportunity cost of producing cars is the profit that could be earned from producing SUVs; the opportunity cost of producing SUVs is the profit that could be earned from producing cars.
3. The man can devote his time to his current career or to an education; his time is a scarce resource. He must choose between these alternatives. The opportunity cost of continuing as a nurses' aide is the forgone benefit he expects from training as a registered nurse; the opportunity cost of going to college is the forgone income he could have earned working full-time as a nurses' aide.

## 1.2. The Field of Economics

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### LEARNING OBJECTIVES

1. Explain the distinguishing characteristics of the economic way of thinking.
2. Distinguish between microeconomics and macroeconomics.

We have examined the basic concepts of scarcity, choice, and opportunity cost in economics. In this section, we will look at economics as a field of study. We begin with the characteristics that distinguish economics from other social sciences.

### The Economic Way of Thinking

Economists study choices that scarcity requires us to make. This fact is not what distinguishes economics from other social sciences; all social scientists are interested in choices. An anthropologist might study the choices of ancient peoples; a political scientist might study the choices of legislatures; a psychologist might study how people choose a mate; a sociologist might study the factors that have led to a rise in single-parent households. Economists study such questions as well. What is it about the study of choices by economists that makes economics different from these other social sciences?

Three features distinguish the economic approach to choice from the approaches taken in other social sciences:

1. Economists give special emphasis to the role of opportunity costs in their analysis of choices.
2. Economists assume that individuals make choices that seek to maximize the value of some objective, and that they define their objectives in terms of their own self-interest.
3. Individuals maximize by deciding whether to do a little more or a little less of something. Economists argue that individuals pay attention to the consequences of small changes in the levels of the activities they pursue.

The emphasis economists place on opportunity cost, the idea that people make choices that maximize the value of objectives that serve their self-interest, and a focus on the effects of small changes are ideas of great power. They constitute the core of economic

thinking. The next three sections examine these ideas in greater detail.

### **Opportunity Costs Are Important**

If doing one thing requires giving up another, then the expected benefits of the alternatives we face will affect the ones we choose. Economists argue that an understanding of opportunity cost is crucial to the examination of choices.

As the set of available alternatives changes, we expect that the choices individuals make will change. A rainy day could change the opportunity cost of reading a good book; we might expect more reading to get done in bad than in good weather. A high income can make it very costly to take a day off; we might expect highly paid individuals to work more hours than those who are not paid as well. If individuals are maximizing their level of satisfaction and firms are maximizing profits, then a change in the set of alternatives they face may affect their choices in a predictable way.

The emphasis on opportunity costs is an emphasis on the examination of alternatives. One benefit of the economic way of thinking is that it pushes us to think about the value of alternatives in each problem involving choice.

### **Individuals Maximize in Pursuing Self-Interest**

What motivates people as they make choices? Perhaps more than anything else, it is the economist's answer to this question that distinguishes economics from other fields.

Economists assume that individuals make choices that they expect will create the maximum value of some objective, given the constraints they face. Furthermore, economists assume that people's objectives will be those that serve their own self-interest.

Economists assume, for example, that the owners of business firms seek to maximize profit. Given the assumed goal of profit maximization, economists can predict how firms in an industry will respond to changes in the markets in which they operate. As labor costs in the United States rise, for example, economists are not surprised to see firms moving some of their manufacturing operations overseas.

Similarly, economists assume that maximizing behavior is at work when they examine the behavior of consumers. In studying consumers, economists assume that individual consumers make choices aimed at maximizing their level of satisfaction. In the next chapter, we will look at the results of the shift from skiing to snowboarding; that is a shift that reflects the pursuit of self-interest by consumers and by manufacturers.

In assuming that people pursue their self-interest, economists are not assuming people are selfish. People clearly gain satisfaction by helping others, as suggested by the large charitable contributions people make. Pursuing one's own self-interest means pursuing

the things that give one satisfaction. It need not imply greed or selfishness.

## Choices Are Made at the Margin

Economists argue that most choices are made “at the margin.” The **margin** is the current level of an activity. Think of it as the edge from which a choice is to be made. A **choice at the margin** is a decision to do a little more or a little less of something.

Assessing choices at the margin can lead to extremely useful insights. Consider, for example, the problem of curtailing water consumption when the amount of water available falls short of the amount people now use. Economists argue that one way to induce people to conserve water is to raise its price. A common response to this recommendation is that a higher price would have no effect on water consumption, because water is a necessity. Many people assert that prices do not affect water consumption because people “need” water.

But choices in water consumption, like virtually all choices, are made at the margin. Individuals do not make choices about whether they should or should not consume water. Rather, they decide whether to consume a little more or a little less water. Household water consumption in the United States totals about 105 gallons per person per day. Think of that starting point as the edge from which a choice at the margin in water consumption is made. Could a higher price cause you to use less water brushing your teeth, take shorter showers, or water your lawn less? Could a higher price cause people to reduce their use, say, to 104 gallons per person per day? To 103? When we examine the choice to consume water at the margin, the notion that a higher price would reduce consumption seems much more plausible. Prices affect our consumption of water because choices in water consumption, like other choices, are made at the margin.

The elements of opportunity cost, maximization, and choices at the margin can be found in each of two broad areas of economic analysis: microeconomics and macroeconomics. Your economics course, for example, may be designated as a “micro” or as a “macro” course. We will look at these two areas of economic thought in the next section.

## Microeconomics and Macroeconomics

The field of economics is typically divided into two broad realms: microeconomics and macroeconomics. It is important to see the distinctions between these broad areas of study.

**Microeconomics** is the branch of economics that focuses on the choices made by individual decision-making units in the economy—typically consumers and firms—and the impacts those choices have on individual markets. **Macroeconomics** is the branch of economics that focuses on the impact of choices on the total, or aggregate,