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Robert L. Sexton

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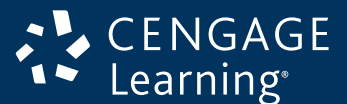
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# EXPLORING Microeconomics



ROBERT L. SEXTON

Pepperdine University



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# DEDICATION

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*To Teachers of Economics  
Everywhere:  
Opening Their Students'  
Minds to the Wonders  
of Economics*



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# PREFACE

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*Exploring Microeconomics, 7th Edition*, was written to not only be a student-friendly textbook, but one that was relevant, one that focused on those few principles and applications that demonstrate the enormous breadth of economics to everyday life. This text is lively, motivating, and exciting, and it helps students relate economics to their world.

## The Section-by-Section Approach

Many students are not lacking in ability but, rather, are lacking a strategy. Information needs to be moved from short-term memory to long-term memory and then retrieved. Learning theory provides several methods for helping students do this.

*Exploring Microeconomics* uses a section-by-section approach in its presentation of economic ideas. Information is presented in small, self-contained sections rather than in large blocks of text. Learning theorists call this *chunking*. That is, more information can be stored in the working memory as a result of learning in smaller blocks of information. Also, by using shorter bite-sized pieces, students are not only more likely to read the material but also more likely to reread it, leading to better comprehension and test results. Learning theorists call this *rehearsal*.

Unlike standard textbook construction, this approach is distinctly more compatible with the modern communication style with which most students are familiar and comfortable: short, intense, and exciting bursts of information. Rather than being distracted and discouraged by the seeming enormity of the task before them, students are more likely to work through a short, self-contained section before getting up from their desks. More importantly, instructors benefit from having a student population that has actually read the textbook and prepared for class!

In executing the section-by-section approach in *Exploring Microeconomics*, every effort has been made to take the intimidation out of economics. The idea of sticking to the basics and reinforcing student mastery, concept by concept, has been done with the student in mind. But students aren't the only ones to benefit from this approach. The section-by-section presentation allows instructors greater flexibility in planning their courses.

*Exploring Microeconomics* was created with flexibility in mind in order to accommodate a variety of teaching styles. Many of the chapters are self-contained, allowing instructors to customize their course. For example, in Part 3, the theory of the firm chapters can be presented in any order. The theory of the firm chapters are introduced in the textbook from the most competitive market structure (perfect competition) to the least competitive market structure (monopoly). After all, almost all firms face a downward-sloping demand curve, not just monopolists. However, instructors who prefer can teach monopoly immediately following perfect competition because each chapter is self-contained. And for those who do not have sufficient time to cover the Aggregate expenditure model, the Fiscal Policy chapter has an extensive section on the multiplier.

Each chapter is comprised of approximately 6–10 short sections. These sections are self-contained learning units, typically presented in 3–6 pages that include these helpful learning features.

## Key Questions

Each section begins with a list of questions that highlight the primary ideas that students should learn from the material. These questions are intended to serve as a preview and to pique interest in the material to come. They also serve as landmarks: if students can answer these questions after reading the material, they have prepared well.

### Economics: A Brief Introduction 1.1

- ▶ What is economics?
- ▶ What is the economic problem?
- ▶ What is scarcity?

## SECTION QUIZ

- Which of the following would reflect self-interested behavior to an economist?
  - Worker pursuing a higher-paying job and better working conditions
  - Consumer seeking a higher level of satisfaction with her current income
  - Mother Teresa using her Nobel Prize money to care for the poor
  - All of the above
- When economists assume that people act rationally, it means they
  - always make decisions based on complete and accurate information.
  - make decisions that will not be regretted later.
  - do the best they can based on their values and information under current and future circumstances.
  - make decisions based solely on what is best for society.
  - commit no errors in judgment.
- Rational self-interest can include
  - the welfare of our family.
  - our friends.
  - the poor people of the world.
  - all of the above.
- Rational self-interest means
  - people never make mistakes.
  - that our concerns for others does not involve costs.
  - we are materialistic and selfish.
  - people make decisions with some desired outcome in mind.

- What do economists mean by self-interest?
- What does rational self-interest involve?
- How are self-interest and selfishness different?
- What is rational behavior?

Answers: 1. d 2. c 3. d 4. d

## Section Quizzes

It is also important that students learn to self-manage. They should ask themselves: How well am I doing? How does this relate to what I already know? The section-by-section approach provides continual self-testing along every step of the way. Each section ends with 4–10 multiple-choice questions emphasizing the important points in each section. It also includes 4–6 open-ended questions designed to test comprehension of the basic points of the section just covered. Answers for multiple-choice questions are provided in the Section Quiz box, and answers to the open-ended questions are provided at the end of each chapter so students can check their responses. If students can answer these Section Quiz questions correctly, they can feel confident about proceeding to the next topic.

## Student Questions

Over the years, student questions have been tracked. These FAQs (Frequently Asked Questions) are highlighted in the margins and offset by an icon with students raising their hands in class.



What do economists mean when they say people are rational?

## Economic Content Standards (ECS)

From the National Council of Economic Education are set in the margin where the content is introduced. This addition helps to establish clear learning objectives and ties the text to these objectives.

### ECS economic content standards

Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something; few choices are “all or nothing” decisions.

## Other End-of-Chapter Materials Include:

### Interactive Summary

Each chapter ends with an interactive summary of the main ideas in the chapter. Students can fill in the blanks and check their answers against those provided at the end of the summary. It is a useful refresher before class or tests and a good starting point for studying.

### Key Terms and Concepts

A list of key terms concludes each chapter. If students can define all these terms, they have a good head start on studying.

### Problems

Each chapter provides a list of exercises to test students’ comprehension and mastery of the material. Organized in chronological order to follow the chapter, students can easily refer back to the chapter content for review and support as they proceed through the exercises.

### INTERACTIVE SUMMARY

#### Fill in the blanks:

1. An increase in demand results in a(n) \_\_\_\_\_ equilibrium price and a(n) \_\_\_\_\_ equilibrium quantity.
2. A decrease in supply results in a(n) \_\_\_\_\_ equilibrium price and a(n) \_\_\_\_\_ equilibrium quantity.
3. If demand decreases and supply increases, but the decrease in demand is greater than the increase in supply, the equilibrium quantity will \_\_\_\_\_.
4. If supply decreases and demand increases, the equilibrium price will \_\_\_\_\_ and the equilibrium quantity will be \_\_\_\_\_.

5. A price \_\_\_\_\_ is a legally established maximum price; a price \_\_\_\_\_ is a legally established minimum price.
6. Rent controls distort market signals and lead to \_\_\_\_\_ of rent-controlled apartments.
7. The quality of rent-controlled apartments would tend to \_\_\_\_\_ over time.
8. An increase in the minimum wage would tend to create \_\_\_\_\_ unemployment for low-skilled workers.
9. The secondary effects of an action that may occur after the initial effects are called \_\_\_\_\_.

Answers: 1. greater; greater 2. higher; lower 3. decrease 4. increase; indeterminate 5. ceiling; floor 6. shortages 7. decline 8. additional 9. unintended consequences

price ceiling 144

price floor 144

### KEY TERMS AND CONCEPTS

unintended consequences 148

### SECTION QUIZ ANSWERS

#### 5.1 Changes in Market Equilibrium

1. **Does an increase in demand create a shortage or surplus at the original price?**  
An increase in demand increases the quantity demanded at the original equilibrium price, but it does not change the quantity supplied at that price, meaning that it would create a shortage at the original equilibrium price.
2. **What happens to the equilibrium price and quantity as a result of a demand increase?**  
Frustrated buyers unable to buy all they would like at the original equilibrium price will compete the market price higher, and that higher price will induce suppliers to increase their quantity supplied. The result is a higher market price and a larger market output.
3. **Does an increase in supply create a shortage or surplus at the original price?**  
An increase in supply increases the quantity supplied at the original equilibrium price, but it does not change the quantity demanded at that price, meaning that it would create a surplus at the original equilibrium price.

4. **Assuming the market is already at equilibrium, what happens to the equilibrium price and quantity as a result of a supply increase?**  
Frustrated sellers unable to sell all they would like at the original equilibrium price will compete the market price lower, and that lower price will induce demanders to increase their quantity demanded. The result is a lower market price and a larger market output.
5. **Why do heating oil prices tend to be higher in the winter?**  
The demand for heating oil is higher in the cold winter months. The result of this higher winter heating oil demand, for a given supply curve, is higher prices for heating oil in the winter.
6. **What would have to be true for both supply and demand to shift in the same time period?**  
For both supply and demand to shift in the same time period, one or more of both the supply curve shifters and the demand curve shifters would have to change in that same time period.

## Steps on How to Do Well in This (or any other) Course

1. Are you motivated to learn? Link your motivation to goals. I want an A in this class. I want to graduate. I want to go to medical school or law school. I want a college degree. Setting goals demonstrates an intention to achieve and activates learning. School is really about learning to learn and hopefully, learning to enjoy learning. Students must find satisfaction in learning based on the understanding that the goals are useful to them. Put yourself in the right mindset. In short, learning is most effective when an individual is ready to learn. If you are not ready for Step 1, the other nine steps are less useful.
2. Do you attend class and take good notes? Listen actively—think before you write but be careful not to fall behind. Try to capture the main points of the lecture. You cannot take down everything. Leave space in your notebook so you can fill in with greater clarity when reading or rereading text. This is also a good time to edit your notes. Review your notes within 24 hours of lecture. This way you will be reviewing rather than relearning!
3. Do you read before class? Stay current. If you are studying Chapter 3 when the lecture is on Chapter 6, it will harm your performance. While perfection is not necessary, do the best you can to read the material before it is covered in lecture. You don't need to reread. It is better to try to recall what you read the first time.
4. Do you just highlight when you read? Don't. It is too passive. Finish a section and summarize it in your own words. Afterward, compare it with the section checks and summary at the end of the chapter to see if you caught all the main points. Do NOT read something without learning anything. That's a waste of time. Train your mind to learn—questioning, reciting, and reviewing while you read will make you an active reader and a better student. Highlighting focuses on individual concepts, but is much less helpful when trying to make connections between concepts.
5. When do you study? Break up your study time to keep it fresh. Don't study when you are tired. Know when you function best. To many people, an hour of studying in the day is worth two at night! That is, reading in the morning after a good night's sleep may be much more productive than when you are tired late at night. Study in 20- to 50-minute chunks with 5- to 10-minute breaks. This has proven to be the most effective way to study. One of the most consistent findings of scholars of learning behavior is something called spacing effects, which means spacing your studies over time. That is, it is easier to retain information when you study 5 hours over 5 days than it is to study 5 hours in 1 day.
6. How do you study? Study actively. Study by doing. Work problems, like in physics, chemistry, or engineering. Go back and forth between problems, examples, and text. That is, practice, practice, and practice. There are many problems throughout the text and on the website. Do them. The late John Wooden (famous basketball coach at UCLA) would often quote Ben Franklin, "Failing to prepare is preparing to fail." Have you worked on your self-confidence? Before you look up the answer to a question, assign a "confidence factor" to your work. On a scale of 1–10, how confident are you that you are right? Be honest with yourself. The more often you prove yourself right, the less test anxiety you will have. Self-testing, or practice testing, is part of recalling. Practicing recall also involves writing down material to be learned. When you are reading a section or working on a practice exam, grab a pencil and a piece of paper and write it down.
7. Do you work for understanding? Can you explain the concepts to others? If you can explain it to others, perhaps in a study group, you will really know it. There is no better way to learn something than by teaching it to others.
8. Do you find a quiet place to study with few distractions? Music and TV are not conducive to quality study time. This will only impair concentration. If you find your mind wandering, get up and walk around for a couple of minutes. Try to relax before you start studying, and associate reading with relaxation, not anxiety. Set a goal of how much you want to accomplish in each session and try to increase it gradually.



9. Do you apply your reading and lectures to your daily life? Retention is always greater when you can make the connection between the course and your life. Read the *In the News* features and the real-world examples throughout the text and see how the economic principles apply to your everyday life. Economics should also help you better understand the events you read about in the newspaper and on the Internet.
10. Do you cram for tests? Don't. It will not work well in economics and perhaps not in any analytical field. Study regularly, with greater review being the only difference in your study habits prior to a test. Try to have all your material read two days prior to exam so the remaining time can be devoted to review. Cramming for tests leads to fatigue, test anxiety, and careless mistakes. Get plenty of sleep. Treat being in school as having a full-time job—put in your time regularly and you won't need or want to cram. In short, don't procrastinate!



# VISUAL LEARNING FEATURES

Imagery is also important for learning. Visual stimulus helps the learning process. This text uses pictures and visual aids to reinforce valuable concepts and ideas. Information is often stored in visual form; thus, pictures are important in helping students retain important ideas and retrieve them from their long-term memory. Students want a welcoming, magazine-looking text; a brain-friendly environment. The most consistent remark we have received from *Exploring Microeconomics* adopters is that their students are reading their book, and reading the text leads to better test performance.

At every turn this text has been designed with interesting graphics so that visual cues help students learn and remember:

## Photos

The text contains a number of colorful pictures. They are not, however, mere decoration; rather, these photos are an integral part of the book, for both learning and motivation purposes. The photos are carefully placed where they reinforce important concepts, and they are accompanied by captions designed to encourage students to extend their understanding of particular ideas.

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How many workers could be added to this jackhammer and still be productive (not to mention safe)? If more workers were added, how much output would be derived from each additional worker? Slightly more total output might be realized from the second worker because the second worker would be using the jackhammer while the first worker was taking a break from "the shakes." However, the fifth or sixth worker would clearly not create any additional output, as workers would just be standing around for their turn. That is, the marginal product (additional output) would eventually fall because of diminishing marginal product.



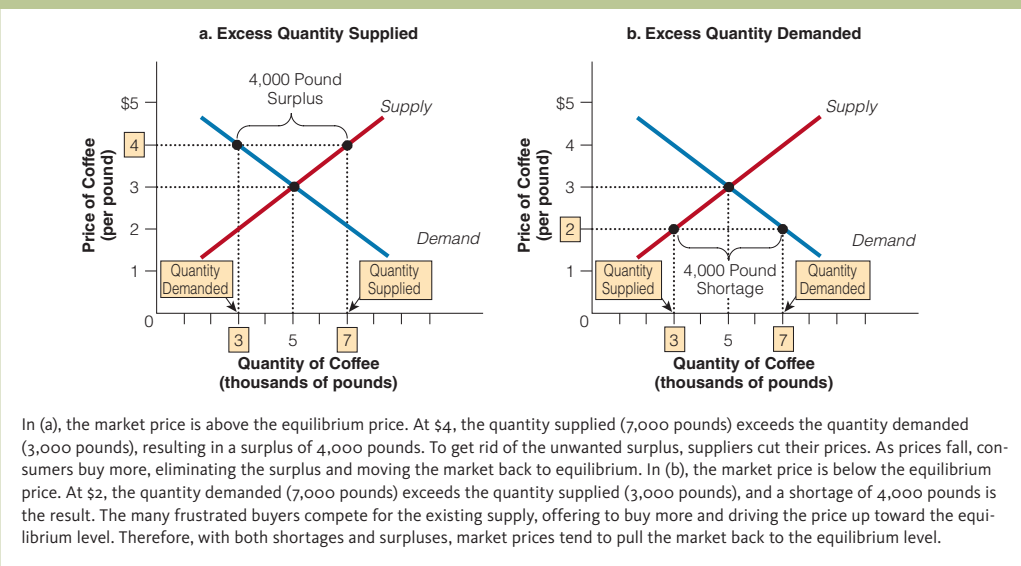
BRUCE BURKHARDT/FLIRT/CORBIS

## Exhibits

Graphs, tables, and charts are important economic tools. These tools are used throughout *Exploring Microeconomics* to illustrate, clarify, and reinforce economic principles. Text exhibits are designed to be as clear and simple as possible, and they are carefully coordinated with the text material.

### section 4.6 exhibit 2

#### Market in Temporary Disequilibrium



# APPLICATIONS

There are numerous applications to everyday life situations scattered throughout the text. These applications were chosen specifically with students in mind, and they are designed to help them find the connection between economics and their life. With that, economic principles are applied to everyday problems and issues, such as teen smoking, property rights and song swapping, crime, gift giving, and many others. There are also five special types of boxed applications scattered throughout each chapter:

## IN THE NEWS

### Gift Giving and Deadweight Loss

Only about 15 percent of gifts during the holidays are money. Money fits the description as an efficient gift. An efficient gift is one that the recipient values at least as much as it costs the giver.

There are a lot of unwanted gifts that recipients receive during the holidays. What do people do with their unwanted gifts? Many people exchange or repackage unwanted gifts. Gift cards are becoming more popular. While they provide less flexibility to recipients than cash, gift cards might be seen as less "tacky" than cash. So why don't more people give cash and gift cards?

Over the past 20 years, University of Minnesota Professor Joel Waldfogel has done numerous surveys asking gift recipients about the items they've received: Who bought it? What did the buyer pay? What's the most you would have been willing to pay for it? Based on these surveys, he's concluded that we value items we receive as gifts 20 percent less, per dollar spent, than items we buy for ourselves. Given the \$65 billion in U.S. holiday spending per year, that means we get \$13 billion less in satisfaction than we would receive if we spent that money the usual way on ourselves. That is, deadweight loss is about \$13 billion a year, the difference between the price of the gifts and the value to their recipients. This is like the deadweight loss associated with subsidies; the recipient values the gift less than the cost to the giver who buys it.

That is, the marginal costs are greater than the marginal benefits.

Of course, people may derive satisfaction from trying to pick "the perfect gift." If that is the case, then the deadweight loss would be smaller. In addition, gift giving can provide a signal. If you really love a person, you will try to get enough information and spend enough time to get the right gift. This sends a strong signal that a gift card or money does not provide. If the recipients are adult children, they may already know of your affection for them so sending a gift card or cash might be less offensive.



NEWSPHOTO/DAILY PRESS/ALAMY/ANZUR

## In the News

These applications focus primarily on current news stories that are relevant and thought provoking. These articles are placed strategically throughout the text to solidify particular concepts. In an effort to emphasize the breadth and diversity of the situations to which economic principles can be applied, these articles have been chosen from a wide range of sources.

## GLOBAL WATCH

### Chilean Bus Drivers Respond to Incentives

The problem with taking the bus is traffic congestion. Bad traffic gives people an incentive to take the bus, but slow buses give people an incentive to stick it out in the privacy of their own car—a vicious cycle. But there may be a solution. In Chile, bus drivers can be paid by the hour or by the passenger. Which of these do you think would lead to shorter delays? Think incentives. If you pay bus drivers by the passenger, they are looking for shortcuts when the traffic is bad. They also take shorter meal and bathroom breaks. They have an incentive to pick up the most passengers they can.

Bus drivers will also pay people known as *sapos* (frogs) for their information. *Sapos* will stand at bus stops, recording arrival times and selling their information to bus drivers who drive past. This depends significantly on the time interval (called headway in the transportation literature) between their bus and the bus immediately ahead on the same route. If the bus in front is far ahead, many passengers will have accumulated since the last bus came by, thus providing high profits for the driver. By contrast, if the bus in front is very close, then the driver can expect to be picking up few passengers and low profits. For their part, *sapos* provide valuable headway information to the drivers.

Each time a new bus arrives, a *sapo* marks the minute on his or her notepad, as well as tells the driver (for a fee) his or her headway, in minutes, with the immediately preceding bus. Given this information, the driver can choose to drive somewhat faster or slower in order to create more profitable spacing. For example, if the typical headway on a route is 10 minutes, but a driver has gone slowly enough to allow



PAUL KEMENY/OLNEY PLANET IMAGES/GETTY IMAGES

that headway to grow to 20 minutes, more passengers will be waiting and the driver will make more money. However, the bus behind that driver will then have a short headway, thus giving that second driver a strong incentive to change the spacing. Unlike drivers paid a fixed hourly wage, drivers receiving per-passenger compensation play a strategic game with each other, changing their driving in order to maximize profits given other drivers' behavior.

A study found that a typical bus passenger in Santiago waits roughly 10% longer for a bus on a paid-by-the-hour route relative to a paid-by-the-passenger route. However, paying by the passenger rather than by the hour leads to more aggressive driving and a lot more accidents. However, given the choice, over 90 percent of the routes in Santiago use the incentive plan—pay-by-the-passenger.

## Global Watch

Whether we are concerned with understanding yesterday, today, or tomorrow, and whether we are looking at a small, far-away country or a large next door neighbor, economic principles can strengthen our grasp of many global issues. "Global Watch" articles were chosen to help students understand the magnitude and character of the changes occurring around the world today and to introduce them to some of the economic causes and implications of these changes. To gain a greater perspective on a particular economy or the planet as a whole, it is helpful to compare important economic indicators around the world. For this reason, "Global Watch" applications are sometimes also used to present relevant comparative statistics.

## Using What You've Learned

Economic principles aren't just definitions to memorize; they are valuable tools that can help students analyze a whole host of issues and problems in the world around them. Part of learning economics is learning when and how to use new tools. These special boxes are scattered throughout the text as a way of reinforcing and checking students' true comprehension of important or more difficult concepts by assessing their ability to apply what they have learned to a real-world situation. Students can check their work against the answer given in the self-contained box, which provides them with immediate feedback and encouragement in the learning process.

### USE WHAT YOU'VE LEARNED

#### Is That Really a Free Lunch, a Freeway, or a Free Beach?

The expression, "There's no such thing as a free lunch," clarifies the relationship between scarcity and opportunity cost. Suppose the school cafeteria is offering "free" lunches today. Although the lunch is free to you, is it really free from society's perspective? The answer is no, because some of society's scarce resources will have been used in the preparation of the lunch. The issue is whether the resources that went into creating that lunch could have been used to produce something else of value. Clearly, the scarce resources that went into the production of the lunch—the labor and materials (food-service workers, lettuce, meat, plows,

tractors, fertilizer, and so forth)—could have been used in other ways. They had an opportunity cost and thus were not free.

Do not confuse free with a zero money price. A number of goods—freeways, free beaches, and free libraries, for instance—do not cost consumers money, but they are still scarce. Few things are free in the sense that they use none of society's scarce resources. So what does a free lunch really mean? It is, technically speaking, a "subsidized" lunch—a lunch using society's scarce resources, but one that the person receiving it does not have to pay for personally.

## Policy Application

These features focus primarily on news stories that involve a government policy decision based upon economic concepts. These applications are scattered throughout the text as a way of reinforcing important or more difficult concepts.

### POLICY WATCH

#### Social Security: How Can We Save It?

What are the options for saving Social Security?

1. Increase the payroll taxes to a rate closer to 15 percent. It is currently 12.4 percent.
2. Increase the age of full-time benefits to age 70. The problem is that seniors already have a difficult time finding employment and may not be able to do the physical work expected of them.
3. Implement "means testing." Means testing would reduce the benefits to retirees who have "sufficient means" for retirement.
4. Increase the return to Social Security funds. The government might be interested in investing part of Social Security in the stock market. The historical returns are much greater in the stock market. The real rate of return (indexed for inflation) has been roughly 7 percent in the stock market compared with only 2 percent for government bonds. However, one of the drawbacks of government investment in the stock market is the potential for political abuse. With such a large amount of funds, the temptation emerges for the government to favor some firms and punish others.
5. Put some of the payroll tax in an individual retirement plan and let individuals manage their own funds—perhaps choosing from a list of mutual funds.
6. Let individuals choose to continue with the current Social Security system or contribute a minimum of, say, 10 percent or 20 percent of their wages to a private investment fund. This option has been tried in a number of Central and South American countries. In Chile, almost 90 percent of workers choose to leave the government Social Security program to invest privately.

Critics of the private plan argue that it is risky, individuals might make poor investment decisions, and the government might ultimately have to pay for their mistakes. That is, the stock market may have a good long-term track record, but it is still inherently uncertain and risky because of economic fluctuations. This may not be consistent with a guaranteed stream of retirement income.

# INSTRUCTOR RESOURCES

The 7th Edition offers an array of instructor resources designed to enhance teaching.

## Instructor's Resource

The Instructor's Resource package includes electronic versions of the Instructor's Manual, Test Bank, and PowerPoint® slides, as well as Cognero, a Cloud-based testing software.

## Instructor's Manual

Prepared by Gary Galles (Pepperdine University), the Instructor's Manual follows the textbook's concept-by-concept approach in two parts: chapter outlines and teaching tips. The Teaching Tips section provides analogies, illustrations, and examples to help instructors reinforce each section of the text. Answers to all of the end-of-chapter text questions can also be found in the Instructor's Manual.

## Test Bank

Test bank questions, available online, have been thoroughly updated. The test bank includes approximately 150 test questions per chapter, consisting of multiple-choice, true-false, and short-answer questions.

## Cognero Testing Software

Cognero is a Cloud-based, easy-to-use test creation software that allows instructors to add or edit questions, and select questions by previewing them on the screen, selecting them randomly, or selecting them by number.

## Microsoft PowerPoint® Presentation Slides

- **Lecture Presentation in PowerPoint.** This PowerPoint presentation covers all the essential sections presented in each chapter of the book. Graphs, tables, lists, and concepts are animated sequentially to visually engage students. Additional examples and applications are used to reinforce major lessons. The slides are crisp, clear, and colorful. Instructors may adapt or add slides to customize their lectures.
- **Exhibits from the Text in PowerPoint.** Every graph and table within the text has been re-created in PowerPoint. These exhibits are available within the lecture presentation, but we have also made them available as a separate batch of slides for those instructors who don't want the lecture slides.

Both the Lecture and Exhibit PowerPoint presentations are available for downloading at the Sexton Companion Web site: [www.cengage.com](http://www.cengage.com).

# RESOURCES

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The 7th Edition offers an array of resources to help students test their understanding of chapter concepts and enhance their overall learning. Found at the student Companion Web site, these interactive resources provide exam preparation and help students get the most from their Principles of Economics course.

## **NEW! Graph Cards**

Available on MindTap, Graph Cards allow students to learn how to work with graphs or prepare for examinations using Graph Cards. Just like flash cards, Graphs Cards present a graph and a question on one side and the answer on the opposite side.

## **Key Term Glossary and Flashcards**

As a study aid, students may use the glossary terms as flashcards to test their knowledge. Students can state the definition of a term, then click on the term to check the correctness of their statement.

## **Adaptive Practice Test Generator**

**Adaptive Practice Test Generator** helps students prepare for test success. The **Adaptive Practice Test Generator** on MindTap™ helps students gauge their understanding before taking an exam. The Adaptive Practice Test Generator offers a real testing scenario with multiple-choice questions similar to those in a test, as well as allows students to select multiple chapters.

## **Frequently Missed Test Questions (FMTQ)**

Available on MindTap, FMTQs are short questions and videos that walk students step by step on the concepts and problems frequently missed in class or examinations.

## **MindTap**

MindTap Exploring Microeconomics, 7th edition, is a personalized teaching experience with relevant assessments that guide students to analyze, apply, and improve thinking. The Learning Path lets professors create a personalized learning experience for their class, and students can take advantage of the resources created for their specific needs. Relevant readings and multimedia assets including Graph Cards, Adaptive Test Generator, Frequently Missed Test Questions (FMTQ), ConceptClips, Aplia, and more, are available with this platform. Analytics and reports provide a snapshot of class progress, time in course, and engagement.

## APLIA™

Created by Paul Romer, one of the nation's leading economists, Aplia enhances teaching and learning by providing online interactive tools and experiments that help economics students become "active learners." This application allows a tight content correlation between Sexton's 7th Edition and Aplia's online tools.

### Students Come to Class Prepared

It is a proven fact that students do better in their course work if they come to class prepared. Aplia's activities are engaging and based on discovery learning, requiring students to take an active role in the learning process. When assigned online homework, students are more apt to read the text, come to class better prepared to participate in discussions, and are more able to relate to the economic concepts and theories presented. Learning by doing helps students feel involved, gain confidence in the materials, and see important concepts come to life.



### Assign Homework in an Effective and Efficient Way

Now you can assign homework without increasing your workload! Together, Sexton and Aplia provide the best text and technology resources to give you multiple teaching and learning solutions. Through Aplia, you can assign problem sets and online activities that automatically give feedback and are tracked and graded, all without requiring additional effort. Since Aplia's assignments are closely integrated with Sexton's 7th Edition, your students are applying what they have learned from the text to their homework.

Contact your local Cengage South-Western representative to find out how you can incorporate this exciting technology into your course. For more information, please visit: [www.aplia.com](http://www.aplia.com).



# ABOUT THE AUTHOR

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Robert L. Sexton is Distinguished Professor of Economics at Pepperdine University. Professor Sexton has also been a Visiting Professor at the University of California at Los Angeles in the Anderson Graduate School of Management and the Department of Economics.

Professor Sexton's research ranges across many fields of economics: economics education, labor economics, environmental economics, law and economics, and economic history. He

has written several books and has published numerous articles, many in top economic journals such as *The American Economic Review*, *Southern Economic Journal*, *Economics Letters*, *Journal of Urban Economics*, and *The Journal of Economic Education*. Professor Sexton has also written more than 100 other articles that have appeared in books, magazines, and newspapers.

Professor Sexton received the Pepperdine Professor of the Year Award in 1991, a Harriet and Charles Luckman Teaching Fellow in 1994, Tyler Professor of the Year in 1997, and received the Howard A. White Award for Teaching Excellence in 2011.



TOMMY SEXTON



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*Robert L. Sexton*



# PART 1



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## Introduction

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# The Role and Method of Economics

- 1.1 Economics: A Brief Introduction
  - 1.2 Economic Behavior
  - 1.3 Economic Theories and Models
  - 1.4 Pitfalls to Avoid in Scientific Thinking
  - 1.5 Positive Statements and Normative Statements
- APPENDIX: Working with Graphs

As you begin your first course in economics, you may be asking yourself why you're here. What does economics have to do with your life? Although we can list many good reasons to study economics, perhaps the best reason is that many issues in our lives are at least partly economic in character.

A good understanding of economics would allow you to answer such questions as, Why do 10:00 A.M. classes fill up more quickly than 8:00 A.M. classes during registration? Why is it so hard to find an apartment in cities such as San Francisco, Berkeley, and New York? Why is teenage unemployment higher than adult unemployment? Why is the price of your prescription drugs so high? Will higher taxes on cigarettes reduce the number of teenagers smoking? If so, by how much? Why do male basketball stars in the NBA make more than female basketball stars in the WNBA? Do houses with views necessarily sell faster than houses without views?

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Why do people buy houses near noisy airports? Why do U.S. auto producers like tariffs (taxes) on imported cars? Is globalization good for the economy? The study of economics improves your understanding of these and many other concerns.

Economics is a unique way of analyzing many areas of human behavior. Indeed, the range of topics to which economic analysis can be applied is broad. Many researchers discover that the economic approach to human behavior sheds light on social problems that have been with us for a long time: discrimination, education, crime, divorce, political favoritism, and more. In fact, your daily newspaper is filled with economics. You can find economics on the domestic page, the international page, the business page, the sports page, the entertainment page, and even the weather page—economics is all around us.

However, before we delve into the details and models of economics, it is important that we present an overview of how economists approach problems—their methodology. How does an economist apply the logic of science to approach a problem? And what are the pitfalls that economists should avoid in economic thinking? We also discuss why economists disagree.



Why do female models make more money than male models?

## Economics: A Brief Introduction

### 1.1

- ▶ What is economics?
- ▶ What is the economic problem?
- ▶ What is scarcity?

### 1.1a Economics—A Word with Many Different Meanings

Some people think economics involves the study of the stock market and corporate finance, and it does—in part. Others think that economics is concerned with the wise use of money and other matters of personal finance, and it is—in part. Still others think that economics involves forecasting or predicting what business conditions will be in the future, and again, it does—in part. The word *economics* is, after all, derived from the Greek *Oeconomicus*, which referred to the management of household affairs.

Precisely defined, **economics** is the study of the choices we make among our many wants and desires given our limited resources. What are resources? **Resources** are inputs—land, human effort, and skills, and machines and factories, for instance—used to produce goods and services. The problem is that our unlimited wants exceed our limited resources, a fact that we call **scarcity**. That is, scarcity exists because human wants for goods and services exceed the amount of goods and services that can be produced using all of our available resources. So scarcity forces us to decide how best to use our limited resources. This is **the economic problem**: Scarcity forces us to choose, and choices are costly because we must give up other opportunities that we value. Consumers must make choices on what to buy, how much to save, and how much to invest of their limited incomes. Workers must decide what types of jobs they want, when to enter the workforce, where they will work, and the number of hours they wish to work. Firms must

#### economics

the study of choices we make among our many wants and desires given our limited resources

#### resources

inputs used to produce goods and services

#### scarcity

exists because our unlimited wants exceed our limited resources

#### the economic problem

scarcity forces us to choose, and choices are costly because we must give up other opportunities that we value



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- Newspapers and websites are filled with articles related to economics—either directly or indirectly.
- News headlines may cover topics such as unemployment, deficits, financial markets, health care, Social Security, energy issues, war, global warming, and so on.

## EGS

### economic content standards

Productive resources are limited. Therefore, people cannot have all the goods and services they want. As a result, they must choose some things and give up others.



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What is the relationship between scarcity and trade-offs?

decide what kinds of goods and services to produce, how much to produce, and how to produce those goods and services at the lowest cost. That is, consumers, workers, and firms all face choices because of scarcity, which is why economics is sometimes called the study of choice.

The economic problem is evident in every aspect of our lives. You may find that the choice between shopping for groceries and browsing at the mall, or between finishing a research paper and going to a movie, is easier to understand when you have a good handle on the “economic way of thinking.”

## 1.1b Economics Is All Around Us

The tools of economics are far reaching. In fact, other social scientists have accused economists of being imperialistic because their tools have been used in so many fields outside the formal area of economics, like crime, education, marriage, divorce, addiction, finance, health, law, politics, and religion. Every individual, business, social, religious, and governmental organization faces the economic problem. Every society, whether it is capitalistic, socialistic, or totalitarian, must also face the economic problem of scarcity, choices, and costs.

Even time has an economic dimension. In fact, in modern culture, time has become perhaps the single most precious resource we have. Everyone has the same limited amount of time per day, and how we divide our time between work and leisure (including study, sleep, exercise, and so on) is a distinctly economic matter. If we choose more work, we must sacrifice leisure. If we choose to study, we must sacrifice time with friends or time spent sleeping or watching television. Virtually everything we decide to do, then, has an economic dimension.

Living in a world of scarcity involves trade-offs. As you are reading this text, you are giving up other things you value: shopping, spending time on Facebook, text messaging with friends, going to the movies, sleeping, or working out. When we know what the trade-offs are, we can make better choices from the options all around us, every day. George Bernard Shaw stated, “Economy is the art of making the most of life.”

## SECTION QUIZ

1. If a good is scarce,
  - a. it only needs to be limited.
  - b. it is not possible to produce any more of the good.
  - c. our unlimited wants exceed our limited resources.
  - d. our limited wants exceed our unlimited resources.
2. Which of the following is true of resources?
  - a. Their availability is unlimited.
  - b. They are the inputs used to produce goods and services.
  - c. Increasing the amount of resources available could eliminate scarcity.
  - d. Both b and c.

(continued)



**SECTION QUIZ (cont.)**

3. If scarcity were not a fact,
  - a. people could have all the goods and services they wanted for free.
  - b. it would no longer be necessary to make choices.
  - c. poverty, defined as the lack of a minimum level of consumption, would also be eliminated.
  - d. all of the above would be true.
4. Economics is concerned with
  - a. the choices people must make because resources are scarce.
  - b. human decision makers and the factors that influence their choices.
  - c. the allocation of limited resources to satisfy unlimited wants.
  - d. all of the above.

- 
1. What is the definition of economics?
  2. Why does scarcity force us to make choices?
  3. Why are choices costly?
  4. What is the economic problem?
  5. Why do even “non-economic” issues have an economic dimension?

**Answers: 1. c 2. b 3. d 4. d**

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## Economic Behavior

### 1.2

- ▶ What is self-interest?
- ▶ What is rational behavior?
- ▶ Why is self-interest not the same as selfishness?

#### 1.2a Self-Interest

Economists assume that most individuals act *as if* they are motivated by self-interest and respond in predictable ways to changing circumstances. In other words, self-interest is a good predictor of human behavior in most situations. For example, to a worker, self-interest means pursuing a higher-paying job and/or better working conditions. To a consumer, it means gaining a higher level of satisfaction from limited income and time.

We seldom observe employees asking employers to cut their wages and increase their workload to increase a company's profits. And how often do customers walk into a supermarket demanding to pay more for their groceries? In short, a great deal of human behavior can be explained and predicted by assuming that most people act *as if* they are motivated by their own self-interest in an effort to increase their *expected* personal satisfaction. When people make choices, they often do not know with certainty which choice is best. But they *expect* the best outcome from that decision—the one that will yield the greatest satisfaction.

Critics will say people don't think that way, and the critics might be right. But economists are arguing that people *act* that way. Economists are observing and studying what



Do people really pursue their self-interest? Do people really think that way?



FEMA/LAMY

- Enormous amounts of resources (time and money)
- were donated to the Hurricane Katrina victims. If
- individuals are acting to promote the things
- that interest them, are these self-interested acts
- necessarily selfish?

people do—their actions. We largely leave what people think to psychologists and sociologists.

Furthermore, when economists use the term *self-interest* they are not implying that people only seek to maximize their material consumption. Many acts of selfless behavior may be self-interested. For example, people may be kind to others in hopes that behavior will be returned. By establishing a reputation of honesty, it may send a signal of a willingness of commitment. This may make society a better place. So is it love, or self-interest, that keeps society together?

There is no question that self-interest is a powerful force that motivates people to produce goods and services. But self-interest can include benevolence. Think of the late Mother Teresa, who spent her life caring for others. One could say that her work was in her self-interest, but who would consider her actions selfish? Similarly, workers may be pursuing self-interest when they choose to work harder and longer to increase their charitable giving or saving for their children's education. That is, self-interest to an economist is not a narrow monetary self-interest. The enormous amount of money and time donated to victims of Hurricane Katrina is an example of self-interest too—the self-interest was to help others in need. However, our charitable actions for others are influenced by cost. We would predict that most people would be more charitable when the tax deductions are greater or that you may be more likely to offer a friend a ride to the airport when the freeway was less congested. In short, the lower the cost of helping others, the more help we would expect to be offered.

In the United States, people typically give more than \$250 billion annually to charities. They also pay more money for environmentally friendly goods, “giving” a cleaner world to the future. Consumers can derive utility or satisfaction from these choices. It is clearly not selfish—it is in their best interest to care about the environment and those who are less fortunate than themselves.



What do economists mean when they say people are rational?

### rational behavior

when people do the best they can, based on their values and information, under current and anticipated future circumstances

## 1.2b What Is Rational Behavior?

Economists assume that people, for the most part, engage in rational, or purposeful, behavior. And you might think that could not possibly apply to your brother, sister, or roommates. But the key is in the definition. To an economist, **rational behavior** merely means that people do the best they can, based on their values and information, under current and anticipated future circumstances. That is, people may not know with complete certainty which decisions will yield the most satisfaction and happiness, but they select the one that they expect to give them the best results among the alternatives. It is important to note that it is only the person making the choice that determines its rationality. You might like red sports cars while your friend might like black sports cars. So it would be rational for you to choose a red sports car and your friend to choose a black sports car.

Economists assume that people do not intentionally make decisions that will make them worse off. Most people act purposefully. They make decisions with some *expected* outcome in mind. Their actions are rational and purposeful, not random and chaotic. Individuals all take purposeful actions when they decide what to buy and produce. They make mistakes and are impacted by emotion, but the point is that they make their decisions with some expected results in mind. In short, rational self-interest means that individuals try to weigh the expected marginal (additional) benefits and marginal (additional) costs of their decisions, a topic we return to in Chapter 2.

## GREAT ECONOMIC THINKERS

### Adam Smith (1723–1790)

Adam Smith was born in a small fishing village just outside of Edinburgh, Scotland, in 1723. At age 4, gypsies (called *tinkers* in Scotland) kidnapped Smith, but he was rescued through the efforts of his uncle. He began studying at Glasgow College when he was just 14 and later continued his studies at Oxford University. He returned to Glasgow at age 28 as a professor of philosophy and logic. (Until the nineteenth century, economics was considered a branch of philosophy, thus Smith neither took nor taught a class in economics.) He later resigned that position to become the private tutor to the stepson of Charles Townshend.

Although known for his intelligence, warm hospitality, and charitable spirit, Smith was not without his eccentricities. Notorious for his absent-mindedness, there is a story about Smith taking a trip to a tanning factory and, while engaged in conversation with a friend, walking straight into a large tanning vat. Another tale features Smith walking 15 miles in his sleep, awakening from his sleepwalk to the ringing of church bells, and scurrying back home in his nightgown. Most astonishing and unfortunate, Smith, without explanation, had the majority of his unpublished writings destroyed before his death in 1790.

Adam Smith is considered the founder of modern economics. He addressed problems of both economic theory and policy in his famous book, *An Inquiry into the Nature and Causes of the Wealth of Nations*, published in 1776. The book was a success from the beginning, with its first edition selling out in just six months, and people have continued to read it for well over two centuries.

Smith believed that the wealth of a nation did not come from the accumulation of gold and silver—the prevailing thought of the day. Smith observed that people tend to pursue their own personal interests and that an “invisible hand” (the market) guides their self-interest, increasing social welfare and general economic well-being. Smith’s most powerful and enduring contribution was this idea of an invisible hand of market incentives channeling individuals’ efforts and promoting social welfare.

Smith also showed that through division of labor and specialization of tasks, producers could increase their



Smith is buried in a small cemetery in Edinburgh, Scotland. The money left on the grave site is usually gone by morning; the homeless prey on the donations to use for food and spirits. Adam Smith is probably smiling somewhere. He had a reputation as a charitable man—“a scale much beyond what might have been expected from his fortunes.”

output markedly. While Smith did not invent the market, he demonstrated that free markets, unfettered by monopoly and government regulation, and free trade were at the very foundation of the wealth of a nation. Many of Smith’s insights are still central to economics today.

**SECTION QUIZ**

1. Which of the following would reflect self-interested behavior to an economist?
  - a. Worker pursuing a higher-paying job and better working conditions
  - b. Consumer seeking a higher level of satisfaction with her current income
  - c. Mother Teresa using her Nobel Prize money to care for the poor
  - d. All of the above
2. When economists assume that people act rationally, it means they
  - a. always make decisions based on complete and accurate information.
  - b. make decisions that will not be regretted later.
  - c. do the best they can based on their values and information under current and future circumstances.
  - d. make decisions based solely on what is best for society.
  - e. commit no errors in judgment.
3. Rational self-interest can include
  - a. the welfare of our family.
  - b. our friends.
  - c. the poor people of the world.
  - d. all of the above.
4. Rational self-interest means
  - a. people never make mistakes.
  - b. that our concerns for others does not involve costs.
  - c. we are materialistic and selfish.
  - d. people make decisions with some desired outcome in mind.

- 
1. What do economists mean by self-interest?
  2. What does rational self-interest involve?
  3. How are self-interest and selfishness different?
  4. What is rational behavior?

**Answers: 1. d 2. c 3. d 4. d**

# Economic Theories and Models

## 1.3

- ▶ What are economic theories and models?
- ▶ What can we expect from theories and models?
- ▶ Why do we need to abstract?
- ▶ What is a hypothesis?
- ▶ What is empirical analysis?
- ▶ What is the *ceteris paribus* assumption?
- ▶ What are microeconomics and macroeconomics?

### 1.3a Economic Theories and Models

**Theories and models** are explanations of how things work that help us understand and predict how and why economic agents like consumers, producers, firms, government, and so on behave the way they do. That is, we use the theories and models to observe how people really behave.

#### theories and models

simplified versions of the real world used to explain and predict behavior

### 1.3b Abstraction Is Important

Economic theories and models cannot realistically include every event that has ever occurred. A good economic theory or model weeds out the irrelevant facts from the relevant ones. We must abstract. Without abstraction or simplification, the world is too complex to analyze.

Economic theories and models make some unrealistic assumptions. For example, we may assume there are only two countries in the world, producing two goods. Obviously, this is an abstraction from the real world. But if we can understand trade in a simplified world, it will help us understand trade in a more complex world. Similarly, sometimes economists make very strong assumptions, such as that all people seek self-betterment or all firms attempt to maximize profits. That is, economists use simplifying assumptions in their models to make the world more comprehensible. But only when we test our models using these assumptions can we find out if they are too simplified or too limiting.

How are economic theories and models like a road map? Much like a road map, economic theories and models are more useful when they ignore details that are *not* relevant to the questions that are being investigated. Some maps, like some economic models, may be too detailed, while others may be too abstract. There is no single correct map or model. Suppose we wanted to drive from Chicago to Los Angeles. What kind of map would we need? All we would need is a map showing the interstate highways that ignores the details of individual streets within a city. However, if we were looking for a particular restaurant or a friend's house in Los Angeles, we would need a more detailed street map of Los Angeles.

#### hypothesis

a testable proposition

#### empirical analysis

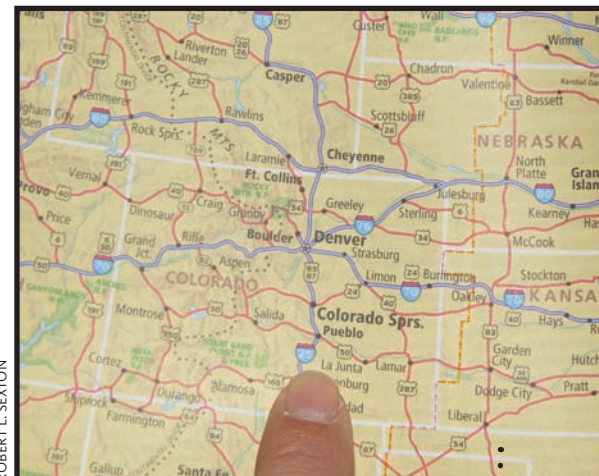
the use of data to test a hypothesis

### 1.3c Developing a Testable Proposition

The beginning of any theory is a **hypothesis**, a testable proposition that makes some type of prediction about behavior in response to certain changes in conditions based on our assumptions. In economic theory, a hypothesis is a testable prediction about how people will behave or react to a change in economic circumstances. For example, if we notice an increase in the price of coffee beans (per pound), we might hypothesize that sales of coffee beans will fall, or if the price of coffee beans (per pound) decreases, our hypothesis might be that coffee bean sales will rise. Once we state our hypothesis, we test it by comparing what it predicts will happen to what actually happens.

#### Using Empirical Analysis

To determine whether our hypothesis is valid, we must engage in **empirical analysis**. That is, we must examine the data to see whether our hypothesis fits well with the facts. If the hypothesis is consistent



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How is economic theory like a map? Much like a road map, economic theory is more useful when it ignores details that are not relevant to the questions that are being investigated.