



International
Edition

Economics

PRINCIPLES, APPLICATIONS, AND TOOLS

Seventh Edition

O'Sullivan
Sheffrin
Perez

PEARSON

Economics

PRINCIPLES, APPLICATIONS, AND TOOLS

SEVENTH EDITION

Arthur O'Sullivan

Lewis and Clark College

Steven M. Sheffrin

Tulane University

Stephen J. Perez

California State University, Sacramento

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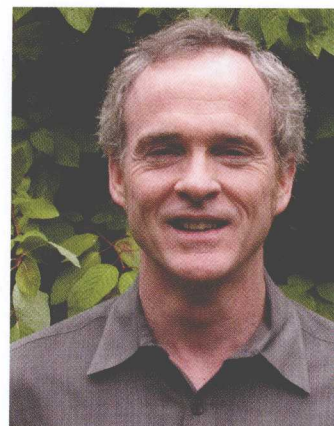
About the Authors

ARTHUR O'SULLIVAN

is a professor of economics at Lewis and Clark College in Portland, Oregon. After receiving his B.S. in economics at the University of Oregon, he spent two years in the Peace Corps, working with city planners in the Philippines. He received his Ph.D. in economics from Princeton University in 1981 and has taught at the University of California, Davis, and Oregon State University, winning teaching awards at both schools. He is the author of the best-selling textbook *Urban Economics*, currently in its seventh edition.

Professor O'Sullivan's research explores economic issues concerning urban land use, environmental protection, and public policy. His articles have appeared in many economics journals, including the *Journal of Urban Economics*, *Journal of Environmental Economics and Management*, *National Tax Journal*, *Journal of Public Economics*, and *Journal of Law and Economics*.

Professor O'Sullivan lives with his family in Portland, Oregon. For recreation, he enjoys hiking, kiteboarding, and squash.



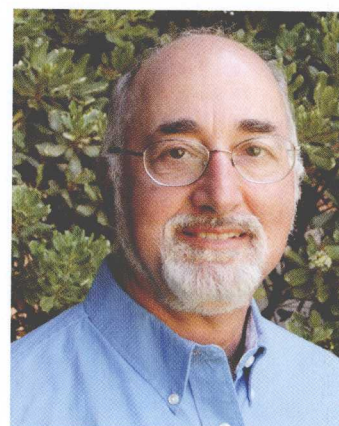
STEVEN M. SHEFFRIN

is professor of economics and executive director of the Murphy Institute at Tulane University. Prior to joining Tulane in 2010, he was a faculty member at the University of California, Davis, and served as department chairman of economics and dean of social sciences. He has been a visiting professor at Princeton University, Oxford University, London School of Economics, and Nanyang Technological University, and he has served as a financial economist with the Office of Tax Analysis of the United States Department of the Treasury. He received his B.A. from Wesleyan University and his Ph.D. in economics from the Massachusetts Institute of Technology.

Professor Sheffrin is the author of 10 other books and monographs and over 100 articles in the fields of macroeconomics, public finance, and international economics. His most recent books include *Rational Expectations* (second edition) and *Property Taxes and Tax Revolts: The Legacy of Proposition 13* (with Arthur O'Sullivan and Terri Sexton).

Professor Sheffrin has taught macroeconomics and public finance at all levels, from general introduction to principles classes (enrollments of 400) to graduate classes for doctoral students. He is the recipient of the Thomas Mayer Distinguished Teaching Award in economics.

He lives with his wife Anjali (also an economist) in New Orleans, Louisiana, and has two daughters who have studied economics. In addition to a passion for current affairs and travel, he plays a tough game of tennis.



STEPHEN J. PEREZ

is a professor of economics and NCAA faculty athletics representative at California State University, Sacramento. After receiving his B.A. in economics at the University of California, San Diego, he was awarded his Ph.D. in economics from the University of California, Davis, in 1994. He taught economics at Virginia Commonwealth University and Washington State University before coming to California State University, Sacramento, in 2001. He teaches macroeconomics at all levels as well as econometrics, sports economics, labor economics, and mathematics for economists.

Professor Perez's research explores most macroeconomic topics. In particular, he is interested in evaluating the ability of econometric techniques to discover the truth, issues of causality in macroeconomics, and sports economics. His articles have appeared in many economics journals, including the *Journal of Monetary Economics*; *Econometrics Journal*; *Economics Letters*; *Journal of Economic Methodology*; *Public Finance and Management*; *Journal of Economics and Business*; *Oxford Bulletin of Economics and Statistics*; *Journal of Money, Credit, and Banking*; *Applied Economics*; and *Journal of Macroeconomics*.



ALTERNATIVE COURSE SEQUENCE

Alternative Economics Sequence

The following chart helps you organize your syllabus based on your teaching preferences and objectives:

	Core	Policy	Optional
1 Introduction: What Is Economics?	X		
Appendix: Using Graphs and Percentages			X
2 The Key Principles of Economics	X		
3 Exchange and Markets			X
4 Demand, Supply, and Market Equilibrium	X		
5 Measuring a Nation's Production and Income	X		
6 Unemployment and Inflation	X		
7 The Economy at Full Employment			X
8 Why Do Economies Grow?	X		
Appendix: A Model of Capital Deepening			X
9 Aggregate Demand and Aggregate Supply	X		
10 Fiscal Policy	X		
11 The Income-Expenditure Model			X
Appendix: Formulas for Equilibrium Income and the Multiplier			X
12 Investment and Financial Markets	X		
13 Money and the Banking System	X		
Appendix: Formula for Deposit Creation			X
14 The Federal Reserve and Monetary Policy	X		
15 Modern Macroeconomics: From the Short Run to the Long Run	X		
16 The Dynamics of Inflation and Unemployment			X
17 Macroeconomic Policy Debates		X	
18 International Trade and Public Policy		X	
19 The World of International Finance	X		
20 Elasticity: A Measure of Responsiveness	X		
21 Market Efficiency and Government Intervention	X		
22 Consumer Choice Using Utility Theory			X
Appendix: Consumer Choice with Indifference Curves			X
23 Production Technology and Cost	X		
24 Perfect Competition	X		
25 Monopoly and Price Discrimination	X		
26 Market Entry and Monopolistic Competition	X		
27 Oligopoly and Strategic Behavior	X		
28 Controlling Market Power: Antitrust and Regulation		X	
29 Imperfect Information: Adverse Selection and Moral Hazard		X	
30 Public Goods and Public Choice		X	
31 External Costs and Environmental Policy		X	
32 The Labor Market, Income, and Poverty	X		
33 Unions, Monopsony, and Imperfect Information			X

Alternative Microeconomics Sequence

		Mix of Theory and Policy	Supply, Demand, and Policy	Supply, Demand, and Market Structure	Challenging Theory	Short Policy Course
1	Introduction: What Is Economics?	X	X	X	X	X
2	The Key Principles of Economics	X	X	X	X	X
3	Exchange and Markets	X	X	X	X	
4	Demand, Supply, and Market Equilibrium	X	X	X	X	X
5	Elasticity: A Measure of Responsiveness	X	X	X	X	X
6	Market Efficiency and Government Intervention	X	X	X	X	X
7	Consumer Choice with Utility Theory				X	
8	Production Technology and Cost	X	X	X	X	
9	Perfect Competition	X	X	X	X	
10	Monopoly and Price Discrimination	X		X	X	
11	Market Entry and Monopolistic Competition	X		X	X	
12	Oligopoly and Strategic Behavior	X		X	X	
13	Controlling Market Power: Antitrust and Regulation	X		X	X	
14	Imperfect Information: Adverse Selection and Moral Hazard	X		X	X	
15	Public Goods and Public Choice		X			X
16	External Costs and Environmental Policy		X			X
17	The Labor Market, Income, and Poverty	X	X			X
18	Unions, Monopsony, and Imperfect Information				X	X
19	International Trade and Public Policy	X	X		X	

Alternative Macroeconomics Sequence

		Standard Course	Long-Run Focus	Short-Run Focus	Challenging Course
1	Introduction: What Is Economics?	X	X	X	X
2	The Key Principles of Economics	X	X	X	X
3	Exchange and Markets	X	X	X	X
4	Demand, Supply, and Market Equilibrium				X
5	Measuring a Nation's Production and Income	X	X	X	X
6	Unemployment and Inflation	X	X	X	X
7	The Economy at Full Employment		X	X	X
8	Why Do Economies Grow?	X	X	X	X
9	Aggregate Demand and Aggregate Supply	X	X	X	X
10	Fiscal Policy	X	X	X	X
11	The Income-Expenditure Model	X		X	X
12	Investment and Financial Markets	X		X	X
13	Money and the Banking System	X		X	X
14	The Federal Reserve and Monetary Policy	X	X	X	X
15	Modern Macroeconomics: From the Short Run to the Long Run	X	X	X	X
16	The Dynamics of Inflation and Unemployment		X	X	X
17	Macroeconomic Policy Debates		X		X
18	International Trade and Public Policy				X
19	The World of International Finance	X	X	X	X

Preface

In preparing this seventh edition, we had two primary goals. First, we wanted to incorporate the sweeping changes in the U.S. and world economies we have all witnessed in the last several years, as the world rebounds from a severe economic downturn. Second, we wanted to stay true to the philosophy of the textbook—using basic concepts of economics to explain a wide-variety of timely and interesting economic applications.

► WHAT'S NEW TO THIS EDITION

In addition to updating all the figures and data, we made a number of other key changes in this edition. They include the following:

- We revised and updated our discussion of fiscal policy in Chapters 5, 9, 10, 15–17, and 19 to reflect the experience of recent attempts to stimulate the economy from the recession.
- We revised and updated our treatment of banking and the monetary system in Chapters 13, 14, and 17 as the Federal Reserve made important changes in its operating procedures, such as purchasing new types of securities, paying interest on reserves, and establishing new mechanisms to support financial markets in a time of stress.
- We added a section in Chapter 5 about the way we measure economic performance, the sustainability of economic growth, and people's happiness as a result.
- We added new material in Chapter 6 about the effects of peer groups and unemployment.
- We updated the discussion of economic growth in Chapter 8 to include the effects of political institutions on growth.
- We added a section in Chapter 12 about the housing market and how it exemplifies the links between investment and finance.
- We added a discussion in Chapter 15 about how policy-makers can avoid a potential liquidity trap.
- We incorporated the links between the vacancy rate and unemployment in our discussion of the natural rate in Chapter 16.
- We added material in Chapter 20 to highlight the difference between the elasticity of demand for a specific brand and the elasticity of demand for a product.
- We added a section on the economics of consumer search to Chapter 29, describing the consumer's decision about how long to search for low prices.
- We added a section in Chapter 31 on the Coase bargaining solution to pollution.

We also incorporated 50 new, exciting applications into this edition and 15 interesting, new chapter-opening stories to motivate the material in each chapter.

- In the chapters common to macroeconomics and microeconomics, the new applications include the puzzle of why people walk up stairs but not escalators (Chapter 2) and why one of the best painters in the world hires someone to paint his house (Chapter 2).
- In the macroeconomics chapters, the new applications include biases in the CPI from not incorporating new goods (Chapter 6), global warming and economic growth in rich and poor countries (Chapter 8), evaluating President Obama's stimulus package (Chapter 10), homeowners who are financially "underwater" (Chapter 12), monetary policy and the housing boom (Chapter 17), and financial problems for countries in the Euro-zone (Chapter 19).
- In the microeconomics chapters, some of the new applications include clicking to find estimates of price elasticities (Chapter 20), a proposed tax on soft drinks (Chapter 22), the break-even price for biofuel (Chapter 24), why popcorn in movie theaters is so expensive (Chapter 25), why an increase in the wage paid to taxi drivers causes them to drive less (Chapter 32), and why unionization decreased the number of high-aptitude teachers (Chapter 33).

► APPLYING THE CONCEPTS

This is an Applications-driven textbook. We carefully selected over 120 real-world Applications that help students develop and master essential economic concepts. Here is an example of our approach from Chapter 4, “Demand, Supply, and Market Equilibrium.”

APPLYING THE CONCEPTS

- How do changes in demand affect prices?
Hurricane Katrina and Baton Rouge Housing Prices
- How do changes in supply in one market affect other markets?
Honeybees and the Price of Ice Cream
- How do simultaneous changes in supply and demand affect the equilibrium price?
The Supply and Demand for Cruise Ship Berths
- How do changes in supply affect prices?
The Bouncing Price of Vanilla Beans
- How do producers respond to higher prices?
Drought in Australia and the Price of Rice

We start each chapter with three to five thought-provoking Applying the Concepts questions that convey important economic concepts.

Once we present the economic logic behind a concept, we illustrate its use with a real-world Application.

6.10 Zero Price for Used Newspapers. In 1987 you could sell a ton of used newspaper for \$60. Five years later, you couldn't sell them at any price. In other words, the price of used newspapers dropped from \$60 to zero in just five years. Over this period, the quantity of used newspapers bought and sold increased. What caused the drop in price? Illustrate your answer with a complete graph.

6.11 Decrease in the Price of Heroin. Between 1990 and 2003, the price of heroin decreased from \$235 per gram to \$76. Over the same period, the quantity of heroin consumed increased from 376 metric tons to 482 metric tons. Use a demand and supply graph to explain these changes in price and quantity.

4.7 Applications of Demand and Supply

- Arrow up or down: Hurricane Katrina _____ the demand for housing in Baton Rouge, so the price of housing _____ and the quantity of housing _____. (Related to Application 1 on page 87.)
- Arrows up or down: The decrease in the number of bee colonies _____ the supply of fruits and berries, _____ the cost of producing ice cream, and _____ the equilibrium price of ice cream. (Related to Application 2 on pages 87–88.)
- Between 2008 and 2009, the equilibrium price of cruises _____ because _____ and demand _____. (Related to Application 3 on pages 88–89.)
- Arrow up or down: The development of a sun-tolerant variety of the vanilla plant _____ the supply of vanilla and its price. (Related to Application 4 on pages 89–90.)
- Arrow up or down: The drought in Australia _____ the supply of rice and _____ its price. (Related to Application 5 on page 90.)

ECONOMIC EXPERIMENT

Market Equilibrium

This simple experiment takes about 20 minutes. We start by dividing the class into two equal groups: consumers and producers.

- The instructor provides each consumer with a number indicating the maximum amount he or she is willing to pay (WTP) for a bushel of apples. The WTP is a number between \$1 and \$100. Each consumer has the opportunity to buy one bushel of apples per trading period. The consumer's score for a single trading period equals the gap between the WTP and the price actually paid for

7.6 Katrina Victims Move Back. Suppose that five years after Hurricane Katrina, half the people who had been displaced by the hurricane move back to New Orleans. Use a demand and supply graph of the return of people to New Orleans. (Related to Application 1 on page 87.)

7.7 Honeybees and Ice Cream. Suppose the decline in bee colonies increases the prices of some ingredients used to produce ice cream. Consider two flavors of ice cream, strawberry and vanilla. The cost of producing strawberry ice cream increases by 20 percent. The cost of producing vanilla ice cream increases by only 5 percent. Use a supply–demand graph to show the implications for the equilibrium prices and quantities of the two flavors of ice cream. (Related to Application 2 on pages 87–88.)

7.8 Cruise Ship Berths. Consider the change in the equilibrium quantity shown in Figure 4.16. Draw a demand and supply graph (with a decrease in demand and an increase in supply) such that the equilibrium quantity (the number of passengers) decreases. What is the fundamental difference between your graph and Figure 4.16? (Related to Application 3 on pages 88–89.)

7.9 Artificial versus Natural Vanilla. An artificial vanilla flavor is cheaper to produce than natural vanilla. Suppose the makers of a vanilla discover a new recipe that improves the taste of artificial vanilla. Use a demand and supply graph to show the effect on the equilibrium price and quantity of natural vanilla. (Related to Application 4 on pages 89–90.)

7.10 Drought and Rice Prices. Consider the market for rice. Use a demand and supply graph to illustrate the following statement: “The drought was a major factor in a near doubling of rice prices.” (Related to Application 5 on page 90.)

apples. For example, if the consumer's WTP is \$80 and he or she pays only \$30 for apples, the consumer's score is \$50. Each consumer has the option of not buying apples. This will be sensible if the best price the consumer can get exceeds the WTP. If the consumer does not buy apples, his or her score will be zero.

- The instructor provides each producer with a number indicating the cost of producing a bushel of apples (a number between \$1 and \$100). Each producer has the opportunity to sell one bushel per trading period. The producer's score for a single trading period equals the gap between the selling prices and the cost of producing

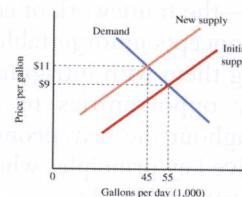
strawberries, raspberries, and almonds, leading to higher prices for these ingredients for ice cream. The higher prices for berries and nuts have increased the cost of producing food products, such as ice cream, increasing their prices as well.

Figure 4.15 shows the effects of the decline of the bee population on the market for ice cream. Increases in the prices of ingredients (berries and nuts) increase the cost of producing ice cream, shifting the supply curve upward. As a result, the equilibrium price of ice cream increases.

The collapsing of bee colonies is a mystery. The ice cream maker Häagen-Dazs donated money to Pennsylvania State University and the University of California, Davis to support research exploring the causes of CCD and possible solutions. To increase consumer awareness of the problem, Häagen-Dazs launched a new flavor, Vanilla Honey Bee. Related to Exercises 7.2 and 7.7.

SOURCE: Based on Pariza Kavilanz, “Disappearing Bees Threaten Ice Cream Sellers,” *CNNMoney.com*, February 20, 2008.

FIGURE 4.15
Honeybees and the Price of Ice Cream
A decrease in pollination by bees decreases the output of fruit and nuts, increasing the prices of some ingredients for ice cream. The resulting increase in the cost of producing ice cream shifts the supply curve upward, increasing the equilibrium price and decreasing the equilibrium quantity.



APPLICATION 3

THE SUPPLY AND DEMAND FOR CRUISE SHIP BERTHS

APPLYING THE CONCEPT #3: How do simultaneous changes in supply and demand affect the equilibrium price?

What happens when an increase in supply is combined with a decrease in demand? In 2009 the cruise industry invested \$4.7 billion on 14 new ships, and in 2010 the industry launched 12 additional new ships. While the supply of cruise berths increased, the demand for cruises decreased, a result of a recession and lower real income. As shown in Figure 4.16, the simultaneous increase in supply and decrease in demand decreased the equilibrium price. To entice consumers, some cruise lines cut prices by as much as 40 percent. Although consumers responded by purchasing more cruises (about 3 percent more in 2009 than in 2008), the cruise lines' revenues decreased. For Carnival Corporation, the world's largest cruise line, total revenue decreased by 10 percent. Related to Exercises 7.3 and 7.8.

SOURCE: Based on “Dum the Torpedoes: Cruise Lines in the Recession,” *Entrepreneur*, February 13, 2010, 67.



For each Application and Applying the Concept question, we provide exercises that test students' understanding of the concepts. In addition, some chapters contain an Economic Experiment section that gives them the opportunity to do their own economic analysis.

► WHY FIVE KEY PRINCIPLES?

In Chapter 2, “The Key Principles of Economics,” we introduce the following five key principles and then apply them throughout the book:

1. **The Principle of Opportunity Cost.** The opportunity cost of something is what you sacrifice to get it.
2. **The Marginal Principle.** Increase the level of an activity as long as its marginal benefit exceeds its marginal cost. Choose the level at which the marginal benefit equals the marginal cost.
3. **The Principle of Voluntary Exchange.** A voluntary exchange between two people makes both people better off.
4. **The Principle of Diminishing Returns.** If we increase one input while holding the other inputs fixed, output will increase, but at a decreasing rate.
5. **The Real-Nominal Principle.** What matters to people is the real value of money or income—its purchasing power—not the face value of money or income.

This approach of repeating five key principles gives students the big picture—the framework of economic reasoning. We make the key concepts unforgettable by using them repeatedly, illustrating them with intriguing examples, and giving students many opportunities to practice what they’ve learned. Throughout the text, economic concepts are connected to the five key principles when the following callout is provided for each principle:

MARGINAL PRINCIPLE

Increase the level of an activity as long as its marginal benefit exceeds its marginal cost. Choose the level at which the marginal benefit equals the marginal cost.



► HOW IS THE BOOK ORGANIZED?

Chapter 1, “Introduction: What Is Economics?” uses three current policy issues—traffic congestion, poverty in Africa, and Japan’s prolonged recession—to explain the economic way of thinking. Chapter 2, “The Key Principles of Economics,” introduces the five principles we return to throughout the book. Chapter 3, “Exchange and Markets,” is devoted entirely to exchange and trade. We discuss the fundamental rationale for exchange and introduce some of the institutions modern societies developed to facilitate trade.

Students need to have a solid understanding of demand and supply to be successful in the course. Many students have difficulty understanding movement along a curve versus shifts of a curve. To address this difficulty, we developed an innovative way to organize topics in Chapter 4, “Demand, Supply, and Market Equilibrium.” We examine the law of demand and changes in quantity demanded, the law of supply and changes in quantity supplied, and then the notion of market equilibrium. After students have a firm grasp of equilibrium concepts, we explore the effects of changes in demand and supply on equilibrium prices and quantities. You can present either macroeconomics or microeconomics chapters first, depending on your preference. See the alternative course sequence charts on pages xxxii–xxxiii of this preface for organization options.

Summary of the Macroeconomics Chapters

Part 2, “The Basic Concepts of Macroeconomics” (Chapters 5 and 6), introduces students to the key concepts—GDP, inflation, unemployment—that are used throughout the text and in everyday economic discussion. The two chapters in this section provide the building blocks for the rest of the book. Part 3, “The Economy in the Long Run” (Chapters 7 and 8), analyzes how the economy operates at full employment and explores the causes and consequences of economic growth.

Next we turn to the short run. We begin the discussion of business cycles, economic fluctuations, and the role of government in Part 4, “Economic Fluctuations and Fiscal Policy” (Chapters 9 through 12). We devote an entire chapter to the structure of government spending and revenues and the role of fiscal policy. In Part 5, “Money, Banking, and Monetary Policy” (Chapters 13 and 14), we introduce the key elements of both monetary theory and policy into our economic models. Part 6, “Inflation, Unemployment, and Economic Policy” (Chapters 15 through 17), brings the important questions of the dynamics of inflation and unemployment into our analysis. Finally, the last two chapters in Part 7, “The International Economy” (Chapters 18 and 19), provide an in-depth analysis of both international trade and finance.

A Few Features of Our Macroeconomics Chapters

The following are a few features of our macroeconomics chapters:

- **Flexibility.** A key dilemma confronting economics professors has always been how much time to devote to long-run topics, such as growth and production, versus short-run topics, such as economic fluctuations and business cycles. Our book is designed to let

professors choose. It works like this: To pursue a long-run approach, professors should initially concentrate on Chapters 1 through 4, followed by Chapters 5 through 8.

- To focus on economic fluctuations, start with Chapters 1 through 4, present Chapter 5, “Measuring a Nation’s Production and Income,” and Chapter 6, “Unemployment and Inflation,” and then turn to Chapter 9, “Aggregate Demand and Aggregate Supply.”
- Chapter 11, “The Income-Expenditure Model,” is self-contained, so instructors can either skip it completely or cover it as a foundation for aggregate demand.
- **Long Run.** Throughout most of the 1990s, the U.S. economy performed very well—low inflation, low unemployment, and rapid economic growth. This robust performance led to economists’ increasing interest in trying to understand the processes of economic growth. Our discussion of economic growth in Chapter 8, “Why Do Economies Grow?” addresses the fundamental question of how long-term living standards are determined and why some countries prosper while others do not. This is the essence of economic growth. As Nobel Laureate Robert E. Lucas, Jr., once wrote, “Once you start thinking about growth, it is hard to think of anything else.”
- **Short Run.** The great economic expansion of the 1990s came to an end in 2001, as the economy started to contract. The recession beginning in 2007 was the worst downturn since World War II. Difficult economic times remind us that macroeconomics is also concerned with understanding the causes and consequences of economic fluctuations. Why do economies experience recessions and depressions, and what steps can policymakers take to stabilize the economy and ease the devastation people suffer from them? This has been a constant theme of macroeconomics throughout its entire history and is covered extensively in the text.
- **Policy.** Macroeconomics is a policy-oriented subject, and we treat economic policy in virtually every chapter. We discuss both important historical and more recent macroeconomic events in conjunction with the theory. In addition, we devote Chapter 17, “Macroeconomic Policy Debates,” to three important policy topics that recur frequently in macroeconomic debates: the role of government deficits, whether the Federal Reserve should target inflation or other objectives, and whether income or consumption should be taxed.

Summary of the Microeconomics Chapters

A course in microeconomics starts with the first four chapters of the book, which provide a foundation for more detailed study of individual decision making and markets.

Part 8, “A Closer Look at Demand and Supply,” (Chapters 20 through 22), provides a closer look at demand and supply, including elasticity, market efficiency, and consumer choice. Part 9, “Market Structures and Pricing” (Chapters 23 through 28), starts with a discussion of production and costs, setting the stage for an examination of alternative market structures, including the extremes of perfect competition and monopoly, as well as the middle ground of monopolistic competition and oligopoly. The last chapter in Part 9 discusses antitrust policy and deregulation. Part 10, “Externalities and Information” (Chapters 29 through 31), discusses the circumstances under which markets break down, including imperfect information, public goods, and environmental degradation.

Part 11, “The Labor Market and Income Distribution” (Chapter 32 and 33), explores the labor market, unions, poverty, discrimination, and the distribution of income.

► MYECONLAB



Both the text and supplement package provide ways for instructors and students to assess their knowledge and progress through the course. MyEconLab, the new standard in personalized online learning, is a key part of O’Sullivan, Sheffrin, and Perez’s integrated learning package for the seventh edition.

For the Instructor

MyEconLab is an online course management, testing, and tutorial resource. Instructors can choose how much or how little time to spend setting up and using MyEconLab. Each chapter contains two Sample Tests, Study Plan Exercises, and Tutorial Resources. Student use of these materials requires no initial set-up by the instructor. The online Gradebook records each student’s performance and time spent on the Tests and Study Plan and generates reports by student or by chapter. Instructors can assign tests, quizzes, and homework in MyEconLab using four resources:

- Preloaded Sample Test questions
- Problems similar to the end-of-chapter exercises
- Test Item File questions
- Self-authored questions using the Econ Exercise Builder

Exercises use multiple-choice, graph drawing, and free-response items, many of which are generated algorithmically so that each time a student works them, a different variation is presented. MyEconLab grades each of these problem types, even those with graphs. When working homework exercises, students receive immediate feedback with links to additional learning tools.

Customization and Communication MyEconLab in CourseCompass™ provides additional optional customization and communication tools. Instructors who teach distance learning courses or very large lecture sections find the CourseCompass format useful because they can upload course documents and assignments, customize the order of chapters, and use communication features such as Digital Drop Box and Discussion Board.

Experiments in MyEconLab Experiments are a fun and engaging way to promote active learning and mastery of important economic concepts. Pearson's experiments program is flexible and easy for instructors and students to use.

- Single-player experiments allow students to play an experiment against virtual players from anywhere at anytime with an Internet connection.
- Multiplayer experiments allow instructors to assign and manage a real-time experiment with their class.

In both cases, pre-and post-questions for each experiment are available for assignment in MyEconLab.

For the Student

MyEconLab puts students in control of their learning through a collection of tests, practice, and study tools tied to the online, interactive version of the textbook, and other media resources. Within MyEconLab's structured environment, students practice what they learn, test their understanding, and pursue a personalized Study Plan generated from their performance on Sample Tests and tests set by their instructors. At the core of MyEconLab are the following features:

- Sample Tests, two per chapter
- Personal Study Plan
- Tutorial Instruction
- Graphing Tool

Sample Tests Two Sample Tests for each chapter are pre-loaded in MyEconLab, enabling students to practice what they have learned, test their understanding, and identify areas in which they need further work. Students can study on their own, or they can complete assignments created by their instructor.

Personal Study Plan Based on a student's performance on tests, MyEconLab generates a personal Study Plan that shows where the student needs further study. The Study

Plan consists of a series of additional practice exercises with detailed feedback and guided solutions that are keyed to other tutorial resources.

Tutorial Instruction Launched from many of the exercises in the Study Plan, MyEconLab provides tutorial instruction in the form of step-by-step solutions and other media-based explanations.

Graphing Tool A graphing tool is integrated into the Tests and Study Plan exercises to enable students to make and manipulate graphs. This feature helps students understand how concepts, numbers, and graphs connect.

Additional MyEconLab Tools MyEconLab includes the following additional features:

1. **Weekly News Update**—This feature provides weekly updates during the school year of news items with links to sources for further reading and discussion questions.
2. **eText**—While students are working in the Study Plan or completing homework assignments, part of the tutorial resources available is a direct link to the relevant page of the text so that students can review the appropriate material to help them complete the exercise.
3. **Glossary Flashcards**—Every key term is available as a flashcard, allowing students to quiz themselves on vocabulary from one or more chapters at a time.

MyEconLab content has been created over the years through the efforts of Charles Baum, Middle Tennessee State University; Peggy Dalton, Frostburg State University; Sarah Ghosh, University of Scranton; Russell Kellogg, University of Colorado, Denver; Bert G. Wheeler, Cedarville University; and Douglas A. Ruby, Noel Lotz, and Courtney Kamauf, Pearson Education.

► WHAT INSTRUCTOR'S SUPPLEMENTS DID WE DEVELOP?

A fully integrated teaching and learning package is necessary for today's classroom. Our supplement package helps you provide new and interesting real-world Applications and assess student understanding of economics. The supplements are coordinated with the main text through the numbering system of the headings in each section. The major sections of the chapters are numbered (1.1, 1.2, 1.3, and so on), and that numbering system is used consistently in the supplements to make it convenient and flexible for instructors to develop assignments.

Four Test Item Files

Economics, seventh edition, is supported by a comprehensive set of four test item files.

There are two test item files for *Macroeconomics* and two test item files for *Microeconomics*. Each test item file offers multiple-choice, true/false, and short-answer questions. The questions are referenced by topic and are presented in sequential order. Each question is keyed by degree of difficulty, with questions ranging on a scale of one to three. Easy questions involve straightforward recall of information in the text. Moderate questions require some analysis on the student's part. Difficult questions usually entail more complex analysis and may require the student to go one step further than the material presented in the text. Questions are also classified as *fact*, *definition*, *conceptual*, and *analytical*. Fact questions test the student's knowledge of factual information presented in the text. Definition questions ask the student to define an economic concept. Conceptual questions test the student's understanding of a concept. Analytical questions require the student to apply an analytical procedure to answer the question.

The test item files include tables and a series of questions asking students to solve for numeric values, such as profit or equilibrium output. There are also numerous questions based on graphs: Several questions ask students to interpret data presented in a graph, draw a graph on their own, and answer related questions.

In each chapter there are several questions that support the Applications in the main book. Each test item file chapter also includes an additional Application based on a newspaper, journal, or online news story. There are also new questions to support the updated and new content in the main book.

The Association to Advance Collegiate Schools of Business (AACSB) The authors of the test item files have connected questions to the general knowledge and skill guidelines found in the AACSB assurance of learning standards.

What Is the AACSB? AACSB is a not-for-profit corporation of educational institutions, corporations, and other organizations devoted to the promotion and improvement of higher education in business administration and accounting. A collegiate institution offering degrees in business administration or accounting may volunteer for AACSB accreditation review. The AACSB makes initial accreditation decisions and conducts periodic reviews to promote continuous quality improvement in management education. Pearson Education is a proud member of the AACSB and is pleased to provide advice to help you apply AACSB assurance of learning standards.

What Are AACSB Assurance of Learning Standards? One of the criteria for AACSB accreditation is quality of the curricula. Although no specific courses are required, the

AACSB expects a curriculum to include learning experiences in the following areas:

- Communication
- Ethical Reasoning
- Analytic Skills
- Use of Information Technology
- Multiculturalism and Diversity
- Reflective Thinking

Questions that test skills relevant to these guidelines are appropriately tagged. For example, a question testing the moral questions associated with externalities would receive the Ethical Reasoning tag.

How Can Instructors Use the AACSB Tags? Tagged questions help you measure whether students are grasping the course content that aligns with the AACSB guidelines noted. In addition, the tagged questions may help instructors identify potential applications of these skills. This in turn may suggest enrichment activities or other educational experiences to help students achieve these skills.

For Macroeconomics . . . Test Item File 1, prepared by Randy Methenitis of Richland College, includes approximately 3,000 multiple-choice, true/false, short-answer, and graphing questions. Test Item File 2, prepared by Brian Rosario of California State University, Sacramento, contains over 3,000 multiple-choice, true/false, and short-answer questions. Both test item files are available in a computerized format using TestGen, test-generating software.

For Microeconomics . . . Test Item File 1, prepared by Randy Methenitis of Richland College, includes approximately 3,000 multiple-choice, true/false, short-answer, and graphing questions. Test Item File 2, prepared by Robert Shoffner III of Central Piedmont Community College, contains over 2,000 multiple-choice, true/false, and short-answer questions. Both test item files are available in a computerized format using TestGen, test-generating software.

TestGen

Microeconomics and *Macroeconomics* test item files 1 and 2 appear in print and as computer files that may be used with TestGen test-generating software. This test-generating program permits instructors to edit, add, or delete questions from the test bank; analyze test results; and organize a database of tests and student results. This software allows for

flexibility and ease of use. It provides many options for organizing and displaying tests, along with a search and sort feature.

Instructor's Manuals

The instructor's manuals, revised by Jeff Phillips of Colby-Sawyer College, follow the textbook's organization, incorporating extra Applications questions. The manuals also provide detailed outlines (suitable for use as lecture notes) and solutions to all questions in the textbook. The instructor's manuals are also designed to help the instructor incorporate applicable elements of the supplement package. Each instructor's manual contains the following for each chapter:

- Summary: a bulleted list of key topics in the chapter
- Approaching the Material: student-friendly examples to introduce the chapter
- Chapter Outline: summary of definitions and concepts
- Teaching Tips on how to encourage class participation
- Summary and discussion points for the Applications in the main text
- New Applications and discussion questions
- Solutions to all end-of-chapter exercises

The instructor's manuals are also available for download from the Instructor's Resource Center.

PowerPoint® Presentations

Three sets of PowerPoint® slides are available for download from the Instructor's Resource Center at www.pearsonshighered.com/irc.

1. A comprehensive set of PowerPoint® slides that can be used by instructors for class presentations. These Powerpoints, prepared by Brock Williams of Metropolitan Community College, includes all the graphs, tables, and equations in the textbook, as well as lecture notes that outline the chapter.
2. A comprehensive set of PowerPoint® slides with Classroom Response Systems (CRS) questions built in so that instructors can incorporate CRS "clickers" into their classroom lectures. This presentation is also prepared by Brock Williams of Metropolitan Community College. For more information on Pearson's partnership with CRS, see the following description. Instructors may download these

PowerPoint® presentations from the Instructor's Resource Center (www.pearsonshighered.com/irc).

3. A PDF version of the PowerPoint® slides is also available as PDF files from the Instructor's Resource Center. This version of the PowerPoint slides can be printed and used in class.

Instructor's Resource Center on CD-ROM

The test item files, TestGen files, instructor's manuals, and PowerPoint® slides are also available on this CD-ROM. Faculty can pick and choose from the various supplements and export them to their hard drive.

CourseSmart

The CourseSmart eTextbook for the text is available through www.coursesmart.com. CourseSmart goes beyond traditional expectations, providing instant, online access to the textbooks and course materials you need at a lower cost to students. And, even as students save money, you can save time and hassle with a digital textbook that allows you to search the most relevant content at the very moment you need it. Whether it's evaluating textbooks or creating lecture notes to help students with difficult concepts, CourseSmart can make life a little easier. See how when you visit www.coursesmart.com/instructors.

Instructor's Resource Center Online

This password-protected site is accessible from www.pearsonshighered.com/irc and hosts all of the resources previously listed: test item files, TestGen files, instructor's manuals, and PowerPoint® slides. Instructors can click on the "Help downloading Instructor Resources" link for easy-to-follow instructions on getting access or contact their sales representative for further information.

Classroom Response Systems

Classroom Response Systems (CRS) is an exciting new wireless polling technology that makes large and small classrooms even more interactive because it enables instructors to pose questions to their students, record results, and display those results instantly. Students can answer questions easily using compact remote-control transmitters. Pearson has partnerships with leading CRS providers and can show you everything you need to know about setting up and using a CRS system. We'll provide the classroom hardware, text-specific PowerPoint® slides, software, and support, and

we'll also show you how your students can benefit! Learn more at www.pearsonhighered.com/elearning.

► WHAT STUDENT SUPPLEMENTS DID WE DEVELOP?

To accommodate different learning styles and busy student lifestyles, we provide a variety of print and online supplements.

Study Guides

The study guides, created by David Eaton of Murray State University, reinforce economic concepts and Applications from the main book and help students assess their learning. Each chapter of the study guides includes the following features:

- **Chapter Summary:** Provides a summary of the chapter, key term definitions, and review of the Applications from the main book.
- **Study Tip:** Provides students with tips on understanding key concepts.
- **Key equations:** Alerts students to equations they are likely to see throughout the class.
- **Caution!:** Alerts students to potential pitfalls and key figures or tables that deserve special attention.
- **Activity:** Encourages students to think creatively about an economic problem. An answer is provided so students can check their work.
- **Practice Test:** Includes approximately 25 multiple-choice and short-answer questions that help students test their knowledge. Select questions include a graph or table for students to analyze. Some of these questions support the Applications in the main book.
- **Solutions to the practice test.**

► REVIEWERS

A long road exists between the initial vision of an innovative principles text and the final product. Along our journey we participated in a structured process to reach our goal. We wish to acknowledge the assistance of the many people who participated in this process.

► REVIEWERS OF THE CURRENT EDITION

The guidance and recommendations from the following professors helped us develop the revision plans for this new edition:

Alabama

JIM PAYNE, *Calhoun Community College*

JAMES SWOFFORD, *University of South Alabama*

Florida

BARBARA MOORE, *University of Central Florida*

Georgia

SCOTT BEAULIER, *Mercer College*

Massachusetts

HANS DESPAIN, *Nichols College*

Nebraska

BROCK WILLIAMS, *Metropolitan Community College*

New Hampshire

JEFF PHILLIPS, *Colby Sawyer College*

New York

EZGI UZEL, *SUNY-Maritime*

Ohio

ERWIN EHRARDT, *University of Cincinnati*

KEN FAH, *Ohio Dominican University*

DANDAN LIU, *Kent State University*

South Carolina

GARY STONE, *Winthrop University*

Texas

STEVE SCHWIFF, *Texas A&M University, Commerce*

► REVIEWERS OF PREVIOUS EDITIONS

We benefited from the assistance of many dedicated professors who reviewed all or parts of previous editions in various stages of development:

Alabama

JAMES SWOFFORD, *University of South Alabama*

Alaska

PAUL JOHNSON, *University of Alaska, Anchorage*

Arizona

PETE MAVROKORDATOS, *Tarrant County College/University of Phoenix*

EVAN TANNER, *Thunderbird, The American Graduate School of International Management*

DONALD WELLS, *University of Arizona*

California

ANTONIO AVALOS, *California State University, Fresno*

COLLETTE BARR, *Santa Barbara Community College*

T. J. BETTNER, *Orange Coast College*

PETER BOELMAN-LOPEZ, *Riverside Community College*

MATTHEW BROWN, *Santa Clara University*

JIM COBB, *Orange Coast College*

JOHN CONSTANTINE, *Sacramento City College*

PEGGY CRANE, *San Diego State University*

ALBERT B. CULVER, *California State University, Chico*

JOSE L. ESTEBAN, *Palomar College*

GILBERT FERNANDEZ, *Santa Rosa Junior College*

E. B. GENDEL, *Woodbury University*

CHARLES W. HAASE, *San Francisco State University*

JOHN HENRY, *California State University, Sacramento*

GEORGE JENSEN, *California State University, Los Angeles*

JANIS KEA, *West Valley College*

ROSE KILBURN, *Modesto Junior College*

PHILIP KING, *San Francisco State University*

ANTHONY LIMA, *California State University, Hayward*

BRET MCMURRAN, *Chaffey College*

JON J. NADENICHEK, *California State University, Northridge*

ALEX OBIYA, *San Diego City College*

JACK W. OSMAN, *San Francisco State University*

JAY PATYK, *Foothill College*

STEPHEN PEREZ, *California State University, Sacramento*

RATHA RAMOO, *Diablo Valley College*

GREG ROSE, *Sacramento City College*

KURT SCHWABE, *University of California, Riverside*

TERRI SEXTON, *California State University, Sacramento*

DAVID SIMON, *Santa Rosa Junior College*

XIAOCHUAN SONG, *San Diego Mesa College*

ED SORENSEN, *San Francisco State University*

SUSAN SPENCER, *Santa Rosa Junior College*

LINDA STOH, *Sacramento City College*

RODNEY SWANSON, *University of California, Los Angeles*

DANIEL VILLEGAS, *California Polytechnic State University*

Colorado

STEVE CALL, *Metropolitan State College of Denver*

Connecticut

JOHN A. JASCOT, *Capital Community Technical College*

Delaware

LAWRENCE STELMACH, *Delaware Valley College*

Florida

IRMA DE ALONSO, *Florida International University*

JAY BHATTACHARYA, *Okaloosa-Walton Community College*

EDWARD BIERHANZL, *Florida A&M University*

ERIC P. CHIANG, *Florida Atlantic University*

MARTINE DUCHATELET, *Barry University*

GEORGE GREENLEE, *St. Petersburg College, Clearwater*

MARTIN MARKOVICH, *Florida A&M University*

THOMAS MCCAULEY, *Florida State University*

STEPHEN MORRELL, *Barry University*

CARL SCHMERTMANN, *Florida State University*

GARVIN SMITH, *Daytona Beach Community College*
 NOEL SMITH, *Palm Beach Community College*
 MICHAEL VIERK, *Florida International University*
 JOSEPH WARD, *Broward Community College, Central*
 VIRGINIA YORK, *Gulf Coast Community College*
 ANDREA ZANTER, *Hillsborough Community College*

Georgia

ASHLEY HARMON, *Southeastern Technical College*
 STEVEN F. KOCH, *Georgia Southern University*
 L. WAYNE PLUMLY, JR., *Valdosta State University*
 GREG TRANDEL, *University of Georgia*

Hawaii

BARBARA ROSS-PFEIFFER, *Kapiolani Community College*

Idaho

CHARLES SCOTT BENSON, JR., *Idaho State University*
 TESA STEGNER, *Idaho State University*

Illinois

DIANE ANSTINE, *North Central College*
 ROSA LEA DANIELSON, *College of DuPage*
 SEL DIBOGLU, *Southern Illinois University*
 LINDA GHENT, *Eastern Illinois University*
 GARY LANGER, *Roosevelt University*
 NAMPEANG PINGKARAWAT, *Chicago State University*
 DENNIS SHANNON, *Belleville Area College*
 CHUCK SICOTTE, *Rock Valley College*

Indiana

JOHN L. CONANT, *Indiana State University*
 MOUSUMI DUTTARAY, *Indiana State University*
 JAMES T. KYLE, *Indiana State University*
 VIRGINIA SHINGLETON, *Valparaiso University*

Iowa

DALE BORMAN, *Kirkwood Community College*

JONATHAN O. IKOBA, *Scott Community College*
 SAUL MEKIES, *Kirkwood Community College, Iowa City*

Kansas

CARL PARKER, *Fort Hays State University*
 JAMES RAGAN, *Kansas State University*
 TRACY M. TURNER, *Kansas State University*

Kentucky

DAVID EATON, *Murray State University*
 JOHN ROBERTSON, *University of Kentucky*

Louisiana

JOHN PAYNE BIGELOW, *Louisiana State University*
 SANG LEE, *Southeastern Louisiana University*
 RICHARD STAHL, *Louisiana State University*

Maine

GEORGE SCHATZ, *Maine Maritime Academy*

Maryland

CAREY BORKOSKI, *Anne Arundel Community College*
 GRETCHEN MESTER, *Anne Arundel Community College*
 IRVIN WEINTRAUB, *Towson State University*

Massachusetts

BRIAN DEURIARTE, *Middlesex Community College*
 DAN GEORGIANNA, *University of Massachusetts, Dartmouth*
 JAMES E. HARTLEY, *Mount Holyoke College*
 MARLENE KIM, *University of Massachusetts, Boston*
 MARK SIEGLER, *Williams College*
 GILBERT WOLFE, *Middlesex Community College*

Michigan

CHRISTINE AMSLER, *Michigan State University*
 BHARATI BASU, *Central Michigan University*
 NORMAN CURE, *Macomb Community College*
 SUSAN LINZ, *Michigan State University*
 SCANLON ROMER, *Delta College*

ROBERT TANSKY, *St. Clair County Community College*

WENDY WYSOCKI, *Monroe Community College*

Minnesota

MIKE MCILHON, *Augsburg College*

RICHARD MILANI, *Hibbing Community College*

Mississippi

ARLENA SULLIVAN, *Jones County Junior College*

Missouri

DUANE EBERHARDT, *Missouri Southern State College*

DAVID GILLETTE, *Truman State University*

BRAD HOPPE, *Southwest Missouri State University*

DENISE KUMMER, *St. Louis Community College*

STEVEN M. SCHAMBER, *St. Louis Community College, Meramec*

ELIAS SHUKRALLA, *St. Louis Community College, Meramec*

KEITH ULRICH, *Valencia Community College*

GEORGE WASSON, *St. Louis Community College, Meramec*

Nebraska

THEODORE LARSEN, *University of Nebraska, Kearney*

TIMOTHY R. MITTAN, *Southeast Community College*

STANLEY J. PETERS, *Southeast Community College*

BROCK WILLIAMS, *Metropolitan Community College*

Nevada

STEPHEN MILLER, *University of Nevada, Las Vegas*

CHARLES OKEKE, *College of Southern Nevada*

New Jersey

LEN ANYANWU, *Union County College*

RICHARD COMERFORD, *Bergen Community College*

JOHN GRAHAM, *Rutgers University*

PAUL C. HARRIS, JR., *Camden County College*

CALVIN HOY, *County College of Morris*

TAGHI RAMIN, *William Paterson University*

BRIAN DE URIARTE, *Middlesex County College*

New Mexico

CARL ENOMOTO, *New Mexico State University*

New York

FARHAD AMEEN, *State University of New York, Westchester County Community College*

KARIJIT K. ARORA, *Le Moyne College*

ALEX AZARCHS, *Pace University*

KATHLEEN K. BROMLEY, *Monroe Community College*

BARBARA CONNELLY, *Westchester Community College*

GEORGE FROST, *Suffolk County Community College*

SUSAN GLANZ, *St. John's University*

SERGE S. GRUSHCHIN, *ASA College of Advanced Technology*

ROBERT HERMAN, *Nassau Community College*

CHRISTOPHER INYA, *Monroe Community College*

MARIE KRATOCHVIL, *Nassau Community College*

MARIANNE LOWERY, *Erie Community College*

JEANNETTE MITCHELL, *Rochester Institute of Technology*

TED MUZIO, *St. John's University*

GRAY ORPHEE, *Rockland County Community College*

CRAIG ROGERS, *Canisius College*

FRED TYLER, *Fordham University*

MICHAEL VARDANYAN, *Binghamton University*

North Carolina

KATIE CANTY, *Cape Fear Community College*

LEE CRAIG, *North Carolina State University*

HOSSEIN GHOLAMI, *Fayetteville Technical Community College*

MICHAEL G. GOODE, *Central Piedmont Community College*

CHARLES M. OLDHAM, JR., *Fayetteville Technical Community College*

RANDALL PARKER, *East Carolina University*

DIANE TYNDALL, *Craven Community College*

CHESTER WATERS, *Durham Technical Community College*

JAMES WHEELER, *North Carolina State University*

North Dakota

SCOTT BLOOM, *North Dakota State University*