

TENTH EDITION
Microeconomics
PRINCIPLES, APPLICATIONS, AND TOOLS

Arthur O'Sullivan
Lewis and Clark College

Steven M. Sheffrin
Tulane University

Stephen J. Perez
California State University, Sacramento



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Printer/Binder: LSC Communications, Inc./Owensville

Cover Printer: Phoenix Color/Hagerstown

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Cataloging-in-Publication Data is available on file at the Library of Congress



ISBN 10: 0-13-517299-3
ISBN 13: 978-0-13-517299-5

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 ninth edition, with translations into Russian, Chinese, Korean, Portuguese, Serbian, and Greek.

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.



Stephen J. Perez

is Interim Provost and a professor of economics 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*.



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PREFACE

In preparing this tenth edition, we had three primary goals. First, we wanted to incorporate the ongoing changes in the United States and world economies as they have continued to recover and adjust from the worldwide recession of the last decade. Second, we strived to update this edition to reflect the latest exciting developments in economic thinking and make these accessible to new students of economics. Finally, 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.

To improve student results, we recommend pairing the text content with **MyLab Economics**, which is the teaching and learning platform that empowers you to reach every student. By combining trusted author content with digital tools and a flexible platform, MyLab personalizes the learning experience and will help your students learn and retain key course concepts while developing skills that future employers are seeking in their candidates. From **Digital Interactives** to **Real-time Data Analysis Exercises**, MyLab Economics helps you teach your course, your way. Learn more at www.pearson.com/mylab/economics.

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:

- At the end of each chapter, we have added Critical Thinking Exercises that challenge the student to think more deeply about the topics and ideas within the chapters.
- We also incorporated a total of 18 exciting new Applications into this edition. In addition, we incorporated a total of 9 new chapter-opening stories. These fresh applications and chapter openers show the widespread relevance of economic analysis.
- The new applications include solar tax credits (Chapter 1), crop insurance and food production (Chapter 3), the effects of the growing popularity of craft beer on hop prices (Chapter 4), In the new applications include the effect of a VAT tax on French restaurants (Chapter 6), the opportunity cost of serving as an Airbnb host (Chapter 8), the rationale for shutting down a coal mine (Chapter 9), the maple syrup cartel (Chapter 12), the implications of genetic testing for insurance (Chapter 14), the behavioral economics of free riding (Chapter 15), carbon permits in the European Union (Chapter 16), and how bicycle messengers respond to incentives (Chapter 17).

- In Chapter 18, we explore how automobile companies have been purchasing a large fraction of their parts outside the United States to put into “American” cars.

Solving Teaching and Learning Challenges

Many students who take the principles of economics class have difficulty seeing the relevance of the key concepts of economics, including the role of opportunity costs, thinking on the margin, the benefits of voluntary exchange, the idea of diminishing returns, and the distinction between real and nominal magnitudes. This reduces student preparedness and engagement. We explore the five key principles of economics we think are most important to students and use the following resources to engage students with the content to highlight not only how economics is relevant to their lives, but also their future careers.


Make Economics Relevant through Real-World Application

Real-world application is crucial to helping students find the relevance in economics. As such, our applications-driven text includes 80 real-world Applications to help students master essential economics concepts. Here is an example of our approach from Chapter 4, “Demand, Supply, and Market Equilibrium.”

APPLICATION 1

THE LAW OF DEMAND FOR YOUNG SMOKERS

APPLYING THE CONCEPTS #1: What is the law of demand?



As price decreases and we move downward along the market demand for cigarettes, the quantity of cigarettes demanded increases for two reasons. First, people who smoked cigarettes at the original price respond to the lower price by smoking more. Second, some people start smoking.

In the United States, cigarette taxes vary across states, and studies of cigarette consumption patterns show that higher taxes mean less cigarette consumption by youths. Using data from the Youth Risk Behavior Surveys (YRBS), one study shows

that increases in state cigarette taxes between 1990 and 2005 resulted in less participation (fewer smokers) and lower frequency (fewer cigarettes per smoker).

A change in cigarette taxes in Canada illustrates the second effect, the new-smoker effect. In 1994, several provinces in eastern Canada cut their cigarette taxes in response to the smuggling of cigarettes from the United States (where taxes are lower), and the price of cigarettes in the provinces decreased by roughly 50 percent. Researchers tracked the choices of 591 youths from the Waterloo Smoking Prevention Program and concluded that the lower price increased the smoking rate by roughly 17 percent. **Related to Exercises 1.6 and 1.8.**

SOURCES: (1) Anindya Sen and Tony Wirjanto, “Estimating the Impacts of Cigarette Taxes on Youth Smoking Participation, Initiation, and Persistence: Empirical Evidence from Canada,” *Health Economics* 19 (2010), pp. 1264–1280. (2) Christopher Carpenter and Phillip J. Cook, “Cigarette Taxes and Youth Smoking: New Evidence from National, State, and Local Youth Risk Behavior Surveys,” *Journal of Health Economics* 27 (2008), pp. 281–299.

Each Application has at least one related exercise available in MyLab Economics. These exercises can be found in the Application boxes in the eText with an opportunity for additional practice in the Study Plan, and in the

end-of-chapter section. The **Study Plan** gives students personalized recommendations, practice opportunities, and learning aids to help them stay on track.

Text Exercise 1.6

Related to Application: Law of Demand for Young Smokers

When several provinces in eastern Canada cut their cigarette taxes, the price of cigarettes decreased by roughly 50 percent, and the youth smoking rate increased by roughly percent.

LAW OF DEMAND FOR YOUNG SMOKERS


APPLYING THE CONCEPTS: What is the law of demand?

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Our macroeconomic world is rich with data. We help students understand the importance of real and current data through the incorporation of Real-Time-Data Analysis Exercises in the Macroeconomics volume. The **Real-Time-Data Analysis Exercises**, marked with , allow students and instructors to use the very latest data from FRED. By completing the exercises, students become familiar with a key data source, learn how to locate data, and develop important employability skills in interpreting data.

Students are often best motivated when they see the relevance of what they're learning to the world they live in. The **Current News Exercises** available to students in MyLab Economics help demonstrate the real world relevance of these important concepts. Every week, microeconomic and macroeconomic news stories and accompanying exercises are posted to MyLab Economics. Assignable and auto-graded, these multi-part exercises ask students to recognize and apply economic concepts to current events.

8/17/18: Economic models Ex1

Most Economic Forecasts Have a Big Blind Spot: Climate Change

Source: DePillis, Lydia "Most Economic Forecasts Have a Big Blind Spot: Climate Change" *CNN.com*, posted 8/17/2018.

Carefully watch the [video](#), read the article and then answer the following questions.

An economic model is a simplified version of reality used to analyze real-world situations about individual and firm choices made given the constraint of scarce resources.

_____ economic analysis is concerned with what is and not what should be.

A. Micro

B. Positive

C. Normative

D. Macro

The statement, "Minimum wage should be increased," is an example of positive economic analysis.

A. False

B. True

Stimulate Active Learning with Experiments

Economics Experiment sections are available throughout the text, engaging students with the opportunity to perform their own economic analysis.

Economic Experiment

PRODUCING FOLD-ITS

Here is a simple economic experiment that takes about 15 minutes to run. The instructor places a stapler and a stack of paper on a table. Students produce "fold-its" by folding a page of paper in thirds and stapling both ends of the folded page. One student is assigned to inspect each fold-it to be sure that it is produced correctly. The experiment starts with a single student, or worker, who has 1 minute to produce as many fold-its as possible. After the instructor records the number of fold-its produced, the process is repeated with two students, three students,

four students, and so on. How does the number of fold-its change as the number of workers increases?

MyLab Economics
For additional economic experiments, please visit www.pearson.com/mylab/economics

Single Player Experiments are also available in MyLab Economics to engage students in economic decision-making. **Experiments** are an easy-to-use, fun, and engaging way to promote active learning and mastery of important economic concepts. Single-player experiments allow your students to play against virtual players from anywhere at any time so long as they have an Internet connection. Pre- and post-questions for each experiment are available for assignment.

PAUSE **ROUND 1 4** Free Market

Market for Cranberries

→ You are a **Buyer** and your WTP is: **\$16.50**

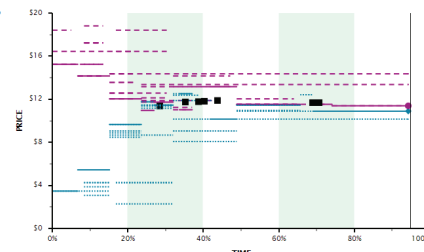
→ **CURRENT BIDS AND ASKS**

- Lowest Ask: \$11.50
- Highest Bid: \$11.00

→ Your Bid

- \$ 0.00 +

SUBMIT



Show the Big Picture with 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:

- The Principle of Opportunity Cost.** The opportunity cost of something is what you sacrifice to get it.
- 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.
- The Principle of Voluntary Exchange.** A voluntary exchange between two people makes both people better off.
- The Principle of Diminishing Returns.** If we increase one input while holding the other inputs fixed, output will increase, but at a decreasing rate.
- 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, such as the **Concept Checks** available in MyLab Economics.

Practicing the Principles

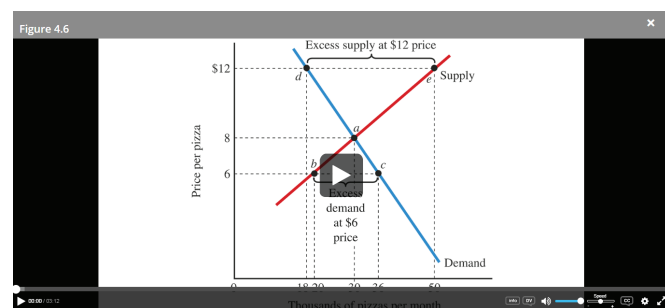
Each section of each learning objective concludes with an online Concept Check that contains one or two multiple choice, true/false, or fill-in questions. These checks act as “speed bumps” that encourage students to stop and check their understanding of fundamental terms and concepts before moving on to the next section. The goal of this digital resource is to help students assess their progress on a section-by-section basis, so they can be better prepared for homework, quizzes, and exams.

The end-of-chapter exercises then test student understanding of the concepts presented in each chapter. These exercises are available in MyLab Economics and include 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. New to this edition are accessible versions of exercises in MyLab Economics that ask students to draw a graph. These accessible versions present the same question in a different form, which will allow every student the same opportunity to practice their knowledge of the key principles explored in the text.

New to this edition are the Critical Thinking exercises included in the end-of-chapter section. Every Critical Thinking exercise will be available in MyLab Economics as an essay question. These open-ended, thought-provoking questions challenge students to think more deeply about and apply the key concepts presented within the chapters.

Illustrating the Key Principles of Economics

These big picture concepts are also well-illustrated in the figures and tables included in the text. **Animated graphs** in MyLab Economics help students understand shifts in curves, movements along curves, and changes in equilibrium values. For every figure in the book, there is also an exercise directly related to that figure in MyLab Economics.



Developing Employability Skills

For students to succeed in a rapidly changing job market, they need thinking and communication skills. In addition, they need to be informed about career options and the pathway from college student to productive employee. This book—along with the MyLab—promotes skill development and career awareness.

We added a new section to Chapter 1 on page 10, “Employability: Economic Logic on the Job,” where we discuss how economics promotes the sort of critical thinking and communication skills that employers value in their workers. Additionally, we discuss the role of economics in a liberal-arts education in building thinking skills that make a worker responsive to changes in the workplace. We also point readers to the U.S. Bureau of Labor Statistics as a good source of information about career paths that start with course work in economics.

Economics is the science of choice, and the book clearly illustrates the widespread application of economics. Throughout the book we use examples from business, government, and other organizations to show the practical deployment of economics to all sorts of decisions. This approach applies economic concepts with real-world situations, and thus imparts critical thinking skills to workers in all sorts of organizations. We deliver these practical applications in the text itself, as well as in chapter openers and 3 to 5 applications per chapter.

APPLICATION 1

DON'T FORGET THE COSTS OF TIME AND INVESTED FUNDS

APPLYING THE CONCEPTS #1: What is the opportunity cost of running a business?



Suppose you have the opportunity to develop a software application (an app). It would take you 1,000 hours (half a year of work time) to design and test the app. To develop the app, you need a high-powered computer that has a purchase price of \$5,000 and can be resold at any time for the same price. What is the cost of developing the app?

We can use the principle of opportunity cost to compute the development cost. If you could earn \$14 per hour as a janitor, the opportunity cost of your time is the \$14,000 you could earn instead as a janitor. If you have a savings account that earns 6 percent per year, the opportunity cost of investing \$5,000 in the computer for half a year instead of the savings account is \$150. Adding the opportunity cost of your time to the opportunity cost of your funds, the cost of developing the app is \$14,150. **Related to Exercise 1.7.**

How Is The Book Organized?

Chapter 1, “Introduction: What Is Economics?” uses three current policy issues—traffic congestion, the trade-offs from international trade, and the recovery from the financial crisis of 2007—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.

Summary of the 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 2, “A Closer Look at Demand and Supply” (Chapters 5 through 7), provides a closer look at demand and supply, including elasticity, market efficiency, and consumer choice. Part 3, “Market Structures and Pricing” (Chapters 8 through 13), starts with a discussion of produc-

tion 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 3 discusses antitrust policy and deregulation. Part 4, “Externalities and Information” (Chapters 14 through 16), discusses the circumstances under which markets break down, including imperfect information, public goods, and environmental degradation.

Part 5, “The Labor Market and Income Distribution” (Chapter 17), explores the economic forces that determine wages, and also examines recent changes in the distribution of income and the effects of government programs on the income distribution.

While international applications occur throughout the text, we devote two chapters specifically to international trade and finance. Chapter 18 develops the theory of international trade and discusses a wide range of policy topics including protectionism and what role international trade agreements play in today’s world. In Chapter 19, we study international finance. We discuss how exchange rates are determined, our experiences with fixed and flexible exchange rates, and how international financial crises develop.

Instructor Teaching Resources

This program comes with the following teaching resources.

Supplements available to instructors at www.pearsonhighered.com	Features of the Supplement
Instructor’s Manual Authored by Jeff Phillips of Colby-Sawyer College	<ul style="list-style-type: none"> • Chapter Summary: a bulleted list of key topics in the chapter • Learning Objectives • 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.
Test Bank Authored by Brian Rosario of American River College	6,000 multiple-choice, true/false, short-answer, and graphing questions. Test questions are annotated with the following information: <ul style="list-style-type: none"> • Difficulty: 1 for straight recall, 2 for some analysis, 3 for complex analysis • Type: multiple-choice, true/false, short-answer, essay • Topic: the term or concept the question supports • Learning outcome • AACSB • Page number in the text.
Computerized TestGen	TestGen allows instructors to: <ul style="list-style-type: none"> • Customize, save, and generate classroom tests • Edit, add, or delete questions from the Test Bank • Analyze test results • Organize a database of tests and student results.
PowerPoints	Slides include all the graphs, tables, and equations in the textbook. PowerPoints meet accessibility standards for students with disabilities. Features include, but not limited to: <ul style="list-style-type: none"> • Keyboard and Screen Reader access • Alternative text for images • High color contrast between background and foreground colors

ACKNOWLEDGMENTS

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 Previous Editions

Alabama

Jim Payne, Calhoun Community College
James Swofford, University of South Alabama

Alaska

Paul Johnson, University of Alaska, Anchorage

Arizona

Basil Al-Hashimi, Mesa Community College, Red Mountain
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 McMurrin, Chaffey College
Jon J. Nadenichek, California State University, Northridge
Alex Obiya, San Diego City College
Jack W. Osman, San Francisco State University
Jay Patyk, Footbill 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 Stob, Sacramento City College
Rodney Swanson, University of California, Los Angeles
Daniel Villegas, California Polytechnic State University

Colombia

Michael Jetter, Universidad EIFIT

Colorado

Steve Call, Metropolitan State College of Denver

Connecticut

John A. Jascot, Capital Community Technical College
Stephen Rubb, Sacred Heart University

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 McCaleb, Florida State University
Barbara Moore, University of Central Florida
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

Scott Beaulier, Mercer College
Asbley 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 Dibooglu, 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
Leticia Starkov, Elgin Community College

Indiana

John L. Conant, Indiana State University

Mousumi Duttaray, Indiana State University
Robert B. Harris, Indiana Univ. Purdue Univ. Indianapolis
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 Stabl, 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

Hans Despain, Nichols College
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
Alex Taylor, Suffolk University
Gilbert Wolfe, Middlesex Community College

Michigan

Zeina Alsalmán, Oakland University
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

Ania Antus, North Hennepin Community College
Ihsuan Li, Minnesota State University, Mankato
Mike Mcilbon, Augsburg College
Richard Milani, Hibbing Community College
Scott Sandock, Inver Hills Community College
Joseph Schoen, Anoka-Ramsey Community College Coon Rapids

Mississippi

Billy L. Carson II, Itawamba Community College
Arlena Sullivan, Jones County Junior College

Missouri

Duane Eberhardt, Missouri Southern State College
David Gillette, Truman State University
Brad Hoppes, 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

Debbie Gaspard, Southeast Community College
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
Augustine Boakye, Essex County College
Richard Comerford, Bergen Community College
John Graham, Rutgers University
Paul C. Harris, Jr., Camden County College
Calvin Hoy, County College of Morris
Tagbi Ramin, William Paterson University
Brian de Uriarte, Middlesex County College

New Hampshire

Jeff Phillips, Colby-Sawyer 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
Ezgi Uzel, SUNY-Maritime
Michael Vardanyan, Binghamton University

North Carolina

Walt Boyle, Fayetteville Technical Community College
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
Abm Nasir, North Carolina Central University
Charles M. Oldham, Jr., Fayetteville Technical Community College
Randall Parker, East Carolina University
Julianne Treme, University of North Carolina, Wilmington
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

Ohio

Fatma Abdel-Raouf, Cleveland State University
Jeff Ankrom, Wittenberg University
Erwin Ebrardt, University of Cincinnati
Kenneth C. Fab, Ohio Dominican University
Scott Hunt, Columbus State Community College
Taghi T. Kermani, Youngstown State University
Dandan Liu, Kent State University

Oklahoma

Jeff Holt, Tulsa Community College
Marty Ludlum, Oklahoma City Community College
Dan Rickman, Oklahoma State University

Oregon

Tom Carroll, Central Oregon Community College
Jim Eden, Portland Community College
John Farrell, Oregon State University
David Figlio, University of Oregon
Randy R. Grant, Linfield College
Ted Scheinman, Mt. Hood Community College
Larry Singell, University of Oregon

Pennsylvania

Kevin A. Baird, Montgomery County Community College
Charles Beem, Bucks County Community College
Ed Coulson, Pennsylvania State University
Tabany Naggat, West Chester University
Abdulwabab Sraibeen, Kutztown University
Andy Vassallo, Shippensburg University

South Carolina

Donald Balch, University of South Carolina
Calvin Blackwell, College of Charleston
Janice Boucher Breuer, University of South Carolina
Bill Clifford, Trident Technical College
Frank Garland, Tri-County Technical College
Charlotte Denise Hixson, Midlands Technical College

Woodrow W. Hughes, Jr., Converse College
Miren Ivankovic, Southern Wesleyan University
Chirinjev Peterson, Greenville Technical College
Gary Stone, Wintthrop University
Denise Turnage, Midlands Technical College
Chad Turner, Clemson University

South Dakota

Joseph Santos, South Dakota State University

Tennessee

Cindy Alexander, Pellissippi State University
Nirmalendu Debnath, Lane College
Quenton Pulliam, Nashville State Technical College
Rose Rubin, University of Memphis
Thurston Schrader, Southwest Tennessee Community College

Texas

Rashid Al-Hmoud, Texas Technical University
Mahamudu Bawumia, Baylor University
Steven Beckham, Amarillo College
Omar Belazi, Midland College
Jack Bucco, Austin Community College
Cindy Cannon, North Harris College
David L. Coberly, Southwest Texas State University
Ed Cohn, Del Mar College
Carol Dickson-Carr, Southern Methodist University
Dean Drainey, St. Phillips College
Michael I. Duke, Blinn College
Ghazi Duwaji, University of Texas, Arlington
Harry Ellis, University of North Texas
S. Aun Hassan, Texas Tech University
Thomas Jeitschko, Texas A&M University
Delores Linton, Tarrant County Community College, Northwest
Jessica McCraw, University of Texas, Arlington
Randy Methenitis, Richland College
William Neilson, Texas A&M University
Michael Nelson, Texas A&M University
Rhey Nolan, Tyler Junior College
Paul Okello, University of Texas, Arlington
Joshua Pickrell, South Plains College
John Pisciotta, Baylor University
John Rykowski, Kalamazoo Valley Community College
Dave Shorrow, Richland College
Steve Schwiff, Texas A&M University, Commerce
James R. Vanbeek, Blinn College
Inske Zandvliet, Brookhaven College

Utah

Reed Gooch, Utah Valley University
Ali Hekmat, College of Eastern Utah
Glenn Lowell, Utah Valley University

Virginia

James Brumbaugh, Lord Fairfax Community College, Middleton Campus
Bruce Brunton, James Madison University
Michael G. Heslop, North Virginia Community College
George Hoffer, Virginia Commonwealth University

Melanie Marks, Longwood College
 Thomas J. Meeks, Virginia State University
 John Min, Northern Virginia Community College, Alexandria
 Shannon K. Mitchell, Virginia Commonwealth University
 Bill Reese, Tidewater Community College, Virginia Beach
 David Wheat, Virginia Western Community College

Washington

William Hallagan, Washington State University
 Sam Le, Green River Community College
 Garrett Milam, University of Puget Sound
 Charles S. Wassell, Jr., Central Washington University
 Mark Wylie, Spokane Falls Community College

Wisconsin

Patricia Turco, Milwaukee Area Technical College

Australia

Hak Youn Kim, Monash University

Class Testers

A special acknowledgment goes to the instructors who were willing to class-test drafts of early editions in different stages of development. They provided us with instant feedback on parts that worked and parts that needed changes:

Sheryl Ball, Virginia Polytechnic Institute and State University
 John Constantine, University of California, Davis
 John Farrell, Oregon State University
 James Hartley, Mt. Holyoke College
 Kailash Khandke, Furman College
 Peter Lindert, University of California, Davis
 Louis Makowski, University of California, Davis
 Barbara Ross-Pfeiffer, Kapiolani Community College

Focus Groups

We want to thank the participants who took part in the focus groups for the first and second editions; they helped us see the manuscript from a fresh perspective:

Carlos Aquilar, El Paso Community College
 Jim Bradley, University of South Carolina
 Thomas Collum, Northeastern Illinois University
 David Craig, Westark College
 Jeff Holt, Tulsa Junior College
 Thomas Jeitschko, Texas A&M University
 Gary Langer, Roosevelt University
 Mark McLeod, Virginia Polytechnic Institute and State University
 Tom McKinnon, University of Arkansas

Amy Meyers, Parkland Community College
 Hassan Mohammadi, Illinois State University
 John Morgan, College of Charleston
 Norm Paul, San Jacinto Community College
 Nampeang Pingkaratwat, Chicago State University
 Scanlan Romer, Delta Community College
 Barbara Ross-Pfeiffer, Kapiolani Community College
 Zabra Saderion, Houston Community College
 Virginia Shingleton, Valparaiso University
 Jim Swofford, University of South Alabama
 Janet West, University of Nebraska, Omaha
 Linda Wilson, University of Texas, Arlington
 Michael Youngblood, Rock Valley Community College

A Word of Thanks . . .

We would also like to acknowledge the team of dedicated authors who contributed to the various ancillaries that accompany this book: Jeff Phillips of Colby-Sawyer College and Brian Rosario of American River College.

For the tenth edition, Christine Donovan was the Content Producer who worked with Roberta Sherman and Kathy Smith at Pearson CSC to turn our manuscript pages into a beautiful published book, guide the project, and coordinate the schedules for the book and the extensive supplements package that accompanies it. David Alexander, Specialist Portfolio Manager, supported us and our users during the life of this edition.

From the start, Pearson provided us with first-class support and advice. Over the first nine editions, many people contributed to the project, including Elisa Adams, David Alexander, Lisa Amato, Victoria Anderson, Rod Banister, Christopher Bath, P. J. Boardman, Jodi Bolognese, Lynne Breitfeller, Steve Deitmer, Virginia Guariglia, Leah Jewell, Sharon Koch, Marie McHale, Kathleen McLellan, Ben Paris, Cynthia Regan, Gladys Soto, and David Theisen.

Last but not least, we must thank our families, who have seen us disappear, sometimes physically and other times mentally, to spend hours wrapped up in our own world of principles of economics. A project of this magnitude is very absorbing, and our families have been particularly supportive in this endeavor.

Arthur O'Sullivan

Steven Sheffrin

Stephen Perez