Principles of Economics

TWELFTH EDITION

Karl E. Case • Ray C. Fair • Sharon E. Oster

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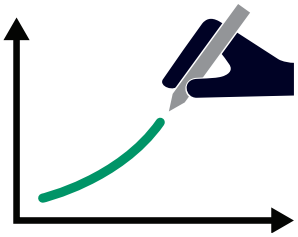

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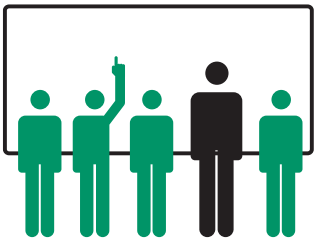

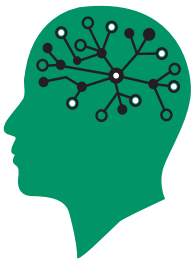

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Principles of **Economics**

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Principles of Economics

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Authorized adaptation from the United States edition, entitled Principles of Economics, 12th Edition, ISBN 978-0-13-407877-9 by Karl E. Case, Ray C. Fair, *and* Sharon M. Oster, *published by Pearson Education © 2017.*

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ISBN 10: 1-292-15256-7
ISBN 13: 978-1-292-15256-1

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

10 9 8 7 6 5 4 3 2 1

Typeset in Albertina MT Pro by Integra Software Services
Printed and bound by Lego in Italy

About the Authors

Karl E. Case is Professor of Economics Emeritus at Wellesley College where he has taught for 34 years and served several tours of duty as Department Chair. He is a Senior Fellow at the Joint Center for Housing Studies at Harvard University and a founding partner in the real estate research firm of Fiserv Case Shiller Weiss, which produces the S&P Case-Shiller Index of home prices. He serves as a member of the Index Advisory Committee of Standard and Poor's, and along with Ray Fair he serves on the Academic Advisory Board of the Federal Reserve Bank of Boston.

Before coming to Wellesley, he served as Head Tutor in Economics (director of undergraduate studies) at Harvard, where he won the Allyn Young Teaching Prize. He was Associate Editor of the *Journal of Economic Perspectives* and the *Journal of Economic Education,* and he was a member of the AEA's Committee on Economic Education.

Professor Case received his B.A. from Miami University in 1968; spent three years on active duty in the Army, and received his Ph.D. in Economics from Harvard University in 1976.

Professor Case's research has been in the areas of real estate, housing, and public finance. He is author or coauthor of five books, including *Principles of Economics, Economics and Tax Policy*, and *Property Taxation: The Need for Reform*, and he has published numerous articles in professional journals.

For the last 25 years, his research has focused on real estate markets and prices. He has authored numerous professional articles, many of which attempt to isolate the causes and consequences of boom and bust cycles and their relationship to regional and national economic performance.

Ray C. Fair is Professor of Economics at Yale University. He is a member of the Cowles Foundation at Yale and a Fellow of the Econometric Society. He received a B.A. in Economics from Fresno State College in 1964 and a Ph.D. in Economics from MIT in 1968. He taught at Princeton University from 1968 to 1974 and has been at Yale since 1974.

Professor Fair's research has primarily been in the areas of macroeconomics and econometrics, with particular emphasis on macroeconometric model building. He also has done work in the areas of finance, voting behavior, and aging in sports. His publications include *Specification, Estimation, and Analysis of Macroeconometric Models* (Harvard Press, 1984); *Testing Macroeconometric Models* (Harvard Press, 1994); *Estimating How the Macroeconomy Works* (Harvard Press, 2004), and *Predicting Presidential Elections and Other Things* (Stanford University Press, 2012).

Professor Fair has taught introductory and intermediate macroeconomics at Yale. He has also taught graduate courses in macroeconomic theory and macroeconometrics.

Professor Fair's U.S. and multicountry models are available for use on the Internet free of charge. The address is http://fairmodel.econ.yale.edu. Many teachers have found that having students work with the U.S. model on the Internet is a useful complement to an introductory macroeconomics course.

Sharon M. Oster is the Frederic Wolfe Professor of Economics and Management and former Dean of the Yale School of Management. Professor Oster joined Case and Fair as a coauthor in the ninth edition of this book. Professor Oster has a B.A. in Economics from Hofstra University and a Ph.D. in Economics from Harvard University.

Professor Oster's research is in the area of industrial organization. She has worked on problems of diffusion of innovation in a number of different industries, on the effect of regulations on business, and on competitive strategy. She has published a number of articles in these areas and is the author of several books, including *Modern Competitive Analysis* and *The Strategic Management of Nonprofits*.

Prior to joining the School of Management at Yale, Professor Oster taught for a number of years in Yale's Department of Economics. In the department, Professor Oster taught introductory and intermediate microeconomics to undergraduates as well as several graduate courses in industrial organization. Since 1982, Professor Oster has taught primarily in the Management School, where she teaches the core microeconomics class for MBA students and a course in the area of competitive strategy. Professor Oster also consults widely for businesses and nonprofit organizations and has served on the boards of several publicly traded companies and nonprofit organizations.

Brief Contents

Contents

Preface

Our goal in the 12th edition, as it was in the first edition, is to instill in students a fascination with both the functioning of the economy and the power and breadth of economics. The first line of every edition of our book has been "The study of economics should begin with a sense of wonder." We hope that readers come away from our book with a basic understanding of how market economies function, an appreciation for the things they do well, and a sense of the things they do poorly. We also hope that readers begin to learn the art and science of economic thinking and begin to look at some policy and even personal decisions in a different way.

What's New in This Edition?

- The 12th edition, Global Edition, has continued the changes in the *Economics in Practice* boxes that we began several editions ago. In these boxes, we try to bring economic thinking to the concerns of the typical student. In many cases, we do this by spotlighting recent research, much of it by young scholars. Some of the many new boxes include:
  - Chapter 3 uses behavioral economics to ask whether the consumption of tea increases during the rainy season.
  - Chapter 6 looks at data from Indian reservations to trace out the incidence of excise taxes.
  - In Chapter 7 we describe recent work on how Uber drivers differ from regular cab drivers.
  - Many people currently buy clothes and shoes on line. Chapter 15 discusses whether there is such a thing as too much variety when it comes to consumer choices and if there is a diversification bias.
  - In Chapter 22 we look at data compiled by the International Labor Organization indicating that the youth are three times more likely to be unemployed than older age-groups.
  - In Chapter 29 we describe recent research on how well recessions can be predicted.
  - In Chapter 35 we describe work that uses children's height in India to examine hunger and gender inequality.
  - Chapter 36, our new chapter, contains three boxes, examining the Moving to Opportunity program, control groups and experimental economics, and the effects of the minimum wage.

  In other cases we use recent events or common situations to show the power and breadth of economic models:
  - In Chapter 8 we use the example of a Taylor Swift concert to explain fixed versus variable costs.
  - In Chapter 9 we explore economies to scale with the example of Google's advantages in the search market.
  - In Chapter 13 we look at the structure of the NFL and discuss how it affects market outcomes for the NFL and associated businesses.
  - In Chapter 16 we look at how firms use carbon prices to motivate managers to be more conscious in the investment decisions about the environment.
  - In Chapter 25 we illustrate the role of banks in creating money by describing bank runs in two classic movies and in the legend of Wyatt Earp.

  It is our hope that students will come to see both how broad the tools of economics are and how exciting is much of the new research in the field. For each box, we have also added questions to take students back from the box to the analytics of the textbook to reinforce the underlying economic principles of the illustrations.
- As in the previous edition, we have reworked some of the chapters to streamline them and to improve readability. In this edition, Chapter 16 has been considerably reworked

to include a more comprehensive and up-to-date analysis of environmental issues. This chapter now focuses on externalities, public goods, and common resources. Social choice has been moved to the chapter covering public finance. Chapter 18 has also been substantially reworked to reflect the increased worldwide concern with issues of inequality. Finally, Chapter 35 has been revised to include more of the modern approach to economic development, including discussion of the millennium challenge.

- A major change in macro in the last edition was to replace the LM curve with a Fed interest rate rule, where the money supply now plays a smaller role in the analysis. Continuing in this spirit, in the current edition we have merged the supply of money and demand for money chapters into one chapter, Chapter 25. This streamlines the analysis and eliminates material that is no longer important.
- We have added a new chapter, Chapter 36, "Critical Thinking About Research," which we are quite excited about. It may be the first time a chapter like this has been included in an introductory economics text. This chapter covers the research methodology of economics. We highlight some of the key concerns of empirical economics: selection issues, causality, statistical significance, and regression analysis. Methodology is a key part of economics these days, and we have tried to give the introductory student a sense of what this methodology is.
- All of the macro data have been updated through 2014. The slow recovery from the 2008–2009 recession is still evident in these data, as it was in the 11th edition. This gives students a good idea of what has been happening to the economy since they left high school.
- Many new questions and problems at the end of the chapters have been added.

The Foundation

The themes of *Principles of Economics*, 12th edition, are the same themes of the first eleven editions. The purposes of this book are to introduce the discipline of economics and to provide a basic understanding of how economies function. This requires a blend of economic theory, institutional material, and real-world applications. We have maintained a balance between these ingredients in every chapter. The hallmark features of our book are as follows:

1. Three-tiered explanations of key concepts (*stories-graphs-equations*)
2. Intuitive and accessible structure
3. International coverage

Three-Tiered Explanations: Stories-Graphs-Equations

Professors who teach principles of economics are faced with a classroom of students with different abilities, backgrounds, and learning styles. For some students, analytical material is difficult no matter how it is presented; for others, graphs and equations seem to come naturally. The problem facing instructors and textbook authors is how to convey the core principles of the discipline to as many students as possible without selling the better students short. Our approach to this problem is to present most core concepts in the following three ways.

First, we present each concept in the context of a simple intuitive ***story*** or example in words often followed by a table. Second, we use a ***graph*** in most cases to illustrate the story or example. And finally, in many cases where appropriate, we use an ***equation*** to present the concept with a mathematical formula.

Microeconomic Structure

The organization of the microeconomic chapters continues to reflect our belief that the best way to understand how market economies operate—and the best way to understand basic economic theory—is to work through the perfectly competitive model first,

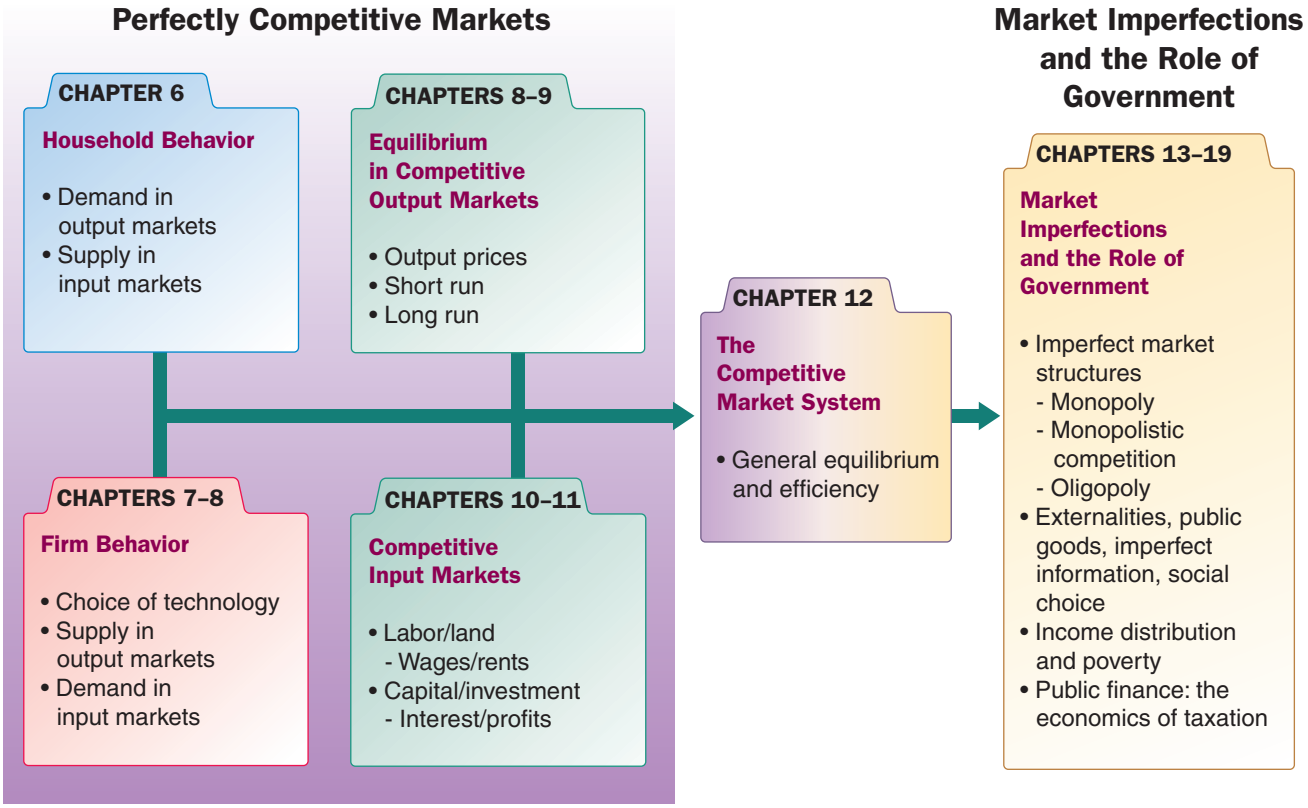
including discussions of output markets (goods and services) and input markets (land, labor, and capital), and the connections between them before turning to noncompetitive market structures such as monopoly and oligopoly. When students understand how a simple, perfectly competitive system works, they can start thinking about how the pieces of the economy "fit together." We think this is a better approach to teaching economics than some of the more traditional approaches, which encourage students to think of economics as a series of disconnected alternative market models.

Learning perfect competition first also enables students to see the power of the market system. It is impossible for students to discuss the efficiency of markets as well as the problems that arise from markets until they have seen how a simple, perfectly competitive market system produces and distributes goods and services. This is our purpose in Chapters 6 through 11.

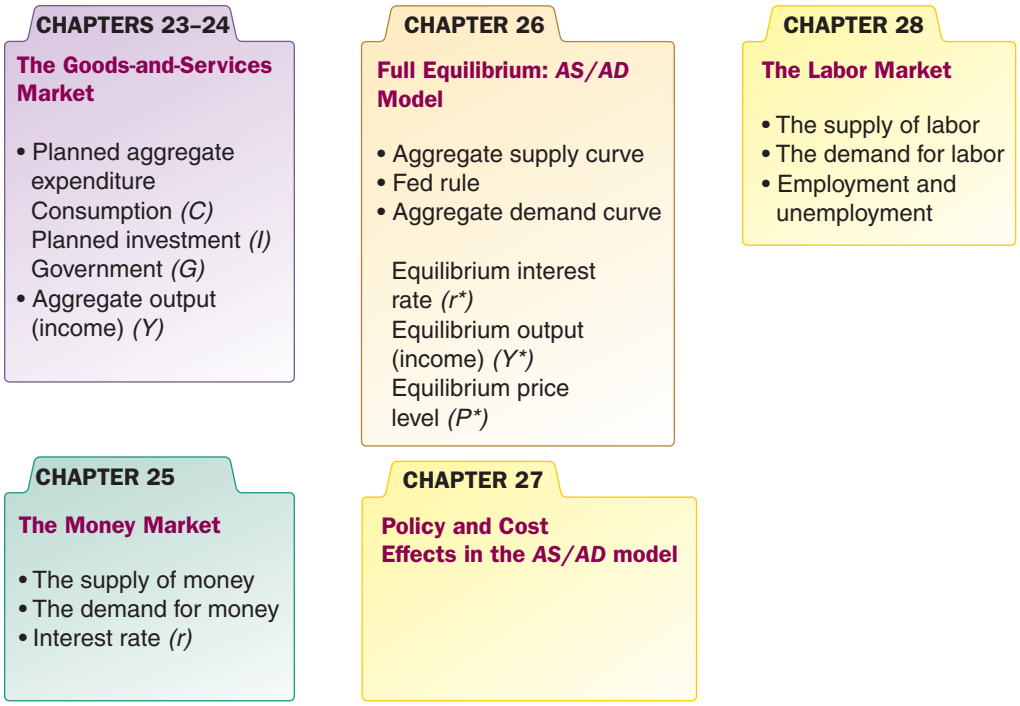
Chapter 12, "General Equilibrium and the Efficiency of Perfect Competition," is a pivotal chapter that links simple, perfectly competitive markets with a discussion of market imperfections and the role of government. Chapters 13 through 15 cover three noncompetitive market structures—monopoly, monopolistic competition, and oligopoly. Chapter 16 covers externalities, public goods, and social choice. Chapter 17, which is new to this edition, covers uncertainty and asymmetric information. Chapters 18 and 19 cover income distribution as well as taxation and government finance. The visual at the bottom of this page (Figure II.2 from page 144), gives you an overview of our structure.

Macroeconomic Structure

We remain committed to the view that it is a mistake simply to throw aggregate demand and aggregate supply curves at students in the first few chapters of a principles book. To understand the *AS* and *AD* curves, students need to know about the functioning of both the goods market and the money market. The logic behind the simple demand curve is wrong when it is



▲ FIGURE II.2 **Understanding the Microeconomy and the Role of Government**



▲ FIGURE V.1 The Core of Macroeconomic Theory

applied to the relationship between aggregate demand and the price level. Similarly, the logic behind the simple supply curve is wrong when it is applied to the relationship between aggregate supply and the price level. We thus build up to the AS/AD model slowly.

The goods market is discussed in Chapters 23 and 24 (the IS curve). The money market is discussed in Chapter 25 (material behind the Fed rule). Everything comes together in Chapter 26, which derives the AD and AS curves and determines the equilibrium values of aggregate output, the price level, and the interest rate. This is the core chapter and where the Fed rule plays a major role. Chapter 27 then uses the model in Chapter 26 to analyze policy effects and cost shocks. Chapter 28 then brings in the labor market. The figure at the top of this page (Figure V.1 on page 493) gives you an overview of this structure.

One of the big issues in the organization of the macroeconomic material is whether long-run growth issues should be taught before short-run chapters on the determination of national income and countercyclical policy. In the last four editions, we moved a significant discussion of growth to Chapter 22, "Unemployment, Inflation, and Long-Run Growth," and highlighted it. However, while we wrote Chapter 31, the major chapter on long-run growth, so that it can be taught before or after the short-run chapters, we remain convinced that it is easier for students to understand the growth issue once they have come to grips with the logic and controversies of short-run cycles, inflation, and unemployment.

International Coverage

As in previous editions, we continue to integrate international examples and applications throughout the text. This probably goes without saying: The days in which an introductory economics text could be written with a closed economy in mind have long since gone.

Tools for Learning

As authors and teachers, we understand the challenges of the principles of economics course. Our pedagogical features are designed to illustrate and reinforce key economic concepts through real-world examples and applications.

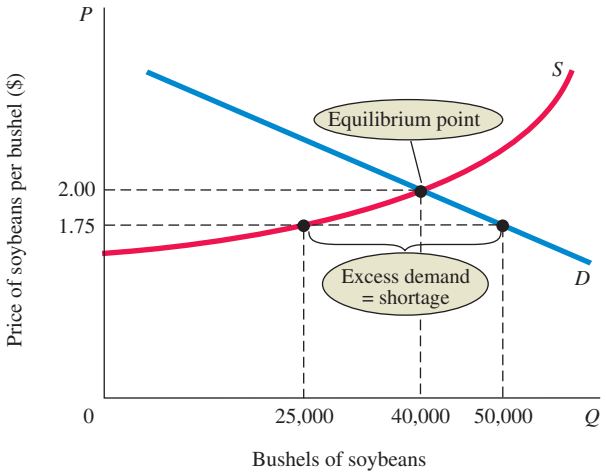


FIGURE 3.9 Excess Demand, or Shortage
At a price of $1.75 per bushel, quantity demanded exceeds quantity supplied. When excess *demand* exists, there is a tendency for price to rise. When quantity demanded equals quantity supplied, excess demand is eliminated and the market is in equilibrium. Here the equilibrium price is $2.00 and the equilibrium quantity is 40,000 bushels.

Economics in Practice

As described earlier, the *Economics in Practice* feature focuses on recent research or events that support a key concept in the chapter and help students think about the broad and exciting applications of economics to their lives and the world around them. Some of these boxes contains a question or two to further connect the material they are learning with their lives.

Graphs

Reading and interpreting graphs is a key part of understanding economic concepts. The Chapter 1 Appendix, "How to Read and Understand Graphs," shows readers how to interpret the 200-plus graphs featured in this book. We use red curves to illustrate the behavior of firms and blue curves to show the behavior of households. We use a different shade of red and blue to signify a shift in a curve.

Problems and Solutions

Each chapter and appendix ends with a problem set that asks students to think about and apply what they've learned in the chapter. These problems are not simple memorization questions. Rather, they ask students to perform graphical analysis or to apply economics to a real-world situation or policy decision. More challenging problems are indicated by an asterisk. Many problems have been updated. The solutions to all of the problems are available in the *Instructor's Manuals*. Instructors can provide the solutions to their students so they can check their understanding and progress.

Digital features located in MyEconLab

MyEconLab is a unique online course management, testing, and tutorial resource. It is included with the eText version of the book or as a supplement to the print book. Students and instructors will find the following online resources to accompany the twelfth edition:

- **Concept Checks:** 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.
- **Animations:** Graphs are the backbone of introductory economics, but many students struggle to understand and work with them. Select numbered figures in the text have a supporting animated version online. The goal of this digital resource is to help students

understand shifts in curves, movements along curves, and changes in equilibrium values. Having an animated version of a graph helps students who have difficulty interpreting the static version in the printed text. Graded practice exercises are included with the animations. Our experience is that many students benefit from this type of online learning.

- **Learning Catalytics:** Learning Catalytics is a "bring your own device" Web-based student engagement, assessment, and classroom intelligence system. This system generates classroom discussion, guides lectures, and promotes peer-to-peer learning with real-time analytics. Students can use any device to interact in the classroom, engage with content, and even draw and share graphs.

  To learn more, ask your local Pearson representative or visit www.learningcatalytics.com.
- **Digital Interactives:** Focused on a single core topic and organized in progressive levels, each interactive immerses students in an assignable and auto-graded activity. Digital Interactives are also engaging lecture tools for traditional, online, and hybrid courses, many incorporating real-time data, data displays, and analysis tools for rich classroom discussions.
- **Dynamic Study Modules:** With a focus on key topics, these modules work by continuously assessing student performance and activity in real time and using data and analytics, provide personalized content to reinforce concepts that target each student's particular strengths and weaknesses.
- **NEW: Math Review Exercises:** MyEconLab now offers a rich array of assignable and auto-graded exercises covering fundamental math concepts geared specifically to principles and intermediate economics students. Aimed at increasing student confidence and success, our new math skills review Chapter R is accessible from the assignment manager and contains over 150 graphing, algebra, and calculus exercises for homework, quiz, and test use. Offering economics students warm-up math assignments, math remediation, or math exercises as part of any content assignment has never been easier!
- **Graphs Updated with Real-Time Data from FRED:** Approximately 25 graphs are continuously updated online with the latest available data from FRED (Federal Reserve Economic Data), which is a comprehensive, up-to-date data set maintained by the Federal Reserve Bank of St. Louis. Students can display a pop-up graph that shows new data plotted in the graph. The goal of this digital feature is to help students understand how to work with data and understand how including new data affects graphs.
- **Interactive Problems and Exercises Updated with Real-Time Data from FRED:** The end-of-chapter problems in select chapters include real-time data exercises that use the latest data from FRED.

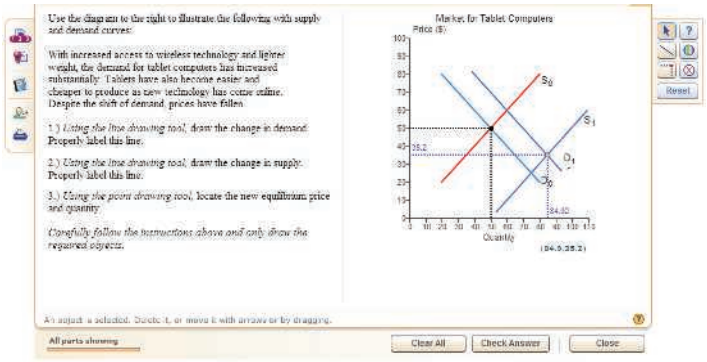
MyEconLab for the Instructor

Instructors can choose how much or how little time to spend setting up and using MyEconLab. Here is a snapshot of what instructors are saying about MyEconLab:

> MyEconLab offers [students] a way to practice every week. They receive immediate feedback and a feeling of personal attention. As a result, my teaching has become more targeted and efficient.—Kelly Blanchard, Purdue University
>
> Students tell me that offering them MyEconLab is almost like offering them individual tutors.—Jefferson Edwards, Cypress Fairbanks College
>
> MyEconLab's eText is great—particularly in that it helps offset the skyrocketing cost of textbooks. Naturally, students love that.—Doug Gehrke, Moraine Valley Community College

Each chapter contains two preloaded homework exercise sets that can be used to build an individualized study plan for each student. These study plan exercises contain tutorial resources, including instant feedback, links to the appropriate learning objective in the eText,

pop-up definitions from the text, and step-by-step guided solutions, where appropriate. After the initial setup of the course by the instructor, student use of these materials requires no further instructor setup. The online grade book records each student's performance and time spent on the tests and study plan and generates reports by student or chapter.

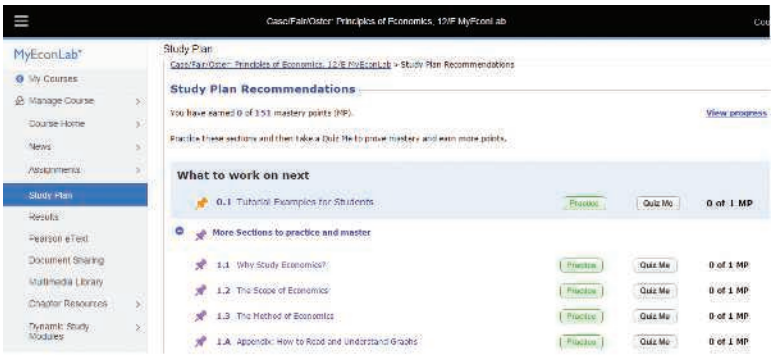


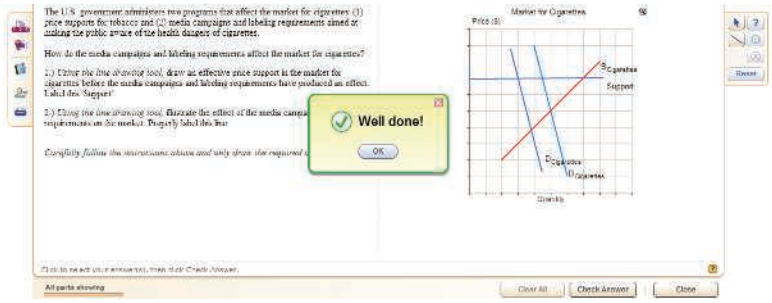
Alternatively, instructors can fully customize MyEconLab to match their course exactly, including reading assignments, homework assignments, video assignments, current news assignments, and quizzes and tests. Assignable resources include:

- Preloaded exercise assignments sets for each chapter that include the student tutorial resources mentioned earlier
- Preloaded quizzes for each chapter that are unique to the text and not repeated in the study plan or homework exercise sets
- Study plan problems that are similar to the end-of-chapter problems and numbered exactly like the book to make assigning homework easier
- *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 skills in interpreting data.
- In the eText available in MyEconLab, select figures labeled MyEconLab Real-time data allow students to display a pop-up graph updated with real-time data from FRED.
- *Current News Exercises*, provide a turnkey way to assign gradable news-based exercises in MyEconLab. Each week, Pearson scours the news, finds a current microeconomics and macroeconomics article, creates exercises around these news articles, and then automatically adds them to MyEconLab. Assigning and grading current news-based exercises that deal with the latest micro and macro events and policy issues has never been more convenient.
- *Experiments in MyEconLab* are a fun and engaging way to promote active learning and mastery of important economic concepts. Pearson's Experiments program is flexible, easy-to-assign, auto-graded, and available in single-and multiplayer versions.
  - Single-player experiments allow your students to play against virtual players from anywhere at any time so long as they have an Internet connection.
  - Multiplayer experiments allow you to assign and manage a real-time experiment with your class.
  - Pre- and post-questions for each experiment are available for assignment in MyEconLab.
  - For a complete list of available experiments, visit **www.myeconlab.com**.
- Test Item File questions that allow you to assign quizzes or homework that will look just like your exams
- Econ Exercise Builder, which allows you to build customized exercises

Exercises 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.

MyEconLab grades every problem type except essays, even problems with graphs. When working homework exercises, students receive immediate feedback, with links to additional learning tools.





Customization and Communication MyEconLab in MyLab/Mastering provides additional optional customization and communication tools. Instructors who teach distance-learning courses or very large lecture sections find the MyLab/Mastering format useful because they can upload course documents and assignments, customize the order of chapters, and use communication features such as Document Sharing, Chat, ClassLive, and Discussion Board.

MyEconLab for the Student

MyEconLab puts students in control of their learning through a collection of testing, practice, and study tools tied to the online, interactive version of the textbook and other media resources. Here is a snapshot of what students are saying about MyEconLab:

- It was very useful because it had EVERYTHING, from practice exams to exercises to reading. Very helpful.—student, Northern Illinois University
- I would recommend taking the quizzes on MyEconLab because it gives you a true account of whether or not you understand the material.—student, Montana Tech
- It made me look through the book to find answers, so I did more reading.—student, Northern Illinois University

Students can study on their own or can complete assignments created by their instructor. In 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 from quizzes created by their instructors. In Homework or Study Plan mode, students have access to a wealth of tutorial features, including:

- Instant feedback on exercises that helps students understand and apply the concepts
- Links to the eText to promote reading of the text just when the student needs to revisit a concept or an explanation
- Step-by-step guided solutions that force students to break down a problem in much the same way an instructor would do during office hours
- Pop-up key term definitions from the eText to help students master the vocabulary of economics
- A graphing tool that is integrated into the various exercises to enable students to build and manipulate graphs to better understand how concepts, numbers, and graphs connect

Additional MyEconLab Tools MyEconLab includes the following additional features:

- **Pearson eText**—Students actively read and learn with more engagement than ever before.
- **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 through the efforts of Chris Annala, State University of New York–Geneseo; Charles Baum, Middle Tennessee State University; Peggy Dalton, Frostburg State University; Carol Dole, Jacksonville University; David Foti, Lone Star

College; Sarah Ghosh, University of Scranton; Satyajit Ghosh, Universtity of Scranton; Woo Jung, University of Colorado; Chris Kauffman, University of Tennessee–Knoxville; Russell Kellogg, University of Colorado–Denver; Katherine McCann, University of Delaware; Daniel Mizak, Frostburg State University; Christine Polek, University of Massachusetts–Boston; Mark Scanlan, Stephen F. Austin State University; Leonie L. Stone, State University of New York–Geneseo; and Bert G. Wheeler, Cedarville University.

Other Resources for the Instructor

The following supplements are designed to make teaching and testing flexible and easy and are available for *Micro*, *Macro*, and *Economics* volumes.

Instructor's Manuals

Two *Instructor's Manuals*, one for *Principles of Microeconomics* and one for *Principles of Macroeconomics*, were prepared by Tony Lima of California State University, East Bay (Hayward, California). The *Instructor's Manuals* are designed to provide the utmost teaching support for instructors. They include the following content:

- Detailed *Chapter Outlines* include key terminology, teaching notes, and lecture suggestions.
- *Topics for Class Discussion* provide topics and real-world situations that help ensure that economic concepts resonate with students.
- Unique *Economics in Practice* features that are not in the main text provide extra real-world examples to present and discuss in class.
- *Teaching Tips* provide tips for alternative ways to cover the material and brief reminders on additional help to provide students. These tips include suggestions for exercises and experiments to complete in class.
- *Extended Applications* include exercises, activities, and experiments to help make economics relevant to students.
- *Excel Workbooks*, available for many chapters, make it easy to customize numerical examples and produce graphs.
- *Solutions* are provided for all problems in the book.

Four Test Item Files

We have tailored the Test Item Files to help instructors easily and efficiently assess student understanding of economic concepts and analyses. Test questions are annotated with the following information:

- **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
- **Skill:** Fact, definition, analytical, conceptual
- **AACSB:** See description in the next section.

The Test Item Files include questions with tables that students must analyze to solve for numerical answers. The Test Item Files also contain questions based on the graphs that appear in the book. The questions ask students to interpret the information presented in the graph. Many questions require students to sketch a graph on their own and interpret curve movements.

Microeconomics Test Item File, by Randy Methenitis of Richland College: The Microeconomics Test Item File includes over 2,700 questions. All questions are machine gradable and are either multiple-choice or true/false. This Test Item File is for use with the 12th edition of *Principles of Microeconomics* in the first year of publication. It is available in a computerized format using TestGen EQ test-generating software and is included in MyEconLab.

Microeconomics Test Item File Discussion and Short Answer, by Richard Gosselin of Houston Community College: This second Test Item File includes 1,000 conceptual problems, essay questions, and short-answer questions. Application-type problems ask students to draw graphs and analyze tables. The Word files are available on the Instructor's Resource Center (**www.pearsonglobaleditions.com/Case**).

Macroeconomics Test Item File by Randy Methenitis of Richland College: The Macroeconomics Test Item File includes over 2,900 questions. All questions are machine gradable and are either multiple-choice or true/false. This Test Item File is for use with the 12th edition of *Principles of Macroeconomics* in the first year of publication. This Test Item File is available in a computerized format using TestGen EQ test-generating software and included in MyEconLab.

Macroeconomics Test Item File: Discussion and Short Answer, by Richard Gosselin of Houston Community College: This second Test Item File includes 1,000 conceptual problems, essay questions, and short-answer questions. Application-type problems ask students to draw graphs and analyze tables. The Word files are available on the Instructor's Resource Center (**www.pearsonglobaleditions.com/Case**).

The Test Item Files were checked for accuracy by the following professors:

Leon J. Battista, Bronx Community College; Margaret Brooks, Bridgewater State College; Mike Casey, University of Central Arkansas; Mike Cohick, Collin County Community College; Dennis Debrecht, Carroll College; Amrik Dua, California State Polytechnic University, Pomona; Mitchell Dudley, The College of William & Mary; Ann Eike, University of Kentucky; Connel Fullencamp, Duke University; Craig Gallet, California State University, Sacramento; Michael Goode, Central Piedmont Community College; Steve Hamilton, California State Polytechnic University; James R. Irwin, Central Michigan University; Aaron Jackson, Bentley College; Rus Janis, University of Massachusetts, Amherst; Jonatan Jelen, The City College of New York; Kathy A. Kelly, University of Texas, Arlington; Kate Krause, University of New Mexico; Gary F. Langer, Roosevelt University; Leonard Lardaro, University of Rhode Island; Ross LaRoe, Denison University; Melissa Lind, University of Texas, Arlington; Solina Lindahl, California State Polytechnic University; Pete Mavrokordatos, Tarrant County College; Roberto Mazzoleni, Hofstra University; Kimberly Mencken, Baylor University; Ida Mirzaie, Ohio State University; Shahruz Mohtadi, Suffolk University; Mary Pranzo, California State University, Fresno; Ed Price, Oklahoma State University; Robert Shoffner, Central Piedmont Community College; James Swofford, University of South Alabama; Helen Tauchen, University of North Carolina, Chapel Hill; Eric Taylor, Central Piedmont Community College; Henry Terrell, University of Maryland; John Tommasi, Bentley College; Mukti Upadhyay, Eastern Illinois University; Robert Whaples, Wake Forest University; and Timothy Wunder, University of Texas, Arlington.

The Association to Advance Collegiate Schools of Business (AACSB) The authors of the Test Item File have connected select Test Item File 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 areas such as the following:

- Written and Oral Communication
- Ethical Understanding and Reasoning

- Analytic Thinking Skills
- Information Technology
- Diverse and Multicultural Work
- Reflective Thinking
- Application of Knowledge

Questions that test skills relevant to these guidelines are tagged with the appropriate standard. For example, a question testing the moral questions associated with externalities would receive the Ethical Understanding and 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 earlier. This in turn may suggest enrichment activities or other educational experiences to help students achieve these skills.

TestGen

The computerized TestGen package allows instructors to customize, save, and generate classroom tests. The test program permits instructors to edit, add, or delete questions from the Test Item Files; analyze test results; and organize a database of tests and student results. This software allows for extensive flexibility and ease of use. It provides many options for organizing and displaying tests, along with search and sort features. The software and the Test Item Files can be downloaded from the Instructor's Resource Center (**www.pearsonglobaleditions.com/Case**).

PowerPoint® Lecture Presentations

PowerPoint slides for *Principles of Microeconomics* and *Principles of Macroeconomics*, prepared by Jim Lee of Dickinson State University, are available:

- A comprehensive set of PowerPoint slides can be used by instructors for class presentations or by students for lecture preview or review. These slides include all the figures, photos, tables, key terms, and equations in the textbook. Instructors may download these PowerPoint presentations from the Instructor's Resource Center (**www.pearsonglobaleditions.com/Case**).
- A student version of the PowerPoint slides are available as .pdf files. This version allows students to print the slides and bring them to class for note taking. Instructors can download these PowerPoint presentations from the Instructor's Resource Center (**www.pearsonglobaleditions.com/Case**).

Acknowledgments

We are grateful to the many people who helped us prepare the 12th edition. We thank David Alexander, our editor, and Lindsey Sloan, our program manager, for their help and enthusiasm.

Roberta Sherman, project manager, and Jeffrey Holcomb, our Team Lead of Project Management, ensured that the production process of the book went smoothly. In addition, we also want to thank Stephanie Raga of Integra Software Services, Inc., who kept us on schedule, and Jenell Forschler, who managed the research of the many photographs that appear in the book.

We want to give special thanks to Patsy Balin, Murielle Dawdy, and Tracy Waldman for their research assistance.

We also owe a debt of gratitude to those who reviewed and checked the 12th edition for accuracy. They provided us with valuable insight as we prepared this edition and its supplement package.

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The following individuals were of immense help in reviewing all or part of previous editions of this book and the teaching/learning package in various stages of development:

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