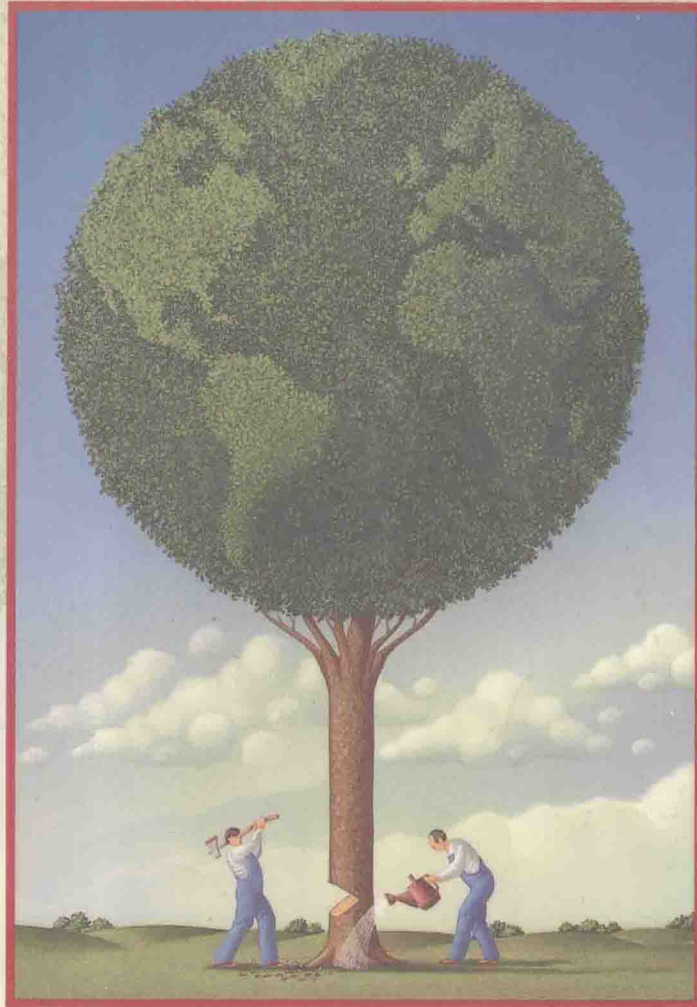


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# MICROECONOMICS

*Third Edition*

# PRINCIPLES OF MICROECONOMICS

*Karl E. Case*  
Wellesley College

*Ray C. Fair*  
Yale University



Prentice Hall, Englewood Cliffs, New Jersey 07632

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# Preface

This textbook contains the five introductory chapters, 15 microeconomics chapters, and selected international chapters from our hardbound *Principles of Economics* textbook. It has been specially prepared for microeconomics courses in which professors prefer to assign a paperback “split” rather than a single volume containing coverage of both microeconomics and macroeconomics.

So that users of this book and its companion volume, *Principles of Macroeconomics*, can fully understand our methodology in preparing the third edition, what follows is an adaptation of the preface as it appears in our single hardbound volume.

With the twenty-first century only a few years away, the pace of economic events in the United States and abroad continues to accelerate. The world has changed significantly since the publication of the second edition of *Principles of Microeconomics* in 1992. The United States elected a new President and has a new tax code. The recession of 1990–1991 turned into a painfully slow recovery. The Soviet Union ceased to exist, dissolving into 15 independent states. Yeltsin’s Russia is struggling to transform a socialist system into a market-based economy. After years of stagnation, China has begun to experience rapid growth and inflation. The oil fires in Kuwait are out, and the dramatic events of the Persian Gulf War are almost forgotten as the world struggles with suffering in places like Bosnia and Somalia.

Because events have changed the economic landscape so rapidly, we decided to revise *Principles of Microeconomics* after two years, rather than the usual three. The third edition features many all-new and updated examples relevant to the students of the 1990s. Revising after two years also allowed us to take into account the federal government’s reindexation of the national income data from base year 1982 to 1987 and to focus on GDP rather than GNP.

In addition, we continued to receive feedback from colleagues and users of the text. To date, thousands of students and professors have used *Principles of Microeconomics*. In the third edition, we have made every effort to be responsive to our readers’ suggestions while maintaining the book’s basic focus and

pedagogical organization. We have moved material on international trade and comparative advantage to the introductory chapters and have continued to integrate global examples throughout the text. We have worked hard to provide current applications of theory while cutting extraneous material and shortening the text’s basic coverage. (The third edition is more than 60 pages shorter than the second edition.) We have also added new problem sets to each chapter and 10 new case studies. The result, we hope, is a principles book that will set the standard for today’s students.

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## THE PLAN OF *PRINCIPLES OF MICROECONOMICS*

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Despite major revisions and new features, the themes of the third edition are the same themes of the first two editions. The purpose of this book is 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 tried to maintain a reasonable balance between these ingredients in every chapter in this book. Like the first two editions, the third edition also attempts to present a number of theoretical views in an evenhanded way.

## Organization

Market research and comments from users of the second edition convinced us that the organization of the material in the second edition of *Principles of Microeconomics* is pedagogically sound. For this reason, we have not altered the presentation drastically.

The organization of the microeconomic material 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 and input markets and the connections between them, before turning to non-

competitive market structures. When students understand how a simple 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.

Doing competition first also allows students to see the power of the market system. It is impossible to discuss the things that markets do well until students have seen how a simple system determines the allocation of resources. This is our purpose in Chapters 6–11. Chapter 12 remains a pivotal chapter that links the world of perfect competition with the imperfect world of noncompetitive markets, externalities, imperfect information, and poverty, all of which we discuss in Chapters 13–17. In Chapters 18–20 students use everything they’ve learned in Chapters 6–17 to take a closer look at some of the fields of applied microeconomics (the economics of taxation, labor economics, and urban and regional economics). Finally, in Chapters 21–23, we examine some topics in international economics. Although we’ve chosen to place these chapters at the end of the book, professors can integrate them into their course at any time they feel is appropriate.

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## THE PLAN OF *PRINCIPLES OF MACROECONOMICS*

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For professors who are teaching macroeconomics, a new version of *Principles of Macroeconomics* is also available. Although we have made a number of changes to the content of the macroeconomic material in the third edition of *Principles of Macroeconomics*, we remain committed to the view that it is a mistake to simply throw aggregate demand and supply curves at students in the first few chapters of a principles book. Aggregate demand and supply curves are very complex theoretical constructs—indeed, we encountered debates regarding the aggregate supply curve everywhere we turned. To understand the *AS* and *AD* curves, one needs to know about the functioning of the goods market, the money market, and the labor market. The logic behind the simple demand curve is simply wrong when applied to the relationship between aggregate demand and the price level.

Similarly, the logic behind the simple supply curve is wrong when applied to the relationship between aggregate supply and the price level.

Part of teaching economics is teaching economic reasoning. Our discipline is built around deductive logic. Once we teach students a pattern of logic, we want and expect them to apply it to new circumstances. When they apply the logic of a simple demand curve or simple supply curve to the aggregate demand or aggregate supply curve, the logic does not fit. We believe the best way to teach the reasoning embodied in the aggregate demand and aggregate supply curves without creating serious confusion is to build up to them carefully.

**ORGANIZATION** As in the second edition of *Principles of Macroeconomics*, the macroeconomic section begins with three introductory chapters (6–8) that introduce students to macroeconomic tools, national income accounting, and inflation and unemployment. These chapters are followed by two chapters that present the basic functioning of the goods market (Chapters 9 and 10) and two chapters that present the basic functioning of the money market (Chapters 11 and 12). It is in these chapters that students are introduced to the concepts of fiscal and monetary policy. These four chapters are followed by a chapter that brings the two markets together. This chapter, Chapter 13, does in essence a very simplified version of *IS/LM* analysis verbally. (The *IS* and *LM* curves are included in an appendix to Chapter 13 for those instructors who are interested in teaching them.)

Given the groundwork that has been laid in Chapter 13, Chapter 14 proceeds directly to derive the aggregate demand curve and then the aggregate supply curve. The two curves are then put together to determine the aggregate price level and to discuss the various theories of inflation.

Following the development of the *AD* and *AS* curves, we turn to a more detailed look at the labor market in Chapter 15 and discuss various theories of unemployment. By the end of Chapter 15, students have put the goods market, the money market, and the labor market together, and they have analyzed inflation, unemployment, and monetary and fiscal policy. Chapter 16 uses the material learned earlier to analyze a number of current macroeconomic issues, including the budget deficit and the defeat of President Bush in 1992.

In Chapter 17, we take a closer look at the behavior of households and firms in the macroeconomy, and in Chapter 18 we use the material in Chapter 17 to analyze further macroeconomic issues. Chapters 17 and 18 have been grouped into an optional part that can be skipped without losing the flow of the material. We close the macro section of the book by looking at some current debates in macroeconomics (Chapter 19) and economic growth (Chapter 20). We then consider international economics in more detail in Chapters 21–24.

**CONTENT** In preparing the third edition, we have maintained the two innovations we introduced in the second edition. The first is the treatment of aggregate supply. Clearly, there is strong disagreement among economists and across economics textbooks on the exact nature of the aggregate supply curve. All economists agree that if input prices rise at the same rate as output prices, the aggregate supply curve is vertical; firms have no incentive to change output if their costs and revenues change at the same rate. For the *AS* curve to have a positive slope in the short run, input prices must either be constant or there must be some lag in their adjustment.

Some textbooks assume that input prices are constant when the overall price level changes, essentially treating the aggregate supply curve as if it were the sum of individual market supply curves. This assumption of constant input prices is obviously unrealistic, and in the second edition we changed our description of the short-run *AS* curve to one that assumes some lag in input price adjustment when the overall price level changes. In addition, we clarified and expanded our description of the long-run aggregate supply curve, incorporating the concept of potential GDP.

Second, we continue to distinguish between inflation (a change in the overall price level) and *sustained* inflation (an increase in the overall price level that continues for some period of time). There can be confusion in students' minds as to what inflation is and whether or not it is a purely monetary phenomenon, and we think that this distinction helps to clarify our discussions.

We do microeconomics first in the combined volume but have crafted the third edition so that professors can proceed directly to either microeconomics or macroeconomics after teaching the five introductory chapters.

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## HIGHLIGHTS OF THE THIRD EDITION OF *PRINCIPLES OF MICROECONOMICS*

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### Recent Data, Examples, Events, and Topics

Every chart, table, and graph in the book has been revised with the most recent data available. The national income data now focus on GDP rather than GNP, and all data have been revised to base year 1987. In addition, we have integrated topics that have generated a great deal of attention over the last few years—the economics of information, environmental economics, the recession of 1990–1991, the national debt, the economics of health care reform, the provisions of the new tax law, and the recent experiences of Russia and Poland, to name just a few.

### Increased Coverage of International Material

We have increased our coverage of international material in several ways. First, we have moved a discussion of comparative advantage and international trade from Chapter 36 to Chapter 2. (We do maintain a chapter on international trade in the International Economics section of the book as well.) Second, we have added many new “Global Perspective” boxes throughout the text. These boxes are designed to illustrate economic logic with global examples and to emphasize today's global economy. Finally, we have attempted to integrate international examples directly into the text whenever appropriate. All international examples are marked by a globe icon in the book's table of contents.

### Optional Chapters

We have tried to keep uppermost in our minds that time is always tight in a principles course. For this reason, we have made sure that certain chapters can be skipped without losing the flow of the material. Chapter 11 (on the capital market) can be skipped because Chapter 10 (on input markets in general) covers the basics of the capital market. Similarly, the “topics” chapters in Part Four can be skipped if time is short.



## Student Learning Aids

Each chapter begins with a brief overview of what the student has learned in the previous chapter and ends with a brief “look ahead” to the following chapter. To help students study, key terms have been printed in boldface and glossed to the margins. Each chapter ends with a point-by-point summary of the chapter, a list of review terms and concepts (cross-referenced to text page), and a problem set.

Because many believe that economics must be relevant to be interesting, we have created two types of boxes for the third edition. *Global Perspective* boxes provide economic examples from around the world. *Issues and Applications* boxes focus on current events and debates in economics and apply the theory learned in the text to real-world events and situations.

In addition, we have set the major principles of economics off from the text in such a way as to highlight their importance. These highlights flow logically from the preceding text and into the text that follows. Students can use these as a way of reviewing the key points in each chapter to prepare for exams.

## Problem Sets

Each chapter and appendix ends with a problem set that asks students to think about 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. Approximately 40% of the problems are new to the third edition. The answers to these problems, as well as additional problem sets, are available in the Instructor’s Manual.

## Case Studies

The end-of-part case studies introduced in the second edition proved to be quite popular. The third edition features five new case studies on topics ranging from the black market for ivory to regulation of cable TV. Each case study is accompanied by a video and questions for analytical thinking. The cases are not simply additional problems, and they are not simple extensions of the text material. They are meant to be applications of some of the *ideas* that the part was designed to teach and are designed to foster critical thinking and “thinking like an economist.” They might be used as assignments or for class discussion.

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## THE TEACHING/LEARNING PACKAGE

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Each component of the teaching and learning package has been carefully crafted to ensure that the principles of microeconomics course is a rewarding experience for both instructors and students. All of the supplements have been rewritten for the third edition. In addition, several innovative new supplements are available. To see a sample chapter from each of the ancillaries, ask your sales representative for a Case/Fair supplements sampler.

## Study Guide

A comprehensive study guide has been prepared by Professor Thomas Beveridge of North Carolina State University. This study aid reinforces the textbook and provides students with additional applications and exercises. Each chapter in the study guide corresponds to a chapter in this textbook and contains the following features:

- **Learning Objectives with Summaries and Practice Questions.** A list of learning goals for the chapter, along with a brief summary of the material, helpful study hints, practice questions with solutions, and page references to the text.
- **Tips and Learning Suggestions.** Suggestions to help students grasp the material better and to make more of their study time. This section also points out common errors or potential sources of confusion that arise as students attempt to learn economic principles.
- **Matching Vocabulary.** A brief review of the chapter’s important vocabulary.
- **Exercises and Problem Sets.** The tools of graphic analysis are extremely important in the study of economics. This portion of the study guide requires the use of graphic analysis to solve economic problems. It also presents real-world situations and asks students to apply economic theory to their own experiences.
- **True/False and Multiple-Choice Questions.** A series of questions designed to test students’ grasp of the material and to help them prepare for exams.
- **Short-Answer and Discussion Questions.** Analytical questions that ask students to think more deeply about economic theory and issues.

- **Solutions.** Complete solutions—not just answers—to all questions in the study guide, complete with page references to the textbook.

## Annotated Instructor's Edition With Data Update Request Card

The AIE for the third edition of *Principles of Microeconomics*, prepared by Professor Dereka Rushbrook of Ripon College, is a special printing of the text that includes marginal annotations divided into seven categories:

- **Theory Applied**
- **Global Example**
- **Suggested Outside Reading**
- **Teaching Note**
- **Student Misconception**
- **For Discussion**
- **FYI**

The AIE also includes an ABC News video icon to indicate the availability of a video clip on the topic discussed in the text. In addition, the AIE includes a reply card that allows professors to receive free semiannual data updates from the authors and Prentice Hall.

## Instructor's Manual

The innovative instructor's manual, written by Professor Marc Lieberman of Vassar College, corresponds to the organization of the student text. The instructor's manual is the key integrative supplement in the teaching and learning package and has been designed with the *teaching* of economics in mind. Each chapter includes suggestions for integrating each of the elements of the teaching/learning package into the classroom. The manual also includes a summary of chapter coverage; lecture suggestions with graphs; additional applications; additional problem sets with solutions; and answers to all end-of-chapter text questions. The manual has been designed so that instructors can easily xerox and distribute the relevant material in the manual.

## Test Item File

A revised, expanded, and comprehensive test bank of approximately 2,700 short-answer/essay, multiple-choice, true/false, and problem set questions has been prepared for *Principles of Microeconomics* by Professor Teresa Riley of Youngstown State University. The questions are divided into three levels of difficulty—easy, moderate, and difficult—and are page-referenced to the text. Problem sets (a series of questions based on a graph or scenario) can contain all three levels. Also included are challenging questions that require students to undertake several steps of reasoning, or to work backwards from effect to cause.

## New Prentice Hall Test Manager 2.0

The test item file is designed for use with the new version of the Prentice Hall Test Manager, a computerized package that allows users to custom design, save, and generate classroom tests. Available in both 3.5" and 5.25" IBM versions, the test manager also permits professors to edit and add or delete questions from the test item file, to edit existing graphics and create new graphics, and to export files to various word processing programs, including WordPerfect and Microsoft Word. Graphic capability ensures that all graphs included in the test item file can be printed next to the appropriate question.

For those with limited access to computers or secretarial support, Prentice Hall's Telephone Testing Service allows professors to order customized tests by calling a toll-free telephone number a few days before the test is to be administered. Additional information about the various forms of testing service can be obtained from your Prentice Hall sales representative.

## Transparency Resource Package, Transparency Masters, and Electronic Transparencies

There are more than 200 graphs and charts in the *Principles of Microeconomics* text. All of these are available as transparency masters. The Transparency Resource Package, prepared by Professor Rhona Free of Eastern Connecticut State University, also includes reproductions of key text graphs on full-color



8 1/2" × 11" acetates for classroom use. In addition, more than 40 sets of additional data (not found in the textbook) and summary diagrams are included as full-color transparencies. These data are drawn from a variety of public and private sources and can be used to supplement lectures or stimulate classroom discussions. The time-series data are also available in electronic format. The Transparency Resource Package is provided in a three-ring binder, with the transparencies appearing on the right page and their accompanying lecture notes on the left page.



### ABC/Prentice Hall Video Library for *Principles of Economics*

ABC News and Prentice Hall have combined their experience in academic publishing and global reporting to provide a comprehensive video ancillary to the third edition. The library contains 35 news clips from the ABC News programs *Nightline*, *World News Tonight*, *Business World*, and *On Business*. Each of the clips has been chosen to illustrate or supplement a specific discussion in the text. The ABC News icon appears in the margin of the Annotated Instructor's Edition to indicate the availability of a video. All the videos are timely or timeless, and many can be used at different points in the course.

### ABC News/Prentice Hall Video Guide

A guide for professors providing suggestions for integrating the ABC/PH Video Library into the classroom. In addition to a brief summary and the running time of each clip, the guide (prepared by Professor Steven Tomlinson of the University of Texas at Austin) includes teaching notes, in-class exercises, handouts, and transparency masters that tie the news analysis to economic analysis. The Video Guide is an ideal companion to the Instructor's Manuals.



### The New York Times "Themes of the Times" Program

The *New York Times* and Prentice Hall are sponsoring "Themes of the Times": a program designed to enhance student access to current information of relevance in the classroom.

Through this program, the core subject matter provided in the text is supplemented by a collection of time-sensitive articles from one of the world's most distinguished newspapers, *The New York Times*. These articles demonstrate the vital, ongoing connections between what is learned in the classroom and what is happening in the world around us.

A series of discussion questions to accompany the articles is also available. A new edition of the mini-newspaper is available semiannually. To enjoy the wealth of information of *The New York Times* daily, a reduced subscription rate is available in deliverable areas. For information, call toll-free: 1-800-631-1222.

### Software for *Principles of Economics*

Developed for use with the third edition by Professor Julia Friedman of Macalester College and Professor Ray Whitman of the University of the District of Columbia, the Prentice Hall *Principles of Economics* software provides graphical simulations for 16 micro and macro topics. The software allows students to manipulate data and graphs, while the accompanying documentation provides the same data sets and graphs with a series of questions and problems. The package offers professors the opportunity to use a computer package in the classroom and students the opportunity to learn the basics of the most popular spreadsheet programs on the market. A demo disk is included with the supplements sampler; ask your sales representative for a copy.

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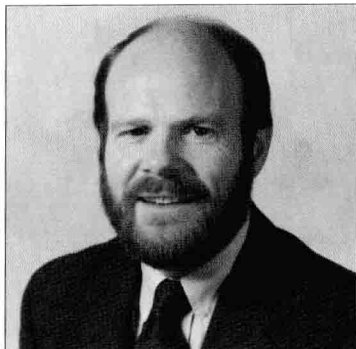
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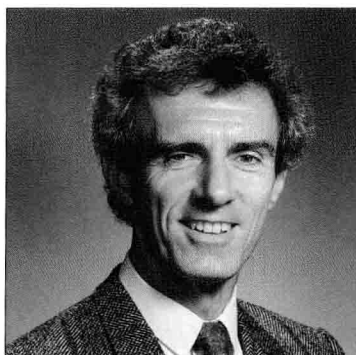
# About the Authors



**Karl E. Case** is the Marion Butler McLean Professor in the History of Ideas and Professor of Economics at Wellesley College. He also lectures on Economics and Tax Policy in the International Tax Program at Harvard Law School and is a Visiting Scholar at the Federal Reserve Bank of Boston. He received his B.A. from Miami University in 1968, spent three years in the army, and received his M.A. and Ph.D. from Harvard University. In 1980 and 1981 he was a Liberal Arts Fellow in Law and Economics at Harvard Law School.

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