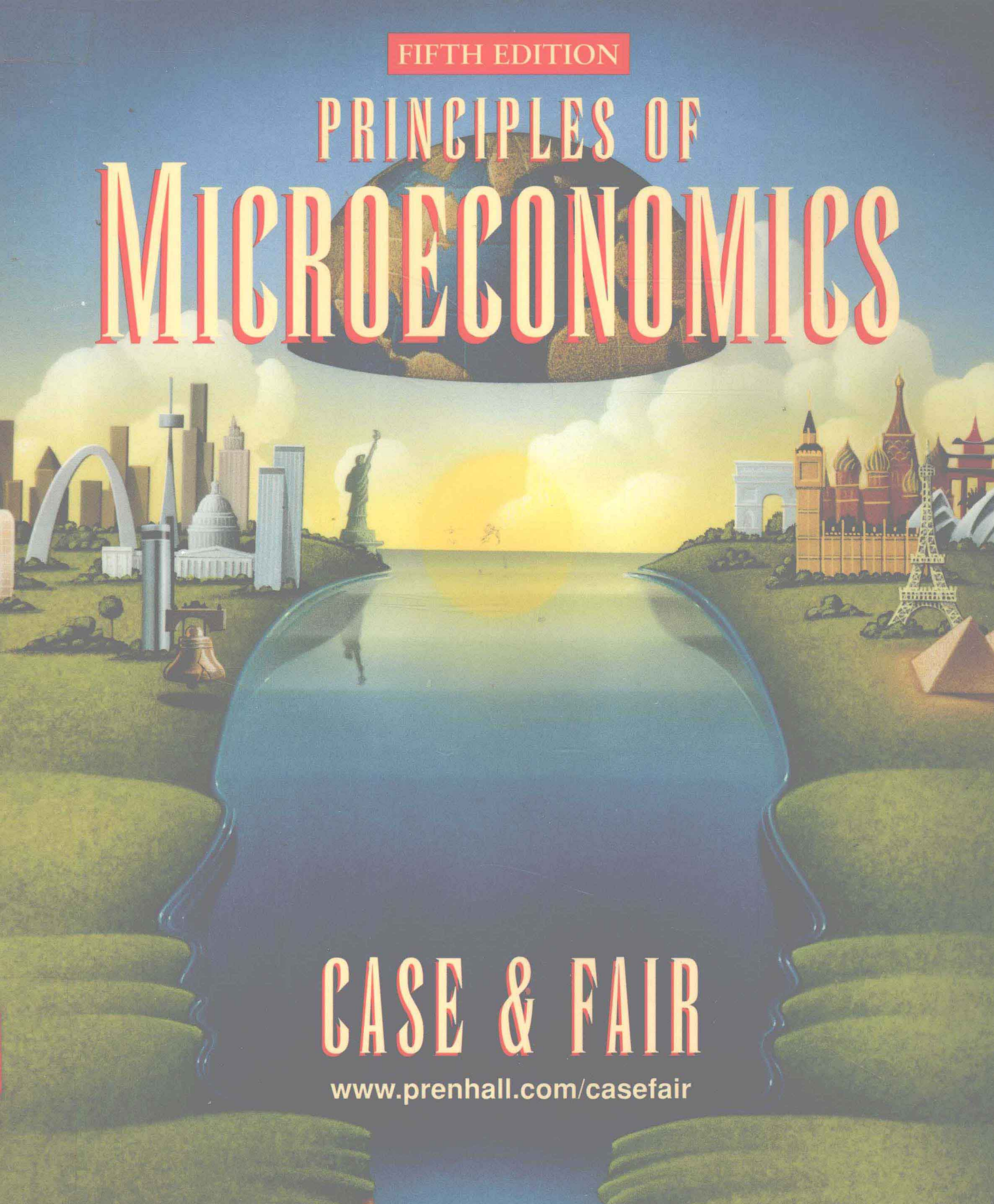


FIFTH EDITION

PRINCIPLES OF MICROECONOMICS



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FIFTH EDITION

PRINCIPLES OF MICROECONOMICS

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To
Professor Richard A. Musgrave
and
Professor Robert M. Solow

PREFACE

THIS TEXTBOOK CONTAINS the five introductory chapters, fifteen 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 fourth edition, what follows is an adaption of the preface as it appears in our single hardbound volume.

As this fifth edition is being prepared to go on press: We are into the 28th consecutive quarter of expansion in the U.S. economy. Unemployment is at its lowest in nearly 30 years. A number of Asian economies, including Korea, Thailand, and Indonesia, have suffered sharp economic downturns, and even Japan, the world's second largest economy, is suffering through recession and slow growth. Much of Europe is set to adopt a common currency. Hong Kong has become part of China. Congress passed the Taxpayer Relief Act and welfare reform has become reality. The Russian economy has begun to grow. (When our first edition was published in 1989, the Berlin Wall had not yet fallen, the Cold War still chilled international relations, and Iraq had not yet invaded Kuwait.)

How rapidly the world is changing!

The degree to which the economic landscape has changed since our fourth edition was published, has led to hundreds of changes—some large, some not so large, some you might expect, some not—in this revision. One way of reflecting many of those changes in the landscape, is through the new Fast Facts feature we added to every chapter. Each Fast Fact contains some additional data or a current example, describing a significant change in the economy, adding depth to the text, while not adding bulk because they are concise, written to fit briefly in the margin column.

Revising a book involves adding new material, and there is a tendency for text books to grow in volume over time. But student time is a scarce resource, and longer books are more costly to produce. So our goal throughout was to update, refine and add material where needed but

to end up cutting excess baggage and obsolete material wherever possible. The bottom line is that the fifth edition is a shorter book.

All tables and figures have been updated with the most recent data available, and the case studies (with accompanying videos) that end each part are completely new. And while we continue to cover the core of economic theory, we have added new material on important topics that have only recently emerged as major economic issues. These include health-care reform, immigration, urban problems and crime, welfare reform, the new trade treaties, and the experiences of transitional economies.

In addition, the fifth edition contains more international material than any previous edition. Almost every chapter contains a global application or example. (A complete list of global examples follows the detailed table of contents.) We've also added many new problems to the end of each chapter and included solutions to the even-numbered problems at the end of the text.

To date, more than 400,000 students and professors have used *Principles of Macroeconomics*, or one of its split volumes. In this new edition, we have made every effort to be responsive to our readers' suggestions while maintaining the book's basic focus and pedagogical organization. To make the book accessible to a wider range of students, we have cut a great deal of extraneous material, simplified several of the more analytical sections, and redrawn many of the more technical graphs using real numbers rather than variable names. And, to make the book more appealing to today's visual learners, we've completely revised the art, photo, and illustration program. The result, we hope, is a principles book that students will keep on their shelves and use throughout college and beyond.

THE PLAN OF *PRINCIPLES OF MICROECONOMICS*

Despite major revisions and new features, the themes of the fifth edition are the same themes of the first four 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 four editions, the fourth edition also attempts to present different 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 third 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 noncompetitive 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 the economics of health care, immigration, and urban problems). 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.

THE PLAN OF PRINCIPLES OF MACROECONOMICS

For professors who are teaching macroeconomics, a new version of *Principles of Macroeconomics* is also available.

Several new textbooks have shifted the emphasis in the presentation of macroeconomics from short run income determination to long run growth while deemphasizing business cycles, the role of countercyclical policy and the problems of unemployment and inflation. While we agree that growth deserves more attention in macroeconomics, we have chose *not* to follow their lead. We remain convinced that the basic structure of aggregate supply and aggregate demand provides a very powerful pedagogical framework within which students can come to understand the nature of the debates that now permeate the professional literature, including the efficacy of monetary and fiscal policy, the role of the Fed, and the factors that determine growth and the cyclical behavior of the economy. We are also convinced that unemployment and inflation remain serious potential problems for economies in the U.S. and across the world.

Although we have made a number of changes to the content of the macroeconomic material in the fifth edition of *Principles of Macroeconomics*, we remain committed to the view that it is a mistake to simply 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, one needs to know about the functioning of the goods market and the money 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 fourth edition of *Principles of Macroeconomics*, the macroeconomics section begins with three introductory chapters (6–8) that introduce students to macroeconomic tools, national income accounting, and inflation and unemployment (both in the United States and abroad). 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 four chapters that students are introduced to the concepts of fiscal and monetary policy. These 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 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 proposed balanced-budget legislation and business cycles in Europe and Asia.

In chapter 17, we take a closer look at the behavior of households and firms in the macroeconomy. It 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 18) and economic growth and productivity (chapter 19). We then consider international economics in more detail in chapters 20–23.

Content In preparing the fifth 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.

HIGHLIGHTS OF THE FIFTH EDITION OF *PRINCIPLES OF MICROECONOMICS*

NEW FAST FACTS IN EVERY CHAPTER

An important new feature of the fifth edition is that between 2 and 4 Fast Facts have been added to every chapter. Each one is a new table of data, an additional

example, a research result, or simply an illustration of a point made in the text. While brief and not as involved as a Box, we believe these will add depth and richness to the material. As an example, in the discussion of elasticity, we obtained some current estimates of price elasticity of demand for a number of common goods from Regional Financial Associates, a first rate forecasting and modelling firm in Philadelphia. Other examples include a brief discussion of the Three Gorges Dam under construction in China and the current U.S. dollar exchange rates against several currencies.

RECENT DATA, EXAMPLES, EVENTS, AND TOPICS

Every chart, table, and graph in the book has been revised with the most recent data available. In addition, we have integrated topics that have generated a great deal of attention over the last few years—the economics of crime, immigration, and health care, the Justice Department’s assault on Microsoft, the recent experiences of Russia and the economies of Eastern Europe, the continuing economic problems of Asia, the adoption of a common currency in Europe, the debate about shifting to a consumption tax, and the decline of the “natural monopolies” and consequent deregulation of electricity rates, to name just a few.

INCREASED COVERAGE OF INTERNATIONAL MATERIAL

We have increased our coverage of international material in three ways. First, 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. Second, we have integrated international examples directly into the text whenever appropriate. All international examples are listed in a table following the book’s detailed table of content. Third, the last part of the book, International Economics, treats international economics in detail.

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 bold-face 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 three types of boxes for the fourth edition. *Global Perspective* boxes provide economic examples from around the world. *Application* boxes apply the theory learned in the text to real-world events and situations. *Issues and Debate* boxes examine many of the economic issues currently under debate.

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 tell us that they find these very useful as a way of reviewing the key points in each chapter to prepare for exams.

PROBLEM SETS AND SOLUTIONS

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 percent of the problems are new to this edition. More challenging

problems are indicated by an asterisk. The solutions to all even-numbered problems appear at the back of the book. The solutions to all odd-numbered problems, as well as additional problem sets, are available in the instructor's resource manual.

CASE STUDIES

The end-of-part case studies continue to be quite popular. The fifth edition features nine new case studies on topics ranging from the spotted owl and new homes to making your own money. Each case study is accompanied with 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.

TEACHING AND LEARNING TOOLS

The ancillary package for the fifth edition reflects changes in technology and utilizes new ways of disseminating information. A customized Web site links with Prentice Hall Learning on the Internet Partnership (PHLIP) to offer a comprehensive Internet package for the student and the instructor. An integrated package of software, printed supplements, videos, and reference guides completes the total teaching and learning package. Please contact your Prentice Hall sales representative for information on any of the Case and Fair supplements.

INTERNET RESOURCES (WWW.PRENHALL.COM/CASEFAIR)

The Case and Fair Web site offers students another opportunity to sharpen their problem-solving skills and to assess their understanding of the text material. Just go to the Case and Fair site and click on the Online Study Guide for additional true/false, multiple-choice, fill-in-the-blanks, and essay questions. The site also connects the student

to the Take It to the Net Web-destination exercises cited at the end of each chapter of text. The online study guide has a built-in grading feature; students take the exams and receive immediate feedback.

From the Case and Fair Web site, the student and the instructor can link to PHLIP. Developed by Dan Cooper at Marist College, PHLIP provides academic support for faculty and students using the fifth edition. The student section of PHLIP offers some downloadable supplements as well as PHLIPing through the News, a review of current-events articles keyed to topics in the text. Scott Simkins (North Carolina A&T State University) and Jim Barbour (Elon College) update the articles biweekly and provide summaries with discussion questions and research ideas. The faculty section of PHLIP requires a user-name and password—please contact your Prentice Hall sales representative.

ECONOMICS EXPLORER RUNTIME MULTIMEDIA

The *Economics Explorer* CD-ROM, developed by Prentice Hall and Logal Software, Inc., combines video, animation, and spreadsheet capabilities to bring economics to life. Logal has taken the basic economic models from the textbook and created a series of dynamic, interactive simulations that help students visualize how math, graphs, and economic intuition are connected.

Once students have learned to use the simulation, they can design their own experiments and test their own conjectures. Using *Economics Explorer*, students can test the limits of economic models, input their own data to recreate events from economic history, and (using spreadsheet capabilities) record the results and display them in graphs like those from their textbook.

The fifth edition instructor's manual provides tips for integrating *Economics Explorer* into the course. The Study Guide alerts the students to relevant exercises tied to topics in the text.

STUDY GUIDE

A comprehensive study guide has been prepared by Thomas Beveridge of North Carolina State University. This study aid reinforces the textbook and provides

students with additional applications and exercises. Each chapter contains the following elements:

- **Point-by-Point Objectives.** 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.
- **Practice Tests.** Approximately 20 multiple-choice questions and their answers.
- **Application Questions.** A series of multiple-choice questions that require the use of graphic or numerical analysis to solve economic problems.
- **Solutions.** Worked-out solutions to all questions in the Study Guide, complete with page references to the text.
- **Comprehensive Part Exams.** Nine part exams to test the students' overall comprehension consisting of up to 25 multiple-choice questions, extended examples, and problem questions where appropriate.

The study Guide also references the Take It to the Net Web exercises from the text and alerts the student to relevant applications in the *Economics Explorer* software.

INSTRUCTOR'S MANUAL

An innovative instructor's manual for *Principles of Microeconomics* was written by Mary Lesser at Iona College. The manual is designed to help the instructor incorporate applicable elements of the fifth edition supplement package. The manual includes:

- Detailed chapter outlines with key terminology, teaching notes, and lecture suggestions.
- Video Guide for the 1998/99 Economics Video Library.
- Class Tips from Students, which feature real-world ideas from the students' point of view.
- Teaching Tips on incorporating the Take It to the Net Web exercises and *Economics Explorer* Software.
- Additional Problems with solutions.
- Extended Applications, which include exercises, activities, and experiments to help make economics relevant to students.
- Solutions to all odd-numbered problems from the text.
- Case Study Solutions for the analytical thinking questions that accompany cases from the fifth edition text.

TEST ITEM FILE

The fifth edition test bank for *Principles of Microeconomics*, completely revised and updated by Timothy Duy of the University of Oregon, contains almost 4,000 true/false, multiple-choice, short-answer, and essay questions. Also included are Problem Sets, a series of questions based on a scenario or graph. Each question in the test bank is page-referenced and coded for level of difficulty (easy, moderate, challenging, and honors). Questions are also classified as fact, definition, single, and multi. Questions classified as single require the student to use a single-step analytical process to answer whereas the questions classified as multi require the student to perform numerous steps in the analytical process.

A test item file is available for both microeconomics and macroeconomics, in printed form or in a computerized version.

PH CUSTOM TESTS

Available for Windows and Macintosh, PH Custom is the computerized version of the test item files. The test program allows professors to edit, add or delete questions from the test item file, edit existing graphics and create new graphics, and export files to word processing programs.

POWERPOINT LECTURE PRESENTATION

An all-new PowerPoint presentation, by Mark Karscig of Central Missouri State University, offers summaries and necessary reinforcement of important text material. Many important graphs "build" over a sequencing of slides so that students may see the step-by-step process involved in economic analysis. The package will allow for instructors to make full-color, professional-looking presentations while providing the ability for custom handouts to be provided to the students.

COLOR TRANSPARENCIES

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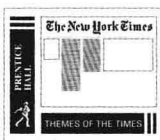
ABC NEWS/PRENTICE HALL VIDEO LIBRARY

ABC News and Prentice Hall combine their individual expertise in academic publishing and global reporting to provide a comprehensive video ancillary to the fifth edition. The 1998/99 Economics Video Library contains 23 news clips from *Nightline*, *World News Tonight*, *Wall Street Journal Report*, and *20/20*. Each clip illustrates the vital, ongoing connections between what is learned in the classroom and what is happening in the world around us. All the videos are timely or timeless, and many can be used at different points in the course. The instructor's manual provides suggestions on where and how to integrate each video.

THE NEW YORK TIMES "THEMES OF THE TIMES"

The New York Times, Inc., and Prentice Hall collaborate to offer *Economic Themes of the Times*—12 newspaper pages full of current articles on public policy, business, finance and other issues that expose the real-world, everyday relevance of economics. "Themes of the Times" is available for both Spring and Fall quarters.

The New York Times offers a reduced subscription rate for students and professors. For more information, call 1-800-631-1222.



ABCNEWS

THE SECOND YEAR SUPPLEMENT PACKAGE

A new wave of supplements will be available to help the instructor in the second year of using the fifth edition textbook:

- A brand new Test Item File, written by Mary Lesser, Iona College.
- 1999/2000 Economics Video Library and Video Guide.
- Presentation Manager.

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SURFING FOR SUCCESS INTERNET GUIDE

Surfing for Success in Economics 1998/99 is an invaluable guide on using Internet resources. Scott Simkins and Jim Barbour join Andrew Stull in creating a reference that not only helps beginning students learn their way around the Internet, but lists economics-related sites and Your Turn Web-destination exercises to make surfing the Internet a natural part of the economics classroom.

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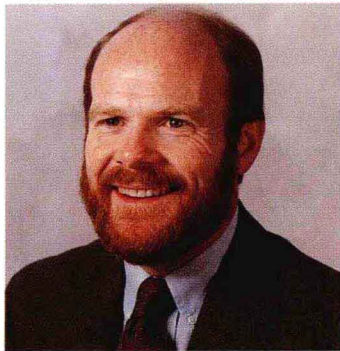
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A ABOUT THE AUTHORS



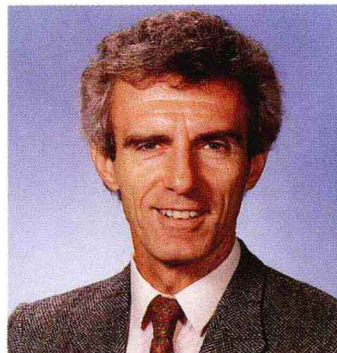
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Professor Fair's United States and multicountry models are available for use on the Internet free of charge. The address is <http://fairmodel.econ.yale.edu>. Many teachers have found that having students work with the United States model on the Internet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

BRIEF CONTENTS

INTRODUCTION

- PART 1: Introduction to Economics 1
1. The Scope and Method of Economics 1
 2. The Economic Problem: Scarcity and Choice 25
 3. The Structure of the U.S. Economy: The Private, Public, and International Sectors 45
 4. Demand, Supply, and Market Equilibrium 67
 5. The Price System, Supply and Demand, and Elasticity 97

MICROECONOMICS

- PART 2: Foundations of Microeconomics:
Consumers and Firms 127
6. Household Behavior and Consumer Choice 127
 7. The Production Process: The Behavior of Profit-Maximizing Firms 159
 8. Short-Run Costs and Output Decisions 183
 9. Costs and Output Decisions in the Long Run 207
 10. Input Demand: The Labor and Land Markets 233
 11. Input Demand: The Capital Market and the Investment Decision 253
 12. General Equilibrium and the Efficiency of Perfect Competition 273

- PART 3: Market Imperfections and the Role of Government 297

13. Monopoly 297
14. Monopolistic Competition and Oligopoly 323
15. Antitrust Policy and Regulation 347
16. Externalities, Public Goods, Imperfect Information, and Social Choice 373
17. Income Distribution and Poverty 403

- PART 4: Current Microeconomic Issues 429

18. Public Finance: The Economics of Taxation 429
19. The Economics of Labor Markets and Labor Unions 451
20. Current Topics in Applied Microeconomics: Health Care, Immigration, and Urban Problems 475

INTERNATIONAL ECONOMICS

21. International Trade, Comparative Advantage, and Protectionism 497
22. Economic Growth in Developing Nations 519
23. Economies in Transition and Alternative Economic Systems 541

CONCISE DICTIONARY OF ECONOMIC TERMINOLOGY D-1

SOLUTIONS TO EVEN-NUMBERED PROBLEMS S-1

INDEX I-1

C CONTENTS

INTRODUCTION

PART 1: Introduction to Economics 1

1 The Scope and Method of Economics 1

WHY STUDY ECONOMICS? 2

To Learn a Way of Thinking 2

To Understand Society 4

To Understand Global Affairs 5

To Be an Informed Voter 6

THE SCOPE OF ECONOMICS 6

Microeconomics and Macroeconomics 7

The Diverse Fields of Economics 8

THE METHOD OF ECONOMICS 8

APPLICATION: *The Fields of Economics* 9

Theories and Models 10

Economic Policy 13

AN INVITATION 15

SUMMARY 16

REVIEW TERMS AND CONCEPTS 16

PROBLEM SET 16

APPENDIX: How to Read
and Understand Graphs 18

2 The Economic Problem: Scarcity and Choice 25

SCARCITY, CHOICE,
AND OPPORTUNITY COST 26

The Three Basic Questions 26

The Production Possibility Frontier 31

The Economic Problem 36

ECONOMIC SYSTEMS 37

Command Economies 37

Laissez-Faire Economies: The Free Market 38

GLOBAL PERSPECTIVE: *Eastern Europe and Russia:
A Mixed Progress Report* 39

Mixed Systems, Markets, and Governments 40

LOOKING AHEAD 41

SUMMARY 41

REVIEW TERMS AND CONCEPTS 42

PROBLEM SET 42

3 The Structure of the U.S. Economy: The Private, Public, and International Sectors 45

THE PRIVATE SECTOR: U.S. BUSINESS
AND INDUSTRIAL ORGANIZATION 46

The Legal Organization of Firms 46

The Organization of Industries 48

How Competitive Is the U.S. Economy? 52

Structural Change Since 1970 53

APPLICATION: *The Changing Mix of Jobs
in the United States* 55

THE PUBLIC SECTOR: TAXES
AND GOVERNMENT SPENDING 55

The Size of the Public Sector 55

Government Expenditures 58

Sources of Government Revenue 59

THE INTERNATIONAL SECTOR:
IMPORTS AND EXPORTS 61

FROM INSTITUTIONS TO THEORY 63

SUMMARY 64

REVIEW TERMS AND CONCEPTS 65

PROBLEM SET 65

4 Demand, Supply, and Market Equilibrium 67

FIRMS AND HOUSEHOLDS: THE BASIC
DECISION-MAKING UNITS 68

INPUT MARKETS AND OUTPUT MARKETS:
THE CIRCULAR FLOW 69

DEMAND IN PRODUCT/OUTPUT MARKETS 70

Price and Quantity Demanded:

The Law of Demand 71

Other Determinants of Household Demand 74

Shift of Demand versus Movement Along
a Demand Curve 76
From Household Demand
to Market Demand 79

SUPPLY IN PRODUCT/OUTPUT MARKETS 80

Price and Quantity Supplied: The Law
of Supply 80
Other Determinants of Firm Supply 82
Shift of Supply versus Movement Along a
Supply Curve 83
From Individual Firm Supply to Market
Supply 84

MARKET EQUILIBRIUM 85

Excess Demand 86
Excess Supply 88
Changes in Equilibrium 89

**DEMAND AND SUPPLY
IN PRODUCT MARKETS: A REVIEW 90**

*APPLICATION: Supply and Demand
in the News 92*

**LOOKING AHEAD: MARKETS
AND THE ALLOCATION OF RESOURCES 93**

SUMMARY 94
REVIEW TERMS AND CONCEPTS 95
PROBLEM SET 95

**5 The Price System, Supply and Demand,
and Elasticity 97**

THE PRICE SYSTEM: RATIONING
AND ALLOCATING RESOURCES 97
Price Rationing 97
Constraints on the Market
and Alternative Rationing Mechanisms 99

*GLOBAL PERSPECTIVE: The Market Comes
to China 100*

Prices and the Allocation of Resources 103

SUPPLY AND DEMAND ANALYSIS:
AN OIL IMPORT FEE 105

ELASTICITY 106

*ISSUES AND DEBATES: Traffic Congestion
and Organ Donations 107*

Price Elasticity of Demand 108
Calculating Elasticities 111
The Determinants of Demand Elasticity 117

*APPLICATION: London Newspapers
and New York Restaurants Learn
About Elasticity 118*

Other Important Elasticities 119

LOOKING AHEAD 120

SUMMARY 120
REVIEW TERMS AND CONCEPTS 121
PROBLEM SET 121

*CASE STUDY: The Spotted Owl, the Lumber
Industry, and the Market for New Homes 124*

MICROECONOMICS

**PART 2: Foundations of Microeconomics:
Consumers and Firms 127**

**6 Household Behavior
and Consumer Choice 127**

HOUSEHOLD CHOICE
IN OUTPUT MARKETS 129
The Determinants of Household Demand 129
The Budget Constraint 130

*APPLICATION: Opportunity Costs—
Then and Now 133*

THE BASIS OF CHOICE: UTILITY 135
Diminishing Marginal Utility 135
Allocating Income to Maximize Utility 137
The Utility-Maximizing Rule 138
Diminishing Marginal Utility
and Downward-Sloping Demand 139

INCOME AND SUBSTITUTION EFFECTS 139
The Income Effect 140
The Substitution Effect 140