



ECONOMICS

PRINCIPLES AND POLICY

EIGHTH EDITION

WILLIAM J. BAUMOL

ALAN S. BLINDER

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WILLIAM J. BAUMOL

C.V. Starr Center for Applied Economics
New York University

ALAN S. BLINDER

Princeton University

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The Dryden Press
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To my four children, Ellen, Daniel, and now Sabrina and Jim.

W.J.B.

To Scott and William, both now well beyond the final exam.

A.S.B.

ABOUT THE AUTHORS

William J. Baumol

William Baumol was born February 26, 1922, in an area of New York City that has since come to be known as Fort Apache. He received his BSS at the College of the City of New York in 1942 and his Ph.D. at the University of London in 1949.

He is Professor of Economics and Director of the C.V. Starr Center for Applied Economics at New York University and Professor Emeritus at Princeton University. He is a frequent consultant to the management of major firms in a wide variety of industries in the United States and other countries, as well as to a number of governmental agencies. In several fields, including the telecommunications and electric utility industries, current regulatory policy is based on his explicit recommendations. Among his many contributions to economics are research on the theory of the firm, the contestability of markets, the economics of the arts and other services—the “cost disease of the services” is often referred to as “Baumol’s disease”—and productivity convergence among nations. In addition to economics, he taught a course in wood sculpture at Princeton for about 20 years.

He has been president of the American Economic Association, and three other professional societies. He is an elected member of the National Academy of Sciences, created by the U.S. Congress, and of the American Philosophical Society, founded by Benjamin Franklin. He is also on the board of trustees of the National Council on Economic Education, and of the Theater Development Fund. He is the recipient of nine honorary degrees.

Baumol is the author of 30 books and hundreds of journal and newspaper articles, and his writings have been translated into more than a dozen languages.

Alan S. Blinder

Alan S. Blinder was born in New York City and attended Princeton University, where one of his teachers was William Baumol. After earning a master’s degree at the London School of Economics and a Ph.D. at MIT, Blinder returned to Princeton, where he has taught since 1971. He is currently the Gordon S. Rentschler Memorial Professor of Economics and co-director of Princeton’s Center for Economic Policy Studies, which he founded.

In January 1993, Blinder went to Washington as part of President Clinton’s first Council of Economic Advisers. Then, from June 1994 through January 1996, he served as vice chairman of the Federal Reserve Board. He thus played a role in formulating both the fiscal and monetary policies of the 1990s, topics discussed extensively in this book.

For more than 10 years, Blinder wrote newspaper and magazine columns on economic policy, and his op-ed pieces still appear regularly in various newspapers.

Blinder has been vice president of the American Economic Association and is a member of both the American Philosophical Society and the American Academy of Arts and Sciences. He has two grown sons, and lives in Princeton with his wife, where he plays tennis as often as he can.

■ PREFACE

The economy changes all the time, but certain principles endure. Steadfastly, we refuse to give up the principles that have guided us through seven previous editions of this book. We still follow our original precept that practical issues and developments in the real economy should influence the content of an introductory economics course and determine how its materials are presented. So we begin most chapters with a real problem and use it as a launching pad for our analysis, rather than the reverse. We still refuse to be lured into the claim that everything contained in this volume is of extreme importance for the reader's future. Therefore, throughout the book we single out those materials that we believe to have enduring value for the student. We believe that readers who do not make some effort to understand and remember these matters after the course is ended will have shortchanged themselves.

It has been said that economics is no laughing matter, and that an economist is a person who, having observed something that works in reality, wonders whether it works in theory! This book contains its share of theoretical material. But the theory is not merely an exercise in making students miserable; it is driven by issues that are real and current. As used by physicists, biologists, and economists—indeed by all in the fields of research in colleges and universities—the word *theory* simply means a thorough and rigorous explanation. For example, economists believe that foreign trade can harm some workers but make most members of the community better off. We need theory to explain why. Or another example: Average incomes of people who live in market economies have grown far faster than those of others in countries where the economy is directed by government planners. Again, theory can explain why.

These observations also suggest two major areas in which this book has been changed since the previous edition. Although coverage of trade among nations and economic growth have always played a substantial part in this text, these subjects are now emphasized even more and are raised wherever they are appropriate. We were induced to turn in this direction by recent developments in the United States and in other industrial economies. More and more of what is produced in the typical country is sold abroad rather than to domestic consumers. Correspondingly, ever more of what consumers buy comes from other lands. At the same time, the continuing appearance of new and improved technology enables workers in all countries to produce more than they did before. Yet, despite the resulting prosperity in the United States during most of the last two decades, the earnings of less-educated workers have fallen behind those of workers with more education and higher skills.

To keep up the prosperity, to offer a better future to those who are now less educated, and to deal with the enormous economic problems of the poorer nations of the world, we need to understand the effects of international trade and of improvements in technology. Do they make most of us better off by making products cheaper, so that our incomes go further? Or do they threaten our incomes by making us more vulnerable to foreign competition and labor-saving technology? These crucial issues are addressed at several points in this book. We have provided an entirely new chapter (Chapter 15) analyzing how competition involving improved products and production techniques drives the growth in free-market economies. This chapter offers material that has not been published previously and seems to have no counterpart in other principles texts.

In addition to this new chapter, many parts of the book have been extensively rewritten and reorganized for easier comprehension. Many of these changes follow suggestions of users of the book and others whose opinions we solicited in an extensive survey. In particular, the four core microeconomics chapters were substantially modified with improved readability in mind. In each of these chapters we were careful to retain the features that readers reported as being helpful in earlier editions.

We have also added a brief treatment of the principle of comparative advantage to Chapter 4. Last, but certainly not least, these halcyon days—when neither high unemployment nor high inflation seem to threaten the U.S. economy—make it appropriate to place greater emphasis on economic growth in the macroeconomic discussion. This has been done throughout the book, but especially in Chapters 24, 33, and 34.

NOTE TO THE STUDENT

We would like to offer one suggestion for success in your economics course. Unlike some of the other courses you may be taking, economics is cumulative: Each week's lesson builds upon what you have learned before. You will save yourself a lot of frustration and a lot of work by keeping up on a week-to-week basis. To assist you in doing so, we provide a chapter summary, a list of important terms and concepts, and a selection of questions to help you review the contents of each chapter. Making use of these learning aids will increase your chances of success in your economics course. For additional assistance, we have developed student supplements to help reinforce the concepts in this book and provide opportunity for practice and feedback. See the following list of ancillaries for learning tools that apply specifically to students.

ANCILLARIES

As economic education incorporates new technologies, we have expanded and improved our extensive learning package to accommodate student and instructor needs.

STUDY GUIDE Craig Swan of the University of Minnesota has revised the student Study Guide to make it an even more valuable tool for understanding the text's main concepts. The Study Guide, which is available in main, micro, and macro split versions, includes:

- Learning objectives
- Lists of important terms and concepts for every chapter
- Quizzes that help students test their understanding and comprehension of concepts
- Multiple-choice tests for self-understanding
- Lists of supplementary readings and study questions for every chapter
- “Economics in Action” sections that use current news articles to illustrate economic concepts
- “Economics Online,” exercises that outline useful Internet and Web sources for economic data and information. Periodic updates of these sources will be provided on the Dryden/Harcourt Web page at www.harcourtcollege.com.

INSTRUCTOR'S MANUAL David O'Hara of Metropolitan State University has extensively revised the Instructor's Manual. Every chapter includes detailed chapter outlines, teaching tips and suggestions, answers to end-of-chapter questions in the main text, and questions for classroom discussion.

MICROECONOMICS TEST BANK The updated and revised Microeconomics Test Bank by Doug Kinnear of Colorado State University consists of more than 200 questions per chapter and covers Chapters 1–22 and 35 in the text. Every question has been checked to ensure the accuracy and clarity of the answers and painstakingly revised to address the main text revisions. The Test Bank includes true/false, multiple-choice, and short-answer questions that assess students' critical-thinking skills. Easy, medium, and difficult questions outline the process that students must use to arrive at their answers: recall, application, and integration. Questions are organized by text section to help instructors pick and choose their selections with ease.

MACROECONOMICS TEST BANK The updated and revised Macroeconomics Test Bank by Edward F. Stuart of Northeastern Illinois University consists of more than

200 questions per chapter covering Chapters 23–34 and 36–37 in the text. Every question has been checked to ensure the accuracy and clarity of the answers and painstakingly revised to address the main text revisions. The Test Bank includes true/false, multiple-choice, and short-answer questions that assess students' critical-thinking skills. Easy, medium, and difficult questions outline the process that students must use to arrive at their answers: recall, application, and integration. Questions are organized by text section to help instructors pick and choose their selections with ease.

COMPUTERIZED TEST BANKS The computerized Test Banks, available in our easy-to-use EXAMaster program, have been enhanced significantly for this edition. EXAMaster allows instructors to add and edit their own questions, create and edit graphics, print scrambled versions of tests, and convert multiple-choice questions to open-ended questions. EXAMaster 99 now includes a more intuitive graphic interface, increased test sizes of up to 500 questions, the capacity to create up to 99 versions of any one test, online testing and grade bookkeeping, and many more features. The new software is now available on CD-ROM in Windows and Macintosh formats.

THE WALL STREET JOURNAL EDITION Instructors can help students relate the economic concepts in the text to everyday life by ordering the *Wall Street Journal* edition of the textbook. This special edition supplements the standard edition with a discounted 20-week *Wall Street Journal* subscription for students. Professors get a free subscription when 10 or more of their students order the *Wall Street Journal*. The *Wall Street Journal* provides an effective tie-in to the text because new examples of economic principles appear in each day's paper. Students can activate their subscriptions by simply completing and mailing the business reply card located in the back of the book. This option is available for both the main version of the book and the paperback splits. Instructors interested in finding out more about this program can contact their sales representative or simply call 800-782-4479.

TRANSPARENCY ACETATES Full color transparency acetates for all important figures and tables in the eighth edition are available for use on an overhead projector. They are available to adopters upon request in microeconomic and macroeconomic sets.

POWERPOINT PRESENTATION SOFTWARE Steven Shulman of Colorado State University has prepared a comprehensive and user-friendly PowerPoint presentation for use in classroom lectures. The presentation consists of speaking points and chapter outlines that are accompanied by graphs and tables from the main text. *PowerPoint Viewer* is provided in the package.

ECONACTIVE STUDENT CD-ROM A new HTML-based EconActive student CD-ROM supplement is now available and very easy to use. The look and feel is similar to that of a Web site. The CD-ROM contains chapter-review sections, automatically graded multiple choice and true/false quizzes, "cyberproblems" that launch to the World Wide Web for real-world economic analysis, and more. It also includes interactive graphs and graphing problems that require students to graph solutions.

INSTRUCTOR'S CD-ROM Beginning with the eighth edition, accompanying instructor's supplements are available on one CD-ROM. Included on the CD-ROM are the PowerPoint slides, Instructor's Manual, and Test Banks. The CD-ROM also displays a navigation bar that allows instructors to easily search among the microeconomics and macroeconomics versions of the supplements.

WEB SITE Valuable resources for both instructors and students can be found on the Internet at www.dryden.com/econ/baumol. For instructors, the PowerPoint presentations and Instructor's Manual are available on the instructors' resources section of the site. Students will find chapter-by-chapter links to economics-related Internet

sites, automatically graded practice quizzes, PowerPoint slides for their review, sample chapters from the study guide and *Econ.Active CD-ROM*, and other resources. Also, career listings for students, leading economic indicator information, and an economic URL database can be found at www.dryden.com.

WEBCT COURSE MANAGEMENT SOFTWARE Harcourt now offers HTML-based software for instructors who are interested in building Web-based learning sites for their students. This software can be utilized by nontechnical users to create entire online courses or simply to post office hours or supplementary course materials for students. Instructors can design Web sites that provide a full array of educational tools, including communications links with their students, Web testing, student grade tracking with access control, database collaboration and searching, and more. It is free of charge to adopters. For more information, call the Harcourt customer service line at 800-237-2665, or visit our home page at www.harcourtcollege.com. You can also visit www.webct.com for a “virtual” tour.

MACROECONOMICS ONLINE Available for Spring 2000, *Macroeconomics Online* by Michael Lehmann and Tawni Ferrarini is a Web-based course that can serve as a supplement to the macroeconomics portion of this text. The course, which uses the Web-CT platform and is delivered online, uses the retrieval of economic data from the World Wide Web and graphical analysis to teach real-world application of economic concepts.

INTERACTIVE COMPUTER GAMES *Survival II: Warrior Island* and *Inuit Hunter* are two interactive games designed by George Bohler, Professor of Economics at Florida Community College at Jacksonville. Both games teach basic economic principles through the discovery method.

- The setting of *Survival II: Warrior Island* is a remote island in the Pacific Ocean populated by 100 survivors of a shipwreck. The goal of the game is to maximize survivors’ food production in their 12 months of exile. Players quickly learn that the game’s objective requires the application of fundamental economic concepts including resource allocation, capital budgeting, and opportunity cost.
- *Inuit Hunter* is a game of economic strategy that endeavors to recreate the survival activities of Inuit hunter-gatherer bands of the Canadian Arctic in the early years of the 20th century. As with most games, the object is to win. The player who accumulates the highest number of fox furs by the end of the game is the winner. In order to do this, a number of economic principles—including scarcity, opportunity cost, the advantages of trade and specialization, and profit maximization—must be employed.

GAMES MANUAL A games manual, in part a contribution by Charles Stull of Kalamazoo College, provides instructors with classroom games designed to illustrate and enliven important economic concepts. The games have been tremendously popular with instructors and are very useful for classroom learning.

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NOTE TO THE INSTRUCTOR

In trying to improve the book from one edition to the next, we rely heavily on our experiences as teachers. But our experience using the book is minuscule compared with that of the hundreds of instructors who use it nationwide. If you encounter problems or have suggestions for improving the book, we urge you to let us know

by writing to us in care of Harcourt College Publishers, 301 Commerce Street, Suite 3700, Fort Worth, TX 76102. Such letters are invaluable, and we are glad to receive both praise and suggestions for improvement. Many such suggestions that were accumulated after publication of the seventh edition have found their way into this new book. Suggested course outlines for both one-semester and one-quarter courses follow.

OUTLINE FOR A ONE-SEMESTER COURSE IN MICROECONOMICS

CHAPTER	TITLE
1	What is Economics?
2	The Use and Misuse of Graphs
3	The Economy: Myth and Reality
4	Scarcity and Choice: <i>The Economic Problem</i>
5	Supply and Demand: An Initial Look
6	Consumer Choice: Individual and Market Demand
7	Demand and Elasticity
8	Production, Inputs, and Cost: Building Blocks for Supply Analysis
9	Output, Price, and Profit: The Importance of Marginal Analysis
10	The Firm and the Industry Under Perfect Competition
11	The Price System and the Case for the Free Market
12	Monopoly
13	Between Competition and Monopoly
14	The Market Mechanism: Shortcomings and Remedies
15	The Microeconomics of Innovation: Prime Engine of Growth
16	Real Firms and their Financing: Stocks and Bonds
17	Pricing the Factors of Production
18	Labor: The Human Input
20	Limiting Market Power: Regulation and Antitrust
21	Taxation and Resource Allocation

Plus any two of the following:

19	Poverty, Inequality, and Discrimination
22	Externalities, the Environment, and Natural Resources
35	International Trade and Comparative Advantage

OUTLINE FOR A ONE-SEMESTER COURSE IN MACROECONOMICS

CHAPTER	TITLE
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5	Supply and Demand: An Initial Look
23	The Realm of Macroeconomics
24	The Goals of Macroeconomic Policy
25	Income and Spending: The Powerful Consumer
26	Demand-Side Equilibrium: Unemployment or Inflation?
27	Changes on the Demand Side: Multiplier Analysis
28	Supply-Side Equilibrium: Unemployment <i>and</i> Inflation?
29	Managing Aggregate Demand: Fiscal Policy
30	Money and the Banking System
31	Monetary Policy and the National Economy
32	The Debate Over Monetary Policy
33	Deficits, Monetary Policy, and Growth
34	The Phillips Curve and Economic Growth
35	International Trade and Comparative Advantage
36	The International Monetary System: Order or Disorder?
37	Exchange Rates and the Macroeconomy

**OUTLINE FOR A ONE-SEMESTER COURSE COVERING BOTH
MACROECONOMICS AND MICROECONOMICS**

CHAPTER	TITLE
1	What is Economics?
2	The Use and Misuse of Graphs
3	The Economy: Myth and Reality
4	Scarcity and Choice: <i>The Economic Problem</i>
5	Supply and Demand: An Initial Look
6	Consumer Choice: Individual and Market Demand
7	Demand and Elasticity
8	Production, Inputs, and Cost: Building Blocks for Supply Analysis
9	Output, Price, and Profit: The Importance of Marginal Analysis
12	Monopoly
13	Between Competition and Monopoly
17	Pricing the Factors of Production
18	Labor: The Human Input
23	The Realm of Macroeconomics
25	Income and Spending: The Powerful Consumer
26	Demand-Side Equilibrium: Unemployment or Inflation?
28	Supply-Side Equilibrium: Unemployment <i>and</i> Inflation?

OUTLINE FOR A ONE-QUARTER COURSE IN MICROECONOMICS

CHAPTER	TITLE
4	Scarcity and Choice: <i>The Economic Problem</i>
5	Supply and Demand: An Initial Look
6	Consumer Choice: Individual and Market Demand
7	Demand and Elasticity
8	Production, Inputs, and Cost: Building Blocks for Supply Analysis
9	Output, Price, and Profit: The Importance of Marginal Analysis
10	The Firm and the Industry Under Perfect Competition
11	The Price System and the Case for the Free Market
12	Monopoly
13	Between Competition and Monopoly
14	The Market Mechanism: Shortcomings and Remedies
16	Real Firms and Their Financing: Stocks and Bonds
17	Pricing the Factors of Production
18	Labor: The Human Input
21	Taxation and Resource Allocation

OUTLINE FOR A ONE-QUARTER COURSE IN MACROECONOMICS

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30	Money and the Banking System
31	Monetary Policy and the National Economy
32	The Debate Over Monetary Policy
33	Deficits, Monetary Policy, and Growth
34	The Phillips Curve and Economic Growth

OUTLINE FOR A ONE-QUARTER COURSE ON APPLICATIONS OF BOTH MACROECONOMICS AND MICROECONOMICS

CHAPTER	TITLE
19	Poverty, Inequality, and Discrimination
20	Limiting Market Power: Regulation and Antitrust
21	Taxation and Resource Allocation
22	Externalities, the Environment, and Natural Resources
24	The Goals of Macroeconomic Policy
33	Deficits, Monetary Policy, and Growth
35	International Trade and Comparative Advantage
36	The International Monetary System: Order or Disorder?
37	Exchange Rates and the Macroeconomy

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Finally, and with great pleasure, we turn to the customary acknowledgments of indebtedness. Ours have been accumulating now through eight editions. In these days of specialization, even a pair of authors cannot master every subject that an introductory textbook must cover. Our friends and colleagues Albert Ando, Charles Berry, Rebecca Blank, William Branson, the late Lester Chandler, Gregory Chow, Avinash Dixit, Robert Eisner, Susan Feiner, the late Stephen Goldfeld, Claudia Goldin, Ronald Grieson, Daniel Hamermesh, Yuzo Honda, Peter Kenen, Melvin Krauss, Herbert Levine, the late Arthur Lewis, Burton Malkiel, Edwin Mills, Janusz Ordovery, Uwe Reinhardt, Harvey Rosen, Laura Tyson, and Martin Weitzman have all given generously of their knowledge in particular areas over the course of eight editions. We have learned much from them, and only wish we had learned more.

Many economists and students at other colleges and universities offered useful suggestions for improvements, many of which we have incorporated into this eighth edition. We wish to thank Ray Cohn, Illinois State University; George Hoffer, Virginia Commonwealth University; Kirk Kim, University of Wisconsin at Whitewater; Doug Kinnear, Colorado State University; Sang Lee, University of Florida; Robby Rosenman, Washington State University; Edward Stuart, Northeastern Illinois University; John Tiemstra, Calvin College; Hendrick Van den Berg, University of Nebraska at Lincoln; Doug Walker, Louisiana State University; and Stephan Weiler, Colorado State University, for their insightful reviews.

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And, finally, there are our wives, Hilda Baumol and Madeline Blinder. They have now participated and helped with this project for nearly a quarter of a century. During that period, this book has quite literally become part of our families. And both their contributions and our affection have grown.

*William J. Baumol
Alan S. Blinder*

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