# MICROECONOMICS

PRINCIPLES AND POLICY

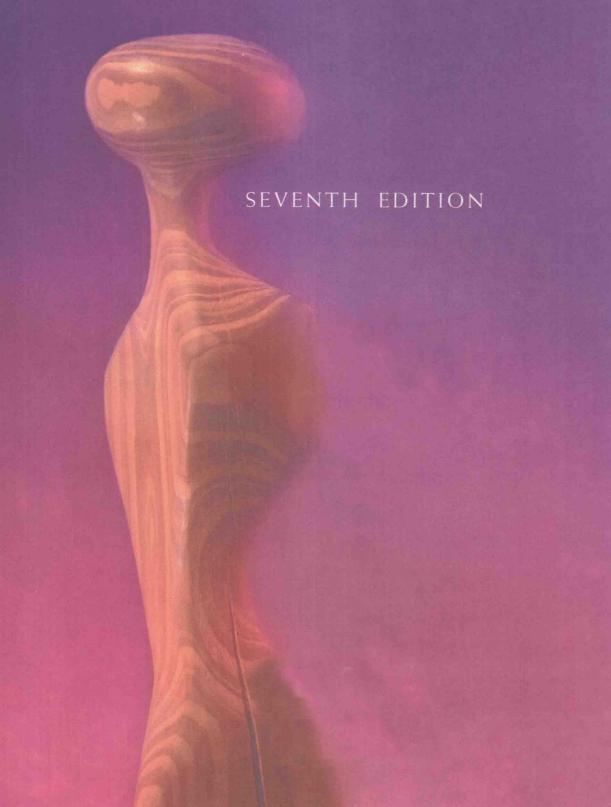
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SEVENTH EDITION

WILLIAM J. BAUMOL ALAN S. BLINDER

## MICROECONOMICS

PRINCIPLES AND POLICY



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## MICROECONOMICS

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1998 UPDATE

SEVENTH EDITION

### WILLIAM J. BAUMOL

C.V. STARR CENTER FOR APPLIED ECONOMICS

NEW YORK UNIVERSITY

### ALAN S. BLINDER

PRINCETON UNIVERSITY



### THE DRYDEN PRESS HARCOURT BRACE COLLEGE PUBLISHERS

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To my four children, Ellen, Daniel, and now Sabrina and Jim W.J.B.

To the memory of my father, Morris Blinder, to whom I owe much A.S.B.

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#### PREFACE

he Seventh Edition continues the basic philosophy of its predecessors. In particular, we avoid the fiction, so popular among textbook writers, that everything is of the utmost importance—a pretense that students are sufficiently intelligent to see through in any event. We try, instead, to highlight those important ideas that are likely to be of lasting significance—principles that students will want to remember long after the course is over because they offer insights that are far from obvious, because they are of practical importance, and because they are widely misunderstood by intelligent laymen. Eight of the most important of these ideas are selected as **Ideas for Beyond the Final Exam** and are called to the reader's attention when they occur through the use of the symbol \( \bigcirc\).

While all modern economics textbooks abound with "real world" examples, we try to go beyond this by elevating the examples to preeminence. In our view, the policy issue or everyday economic problem ought to lead the student naturally to the economic principle, not the other way around. For this reason, almost every chapter begins with a real policy issue or a practical problem that may seem puzzling or paradoxical to noneconomists. We then proceed to describe the economic analysis required to remove the mystery.

In so doing, we use technical terminology and diagrams only where there is a clear need for them, never for their own sake. Still, economics is a technical subject, and so this is, unavoidably, a book for the desk and not for the bed. We make, however, strenuous efforts to simplify the technical level of the discussion as much as possible without sacrificing content. Fortunately, almost every important idea in economics can be explained in plain English, and this is what we try to do.

Each edition of this book has been influenced by economic events. Reflecting the growing "globalization" of the world economy, the Fifth Edition was substantially revised to exhibit more clearly the international linkages between the U.S. economy and other economies. The Sixth Edition was written just after the collapse of communism. Since the book has long focused on the market mechanism and how it works, it was easy to incorporate these stunning events into the discussion. Both of these features are retained in the Seventh Edition.

But the Seventh Edition is also affected by another critical development—one that cannot be dealt with so definitively: rising inequality in the world's industrialized countries in general, and in the United States in particular. While overall income continues to grow in these countries, more and more of each nation's income and wealth are going to the most affluent portion of the population, while lower-income groups fall further and further behind. This development is not new; it has been going on for more than a decade. But its very persistence has now made it a subject of urgent concern.

Rising inequality has been accompanied by a sharp and continuing slowdown of growth and by a severe stagnation in the rise of American real wages. Unfortunately, no one is quite sure about the causes of these worrisome developments

nor about the means that can be used to ameliorate them. The issues are, therefore, raised at a number of points in this book, and the pertinent facts are reported and discussed. But we are suitably modest in discussing both the underlying causes and the policy issues to which they give rise.

Several new features of this edition are worth noting. The order of the core chapters on microeconomics, Chapters 5 through 8, has been changed in response to suggestions from readers. Their suggestions also led us to add more substantial discussions of consumers' surplus in Chapter 5, price discrimination in Chapter 11, and game theory in Chapter 12. Many more "Policy Debate" boxes, a popular feature of the last edition, have been added to this edition. We have also included a new feature that offers students a somewhat more tangible picture of some of the subjects discussed. New boxes called "You Are There" describe an antitrust court case and activities on the floor of the New York Stock Exchange. Finally, the book has undergone extensive and painstaking updating throughout, so that new material could be added without increasing overall length.

As a last personal note, we must mention that most of the Seventh Edition, like the Sixth before it, had to be written under the handicap of a separation between the coauthors. Happily, this separation entailed neither disagreement nor rancor, and is now over. Alan Blinder's sojourn in Washington—first as a Member of the President's Council of Economic Advisers and then as Vice Chairman of the Federal Reserve Board—has undoubtedly contributed to the relevance of this book's materials to the real world. But it has also made communication between us far more challenging.

However, there is a silver lining to this cloud of inconvenience. Blinder reports renewed and enhanced respect for Herbert Stein's sage observation that "most of the economics that is usable for advising on public policy is at about the level of the introductory undergraduate course."

#### 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 both a lot of frustration and a lot of work by keeping up on a week-toweek basis. To assist you in doing so, a chapter summary, a list of important terms and concepts, and a selection of questions to help you with your review are provided at the end of each chapter. Making use of these learning aids will increase your success in your economics course. For additional assistance, see the following list of ancillary materials.

#### **ANCILLARIES**

As economic education incorporates new technologies, our extensive learning package has been expanded and improved to accommodate the needs of students and instructors.

Microeconomics Study Guide by Craig Swan, University of Minnesota (for students). Our study guide includes learning objectives, a list of important terms and concepts for every chapter, and a quiz that helps students test their understanding and comprehension of concepts. Also included are multiplechoice tests for self-understanding, a list of supplementary readings and study questions for every chapter, and "Economics in Action" sections that use current news articles to illustrate economic concepts. A new feature, "Economics On-Line," outlines useful Internet and Web sources for economic data and information. Periodic updates of these sources will be provided on the Dryden/Harcourt Web page: www.hbcollege.com.

- Instructor's Manual/Transparency Masters by John Isbister, University of California—Santa Cruz. Every chapter in the revised Instructor's Manual consists of detailed chapter outlines, teaching tips and suggestions, answers to review questions in the text, and questions for classroom discussion. Multiple-choice questions suitable for quizzes and tests have been added in this edition. The transparency masters include all figures and tables not available as acetates.
- Microeconomics Test Bank by Colleen Cameron, University of Mississippi. This updated and reorganized test bank consists of more than 5,500 questions. Every question has been checked to ensure the accuracy and clarity of the answers, and special thanks go to Bryan Taylor for providing this important service. The questions include true/false, analytical and definitional, multiple-choice, and critical-thinking, short-answer questions. Questions have been organized by section in the text to help instructors pick and choose questions with minimum inconvenience. The test bank is also available in computerized IBM and Windows versions in our easy-to-use EXAMaster program. EXAMaster allows you to add and edit your own questions, create and edit graphics, print scrambled versions of tests, convert multiple-choice questions to open-ended questions, plus much more.
- *Transparency Acetates.* Full color transparency acetates for all important figures and tables in the text.
- Weekly News Updates. Each news update links topics in the text with current economic events and consists of the synopsis of a pertinent article, references to a topic or chapter in the text, and a few discussion questions suitable for classroom use. The news updates are posted on the Harcourt Web page.
- PowerPoint<sup>®</sup> Presentation Software. This user-friendly slide show is suitable for classroom presentations. It consists of important graphs and tables from the text as well as bulleted summaries and chapter outlines. PowerPoint Viewer is provided in the package.
- Tutorial, Analytical, and Graphing (TAG) Software by Todd Porter and Teresa Riley, Youngstown State University (for students). In addition to an extensive chapter-by-chapter tutorial, a hands-on graphing section in which students are actually required to draw curves (with keystrokes or a mouse), and a practice exam for each section, this tutorial software consists of a number of new and innovative features added for this edition. Annotated multiple-choice questions give students feedback on their answers and explain reasons why a particular answer is right or wrong. The software is now available in a new Windows version.

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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 either one of us in care of The Dryden Press, 301 Commerce Street, Suite 3700, Fort Worth, TX 76102. Such letters are invaluable, and we are glad to receive them, even if they are critical (but not *too* critical!). Many such suggestions accumulated over the past three years found their way into the Seventh Edition. What follows are suggested course outlines for a one-semester and a one-quarter course in microeconomics.

#### **OUTLINE FOR A ONE-SEMESTER COURSE IN MICROECONOMICS**

Chapter	
Number	Title
1	What Is Economics?
2	The U.S. Economy: Myth and Reality
3	Scarcity and Choice: The Economic Problem
4	Supply and Demand: An Initial Look
5	Consumer Choice: The Demand Side of the Market
6	Demand and Elasticity
7	Production, Inputs, and Cost: Building Blocks for Supply Analysis
8	Output, Price, and Profit: The Importance of Marginal Analysis
9	The Firm and the Industry under Perfect Competition
10	The Price System and the Case for Laissez-Faire
11	Monopoly
12	Between Competition and Monopoly
13	The Market Mechanism: Shortcomings and Remedies
14	Real Firms and Their Financing: Stocks and Bonds
15	Pricing the Factors of Production
16	Labor: The Human Input
18	Limiting Market Power: Regulation of Industry
19	Limiting Market Power: Antitrust Policy
20	Taxation and Resource Allocation

#### **OUTLINE FOR A ONE-QUARTER COURSE IN MICROECONOMICS**

Chapter Number	Title
3	Scarcity and Choice: <i>The</i> Economic Problem
4	Supply and Demand: An Initial Look
4 5	Consumer Choice: The Demand Side of the Market
6	Demand and Elasticity
7	Production, Inputs, and Cost: Building Blocks for Supply Analysis
8	Output, Price, and Profit: The Importance of Marginal Analysis
9	The Firm and the Industry under Perfect Competition
10	The Price System and the Case for Laissez-Faire
11	Monopoly
12	Between Competition and Monopoly
13	The Market Mechanism: Shortcomings and Remedies
14	Real Firms and Their Financing: Stocks and Bonds

- 15 Pricing the Factors of Production
- Labor: The Human Input 16
- 20 Taxation and Resource Allocation

#### WITH THANKS

Finally, and with great pleasure, we turn to the customary acknowledgments of indebtedness. Ours have been accumulating now through seven editions. In these days of specialization, not even a pair of authors can 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 Ordover, Uwe Reinhardt, Harvey Rosen, Laura Tyson, and Martin Weitzman have all given generously of their knowledge in particular areas over the course of seven 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 the Seventh Edition. We wish to thank Mordechai Kreinin, Michigan State University; David Bradford, University of New Hampshire; Arthur Diamond, University of Nebraska-Omaha; Norman J. Waitzman, the University of Utah; Philip G. King, San Francisco State University; Thomas G. Watkins, Eastern Kentucky University; James E. Bell, Harris-Stowe State College; Donald N. Baum, University of Nebraska-Omaha; Jim Cox, DeKalb College; David N. Weil, Brown University; Ted W. Chiles, Auburn University at Montgomery; Daniel Vencill, San Francisco State University; and Terence J. Alexander, Iowa State University, for their insightful reviews.

We also wish to thank the many economists who responded to our survey; their responses were invaluable in planning this revision: Donald C. Balch, University of South Carolina; John Bockino, Suffolk Community College; Michael J. Smitka, Washington & Lee University; Hassan Y. Aly, Ohio State University—Marion Campus; Carol M. Clark, Guilford College; John A. Edgren, Eastern Michigan University; Michael Dowd, University of Toledo; Colleen Cameron, University of Southern Mississippi; Donald A. Coffin, Indiana University Northwest; Shyam Bhatia, Indiana University Northwest; John W. Dodge, University of Sioux Falls; John Blair, Wright State University; David Bradford, University of New Hampshire; James H. Breece, University of Maine; Nancy R. Fox, Saint Joseph's University; Terence J. Alexander, Iowa State University; George Giu, Tuskegee University; S. N. Gajanan, University of Pittsburgh at Bradford; Steven E. Abraham, University of Northern Iowa; James N. Wetzel, Virginia Commonwealth University; Bruce Carpenter, Mansfield University; Yilma Gebremariam, Southern Connecticut State University; Marie D. Connolly, Chatham College; and Garry Fleming, Roanoke College.

Obviously, the book you hold in your hand was not produced by us alone. An essential role was played by the fine people at The Dryden Press, including Emily Barrosse, Executive Editor for Economics; Jeanie Anirudhan, Developmental Editor; Stacey Sims, Developmental Editor; Amy Schmidt, Project Editor; Linda Miller, Art Director; and Ann Coburn, Production Manager. We would also like to thank Carol Cirulli and Sean Lanham for their role in this edition. We appreciate all of their efforts. William Baumol is grateful to the publisher, and especially to Linda Miller, the book's art director, for the decision to use photographs of Professor Baumol's sculptures as a design feature throughout the volume.

We also thank our intelligent and delightful secretaries and research coworkers at Princeton University and New York University: Phyllis Durepos and Janeece Roderick, who struggled successfully with the myriad tasks involved in completing the manuscript. Above all, Professor Baumol owes an unrepayable debt to his longstanding partner in

#### **xvi** Preface

crime, Sue Anne Batey Blackman, who carried out much of the updating of materials and who contributed draft paragraphs, illustrative items, and far more with her usual insight and diligence. By now, she undoubtedly knows more about the book than the authors do.

And, finally, there are our wives, Hilda Baumol and Madeline Blinder. They have now participated and helped with this project for over 20 years. 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

#### ABOUT THE AUTHORS

William J. Baumol was born and raised in New York City. He received his undergraduate degree in economics with a minor in art from the City University of New York and his Ph.D. in economics from the London School of Economics.

He taught at Princeton University for over forty years, and he is now at New York University, where he is the director of the C.V. Starr Center for Applied Economics.

Professor Baumol has published over five hundred scholarly articles and more than twenty books that have been translated into a dozen languages.

He has been president of four professional societies, including the American Economic Association. He is also a member of the Board of Trustees of the Joint Council on Economic Education and a member of the National Academy of Sciences.

He is married and has two children and two grandchildren. In addition to courses in economics, Professor Baumol also taught wood sculpture at Princeton University.

Alan S. Blinder was born in New York City and earned his A.B. at Princeton University, his M.Sc. at the London School of Economics, and his Ph.D. at Massachusetts Institute of Technology—all in economics.

Since 1971, he has taught at Princeton University, where he is now the Gordon S. Rentschler Memorial Professor of Economics. Professor Blinder chaired the department of economics from 1988 to 1990, and he is also the founder and director of Princeton's Center for Economic Policy Studies.

Professor Blinder is the author of ten books and scores of scholarly articles. He is a member of the American Philosophical Society and the American Academy of Arts and Sciences. From January 1993 through January 1996, he served in Washington—first as a Member of the President's Council of Economic Advisers and then as Vice Chairman of the Board of Governors of the Federal Reserve System.

Professor Blinder is married, has two sons, and resides in Princeton, New Jersey.

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