

# Principles of Microeconomics

second edition

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(Credits continue following the index.)

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### **Preface**

The goal of this book is to present modern economics in a form that is intuitive, interesting, and useful for students who have had no prior exposure to this fascinating subject. When I took the introductory economics course in college way back in the 1960s, I found the course and the textbook (Paul Samuelson's) fascinating. People called 1960s-vintage economics the "new economics," because many new ideas, including those put forth by John Maynard Keynes, were being applied for the first time in public policy. But during the 1970s, the 1980s, and the 1990s, economics underwent another tremendous wave of change. Now at the end of the 20th century, economics places much greater emphasis on incentives, on expectations, on long-run fundamentals, on the use of experiments, on rich surveys of individual experiences, on the theory of institutions, and on the importance of stable, predictable economic policies. These new ideas are both interesting and of great relevance to individuals, to firms, and to governments as we start the 21st century. The world economy has also changed radically in the last thirty years with market economies now being the preferred choice of virtually all countries around the world and with billions of more people linked together through international trade. With these changes economics is now more fascinating and more relevant than ever.

#### JOINING THE OLD WITH THE NEW

My strategy in developing the first edition of the textbook, published three years ago, was to give these changes a prominent, clearly explained place alongside the older parts of economics and thereby to make modern economics—with all its fascination and relevance—available to beginning students. The enthusiastic reaction of teachers and students to the first edition has validated this strategy. Teachers who have successfully taught from the first edition point to the clear demonstrations of how a market economy actually works, to the thorough explanation of why markets are efficient when incentives are right and inefficient when incentives are wrong, to the emphasis on long-run fundamentals, to the lively analysis and discussion of real-world public policy, and perhaps most crucial—and certainly the most gratifying to me—to the clear, intuitive explanation of basic economic principles through analogy, example, and user-friendly graphs and illustrations.

#### DEVELOPING THE SECOND EDITION

My strategy in developing the second edition of the text was to produce a streamlined version of the first edition—with more efficient exposition, better organization, more visually effective page layouts, and with many new and updated real-world examples. Suggestions for the revision came from students in the introductory course I teach each year, from students and faculty who have used the book at many other colleges and universities, and from experts in specialized areas—such as experimental economics or international trade—whose advice we sought directly.

Armed with these suggestions we created a revised outline for the second edition. I then revisited every line of text, every graph, every box, every cartoon, and

every photo, adding, deleting, or rewriting to streamline, clarify, and update. After faculty reviews of this draft and, of course, more editing and rewriting, the manuscript moved into production, during which layout—the size and placement of text, tables, and graphs on the page—became my paramount concern. One of the advantages of modern computer page-making techniques is that I could interact in real time with the production editor, experimenting with different layouts and making sure, for example, that the descriptions of the graphs in the text were placed at the most helpful positions relative to the graphs themselves. Though most time-consuming, this interaction was invaluable for making a user-friendly, visually efficient layout.

#### Key Text Revisions: Streamlining, Updating, and Enhancing Intuition

A few examples of the changes I made in the second edition will show how the discussion was streamlined, made more intuitive, and updated. A detailed account of all the additions, deletions, and modifications is found in the transition guide in the Instructor's Resource Manual and on the web site (http://www.hmco.com/college).

Major streamlining was achieved, for example, by eliminating Chapter 14, which had previewed the role of government, and by integrating the material on public choice into the chapter on public goods and externalities (now Chapter 15). Other examples of improved organization include moving the material on the nature of firms from Chapter 8 to Chapter 6 (the first chapter on the theory of the firm) and moving some of the discussion of the role of government to Chapter 10 on monopoly so that instructors can discuss policy options before the more detailed treatment of antitrust and regulation in Chapter 16.

Examples of more intuitive explanations include the use of a new extended example of a student-run firm to derive the supply curve in Chapter 6. And by highlighting the analogy between the consumer decision in Chapter 5, and the firm decision in Chapter 6, the trio of Chapters 5, 6, and 7 (about which many faculty have been especially enthusiastic) now works better than ever. To make the double-auction market demonstration more useful to instructors (who may not have time to conduct experiments in class), we produced a short video to illustrate how experimental markets work.

#### **New, Improved Boxes**

As we revised, added, or updated boxes, we gave many of them special designations—"Reading the News About . . ." or "Using Economics to Explain . ."—in order to help students use the material more effectively. Among the many new or revised boxes you'll find coverage of experimental results on the theory of taxation (Chapter 7) and the model of monopoly (Chapter 10), and helpful hints for drafting costs curves (Chapter 8); you'll also find Reading the News boxes about price floors (Chapter 3), labor supply decisions in the household (Chapter 12), stock price changes (Chapter 13), and the 1996 Welfare Reform Act (Chapter 14).

#### **Enhanced Teaching and Learning Package**

The package of teaching and learning aids (described below) has been completely revised with several new options. The teaching software has been expanded to match each chapter of the text. A web page is now available to provide additional help and information to both students and instructors. And a new series of teaching videos has been produced.

#### A BRIEF TOUR

Principles of Microeconomics is designed for a one-term course. Knowing that teachers use a great variety of sequences and syllabi, I have therefore taken great pains to allow for alternative plans of coverage. International economic issues are considered throughout the text, with separate chapters on international economic policy.

The basic workings of markets and the reasons they improve people's lives are the subjects of Part 1. Chapter 1 introduces the field of economics through a case study showing how economists observe and explain economic puzzles. Chapter 1 defines key terms and ideas, and Chapter 2 outlines the basic unifying themes of economics: scarcity, choice, and the production possibilities curve. The role of prices, the inherent international aspect of economics, the importance of property rights and incentives, and the difference between central planning and markets are some of the key ideas in these chapters. Chapters 3 and 4 cover the basic supply and demand model. I have tried to explain these basic ideas as fully and as clearly as I can, adding the extra sentence of clarification whenever it might help in understanding. The goal is to show how to use the supply and demand model and to learn to "think like an economist." A trio of chapters-5, 6, and 7-has the aim of explaining why competitive markets are efficient, perhaps the most important idea in economics. The parallel exposition of utility maximization (Chapter 5) and profit maximization (Chapter 6) culminates in a detailed description of why competitive markets are efficient (Chapter 7). These first seven chapters provide a complete, self-contained analysis of competitive markets before going on to develop more difficult concepts, such as long-run versus short-run cost curves or monopolist competition. This approach enables the student to learn, appreciate, and use important concepts such as efficiency and deadweight loss early in the course.

A modern market economy is not static; rather it grows and changes over time as firms add new and better machines and as people add to their skills and training. Part 2 describes how firms and markets grow and change over time. This part also shows how economists model the behavior of firms that are not perfectly competitive, such as monopolies. The models of dynamic behavior and imperfect competition developed here are used to explain the rise and fall of real-world firms and industries. Part 2 also delves into the special characteristics of labor markets.

Different countries have taken widely different approaches to the economy. The policy of some countries has been to intervene in virtually every economic decision; other countries have followed more hands-off policies. Part 3, therefore, is devoted to the role of government in the economy. Tax policy, welfare reform, environmental policy, international trade policy, the regulation of industry, and the role of government in producing public goods are analyzed. The problem of government failure is analyzed using models of government behavior. International trade theory and policy are explored in Chapters 17 and 18. International finance is discussed in Chapter 19, and the book concludes with an examination of economies in transition in Chapter 20.

#### PEDAGOGICAL FEATURES

The following pedagogical features are designed to help the student learn economics.

Case studies within the text. This feature uses real-world situations to help motivate economic ideas and models. Examples include health care in Chapter 1, a

#### PART 1 Introduction to Economics and Its Foundations

PART 2

Microeconomics over Time and Through Markets

PART 3
The Role of Government

recent drought in the U.S. peanut market in Chapter 3, and setting national park fees in Chapter 4.

Interesting economic puzzles to stimulate interest in economic models. Most chapters begin with a description of real-world phenomena which economics can help to explain. Examples include the opportunity costs of college for Tiger Woods in Chapter 1 and the sharp rise in oil prices during the Persian Gulf War in Chapter 4.

**Integrating modern economic concepts** in the context of substantive economic problems rather than in separate chapters. This approach demonstrates the relevance of the new ideas and keeps the text to a manageable size. For example, time inconsistency is described in the context of particular economic policy problems.

Use of experimental economics to help explain key ideas in ways that are helpful even to those who do not do such experiments. Details on how to set up and run 18 experiments are provided in an optional experiments manual. The double auction, described in Chapter 7, is one of the experiments featured in this manual and is also the subject of one of the video segments in the Economics Video series.

**Brief reviews at the end of each major section** (about four per chapter) summarize the key points in abbreviated form as the chapter evolves; these reviews are useful for preliminary skim reading as well as for review.

Boxes to give both current event and historical perspectives. Many of the text's boxes explain how to decipher recent news stories about economic policy. Others examine the contributions of the great economists such as Adam Smith and Alfred Marshall, the history of great ideas, and key historical events.

**Functional use of full color** to distinguish between curves and to show how the curves shift dynamically over time. An example of the effective use of multiple colors can be found in the discussion of increasing opportunity costs in Chapter 2.

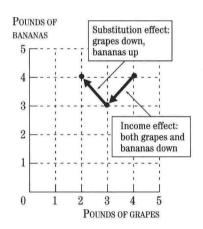
Complete captions and small conversation boxes in graphs. The captions and the small yellow-shaded conversation boxes, such as in the graph in the margin, make many of the figures completely self-contained. In some graphs, sequential numbering of these conversation boxes stresses the dynamic nature of the curves.

*Use of photos and cartoons to illustrate abstract ideas.* Special care has gone into the selection of photos to illustrate difficult economic ideas such as inelastic supply curves or opportunity costs. Each text photo (many consisting of two or three parts) has a short title and caption to explain its relevance to the text discussion.

**Key term definitions** in the margin and a listing of the terms at the end of every chapter and appendix. There is also an alphabetized glossary at the end of the book.

Questions for review at the end of every chapter. These are tests of recall and require only short answers; they can be used for oral review or as a quick self-check.

**Problems**, an essential tool in learning economics, have been carefully selected and tested. An ample supply of these appear in every chapter and appendix. Some of these problems ask the reader to work out examples that are slightly different from the ones in the text; others require a more critical thinking approach. A second set of problems which parallels those at the end of each chapter has been developed for the second edition. Included in the accompanying test bank, this problem set is also available to instructors via the web site.



## A COMPLETE PACKAGE OF TEACHING AND LEARNING AIDS

The highly effective teaching and learning package prepared to accompany the text has been completely revised, updated, and expanded. It provides a full range of support for instructors and students.

Study Guide. John Solow of the University of Iowa and Wm. Stewart Mounts, Jr. of Mercer University have prepared the study guide for the text. In my view, this study guide provides a wonderful learning opportunity that many students will value. Each chapter contains an overview, informal chapter reviews, and a section called "Zeroing In," which harnesses student intuition to explain the chapter's most important concepts. The study guide also provides ample means for practice in using the economic ideas and graphs introduced in each text chapter. A section called "Working It Out" provides worked problems that take students step by step through the analytical process needed to solve real-world applications of core concepts covered in the chapter. End-of-part quizzes offer students one last chance to test their retention of material before taking in-class exams.

Taylor Tutorial and Simulation Software. A flexible, interactive computerized tutorial is available for students to review basic concepts covered in the text. A tutorial for each chapter in the text provides a second opportunity for students to review concepts and models and then to test themselves on what they've learned. A glossary and context-sensitive help are always available. The simulation component of the software includes over 60 years of data on more than 20 key economic indicators, allowing students to graph and compare various measurement instruments and print out their results.

Test Bank. A reliable test bank is the most important resource for efficient and effective learning and teaching. A test bank to go along with the text has been prepared by Stuart Glosser of the University of Wisconsin, Whitewater, and myself. It contains more than 3,000 test questions—including multiple choice, true/false, short answer, and problems—many of which are based on graphs. The questions are coded for correct answer, question type, level of difficulty, and text topic. At the end of each test bank chapter is a set of problems that parallels the end-of-chapter problems from the text.

Computerized Testing Program. A sophisticated and user-friendly program called ESA Test is available so that instructors can quickly create tests according to various selection criteria, including random selection. The program prints graphs as well as the text part of each question. Instructors can scramble the answer choices, edit questions, add their own questions to the pool, and customize their exams in various other ways. The program is available in Windows and Mac versions.

Instructor's Resource Manual. Prepared by Wm. Stewart Mounts, Jr. of Mercer University, Denise Hixson of Midlands Technical College, and myself, the Instructor's Resource Manual provides both first-time and experienced instructors with a variety of additional resources for use with the text. Each chapter contains a brief overview, teaching objectives, key terms from the text, a section that orients instructors to the text's unique approach, and a suggested lecture outline with teaching tips that provide additional examples not found in the text and hints for teaching more

difficult material. Discussion topics and solutions to end-of-chapter text problems are also provided.

Overhead Transparencies. A set of full-color transparencies for all of the numbered figures used to describe the economic models or theories in the text is available for those who are using the text. I usually use two overhead projectors in class so that more than one figure or table can be shown simultaneously.

Power Presentation Manager. This Windows-based software, developed by Houghton Mifflin, allows instructors to create customized lecture presentations that can be displayed on computer-based projection systems. The software, which includes a run-time version of Microsoft PowerPoint, makes available the figures, tables, and key equations from the text and also allows for access to laser disk sequences, instructors' own PowerPoint sets, and screens from other Windows-based software. With the Power Presentation Manager, instructors can quickly and easily integrate all these components—and create their own screens as well—to prepare a seamless classroom presentation with minimal in-class tinkering.

Classroom Experiments: A User's Guide. As I mentioned previously, the text makes use of results from experimental economics to test models and to explain how markets work. I have regularly used experiments in my introductory economics classes—both small sections and large lectures—to illustrate how markets work, and it seems that more and more instructors are incorporating experiments into their classroom teaching. For those instructors who would like to do similar experiments, a lab manual has been prepared by Greg Delemeester of Marietta College and John Neral of Frostburg State University. Written with the first-time user in mind, the manual includes detailed step-by-step instructions for conducting 18 experiments, including the double auction experiment described in Chapter 7 of the text.

Economics Video Series. This exciting teaching tool, which combines footage from my own classroom, animated charts and graphs, and additional narration, brings key economic ideas from the text to life. The video segments can be used as lecture launchers or as a review of material both inside and outside the classroom. The videos also serve as an introduction to some of the concepts that are unique to my text—such as the experimental auction or the development of the model of competitive markets.

Web Site. The web site (http://www.hmco.com/college), developed to accompany this text, provides an extended learning environment for students and a rich store of teaching resources for instructors. With materials carefully chosen to complement and supplement each chapter, students will find key economic links for every chapter as well as numerous ways to test their mastery of chapter content—including extended web-based assignments developed by John Kane of SUNY, Oswego. Another feature allows students and instructors to submit questions or comments about the text. Instructors will find a complete set of parallel questions matching the end-of-chapter problems from the text (with answers), economic and teaching resource links, teaching tips, and the opportunity to view and demo the teaching and student software components of the teaching package.

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#### ACKNOWLEDGMENTS

Completing a project like this is a team effort. I have had the chance to work with an excellent team of professionals at Houghton Mifflin. I worked closely with Bonnie Binkert, Ann West, and Margaret Kearney on this edition and I am grateful to them for their help and encouragement. I would also like to thank Priscilla Abreu, Juli Bliss, Patricia English, Carol Merrigan, Penny Peters, and Adrienne Vincent.

I am grateful to many of my colleagues at Stanford whom I consulted hundreds of times and to the Economics 1 students who used the book and gave me feedback that helped me determine when and where to add that extra sentence of explanation.

Many college teachers and researchers read all or part of the manuscript and gave very helpful comments that were incorporated into revisions. The book would not exist without the help of these reviewers, who are listed below. In particular, I wish to thank David Figlio, Denise Hixson, and David Spencer, who reviewed the text for accuracy during the last stages of production.

My family deserves very special thanks for putting up with me and with the seemingly endless early morning phone calls and piles of manuscript, news clippings, reviews, galleys, and page proof scattered about the house as I worked on the second edition. This book is dedicated to my family.

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