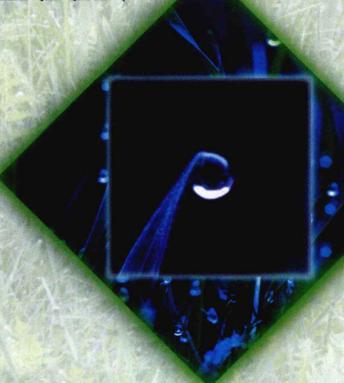


MICROECONOMICS



University of Western Ontario

SIXTH EDITION





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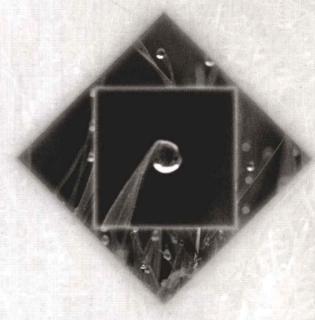
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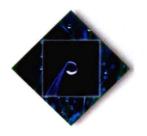
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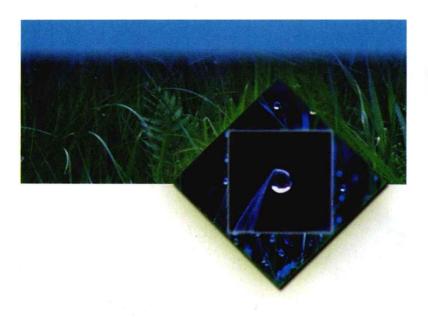
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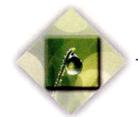
Sixth Edition



PARKIN



he cover depicts an everyday dawn scene—a field of dew-laden grass-viewed through the lens of the Parkin icon. You can look at this cover in many different ways. Here is what I see. • First, I see a metaphor for what my text, Web site, and other supplements and the extraordinary publishing effort that has created them seek to be-a window that gives students a sharply focused view of the world based on a clear and compelling account of timeless principles. • Second, I see a symbol of what economics (and all scientific endeavor) is about. The Parkin icon is like an economic model. We use models to understand reality. The model is abstract, like the diamond and its hole or aperture. The model distorts our view of the world by omitting some details. But it permits us to see the focus of our interest in the brightest and clearest possible light.



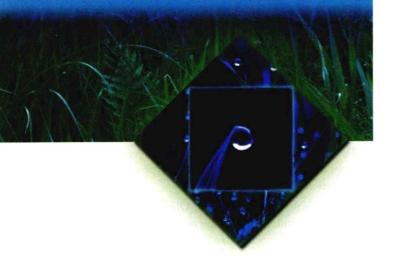
TO Robin



MICHAEL PARKIN received

his training as an economist at the Universities of Leicester and Essex in England. Currently in the Department of Economics at the University of Western Ontario, Canada, Professor Parkin has held faculty appointments at Brown University, the University of Manchester, the University of Essex, and Bond University. He is a past president of the Canadian Economics Association and has served on the editorial boards of the American Economic Review and the Journal of Monetary Economics and as managing editor of the Canadian Journal of Economics. Professor Parkin's research on macroeconomics, monetary economics, and international economics has resulted in over 160 publications in journals and edited volumes, including the American Economic Review, the Journal of Political Economy, the Review of Economic Studies, the Journal of Monetary Economics, and the Journal of Money, Credit and Banking. He became most visible to the public with his work on inflation that discredited the use of wage

and price controls. Michael Parkin also spearheaded the movement toward European monetary union. Professor Parkin is an experienced and dedicated teacher of introductory economics.



PREFACE

his book presents economics as a serious, lively, and evolving science. Its goal is to open students' eyes to the "economic way of thinking" and to help them gain insights into how the economy works and how it might be made to work better. • I provide a thorough and complete coverage of the subject, using a straightforward, precise, and clear writing style. • I am conscious that many students find economics hard, so I place the student at center stage and write for the student. I use language that doesn't intimidate and that allows the student to concentrate on the substance. • I open each chapter with a clear statement of learning objectives, a realworld student-friendly vignette to grab attention, and a brief preview. I illustrate principles with examples that are selected to hold the student's interest and to make the subject lively. And I put principles to work by using them to illuminate current real-world problems and issues. • I present some new ideas, such as dynamic comparative advantage, game theory, the modern theory of the firm, public choice theory, rational expectations, new growth theory, and real business cycle theory. But I explain these topics with familiar core ideas and tools. • Today's course springs from today's issues—the information revolution, energy deregulation, the 2001 recession, the stock market bubble, and the expansion of global trade and investment. But the principles that we use to understand these issues remain the core principles of our science. • Governments and international agencies place continued emphasis on long-term fundamentals as they seek to promote economic growth. This book reflects this emphasis. • To help promote a rich, active learning experience, I have developed a comprehensive online learning environment featuring a dynamic e-book, interactive tutorials and quizzes, daily news updates, and more.

The Sixth Edition Revision

MICROECONOMICS, SIXTH EDITION, RETAINS ALL OF the improvements achieved in its predecessor with its thorough and detailed presentation of modern economics, emphasis on real-world examples and critical thinking skills, diagrams renowned for pedagogy and precision, and path-breaking technology.

New to this edition are

- Rewritten introductory chapter
- All-new chapter on stock markets
- Revised and updated microeconomics content
- Web-based current policy topics
- Expanded Web-based Economics in Action

Rewritten Introductory Chapter

Chapter 1 has been completely rewritten to emphasize the central role of tradeoffs in economics, setting the tone for the rest of the book.

All-New Chapter 20 on Global Stock Markets

This exciting addition provides a valuable framework for addressing your students' questions about how the stock market works. What is a stock? What determines stock prices? Why are stock prices volatile? Why is it rational to diversify? How does the stock market influence the economy, and vice-versa?

Revised and Updated Microeconomics Content

The five major revisions in the microeconomics chapters are

- 1. The Economic Problem (Chapter 2): A revised and more carefully paced explanation of the gains from specialization and exchange.
- 2. Monopolistic Competition and Oligopoly (Chapter 13): An expanded explanation of repeated games and sequential games. These traditionally advanced topics are explained with examples and illustrations that bring the ideas within the grasp of beginning students.
- 3. Economic Inequality (Chapter 15): Two chapters from the Fifth Edition have been combined, streamlined, and given a new focus to explain the sources of the trend in the distribution of income—the widening gap between the highest- and lowest-income households.
- 5 Regulation and Antitrust Law (Chapter 17): Now explains the effects of price caps in monopoly markets and contrasts their effects with price ceilings in competitive markets.
- 5. Externalities (Chapter 18): Reorganized to explain the full range of positive and negative production and consumption externalities.

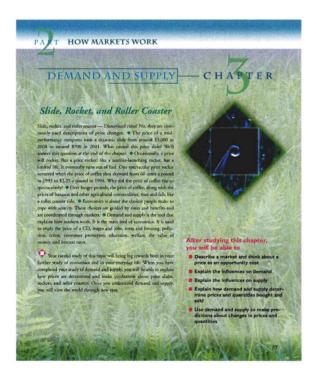
Web-Based Current Policy Topics

To achieve the most up-to-date coverage possible on current policy issues, *The Economics Place* Web site features short modules on notable policy developments. Topics include new coverage of the Farm Bill and farm subsidies (Chapter 6 on Markets in Action) and application of price caps in the California power industry (Chapter 17 on Regulation and Antitrust Law). Other topics will be added as new developments occur.

Expanded Web-Based Economics in Action

Parkin's market-leading interactive tutorial software program may now be accessed on the Web. This Java-based learning tool has been expanded to cover each and every chapter in the textbook.

Economics in Action is a powerful and wide-ranging program. Each Fast Track summary gives students a quick review of the topic at hand, while the Demo feature provides a more detailed lesson on graph movements. In Action, students may manipulate figures from the textbook by changing the conditions that lie behind them and observing how the economy responds to events. Quizzes that use five question types (fill-in-the-blank, true-or-false, multiple-choice, numeric, and complete-the-graph) can be worked with or without detailed feedback.



Features to Enhance Teaching and Learning

HERE I DESCRIBE THE CHAPTER FEATURES THAT are designed to enhance the learning process. Each chapter contains the following learning aids.

Chapter Opener

Each chapter opens with a one-page student-friendly, attention-grabbing vignette. The vignette raises questions that both motivate the student and focus the chapter. The Sixth Edition now carries this story into the main body of the chapter, and relates it to the chapter-ending *Reading Between the Lines* feature.

Chapter Objectives

A list of learning objectives enables students to see exactly where the chapter is going and to set their goals before they begin the chapter. I link these goals directly to the chapter's major headings.

After studying this chapter, you will be able to

- Describe a market and think about a price as an opportunity cost
- Explain the influences on demand
- Explain the influences on supply
- Explain how demand and supply determine prices and quantities bought and sold
- Use demand and supply to make predictions about changes in prices and quantities

In-Text Review Quizzes

A review quiz at end of most major sections enables students to determine whether a topic needs further study before moving on.

REVIEW QUIZ

- 1 What is scarcity?
- 2 Give some examples of scarcity in today's world.
- 3 Define economics.
- 4 Use the headlines in today's news to illustrate the distinction between microeconomics and macroeconomics.

Key Terms

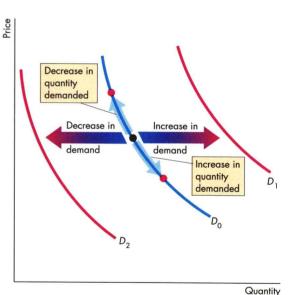
Highlighted terms within the text simplify the student's task of learning the vocabulary of economics. Each highlighted term appears in an end-of-chapter list with page numbers, in an end-of-book glossary, boldfaced in the index, in the Economics in Action software, and on the Parkin Web site.

Land is the gifts of nature that we use to produce goods and servi includes the air, the water, and KEY TERMS surface as well as the minerals Absolute advantage, 47 beneath the surface of the eart Capital is the goods that Capital, 36 produced and that we can now Capital accumulation, 43 produce other goods and servi Comparative advantage, 45 includes interstate highways, b Dynamic comparative advantage, 47 growth, 43 jum Capacity output The output at which average total cost is a minimum—the output at the bottom of the U-shaped AT Key Leim Capital The equipr tools, and manufactu we use to produce of Capital account A eign investment in a its investment abroa

Diagrams That Show the Action

This book has set new standards of clarity in its diagrams. My goal has always been to show "where the economic action is." The diagrams in this book continue to generate an enormously positive response, which confirms my view that graphical analysis is the most powerful tool available for teaching and learning economics. But many students find graphs hard to work with. For this reason, I have developed the entire art program with the study and review needs of the student in mind. The diagrams feature:

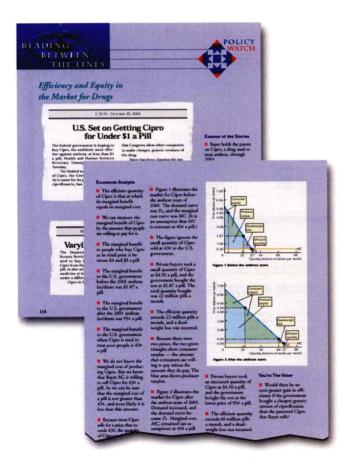
- Shifted curves, equilibrium points, and other important features highlighted in red
- Color-blended arrows to suggest movement
- Graphs paired with data tables
- Diagrams labeled with boxed notes
- Extended captions that make each diagram and its caption a self-contained object for study and review.

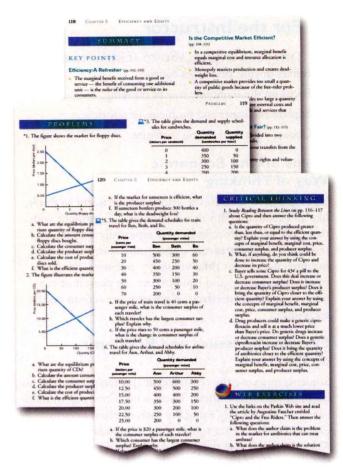


Reading Between the Lines

Each chapter ends with an economic analysis of a significant news article from the popular press together with a thorough economic analysis of the issues raised in the article. The Sixth Edition features all new *Reading Between the Lines* articles. I have chosen each article so that it sheds additional light on the questions first raised in the Chapter Opener.

Special "You're the Voter" sections in selected chapters invite students to analyze typical campaign topics and to probe their own stances on key public policy issues. Critical Thinking Questions about the article appear with the end-of-chapter questions and problems.





End-of-Chapter Study Material

Each chapter closes with a concise summary organized by major topics, lists of key terms (all with page references), problems, and critical thinking questions. In the Sixth Edition, I have added a new set of Web Exercises to the end of each chapter. In addition, I have replaced most of the even-numbered problems throughout the entire text.

The end-of-chapter problems are organized in pairs. The solution to the odd-numbered problem in each pair may be found at the end of the text; the parallel even-numbered problem is left for students to solve on their own. This arrangement offers help to students and flexibility to instructors who want to assign problems for credit.

For the Instructor

This book enables you to achieve three objectives in your principles course:

- Focus on the economic way of thinking.
- Explain the issues and problems of our time.
- Choose your own course structure.

Focus on the Economic Way of Thinking

You know how hard it is to encourage a student to think like an economist. But that is your goal. Consistent with this goal, the text focuses on and repeatedly uses the central ideas: choice; tradeoff; opportunity cost; the margin; incentives; the gains from voluntary exchange; the forces of demand, supply, and equilibrium; the pursuit of economic rent; and the effects of government actions on the economy.

Explain the Issues and Problems of Our Time

Students must use the central ideas and tools if they are to begin to understand them. There is no better way to motivate students than by using the tools of economics to explain the issues that confront them in today's world. These issues include the 2001 recession and what lies beyond, environment, immigration, widening income gaps, energy deregulation, budget deficits or surpluses, restraining inflation, understanding the stock market, avoiding protectionism, and the long-term growth of output and incomes.

Choose Your Own Course Structure

You want to teach your own course. I have organized this book to enable you to do so. I demonstrate the book's flexibility in the flexibility chart and alternative sequences table that appear on pp. xxii–xxiv. You can use this book to teach a traditional course that blends theory and policy or a current policy issues course. Your micro course can emphasize theory or policy. You can structure your macro course to emphasize long-term growth and supply-side fundamentals. Or you can follow a traditional macro sequence and emphasize short-term fluctuations. The choices are yours.



Instructor's Manual

The Instructor's Manual, written by me, Michael Stroup of Stephen F. Austin State University, and James Cobbe of Florida State University, integrates the teaching and learning package and is a guide to all the supplements. Each chapter contains a chapter outline, what's new in the Sixth Edition, teaching suggestions, a look at where we have been and where we are going, lists of available overhead transparencies, descriptions of the electronic supplements, additional discussion questions, answers to the Review Quizzes, solutions to end-of-chapter problems, additional problems, and solutions to the additional problems. The chapter outline and teaching suggestions sections are keyed to the PowerPoint lecture notes.

Three Test Banks

Three separate Test Banks, with nearly 13,000 questions, provide multiple-choice, true-false, numerical, fill-in-the-blank, short-answer, and essay questions. Mark Rush of the University of Florida reviewed and edited all existing questions to ensure their clarity and consistency with the Sixth Edition and incorporated over 2,000 new questions written by Della Lee Sue of Marist College, Carol Dole of the State University of West Georgia, Ed Price of Oklahoma State University, John Graham of Rutgers University, and Sang Lee of Southeastern Louisiana University.

PowerPoint Resources

Robin Bade and I have developed a full-color Microsoft PowerPoint Lecture Presentation for each chapter that includes all the figures from the text, animated graphs, and speaking notes. The slide outlines are based on the chapter outlines in the Instructor's Manual, and the

Predicting Changes in Price and Quantity

A Change in Demand When demand increases, the demand curve shifts rightward

The price rises, which brings an increase in the quantity supplied and a movement along the supply curve.

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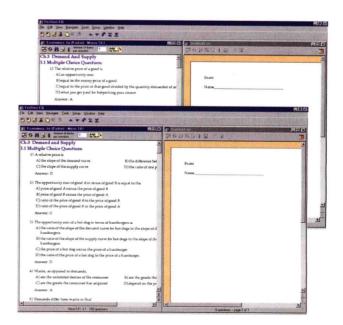
speaking notes are based on the Instructor's Manual teaching suggestions. The presentations can be used electronically in the classroom or can be printed to create hard-copy transparency masters. This item is available for Macintosh and Windows.

Overhead Transparencies

Full-color transparencies of over 200 figures from the text will improve the clarity of your lectures. They are available to qualified adopters of the text (contact your Addison-Wesley sales representative).

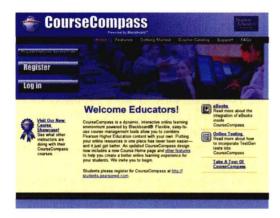
Instructor's CD-ROM with Computerized Test Banks

This CD-ROM contains Computerized Test Bank files, Test Bank and Instructor's Manual files in Microsoft Word, and PowerPoint files. All three test banks are available in Test Generator Software (TestGen-EO with QuizMaster-EQ). Fully networkable, it is available for Windows and Macintosh. TestGen-EQ's new graphical interface enables instructors to view, edit, and add questions; transfer questions to tests; and print different forms of tests. Tests can be formatted with varying fonts and styles, margins, and headers and footers, as in any wordprocessing document. Search and sort features let the instructor quickly locate questions and arrange them in a preferred order. QuizMaster-EQ, working with your school's computer network, automatically grades the exams, stores the results on disk, and allows the instructor to view or print a variety of reports.



CourseCompass

A dynamic, interactive online learning environment powered by Blackboard, CourseCompass provides flexible tools and rich content resources that enable instructors to easily and effectively customize online course materials to suit their needs. Now instructors can track and analyze student performance on an array of Internet activities. Please contact your Addison-Wesley representative for more details.



Economics in Action Software

Instructors can use *Economics in Action* interactive software in the classroom. Its many analytical graphs can be used as "electronic transparencies" for live graph manipulation in lectures. Its real-world data sets and graphing utility bring animated time-series graphs and scatter diagrams to the classroom.

The Parkin Web Site

The Sixth Edition of the textbook continues the tradition of path-breaking technology with *The Economics Place* at www.economicsplace.com. The instructor side of *The Economics Place* includes all of the same resources as the student side, but with the addition of PowerPoint lecture notes, easy access to Instructor's Manual files, and an online "Consult the Author" feature: Ask your questions and make your suggestions via e-mail, and I will answer you within 24 hours.

For the Student

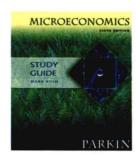
Study Guide

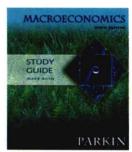
The Sixth Edition Study Guide by Mark Rush of the University of Florida is carefully coordinated with the main text and the Test Banks. For the first time, each copy of the textbook comes bundled with a CD-ROM containing a color, electronic version of the Study Guide. Print copies are also available as an option.

Each chapter of the Study Guide contains:

- Key concepts
- Helpful hints
- True/false/uncertain questions that ask students to explain their answers
- Multiple-choice questions
- Short-answer questions
- Common questions or misconceptions that the student explains as if he or she were the teacher

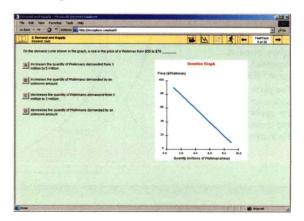
Each part allows students to test their cumulative understanding with sample midterm tests.





Economics in Action Interactive Software

With *Economics in Action* Release 6.0, which is now available on the Web, students will have fun working the tutorials, answering questions that give instant explanations, and testing themselves ahead of their midterm tests. One

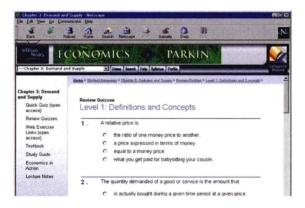


of my students told me that using EIA is like having a private professor in your dorm room! New modules now cover each and every chapter in the text.

The Parkin Web Site

The Economics Place is the market-leading Web site for Parkin. On the Web site, students will find:

- The textbook—the *entire textbook in Adobe Acrobat and PDF* with hyperlinks and animated figures with step-by-step audio explanations.
- Economics in Action—tutorials, quizzes, and graph tools that with a click of the mouse make curves shift and graphs come to life
- The Study Guide—the entire Study Guide, free, online
- Economics in the News updated daily during the school year
- Online "Office Hours": Ask your question via e-mail, and I will answer within 24 hours!
- Economic links—links to sites that keep you up-to-date with what's going on in the economy and that enable you to work end-of-chapter Web-based exercises



The power of *The Economics Place* lies not just in the breadth and depth of learning tools available, but also in the way that we have linked the tools together. For example, suppose that a student logs onto *The Economics Place* to take a multiple-choice quiz. When the quiz is submitted for a grade, the student receives a scorecard with an explanation of why answers are correct or incorrect *and a hyperlink to the part of the e-book that the student should read to better understand the concept.* The student is thus able to navigate easily through the site and to maximize the payoff from her or his study efforts.

Economist.com Edition

The premier online source of economic news analysis, Economist.com provides your students with insight and opinion on current economic events. Through an agreement between Addison-Wesley and *The Economist*, your students can receive a low-cost subscription to this premium Web site for 12 weeks, including the complete text of the current issue of *The Economist* and access to *The Economist*'s searchable archives. Other features include Web-only weekly articles, news feeds with current world and business news, and stock market and currency data. Professors who adopt this special edition will receive a complimentary one-year subscription.

The Wall Street Journal Edition

Addison-Wesley is also pleased to provide your students with access to *The Wall Street Journal*, the most respected and trusted daily source for information on business and economics. For a small additional charge, Addison-Wesley offers your students a 10-week subscription to *The Wall Street Journal* and WSJ.com. Adopting professors will receive a complimentary one-year subscription to *The Wall Street Journal* as well as access to WSJ.com.

Financial Times Edition

Featuring international news and analysis from FT journalists in more than 50 countries, the *Financial Times* will provide your students with insights and perspectives on economic developments around the world. The *Financial Times Edition* provides your students with a 15-week subscription to one of the world's leading business publications. Adopting professors will receive a complimentary one-year subscription to the *Financial Times* as well as access to FT.com.

The Econ Tutor Center

Staffed by qualified, experienced college economics instructors, the Econ Tutor Center is open five days a week, seven hours a day. Tutors can be reached by phone, fax, e-mail or White Board technology. The Econ Tutor Center hours are designed to meet your students' study schedules, with evening hours Sunday through Thursday. Students receive one-on-one tutoring on examples, related exercises, and problems. Please contact your Addison-Wesley representative for information on how to make this service available to your students.