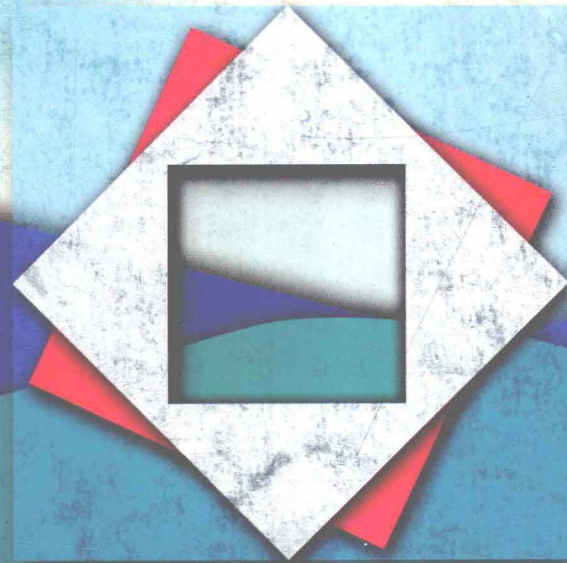


MICROECONOMICS

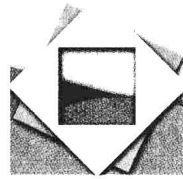
seventh edition



PARKIN

MICROECONOMICS

seventh edition



Michael Parkin

University of Western Ontario



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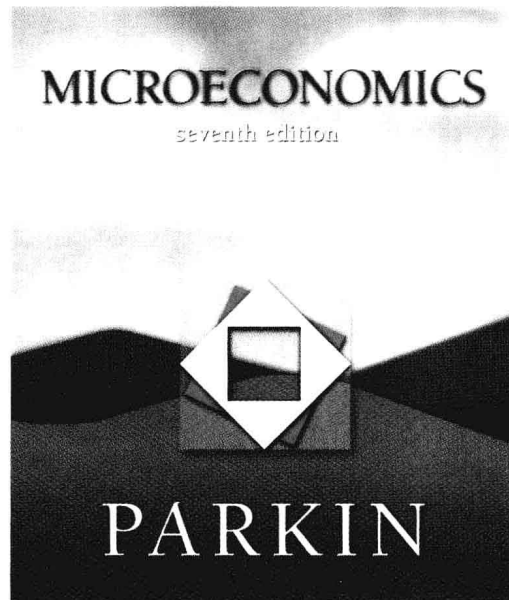
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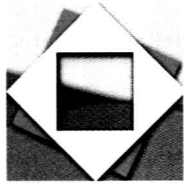
To change the way students see the world—that has been my aim throughout the seven editions of this book.

The cover depicts a landscape viewed through a geometric icon.

The landscape is the economic world. And the icon represents the clarity that economic science brings to our view and understanding of the economic world.

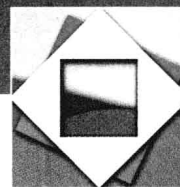
When we view the landscape without the economic lens, we see questions but not answers. The lens provides answers by enabling us to focus on the unseen forces that shape our world. It is a tool that enables us to see the invisible.

This book equips students with the economic lens, shows them how to use it, and enables them to gain their own informed and structured view of the economic world.



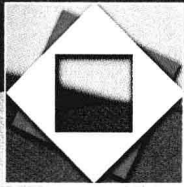
to Robin

ABOUT MICHAEL PARKIN



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

This 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.

Because I am conscious that many students find economics hard, 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 real-world 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 explain modern topics, such as dynamic comparative advantage, game theory, the principal-agent problem, and the modern theory of the firm, public choice theory, information and uncertainty, rational expectations, new growth theory, and real business cycle theory, using the familiar core ideas and tools.

Today's course springs from today's issues—the information revolution and the new economy, the economic shockwaves after 9/11, corporate scandals, 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 Seventh Edition Revision

MICROECONOMICS, SEVENTH 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

- A refocused introductory chapter
- Revised and updated microeconomics content
- **MyEconLab**

Refocused Introductory Chapter

Chapter 1 has been refocused to place greater emphasis on the role of incentives in influencing people's choices and on the central question: Can choices made in the pursuit of self-interest also serve the social interest? This central question of economics is introduced through ten pressing issues in today's world that are explored further at various later points in the text.

Revised and Updated Microeconomics Content

In addition to thorough and extensive updating, the microeconomics chapters feature the following six major revisions:

1. **Markets in Action** (Chapter 6): This chapter includes an expanded section on taxes that consolidates material distributed across two chapters in the previous edition; a new section on subsidies and quotas; and an extension of the material on the minimum wage to the idea of a living wage.
2. **Monopolistic Competition and Oligopoly** (Chapter 13): This chapter contains an amplified explanation of the effects of advertising on price and output in monopolistic competition and the roles of signaling and brand names; plus an expanded discussion of oligopoly games and how game theory illuminates the question of when and whether the pursuit of self-interest leads to outcomes that are in the social interest.
3. **Regulation and Antitrust Law** (Chapter 14): Repositioned after the chapters on monopoly and oligopoly, this chapter contains a general introduction to the public choice approach and new material on three antitrust policy debates: resale price maintenance, tying arrangements, and predatory pricing.
4. **Public Goods and Common Resources** (Chapter 16): This chapter includes a new section on the problem of the commons, with special emphasis on ocean fish and rainforest resources.
5. **Economic Inequality** (Chapter 18): In this chapter the Gini coefficient is defined and explained, and used to examine trends in inequality.
6. **Uncertainty and Information** (Chapter 19): This new chapter explains how markets cope with uncertainty and incomplete information and explores whether the pursuit of self-interest furthers the social interest—whether the “invisible hand” works—in the face of these problems.

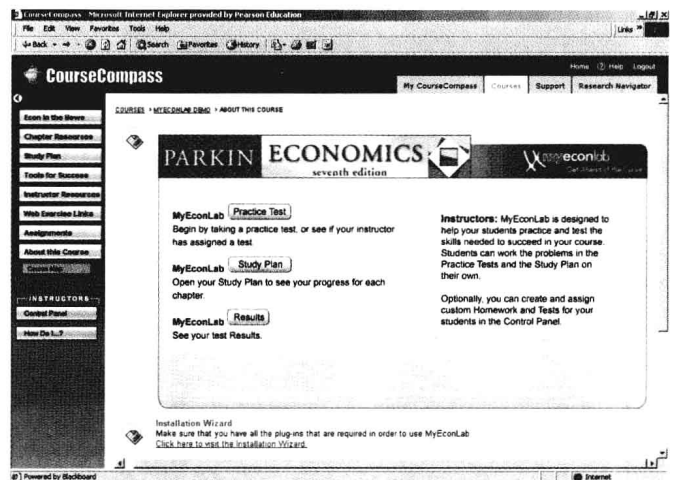
MyEconLab

MyEconLab is a turnkey, online solution for your economics course. Featuring a new and powerful graphing tool and question bank, students are able to self-test and generate a study plan, and instructors are able to assign homework and capture grades. With a tight, everything-in-one-place organization around the new testing tool, questions include true-false, multiple-choice, fill-ins, numerical, and complete-the-graph. Because questions are generated algorithmically, there are about 40,000 questions per chapter!

Previous users of *Economics In Action* will find **MyEconLab** an exciting and powerful resource. Practice tests for each section of the textbook enable students to test their ability and identify the areas in which they need further work. Based on a student's performance on a practice test, a personalized study plan shows where further study is needed. Once students have received their study plan, additional practice exercises, keyed to the textbook, provide extensive practice and link directly to the eText, with animated graphs and other resources.

Users of **MyEconLab** will revel in the powerful graphing tool integrated into both the practice tests and practice exercises. This tool enables students to manipulate graphs and see how the concepts, numbers, and graphs are connected. Questions that use the graphing tool (like all other questions) can be submitted and graded online.

For review and self-assessment, **MyEconLab** provides tutorials launched directly from the practice exercises. Using the tutorial instruction, students can see a demonstration of step-by-step solutions to practice problems, or they can participate in guided tutorials that promote self-discovery.

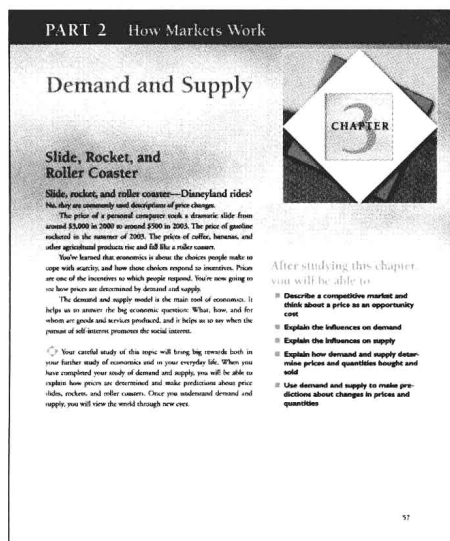


Features to Enhance Teaching and Learning

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. I carry this story into the main body of the chapter and relate it to the chapter-ending *Reading Between the Lines* feature for a cohesive learning experience.



After studying this chapter, you will be able to

- Describe a competitive 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

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.

In-Text Review Quizzes

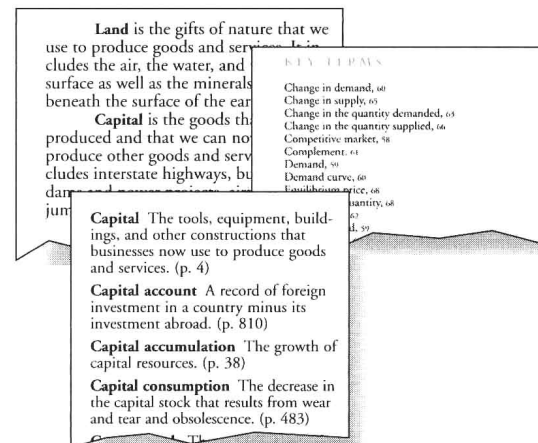
A review quiz at the end of most major sections enables students to determine whether a topic needs further study before moving on.

REVIEW QUIZ

- 1 What is the distinction between a money price and a relative price?
- 2 Explain why a relative price is an opportunity cost.
- 3 Can you think of an example of a good whose money price and relative price have risen?
- 4 Can you think of an example of a good whose money price and relative price have fallen?

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 with page numbers, boldfaced in the index, in the Web glossary, and in the Web Flash Cards.



Land is the gifts of nature that we use to produce goods and services. It includes the air, the water, and surface as well as the minerals beneath the surface of the earth.

Capital is the goods that are produced and that we can use to produce other goods and services. It includes interstate highways, buildings, and machinery.

Capital account A record of foreign investment in a country minus its investment abroad. (p. 810)

Capital accumulation The growth of capital resources. (p. 38)

Capital consumption The decrease in the capital stock that results from wear and tear and obsolescence. (p. 483)

KEY TERMS

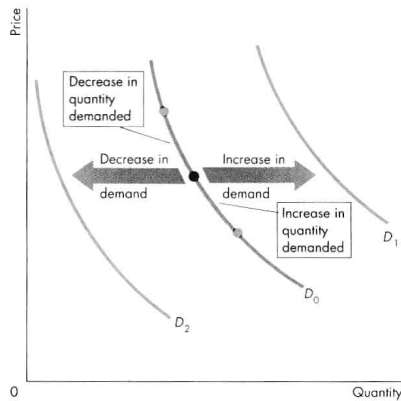
- Change in demand, 60
- Change in supply, 65
- Change in the quantity demanded, 63
- Change in the quantity supplied, 66
- Competitive market, 58
- Complement, 64
- Demand, 60
- Demand curve, 66
- Southwestern price, 68
- Quantity, 68
- Supply, 65

Diagrams That Show the Action

Through seven editions, 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

- Original curves consistently shown in blue
- 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

In *Reading Between the Lines*, which appears at the end of each chapter, I show the student how to apply the tools they have just learned by analyzing an article from a newspaper or news Web site. The seventh edition features 15 new articles and 4 classics from the previous edition. 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, critical thinking questions, and Web Exercises.

The end-of-chapter problems are organized in pairs. The solution to the odd-numbered problem in each pair may be found at **MyEconLab**; 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.

78 CHAPTER 4 DEMAND AND SUPPLY

SUMMARY

KEY POINTS

Markets and Prices (p. 38)

A competitive market is one that has many buyers and sellers that no one can influence the price.

Opportunity cost is a relative price.

Demand and supply determine relative prices.

Demand (p. 46–50)

Demand is the relationship between the quantity demanded of a good and its price when all other influences on a price plane remain the same.

An increase in supply brings a fall in the price and an increase in the quantity demanded. (A decrease in supply brings a rise in the price and a decrease in the quantity demanded.)

An increase in demand and an increase in supply bring an increased quantity, but the price might rise, fall, or remain the same. An increase in demand and a decrease in supply bring a higher price, but the quantity might increase, decrease, or remain the same.

KEY FIGURES

Figure 3.1 The Demand Curve, as Derived

79

PROBLEMS

54. What is the effect on the price of an airplane and the quantity of airplanes sold if:

- The price of a CD rises?
- The price of a Walkman rises?
- The supply of CD players increases?
- Consumer incomes increase?
- Workers who make airplanes get paid more?
- The price of a Walkman rises at the same time the workers who make airplanes get paid more?

55. What is the effect on the price of a DVD player and the quantity of DVD players sold if:

- The price of a DVD rises?
- The price of a DVD falls?
- The supply of DVD players increases?
- Consumer incomes decrease?
- The wage rate of workers who produce DVD players increases?
- The wage rate of workers who produce DVD players rises and at the same time the price of a DVD falls?

56. Suppose that the following events occur one at a time:

- The price of crude oil rises.
- The price of a car rises.
- AL speed limits on highways are abolished.
- Robot technology cuts car production.

57. The figure shows the market for pizza:

- Label the curves in the figure.
- What are the equilibrium price of a pizza and the equilibrium quantity of pizza?

58. The figure illustrates the market for fish:

- Label the curves in the figure.
- What are the equilibrium price of a fish and the equilibrium quantity of fish?

READING BETWEEN THE LINES

Demand and Supply: The Price of Gasoline

Gasoline Prices Soar to Highest Point Yet

Gasoline prices soared this week, with the national average for regular unleaded gasoline rising to a record high of \$3.14 per gallon, according to the U.S. Energy Information Administration (EIA). The price of a gallon of regular unleaded gasoline in the United States has risen from \$1.99 in 2002 to \$3.14 in 2007, a 58 percent increase.

The EIA says that the price of a gallon of regular unleaded gasoline in the United States has risen from \$1.99 in 2002 to \$3.14 in 2007, a 58 percent increase. The price of a gallon of regular unleaded gasoline in the United States has risen from \$1.99 in 2002 to \$3.14 in 2007, a 58 percent increase.

Economic Analysis

The price of a gallon of regular unleaded gasoline in the United States has risen from \$1.99 in 2002 to \$3.14 in 2007, a 58 percent increase. The price of a gallon of regular unleaded gasoline in the United States has risen from \$1.99 in 2002 to \$3.14 in 2007, a 58 percent increase.

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; the tension between self-interest and the social interest; and the scope and limitations of government actions.

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 today's world. Issues such as globalization and the emergence of China as a major economic force; the new economy with new near-monopolies such as eBay and the widening income gap between rich and poor; the post-9/11 economy and the reallocation of resources toward counterterrorism and the defense that it entails; corporate scandals and the principal-agent problems and incentives faced by corporate managers; HIV/AIDS and the enormous cost of drugs for treating it; the disappearing tropical rainforests and the challenge that this problem of the commons creates; the challenge of managing the world's water resources; the persistent unemployment during the nation's jobless recovery of 2002 and 2003; the looming debt that arises from our newly emerged federal budget deficit and the even greater fiscal problems that arise from the Social Security obligations to an aging population; our vast and rising international deficit; and the tumbling value of the dollar on the foreign exchange market.

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. xxiv–xxvi. 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. The choices are yours.

xxiv PREFACE

Flexibility Chart

Core	Policy	Optional
1. What Is Economics?		1. Appendix: Graphs in Economics A good appendix to assign to the student with a fear of graphs.
2. The Economic Problem		
3. Demand and Supply		3. Mathematical Note: Demand, Supply, and Equilibrium
4. Elasticity		7. Utility and Demand Although this chapter is optional, it may be covered if cleared before demand in Chapter 3.
5. Efficiency and Equity A chapter that provides a non-technical explanation of efficiency and equity that unifies the macro coverage and permits early coverage of policy issues.	6. Markets in Action A unique chapter that gives extensive applications of demand and supply.	8. Possibilities, Preferences, and Choices A full chapter on this strictly optional topic to ensure that it is covered clearly with intuitive explanations and illustrations. The more common brief treatment of this topic makes it indigestible. The chapter has an appendix that explains the relation between marginal utility and indifference curves.
10. Output and Costs		9. Consumer Behavior This chapter may be skipped or assigned as a reading.
11. Perfect Competition		
12. Monopoly		

PREFACE xxv

Core	Policy	Optional
13. Monopolistic Competition and Oligopoly	14. Regulation and Antitrust Law Introduces the public-choice theory of government, sets the scene for the following policy chapters, and explains the positive theory of regulation and antitrust law.	
	15. Externalities	
	16. Public Goods and Common Resources	
17. Demand and Supply in Factor Markets	18. Economic Inequality	19. Uncertainty and Information 20. Trading with the World

Instructor's Manuals

The Instructor's Manual (which I wrote with Michael Stroup of Stephen F. Austin State University) integrates the teaching and learning package and serve as a guide to all the supplements. Each chapter contains a chapter outline, what's new in the seventh edition, teaching suggestions, a look at where we have been and where we are going, a list of available overhead transparencies, a description 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.

New Lecture Notes This edition of the Instructor's Manual offers two new exciting features. Extensive lecture notes that incorporate alternative teaching examples—"Points of Interest"—enable a new user of Parkin to walk into a classroom well armed with engaging stories and explanations and a seasoned user to access a whole new set of fresh examples.

New Worksheets Another new and innovative feature is a set of Worksheets prepared by Patricia Kuzyk of Washington State University. These Worksheets ask students to contemplate real-world problems that illustrate economic principles. Examples include showing the effect of the catastrophic events of 9/11 using a marginal cost/marginal benefit diagram, and calculating the effects of funding Social Security for the huge number of baby-boomer retirees. Instructors can assign these as in-class group projects or as homework. There is a Worksheet for every chapter of the book.

Three Test Banks

Three separate Test Banks with nearly 6,500 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 seventh edition and incorporated over 1,000 new questions written by Constantin Ogloblin of Georgia Southern University and William Mosher of Clark University. These Test Banks are available in hard copy and electronically on an Instructor's CD-ROM and in the instructor's resources section of **MyEconLab**.

New Problems This edition features the addition of problems to the testing mix. Written by Constantin Ogloblin, these problems follow the style and format of the end-of-chapter text problems and provide the instructor with a whole new set of testing opportunities and/or homework assignments for every chapter.

New Part Tests These end-of-part tests contain questions that cover all the chapters in the part and feature integrative questions that span more than one chapter.

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 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 overhead transparencies of enlarged and simplified key 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).

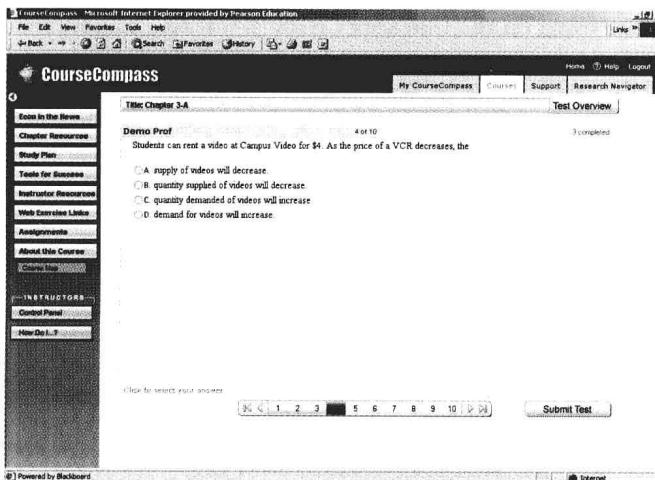
Instructor's CD-ROM with Computerized Test Banks

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 with QuizMaster). Fully networkable, it is available for Windows and Macintosh. TestGen'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 word-processing document. Search and sort features let the instructor quickly locate questions and arrange them in a preferred order. QuizMaster, 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.

MyEconLab

The Web site that accompanies *Economics*, seventh edition breaks new ground by providing a structured environment in which students can practice what they learn and test their understanding and then pursue a study plan that is generated from their performance on practice tests. **MyEconLab** provides rich content resources keyed to the eText as well as flexible tools that enable instructors to easily and effectively customize online course materials to suit their needs.

Instructors can create and assign tests, quizzes, or graded homework assignments that incorporate graphing questions. **MyEconLab** saves instructors time by automatically grading all questions and tracking results in an online grade book. The complete Parkin Test Bank is also preloaded into **MyEconLab**, giving instructors ample material from which they can create assignments.



Once registered for **MyEconLab**, instructors have access to downloadable supplements such as Instructor's Manuals, PowerPoint lecture notes, and Test Banks. Instructors also have access to a "Consult the Author" feature that allows them to ask questions of and make suggestions to the author via e-mail and receive a response within 24 hours.

For more information about **MyEconLab**, or to request an Instructor Access Code, visit <http://www.myeconlab.com>.

For the Student

TWO OUTSTANDING SUPPORT TOOLS ARE AVAILABLE for the student:

- Study Guide
- **MyEconLab**

Study Guide

The Seventh Edition Study Guide by Mark Rush of the University of Florida is carefully coordinated with the text, MyEconLab, and the Test Banks. 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.

MyEconLab

Packaged with every new book, **MyEconLab** puts students in control of their own learning through a suite of study and practice tools tied to the online, interactive version of the textbook and other media tools. At the core of **MyEconLab** are the following features:

- Practice tests
- Personalized study plan
- Additional practice exercises
- Tutorial instruction
- Powerful graphing tool

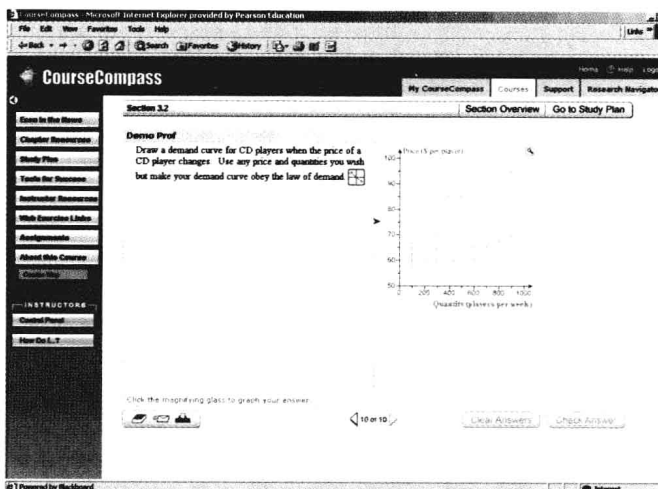
Practice Tests Practice tests for each section of the textbook enable students to test their understanding and identify the areas in which they need to do further work. Instructors can customize the practice tests or leave students to use the supplied pre-built tests.

Personalized Study Plan Based on a student's performance on a practice test, a personal study plan is generated that shows where further study is needed. This study plan consists of a series of additional practice exercises.

Additional Practice Exercises Generated by the student's own performance on a practice test, additional practice exercises keyed to the textbook provide extensive practice and link students to the eText with animated graphs and to other tutorial instruction resources.

Tutorial Instruction Launched from the additional practice exercises, tutorial instruction is provided in the form of solutions to problems, step-by-step explanations, and other media-based explanations.

Powerful Graphing Tool A powerful graphing tool integrated into the practice tests and additional practice exercises let students manipulate graphs so that they get a better feel for how the concepts, numbers, and graphs are connected. Questions that use the graphing tool (like all the other questions) can be submitted and graded.



Additional MyEconLab tools

1. eText (the entire textbook in electronic format)
2. eStudy guide (the entire Study Guide in electronic format and printable)
3. Animated figures (all the textbook figures in step-by-step animations with audio explanations of the action)
4. Electronic tutorials
5. Glossary—key terms from the textbook
6. Glossary Flashcards
7. Office Hours
8. Daily *Economics in the News* updates and archives
9. Links to the most useful economic data and information sources on the Internet
10. eThemes of the Times—archived articles from the *New York Times*, correlated to each textbook chapter and paired with critical thinking questions
11. Research Navigator—extensive help on the research process and four exclusive databases of credible and reliable source material including the *New York Times*, *The Financial Times*, and peer-reviewed journals.
12. 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.

Special Editions

THREE SPECIAL EDITIONS OF THE SEVENTH EDITION text are available:

- Economist.com Edition
- The Wall Street Journal Edition
- Financial Times Edition

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