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# ECONOMICS TODAY

## The Micro View





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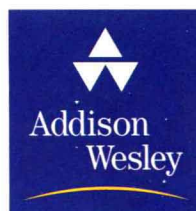
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## The Micro View

2001–2002 EDITION

Roger LeRoy Miller

Institute for University Studies, Arlington, Texas



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Always more can be done. Contact me with any suggestions at [www.econtoday.com](http://www.econtoday.com).

Roger LeRoy Miller






# Preface

The 2001–2002 Edition of *Economics Today* presents economic principles within the context of the sweeping changes occurring in the economic landscape, including the Internet explosion and the e-commerce boom, the East Asian recession, the expansion of global trade and investment, and concerns about inflation and rising interest rates closer to home. *Economics Today* clearly outlines the core principles of economics so that students can fully understand and analyze these and other developments.


*Economics Today* is based on the belief that students learn more when they are involved and engaged. All of the 150 new examples have been selected to grab and hold students' attention. These examples serve one basic purpose—to drive home the application of the theory just presented. You will find the latest theoretical concepts in this 2001–2002 Edition presented in a logical manner for ease of understanding. For more specific details on the presentation of theory, see “Content Changes in the 2001–2002 Edition.”

One of the keys to the success of *Economics Today* is that it is suitable for many teaching styles. Instructors who wish to stress theory can do so. Those who wish to stress applications and examples can do that. Those who wish to incorporate technology into the class can do so with ease.

## WHAT'S NEW IN THE 2001–2002 EDITION?

- **Chapter 6**, “Your Future with Social Security” This pressing national issue is the subject of a complete chapter that examines the economic problems Social Security and Medicare systems face and possible ways that these programs may be reformed.
  - **Chapter 16**, “Electronic Banking” This new chapter focuses on the implications of applications of information technologies in the nation's banking and payment systems. It reviews the recent surge in stored-value and debit cards, the potential for expanded applications of smart-card technologies, and the likely effects of digital cash on the money multiplier.
  - **Compelling New Pedagogy** **NETNOMICS** boxes probe how technological innovations change economic theory and behavior. **FAQ** boxes foster economic intuition by outlining answers to real-world questions. **Economics on the Net** activities guide students to a Web site and provide a structured assignment for both individual and group work. **TYING IT ALL TOGETHER** case applications wrap up each part by demonstrating the relevance of concepts in a business decision-making context.
  - **New Release of Economics in Action** Conveniently packaged with the text, the *Economics in Action*, 2001–2002 Edition, CD-ROM includes two new modules—on labor economics and on payment systems and electronic banking. New marginal icons in the text direct students to corresponding software modules.
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- **www.econtoday.com** The text's dynamic **companion Web site** provides numerous testing resources with tutorial feedback, timely news articles with ready-made discussion questions, an on-line syllabus builder, and virtual office hours. WebCT and Black-Board versions are available.
  - **Wired Test Bank** This indispensable aid for professors who are using *Economics Today*'s many technology resources includes test questions based on the Economics in Action modules, end-of-chapter Economics on the Net activities, and Tying It All Together cases' Internet feature.
  - **Econ Tutor Center** Order the Econ Tutor Center Edition of *Economics Today* to give your students access to qualified economic instructors via phone, fax, and e-mail.

## CONTENT CHANGES IN THE 2001–2002 EDITION

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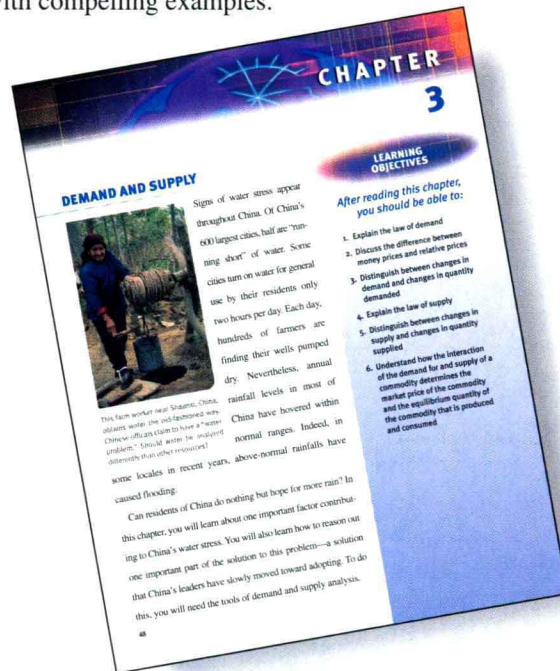
Building on the success of previous editions, the 2001–2002 Edition offers thoroughly updated coverage throughout and two all-new chapters. Every chart, table, and graph has been revised to reflect the most recent data available.

- **Revised and Updated Macro Coverage** The discussion of economic growth in **Chapter 9** is now followed by a focused examination of long-run macroeconomic equilibrium in **Chapter 10**. This lays a solid foundation for evaluating the sources of short-run macroeconomic fluctuations in **Chapter 11**. The coverage of macroeconomic policy-making in the subsequent chapters now has a broader international focus. **Chapters 14, 15, and 33** have been significantly revised to provide more complete and up-to-date discussions of worldwide developments in banking, payment systems, and monetary policy.
  - **Revised and Updated Micro Coverage** Here there is also increased emphasis on globalization of markets, particularly in the coverage of the financial environment of business in **Chapter 21** and discussions of market behavior in **Chapters 23–25** and of regulation and antitrust in **Chapter 26**. In addition, **Chapter 21** reviews the growth of electronic securities trading and evaluates economics issues posed by on-line financial trading.
- 

## PEDAGOGY WITH PURPOSE

*Economics Today*, 2001–2002 Edition, provides a fine-tuned teaching and learning system. This system is aimed at capturing student interest through the infusion of examples that capture the vitality of economics. Each of the following features has been carefully crafted to enhance the learning process:

- **Chapter-Opening Issues** Each chapter-opening issue whets student interest in core chapter concepts with compelling examples.



- **Did You Know That . . . ?** Each chapter starts with a provocative question to engage students and to lead them into the content of the chapter.

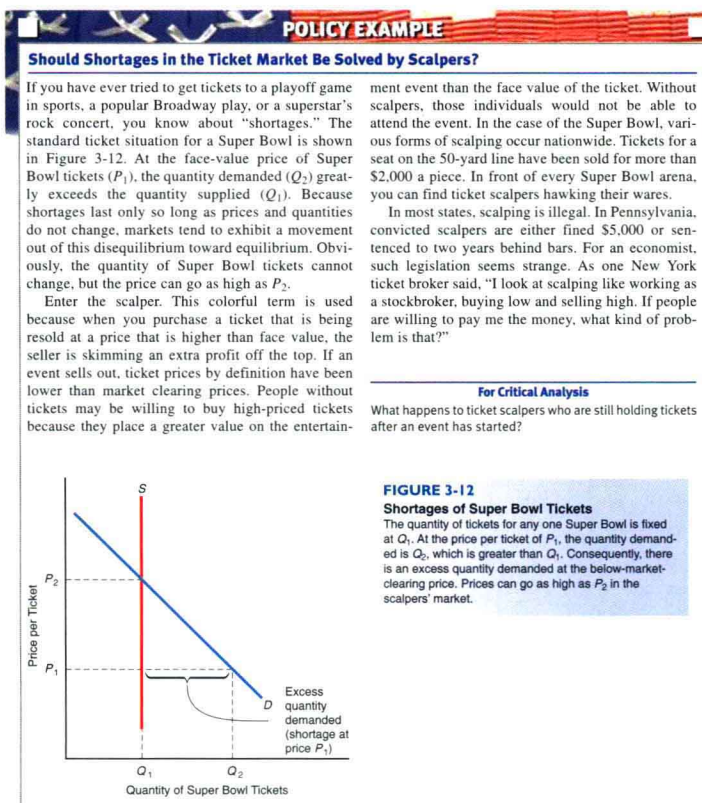
**Did You Know That...** more than 75 million people currently own portable cellular phones? This is a huge jump from the mere 200,000 who owned them in 1985. Since 1992, two out of every three new telephone numbers have been assigned to cellular phones. There are several reasons for the growth of cellular phones, not the least being the dramatic reduction in both price and size due to improved and cheaper computer chips that go into making them. There is something else at work, though. It has to do with crime. In a recent survey, 46 percent of new cellular phone users said that personal safety was the main reason they bought a portable phone. In Florida, for example, most cellular phone companies allow users simply to dial \*FHP to reach the Florida Highway Patrol. The rush to cellular phones is worldwide. Over the past decade, sales have grown by nearly 50 percent every year outside the United States.

We could attempt to explain the phenomenon by saying that more people like to use portable phones. But that explanation is neither satisfying nor entirely accurate. If we use the economist's primary set of tools, *demand and supply*, we will have a better understanding of the cellular phone explosion, as well as many other phenomena in our world. Demand and supply are two ways of categorizing the influences on the price of goods that you buy and the quantities available. As such, demand and supply form the basis of virtually all economic analysis of the world around us.

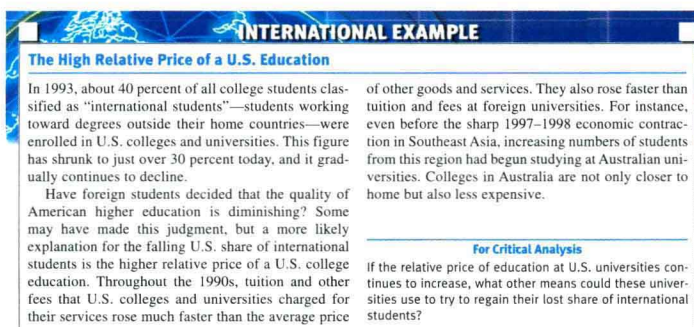
As you will see throughout this text, the operation of the forces of demand and supply take place in *markets*. A **market** is an abstract concept referring to all the arrangements individuals have for exchanging with one another. Goods and services are sold in markets, such as the automobile market, the health market, and the compact disc market. Workers offer their services in the labor market. Companies, or firms, buy workers' labor services in the labor market. Firms also buy other inputs in order to produce the goods and services that you buy as a consumer. Firms purchase machines, buildings, and land. These markets are in operation at all times. One of the most important activities in these markets is the setting of the prices of all of the inputs and outputs that are bought and sold in our complicated economy. To understand the determination of prices, you first need to look at the law of demand.



- **Learning Objectives** A clear statement of learning objectives on the first page of the chapter focuses students' studies.
- **Chapter Outline** The outline serves as a guide to the chapter coverage.
- **Graphs** Precise, four-color graphs clearly illustrate key concepts.
- **Key Terms** To simplify the task of learning the vocabulary of economics, key terms are printed in bold type and defined in the margin of the text the first time they appear.
- **Policy Examples** Students are exposed to important policy questions on both domestic and international fronts in over 40 policy examples.



- **International Examples** Over 30 international examples emphasize the interconnections of today's global economy.



- **Examples** More than 50 thought-provoking and relevant examples highlight U.S. current events and demonstrate economic principles.

**EXAMPLE**

**Garth Brooks, Used CDs, and the Law of Demand**

A few years ago, country singer Garth Brooks tried to prevent his latest album from being sold to any chain or store that also sells used CDs. His argument was that the used-CD market deprived labels and artists of earnings. His announcement came after Wherehouse Entertainment, Inc., a 339-store retailer based in Torrance, California, started selling used CDs side by side with new releases, at half the price. Brooks, along with the distribution arms of Sony, Warner Music, Capitol-EMI, and MCA, was trying to quash the used-CD market. By so doing, it appears that none of these parties understands the law of demand.

Let's say the price of a new CD is \$15. The existence of a secondary used-CD market means that to people who choose to resell their CDs for \$5, the cost of a new CD is in fact only \$10. Because we know that quantity demanded is inversely related to price, we know that more of a new CD will be sold at a price of \$10 than of the same CD at a price of \$15. Taking only this force into account, eliminating the used-CD market tends to reduce sales of new CDs.

But there is another force at work here, too. Used CDs are substitutes for new CDs. If used CDs are not available, some people who would have purchased them will instead purchase new CDs. If this second effect outweighs the incentive to buy less because of the higher effective price, then Brooks is behaving correctly in trying to suppress the used CD market.

**For Critical Analysis**

Can you apply this argument to the used-book market, in which both authors and publishers have long argued that used books are "killing them"?

- **For Critical Analysis** At the end of each example, students are asked to "think like economists" to answer the critical analysis questions. The answers to all questions are found in the Instructor's Manual.
- **Concepts in Brief** Following each major section, "Concepts in Brief" summarizes the main points of the section to reinforce learning and to encourage rereading of any difficult material.
- **FAQ** All-new sidebars encourage analysis by providing answers to frequently asked questions based on economic reasoning.



### *Isn't postage a lot more expensive than it used to be?*

No, in reality, the *relative price* of postage in the United States has fallen steadily over the years. The absolute dollar price of a first-class stamp rose from 3 cents in 1940 to 33 cents at the beginning of the twenty-first century. Nevertheless, the price of postage relative to the average of all other prices has declined since reaching a peak in 1975.



See how the U.S. Department of Agriculture seeks to estimate demand and supply conditions for major agricultural products at <http://usda.mannlib.cornell.edu/reports/waobr/wasde-bb>

- **Internet Resources** Margin notes identify interesting Web sites that illustrate chapter topics, giving students the opportunity to build their economic research skills by accessing the latest information on the national and global economy.



### Putting Economics in Action to Work

To study market equilibrium in more detail, start the EIA CD, and click on "Demand and Supply." Then click on "Putting Demand and Supply Together."

- **Economics in Action Icon** This marginal element directs students to "Economics in Action" modules corresponding to chapter content.



- **Netnomics** The new “Netnomics” feature explores how innovations in information technology are changing economic theory and behavior.



## NETNOMICS

### Stealth Attacks by New Technologies

Successful new products often get off to a slow start. Eventually, however, consumers substitute away from the old products to the point at which demand for the old products effectively disappears. Consider handwritten versus printed manuscripts. For several years in the mid-fifteenth century, printed books were a rarity, and manuscript-copying monks and scribes continued to turn out the bulk of written forms of communication. By the 1470s, however, printed books were more common than handwritten manuscripts. By the end of the fifteenth century, manuscripts had become the rare commodity.

A more recent example involves train engines. Just before 1940, after the diesel-electric engine for train locomotives was invented, an executive of a steam-engine company declared, “They’ll never replace the steam locomotive.” In fact, it only took 20 years to prove the executive wrong. By 1960, steam engines were regarded as mechanical dinosaurs.

To generate the bulk of its profits, the U.S. Postal Service relies on revenues from first-class mail. To keep its first-class customers satisfied, it recently deployed a \$5 billion automation system that reads nine addresses per second and paints envelopes with bar codes to speed sorting. Yet the postal service has lost about \$4 billion in first-class mail business since 1994. Around that time, people began to compare the 25-cent cost of a one-minute phone call with the 32-cent cost of first-class postage. Then they began to substitute away from first-class letters to faxes. Other people got access to the Internet and began to send messages by electronic mail, at no additional charge. First-class mail increasingly looks like a steam-engine dinosaur.

Some observers of the software industry think the same sort of thing could happen to a powerhouse of the present: Microsoft Windows. Today the code for this program is on most personal computers on the planet. Competing operating system applications offered by Sun Microsystems’s Java software and others currently run more slowly than Windows. But they consume many fewer lines of computer code and hence promise swift accessibility via the Internet. It is conceivable that someday people may log on to the Internet and pay by the minute to use such software to run their computers, thereby freeing up their hard drives for other uses. Thus today’s dominant operating system may someday look a lot like a handwritten manuscript does to generations accustomed to reading printed books instead of handwritten manuscripts.

- **Issues and Applications** Linked to the chapter-opening issue, the all-new “Issues and Applications” features are designed to encourage students to apply economic concepts to real-world situations. Each outlines the concepts being applied in the context of a particular issue and is followed by several critical thinking questions that may be used to prompt in-class discussion. Suggested answers to the critical thinking questions appear in the Instructor’s Manual.

**ISSUES & APPLICATIONS**

**China's Water Shortage: Too Little Rain or Not Enough Pricing?**

In China, lack of water has been a big problem. In some towns, people have to wait in long lines at water distribution points set up by local governments. Farmers have lost entire crops. Lacking water to cool machinery, factories have had to cut back on production. Problems are acute in areas where the land is nearly flat, as in large portions of the northern half of China. A recent geographical analysis indicates that water tables are falling steadily in these regions. Satellite images show springs, lakes, and rivers drying up.

**One Approach: Brute Force**

In the late 1960s to spare no expense in fighting the water shortage, China's government decided to build tunnels for water to pass through, to build large amounts of electricity to pump water uphill, to construct huge dams, and to displace hundreds of thousands of people from their homes to make it all possible. Many of these projects are being funded by loans from the World Bank. The main idea behind these projects, of course, is to move water from the countryside to the cities. But many observers point out that even if all these massive efforts succeed, China's cities will still be living on borrowed time. Among the most water-short in the Chinese capital city of Beijing, which has already exhausted groundwater reserves and now takes irrigation water away from farmers.

**The Missing Element: Pricing**

To this point, an important element has been missing from the story. Until recently, most water in China could be consumed at no charge. Government pumping stations provided it at a zero price to all users. In 1998, the government finally enacted a water pricing policy, but Chinese farmers continue to pay only one-tenth of the opportunity cost of obtaining the water they use to irrigate their crops.

Think about what you have learned in this chapter. Whenever the price of a good, such as water, is below its market-clearing price, the quantity demanded exceeds the quantity supplied, and a shortage occurs. In an economy, China's problem is a classic example of a shortage. Naturally, if city-dwellers, farmers, and companies in China can obtain water at very close to a zero price, they will desire to consume water in excess of the amount of water available at that price. That is, the quantity of water demanded will exceed the quantity supplied. An economist could have predicted the shortages before they occurred.

What solution does a typical economist propose? It is for China to let the price system work. Even minor increases in water prices would do wonders to induce people to conserve water. It also would induce Chinese residents to shift water from low-value uses to high-value ones. Pricing water might also eliminate the perceived "need" to build big and build huge dams, tunnels, pumping stations, and the like. By instead thinking smaller and simply permitting the price of water rise toward free-market levels, China could end its water shortage.

**Concepts Applied**

- Demand
- Supply
- Market Price
- Opportunity Cost
- Shortage

**FOR CRITICAL THOUGHT**

- Even at a posted price of zero, was Chinese water really "free"?
- A common argument against letting the market determine the prices of "necessity goods" such as water is that having to pay for water is hard on the average citizen, in most countries, who ultimately pay for government-funded dam projects, tunnels, through mountains, and machinery to pump water uphill!

- ## Economics on the Net
- Canadian Taxes and Energy Markets** The Canadian government follows the example set by the U.S. government and governments of other countries by imposing taxes on some sources of energy and subsidizing other energy sources. This application helps you apply concepts you learned in this chapter to evaluate the effects of taxes and subsidies.
- Internet URL:**  
[www.ciaa.doc.gov/emcu/env/canada.html](http://www.ciaa.doc.gov/emcu/env/canada.html)
- Title:** Canada Environment Review
- Navigation:** Begin at the Energy Information Agency homepage ([www.eiaa.doc.gov](http://www.eiaa.doc.gov)). Click on International ([www.eiaa.doc.gov/emcu/international/contents.html](http://www.eiaa.doc.gov/emcu/international/contents.html)). Select Canada from the list of nations (<http://www.eiaa.doc.gov/emcu/canada.html>). Scroll down to, and click on Environmental Review.
- Application** Read the first three sections of this article ("General Background," "Energy and Environmental Policy," and "Energy Taxes and Subsidies"). Then answer the following questions.
1. Draw a diagram of possible demand and supply curves for the market for gasoline. The tax described
- in the third section of the article is paid by sellers of gasoline. Thus to induce each gasoline seller to supply the same quantity as it would have supplied before the tax, the price that the seller receives must be higher by the amount of the tax. Given this information, illustrate the effect of this tax on the market supply curve. Illustrate and explain how the tax reduces consumption of transportation gas.
2. Draw a diagram of the market for vehicles powered by natural gas. Illustrate the effect of a subsidy on the supply of natural-gas-powered vehicles, and explain how the subsidy encourages the use of these vehicles.
- For Group Study and Analysis** The final paragraph under "Energy Taxes and Subsidies" describes a study of tax incentives for conservation and renewable energy technologies. Discuss how a tax incentive affects the supply of renewable energy technologies. Discuss how a tax policy of "encourages" energy conservation might affect a firm engaged in manufacturing. Debate whether one approach is preferred over the other.

- [illegible]



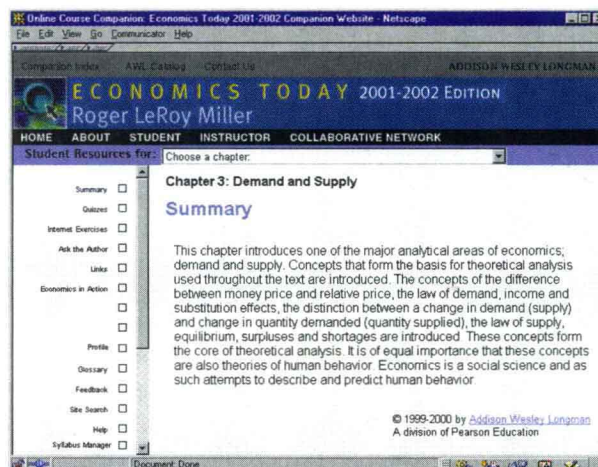
## AN EXPANSIVE, INNOVATIVE TEACHING AND LEARNING PACKAGE

*Economics Today* is accompanied by a variety of technologically innovative and useful supplements for instructors and students.

### TO THE INSTRUCTOR

The following supplementary materials are available to help busy instructors teach more effectively and to incorporate technological resources into their principles courses.

- **Instructor's Resource Disk (IRD) with PowerPoint Lecture Presentation** Fully compatible with the Windows NT, 95, and 98, and Macintosh computers, this CD-ROM provides numerous resources.
- The PowerPoint Lecture Presentation was developed by Jeff Caldwell, Steve Smith, and Mark Mitchell of Rose State College and revised by Andrew J. Dane of Angelo State University. With nearly 100 slides per chapter, the PowerPoint Lecture Presentation animates graphs from the text; outlines key terms, concepts, and figures; and provides direct links to **www.econtoday.com** for in-class Internet activities.
- For added convenience, the IRD also includes Microsoft Word files for the entire content of the Instructor's Manual and Computerized Test Bank files. The easy-to-use testing software (**TestGen-EQ with QuizMaster-EQ** for Windows and Macintosh) is a valuable test preparation tool that allows professors to view, edit, and add questions.
- **www.econtoday.com** The *Economics Today* companion Web site provides on-line access to innovative teaching and learning tools.

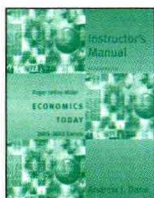
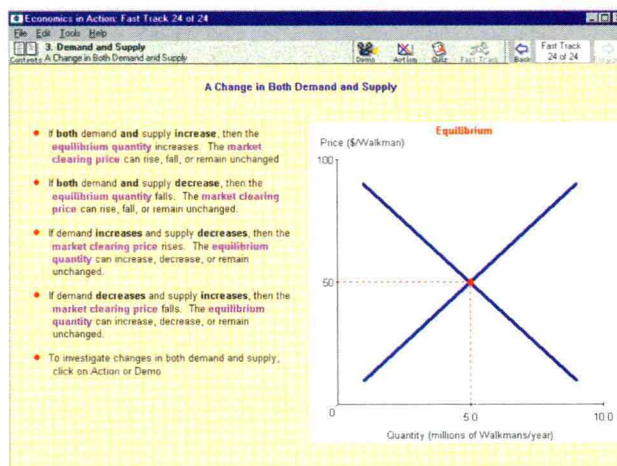


- A number of testing resources are available for your students, including four **multiple-choice quizzes** per chapter and **practice exams** that test their readiness for midterm and final exams. **Tutorial feedback** guides students to the appropriate text sections for further study when they answer questions incorrectly.
- The Companion Web site system provides an **on-line syllabus builder** that allows you to create a calendar of assignments for each class and to track student activity and quiz grades with an electronic gradebook.

- Before class, visit the Web site and print off a **timely news article with ready-made discussion questions** for your students. And a weekly quiz rewards students who follow the news with prizes.
- For added convenience, many of the instructor supplements are available for downloading from the site, including the PowerPoint Lecture Presentation, Computerized Test Bank files, and Instructor's Manual. Please contact your sales representative for the instructor resources password and information on obtaining the **Web content in WebCT and BlackBoard versions**.
- “Ask the Author” gives professors and students round-the-clock access to the author.



**Economics in Action, 2001–2002 Edition, CD-ROM** This interactive tutorial software has been developed by Michael Parkin and Robin Bade of the University of Western Ontario. Adapted by David VanHoose of the University of Alabama for use with *Economics Today*, the software is conveniently packaged with the text and includes two all-new modules on labor economics and on payment systems and electronic banking. The market leader in principles of economics software, Economics in Action aids students' mastery of concepts through review, demonstration, and interaction. Step-by-step tutorials guide students in their discovery of the relationship between economic theory and real-world applications, while the Draw Graph palette tests their graphing abilities. Detailed, customizable quizzes help students prepare for exams by testing their grasp of concepts.



- **Instructor's Manual** Prepared by Andrew J. Dane of Angelo State University, the Instructor's Manual provides the following materials:
  - Chapter overviews, objectives, and outlines
  - Points to emphasize for those who wish to stress theory
  - Answers to “Issues and Applications” critical thinking questions
  - Further questions for class discussion
  - Answers to even-numbered end-of-chapter problems
  - Detailed step-by-step analysis of end-of-chapter problems
  - Suggested answers to “Tying It All Together” case questions
  - Annotated answers to selected student learning questions
  - Selected references



● **Test Bank 1** This Test Bank provides over 3,000 multiple-choice questions and more than 250 short-essay questions with answers. Revised by John Ifediora of the University of Wisconsin, the questions have been extensively classroom-tested for a number of years.

● **Test Bank 2** Revised by James R. Carlson of Manatee Community College, this test bank includes over 3,000 multiple-choice questions and more than 250 short-essay questions. These questions have been class-tested by many professors, including Clark G. Ross, coauthor of the National Competency Test for economics majors for the Educational Testing Service in Princeton, New Jersey.

**NEW**

● **Wired Test Bank** This all-new, innovative supplement is an indispensable aid for professors who are incorporating *Economics Today*'s many technology resources into their courses. It includes questions that allow you to test students on the "Economics in Action" modules, end-of-chapter "Economics on the Net" activities, and "Tying It All Together" cases' Internet feature.

● **Lecture Outlines with Transparency Masters** Prepared by Andrew J. Dane of Angelo State University, this lecture system features more than 500 pages of lecture outlines and text illustrations, including numerous tables taken from the text. Its pages can be made into transparencies or handouts to assist student note taking.

● **Four-Color Overhead Transparencies** One hundred of the most important graphs from the textbook are reproduced as full-color transparency acetates. Many contain multiple overlays.

● **Economics Experiments in the Classroom** Developed by Denise Hazlett of Whitman College, these economics experiments involve students in actively testing economic theory. In addition to providing a variety of micro and macro experiments, this supplement offers step-by-step guidelines for successfully running experiments in the classroom.

● **Additional Homework Problems** For each text chapter, more than 20 additional problems are provided in two separate sets of homework assignments that are available for download from [www.econtoday.com](http://www.econtoday.com). Each homework problem is accompanied by suggested answers.

● **Regional Case Studies for the East Coast, Texas, and California** Additional case studies, available at [www.econtoday.com](http://www.econtoday.com), can be used for in-class team exercises or for additional homework assignments.

● **Pocket Guide to Economics Today for Printed and Electronic Supplements** The Pocket Guide is designed to coordinate the extensive teaching and learning package that accompanies the 2001–2002 Edition of *Economics Today*. For each chapter heading, the author has organized a list of print and electronic ancillaries with page references to help organize lectures, develop class assignments, and prepare examinations.

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