



10th edition

Microeconomics

private & public choice

James D. Gwartney

Richard L. Stroup

Russell S. Sobel

David A. Macpherson

Microeconomics: Private and Public Choice

Tenth Edition

James D. Gwartney

Florida State University

Richard L. Stroup

Montana State University

Russell S. Sobel

West Virginia University

David A. Macpherson

Florida State University

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Microeconomics: Private and Public Choice, 10th Edition

James D. Gwartney, Richard L. Stroup, Russell S. Sobel, David A. Macpherson

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Internal Designer:

Bill Brammer, fusion 29 visual
communication

Cover Designer:

Bill Brammer, fusion 29 visual
communication

Photography Manager:

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5191 Natorp Boulevard
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As in the past, our goal in this edition is to provide students with a user-friendly text that challenges the reader to develop the economic way of thinking. Put simply, this text is about: (a) making economics understandable, (b) illustrating the power and relevance of economics to our daily lives, and (c) explaining why both individuals and nations prosper. Throughout, we seek to communicate basic, and in some cases fairly complicated, ideas in a manner that is understandable for college freshmen and sophomores. We believe that this edition does that better than ever. The accompanying exercises, test questions, and even the PowerPoint package are designed to make the concepts of economics come alive.

The study of economics does not have to be either difficult or “watered down.” *Economics: Private and Public Choice, 10th Edition* is a comprehensive text, rich in detail. But it is written with the student in mind. We have avoided abstractions and mechanical exercises that stress obscure details rather than basic concepts. The primary objective of our writing style is clarity. We have worked hard to make the material as clear as possible. Examples, illustrations, and visual aides are used to reinforce basic concepts. Simplicity, however, is not substituted for depth. Rather, our aim is to highlight the power, accessibility, and relevance of economic concepts.

More than ever before, the world is characterized by dynamic change, instant communication, and interaction between people in different nations. New products and technologies are constantly replacing the old ways of doing things. In fact, sometimes new products become obsolete just a few years after they are introduced. How will these developments affect your life? What will the U.S. economy be like ten or twenty years from now? Why do some countries prosper while others regress? As we proceed, we will use the tools of economics to address these and many other important issues that affect our lives.

DIVISION INTO CORE CHAPTERS AND SPECIAL TOPICS

Beginning with the 9th edition, the text was divided into core chapters and a concluding special topics section. The core chapters cover all of the material taught in most principles courses and they are presented in the usual manner. Examples and data from the real world are used to reinforce the analysis. In addition, the Beyond the Basics section provides 11 relatively short features (about one-third the length of a regular chapter) that focus on high profile special topics. These features, designed for coverage during a single class period, provide a solid foundation for discussing important topics such as the stock market, the future of social security, the organization of health care and education, and the impact of unions. See the front endpapers for a complete listing of the special topics of the Beyond the Basics section. This core/special-topic structure has been quite popular, largely because it makes it easier for instructors to tailor their course to fit their own preferences.

CHANGES IN THE 10TH EDITION

David Macpherson has now officially joined the author team. He has been involved with this project for several years and was responsible for both the *Instructor's Manual* and *Test Bank* of the last edition. Professor Macpherson is both an outstanding researcher and an excellent teacher. On several occasions, Florida State University has recognized his outstanding teaching abilities, particularly in large lecture principles classes. His writing skills and in-depth knowledge of labor markets and monetary economics have both strengthened the author team and contributed significantly to the quality of this edition.

The authors enjoy working together and we have an excellent balance regarding our areas of expertise, alternative perspectives, and even youth and experience. We look forward to a cooperative effort on this project for many years to come.

Keys to Prosperity Series

Our own teaching experience indicates that students often fail to appreciate organizational and institutional factors that provide the foundation for economic progress. In order to help remedy this situation, this edition incorporates a new “Keys to Economic Prosperity” series that highlights the importance of factors like gains from trade, secure property rights, competition, and free trade as sources of economic prosperity. In all, twelve of the most important factors that underlie modern economic prosperity are highlighted at appropriate places throughout the text. These “keys to prosperity” are also listed in the front cover endpapers.

Beyond the Basics Section

The Beyond the Basics section of this edition contains new features on the impact of the Internet, the economics of health care, school choice, and government spending and taxation. In addition, the features from the last edition have been updated and, in several instances, substantially revised. This section provides background material on current issues that students will find both interesting and challenging.

Core Microeconomics

The following changes were made to the core micro material:

- ✕ The importance of the entrepreneur has been elevated throughout the core micro material. Fred Smith (FedEx) and Pleasant Rowland (American Girl dolls) are now included along with Ted Turner and Bill Gates in the Chapter 10 feature on real world entrepreneurs.
- ✕ Chapter 11 incorporates new material on both the Microsoft case and the California electricity crisis.
- ✕ The material on productivity in Chapter 13 was updated and current debate about whether the 1996–2000 increase in productivity is temporary or permanent is highlighted.
- ✕ A new feature on millionaires in America and how to become one is now included in Chapter 13.
- ✕ The debate about the pattern of outcomes versus the fairness of the process has been incorporated into the chapter on income distribution and poverty.

ORGANIZATIONAL FEATURES

We have employed several organizational features designed to make the presentation more interesting and more understandable.

1. Applications and Measures in Economics. The Applications in Economics boxed features apply economic theory to real-world issues and controversies. The Measures of Economic Activity boxes explain how important economic indicators are assembled.
2. Chapter Focus Questions and Closing Key Point Summaries. Each chapter begins with several questions that summarize the focus of the chapter. Following the end of each

chapter is a Key Points section that provides the student with a concise statement of the material (chapter learning objectives). Reviewing the focus questions and these concise key points will help the student better understand the material and integrate it into the broader economic picture.

3. **Key Terms.** The terminology of economics is often confusing to introductory students. Key terms are introduced in the text in bold type; simultaneously, each term is defined in the margin opposite the first reference to the term. A glossary containing the key terms also appears at the end of the book.
4. **Critical Analysis Questions.** Each chapter concludes with a set of discussion questions and problems designed to test the student's ability to analyze economic issues and to apply economic theory to real-world events. Appendix B at the end of the text contains suggested answers for approximately half of the critical analysis questions. We think these answers, illustrating the power of economics, will interest students and will help them develop the economic way of thinking.

SUPPLEMENTARY MATERIALS

For the Student

The Wall Street Journal Edition

Instructors can enhance the real-life applications in the text by ordering *The Wall Street Journal Edition* of the textbook instead of the regular textbook. This special edition of the textbook is the same as the standard edition but includes a discounted 20-week subscription of *The Wall Street Journal* for students. Professors get a free subscription when ten or more of their students order the *Journal*. *The Wall Street Journal* provides a nice tie-in with the text, since new examples of economic principles can be found in each day's paper. Students can activate their subscriptions by simply completing and mailing the business reply card found in the back of the book. Instructors interested in finding out more about this program can contact their sales representative or simply call 1-800-782-4479. This option is available for both the hardcover version of the book and the paperback splits.

Coursebooks

The *Coursebooks* for this edition were prepared by coauthor Professor Russell Sobel and are now available not in two, but three versions, covering all three courses: economics, microeconomics, and macroeconomics. The *Coursebooks* are more than study guides. Each includes numerous multiple-choice, true/false, and discussion questions permitting students to self-test their knowledge of each chapter. Answers and short explanations for most questions are provided in the back of each *Coursebook*. Each chapter also contains problem and project exercises designed to improve the student's knowledge of the mechanics. A set of short readings chosen to supplement the classroom teaching of important topics is also included. Like the textbook, the *Coursebook* is designed to help students develop the economic way of thinking.

Favorite Ways to Learn Economics Student Manual

Authors David Anderson (Centre College) and Jim Chasey (Homewood Flossmoor High School) use experiments to bring economic education to life. This is a growing trend and for good reason. It works! Students are far more likely to retain new knowledge when it is reinforced with hands-on experiments. *Favorite Ways to Learn Economics* is a lab manual for the classroom and for individual study. This manual of experiments and problem sets reinforces the key principles of microeconomics and macroeconomics covered in most college and AP courses. Students will enjoy this active approach to learning. Instructors will see improvement in their students' comprehension. Like a finely tuned lecture, these experiments and problem sets bring economics to life.

PowerPoint Note-taking

For years, we have encouraged students to think rather than focus on note-taking in our classes. It was a hard sell—many feel uncomfortable if they are not developing a set of notes. This note-taking version of the PowerPoint slides contains all slides (both the notes and graphics), along with space for additional note-taking next to each slide. This supplement permits students to focus on the classroom activities while providing them with confidence that they have an excellent set of notes for future reference.

Gwartney Xtra! CD-ROM

Gwartney Xtra! CD-ROM, packaged with every new text, provides students with complimentary access to the robust set of additional on-line learning tools found at the site. If students don't have the CD, they can purchase access to the on-line version at <http://gwartneyXtra.swcollege.com>. Here is a tour through some of the study support features you will find there:

- ✕ **The Graphing Workshop.** For most students, graphing is one of the most difficult aspects of the Principles course. The Graphing Workshop is your one-stop learning resource for help in mastering the language of graphs. You'll explore important economic concepts through a unique learning system made up of tutorials, interactive tools, and exercises that teach you how to interpret, reproduce, and explain graphs.
- ✕ **SEE IT!** Animated graphing tutorials provide step-by-step graphic presentations and audio explanations.
- ✕ **TRY IT!** Interactive graphing exercises have you practice manipulating and interpreting graphs with GraphIt—a hands-on Java graphing tool. You can check your work on-line.
- ✕ **APPLY IT!** Interactive graphing assignments challenge you to apply what you have learned by creating your own graph from scratch to analyze a specific scenario. You can print out and/or e-mail answers to your instructor for grading.
- ✕ **Video Lecture and Applications.** Via streaming video, difficult concepts from each chapter are explained and illustrated by an economics instructor. These "Ask the Instructor" video clips can be extremely helpful review and clarification tools if you had trouble understanding an in-class lecture or if you are more of a visual learner who sometimes has difficulty grasping concepts as they are presented in the text. In addition, CNN video segments bring the "real world" right to your desktop. The accompanying CNN video exercises help to illustrate how economics is an important part of your daily life.
- ✕ **Additional Self-Testing Opportunities.** In addition to the open-access, chapter-by-chapter quizzes found at the Gwartney Product Support Web site (<http://gwartney.swcollege.com>), Gwartney Xtra! offers you an opportunity to practice for midterms and finals by taking on-line quizzes that span multiple chapters.
- ✕ **econ@pps: (Economic Applications).** These economic applications are also available through the Gwartney Xtra! CD. EconDebate Online, EconNews Online, EconData Online, and EconLinks Online, all deepen your understanding of theoretical concepts through hands-on exploration and analysis of the latest economic news stories, policy debates, data, and Web sites. These applications are updated on a regular basis.

Web Site

Valuable resources for students can be found on the Internet at the Gwartney textbook support site: <http://gwartney.swcollege.com>. Students will find links to economics-related Internet sites, automatically graded practice quizzes, PowerPoint slides for their review, a sample chapter from the study guide, access to Gwartney Xtra! and other resources.

South-Western Economics Resource Center

A unique, rich, and robust on-line resource for economics instructors and students (<http://economics.swcollege.com>) provides customer service and product information, teaching and learning tips and tools, information about careers in economics, access to all of our text-supporting Web sites, and other cutting-edge educational resources.

InfoTrac College Edition

If you bought a new copy of the *InfoTrac College Edition* of this text, don't forget to take advantage of your subscription. With *InfoTrac College Edition*, you can receive anytime, anywhere, on-line access to a database of full-text articles from hundreds of scholarly and popular periodicals. You can use its fast and easy search tools to find what you're looking for among the tens of thousands of articles—updated daily and dating back as far as four years—all in this single Web site. It's a great way to locate resources for papers and projects without having to travel to the library. To log on and get started, visit <http://www.infotrac-college.com>

Economics Alive! CD-ROMs

These interactive multimedia study aids for economics are the high-tech, high-fun way to study economics. Through a combination of animated presentations, interactive graphing exercises, and simulations, the core principles of economics come to life and are driven home in an upbeat and entertaining way.

Macroeconomics Alive! CD-ROM

ISBN: 0-538-86850-3

Microeconomics Alive! CD-ROM

ISBN: 0-538-84650-X

For more details, visit the Economics Alive! Web site <http://econalive.swcollege.com>.

Economics: Hits on the Web

This resource booklet supports your students' research efforts on the World Wide Web. The booklet covers materials such as: introduction to the World Wide Web, browsing the Web, finding information on the World Wide Web, e-mail, e-mail discussion groups, and newsgroups, documenting Internet Sources for research, and it provides a listing of the hottest Economic sites on the Web.

The New York Times Guide to Economics

by Bernard F. Sigler, Cheryl Jennings, and Jamie Murphy

More than just a printed collection of articles, this *Guide* provides access, via password, to an on-line collection of the most current and relevant *New York Times* articles that are continually posted as news breaks. Also included are articles from *CyberTimes*, the online technology section of *The New York Times* on the Web. Correlation guides for many South-Western economics texts are available on the South-Western/*New York Times* Web site at <http://nytimes.swcollege.com>.

ISBN: 0-324-04159-4

The Tobacco Wars

The Tobacco Wars, by Walter Adams (Michigan State University) and James W. Brock (Miami University of Ohio) presents the economic theory surrounding the tobacco litigation as a creative dialogue between many key players in the debate—including tobacco industry executives, consumers, attorneys, economists, health care professionals, historians, and political activists. Their fictional conversations illustrate the real-life issues, controversies, and points of view currently at play, giving readers a balanced and provocative framework to reach their own conclusions. The text provides a unique way to illustrate microeconomic principles, such as:

- ✗ Consumer behavior
- ✗ Industrial organization and public policy
- ✗ Antitrust policy
- ✗ Externalities, social costs, and market imperfections

ISBN: 0-324-01296-9

For the Instructor

Test Banks

The *Test Banks* for the 10th Edition were prepared by the author team. The two *Test Banks* contain approximately 7,000 questions—multiple-choice and short answer—most of which have been class tested. Within each chapter, the questions correspond to the major subheadings of the text. The first ten questions of each chapter are suitable for use as a comprehensive quiz covering the material of the chapter. The multiple-choice questions from the *Coursebook* are also included in a special section of the *Test Bank*. Thus, instructors who would like to provide their students with a strong incentive to study the *Coursebook* can easily access these questions and incorporate them into their quizzes and exams.

Computerized Test Banks

The computerized Test Banks for this edition have been enhanced significantly. *Examview*—Computerized Testing Software contains all of the questions in the printed *Test Bank*. *ExamView* is an easy-to-use test creation software compatible with both Microsoft Windows and Macintosh. Instructors can add or edit questions, instructions, and answers and select questions by previewing them on the screen, selecting them randomly, or selecting them by number. Instructors can also create and administer quizzes on-line, whether over the Internet, a local-area network (LAN), or a wide-area network (WAN).

PowerPoint

Prepared by Chuck Skipton, we believe our PowerPoint presentation is the best you will find in the principles market. The new package comes in three formats to suit the various needs of instructors.

- ✗ The first format provides chapter-by-chapter lecture notes with fully animated, hyperlinked slides of the textbook's exhibits. The dynamic slides and accompanying captions make it easy for instructors to present (and students to follow) sequential changes. The dynamic graphics are also used to highlight various relationships among economic variables. In order to facilitate discussion and interaction, questions are strategically interspersed throughout the chapters to help students develop the economic way of thinking. We have used the material in our own classes and can assure you that students find this method of presentation both enjoyable and helpful. Economic principles are developed rather than merely portrayed. This makes it so much easier to visualize relationships.
- ✗ The second version contains all of the slides mentioned in the first version, but they are not fully animated and hyperlinked. This is to suit those instructors with slower modems or less classroom capabilities.
- ✗ The third version contains exact replica slides of all of the exhibits in the book so that an instructor can present these graphs and figures without going through the entire set of lecture note PowerPoint slides.

Instructions explaining how professors can easily add, delete, and modify slides in order to tailor the presentation to their liking are included with the *Instructor's Resource* CD-ROM. If instructors want to make the PowerPoint presentation available to students, they can place it on their Web site (or the site for their course). It is also available on the Web site for this text at <http://gwartney.swcollege.com>.

South-Western Economics Resource Center

A unique, rich, and robust on-line resource for economics instructors and students (<http://economics.swcollege.com>) provides customer service and product information, teaching and learning tips and tools, information about careers in economics, access to all of our text-supporting Web sites, and other cutting-edge educational resources.

Instructor's Manual with Classroom Games

The *Instructor's Manual* was prepared by David Macpherson. Instructions and information on how to use and modify the PowerPoint material is contained in the front of the manual. Also included at the front of the manual is information on the enhancements to the new *Examview*—Computerized Testing Software. The remainder of the manual is divided up by corresponding text chapter, with each manual chapter divided into three parts. The first part is a detailed outline of each chapter in lecture-note form. It is designed to help instructors organize and structure their current lecture notes according to the format of the 10th Edition. Instructors can easily prepare a detailed, personalized set of notes by revising the computerized version of the notes. The second part of each chapter contains teaching tips, sources of supplementary materials, and other helpful information. Part 3 of each chapter provides instructors with in-class games designed to illustrate and enliven important economic concepts. Contributed in part by Professor Charles Stull of Kalamazoo College, the games are an enormously popular feature with instructors. We hope you will try them. We believe you will find them extremely useful for classroom learning.

Instructor's Resource CD-ROM

For the first time, the instructor's supplements accompanying this textbook are now conveniently available on one CD-ROM. Included on the CD-ROM are the PowerPoint slides, *Instructor's Manual*, and *Test Banks*. The CD-ROM also displays a navigation bar, allowing professors to easily search among the microeconomics and macroeconomics versions of the supplements.

Color Transparencies

Color transparencies of the major exhibits of the 10th Edition have been prepared for use with overhead projectors. They are available to adopters upon request in sets for microeconomics and macroeconomics.

South-Western Publishing will provide complimentary supplements or supplement packages to those adopters qualified under our adoption policy. Please contact your sales representative to learn how you may qualify. If as an adopter or potential user you receive supplements you do not need, please return them to your sales representative.

Principles of Economics Videotape

Principles of Economics is a 40-minute videotape that offers students an insightful overview of ten common economic principles: Tradeoffs, Opportunity Cost, Marginal Thinking, Incentives, Trade, Markets, Government's Role, Productivity, Inflation, and The Phillips Curve.

Principles of Economics shows viewers how to apply economic principles to their daily lives. This video is filled with interviews from some of the country's leading economists, and includes profiles of real students facing economic choices, as well as showing the economy's impact on U.S. and foreign companies.

This video can be used at the beginning of a term to give students a general overview of economics, or used one section at a time prior to teaching one of these principles in your course.

CNN Economics Videos

Professors can bring the real world into the classroom by using the CNN Principle of Economics Video Updates. This video provides current stories of economic interest. The video is produced by Turner Learning Inc.

WebTutor/WebTutor Advantage

On-line learning is growing at a rapid pace. Whether instructors are planning to offer courses at a distance, or to offer a Web-enhanced classroom, South-Western/Thomson Learning offers them a solution with WebTutor. WebTutor provides instructors with text-specific content that interacts in the two leading Course Management Systems available in Higher Education—WebCT and Blackboard. WebTutor is a turnkey solution for instructors who want to begin using technology like Blackboard or WebCT, but do not have Web-ready content available or do not want to be burdened with developing their own content. South-Western offers two levels of WebTutor—WebTutor and WebTutor Advantage.

WebTutor—An interactive Study Guide, WebTutor uses the Internet to turn everyone in your class into a front-row student. WebTutor offers quizzing, concept review, flash cards, discussion forums, and more. Instructor tools are also provided to assist communication between students and faculty.

WebTutor Advantage—More than just an interactive study guide, WebTutor Advantage delivers innovative learning aids that actively engage students. Benefits include automatic and immediate feedback from quizzes; interactive, multimedia-rich explanation of concepts, such as flash-animated graphing tutorials and graphing exercises that utilize an on-line graph-drawing tool; streaming video applications; on-line exercises; flashcards; and greater interaction and involvement through on-line discussion forums. Powerful instructor tools are also provided to assist communication and collaboration between students and faculty. Contact your sales representative for more information on WebTutor products.

Favorite Ways to Learn Economics Instructor's Manual

Authors David Anderson (Centre College) and Jim Chasey (Homewood Flossmoor High School) use experiments to bring economic education to life. This is a growing trend and for good reason. It works! Students are far more likely to retain new knowledge when it is reinforced with hands-on experiments. *Favorite Ways to Learn Economics* is a lab manual for the classroom and for individual study. This manual of experiments and problem sets reinforces the key principles of microeconomics and macroeconomics covered in most college and AP courses. Students will enjoy this active approach to learning. Instructors will see improvement in their students' comprehension. Like a finely tuned lecture, these experiments and problem sets bring economics to life.

NOTE TO THE INSTRUCTOR

In trying to improve the book from one edition to the next, we rely heavily on our experiences as teachers. But our experience using the book is minuscule compared with that of the hundreds of instructors who use it nationwide. If you encounter problems or have suggestions for improving the book, we urge you to let us know by writing to us in care of South-Western / Thomson Learning, 5191 Natorp Blvd., Mason, OH 45040. Such letters are invaluable, and we are glad to receive both praise and suggestions for improvement. Many such suggestions that were accumulated since publication of the 9th Edition have found their way into this new book.

Acknowledgments

A project of this type is a team effort. We would like to express our appreciation to Chuck Skipton, who assisted us in numerous ways. Most significantly, he developed what we believe is the very best set of PowerPoint slides accompanying an introductory economics text. In the past, Woody Studenmund of Occidental College prepared the Coursebook and Gary Galles of Pepperdine University coauthored the *Instructor's Manual*. Both of these supplements still bear the imprint of their contribution.

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A Note to the Students

This text contains several features that we think will help you maximize (a good economic term) the returns derived from your study effort. Our past experience indicates that awareness of the following points will help you use the book more effectively.

- ✕ Each chapter begins with a series of focus questions that communicates the central issues of the chapter. Before you read the chapter, briefly think about the focus questions, why they are important, and how they relate to the material of prior chapters.
- ✕ The textbook is organized in the form of an outline. The major headings within the text are the major points of the outline. Minor headings are subpoints under the major headings. In addition, important subpoints within sections are often set off and numbered. Bold, italicized type is used to highlight material that is particularly important. Sometimes thumbnail sketches are included to help the reader better organize important points. Careful use of the headings, highlighted material, and thumbnail sketches will help you master the material.
- ✕ A Key Points summary appears at the end of each chapter. Use the summary as a checklist to determine whether you understand the major points of the chapter.
- ✕ The key terms introduced in each chapter are defined in the margins. As you study the chapter, go over the marginal definition of each key term as it is introduced. Later, you may also find it useful to review the marginal definitions. If you have forgotten the meaning of a term introduced earlier, consult the glossary at the end of the book.
- ✕ The boxed features provide additional depth on various topics. In general, the topics of the boxed features have been chosen because of their relevance as an application of the theory or because of past student interest in the topic.
- ✕ The critical analysis questions at the end of each chapter are intended to test your understanding of the economic way of thinking. Solving these questions and problems will greatly enhance your knowledge of the material. Answers to approximately half of these questions are provided in Appendix B.
- ✕ Economics is about obtaining the most value from the available resources. At appropriate places throughout the text, the Keys to Prosperity Series (indicated with a key-shaped icon) stresses the importance of 12 elements that are central to the achievement of this objective. Students should make sure that they understand these factors because they will enhance their knowledge of the conditions underlying economic prosperity. The front endpapers contain a list of the 12 elements.
- ✕ If you need more practice, be sure to obtain a *Coursebook* and solve the questions and problems for each chapter. The Coursebook also contains the answers to the multiple-choice questions and a brief explanation of why an answer is correct (and other choices incorrect). In most cases, if you master the concepts of the test items in the Coursebook, you will do well on the quizzes and examinations in your course.
- ✕ For extra help utilizing multimedia tools, use the Gwartney X-tra CD-Rom or go to <http://gwartneyXtra.swcollege.com>, where you will find practice quizzes, PowerPoint reviews of each chapter, video clips that answer frequently asked questions, tutorials on graphing, and other helpful learning tools.

About the Authors

James D. Gwartney

James Gwartney is Professor of Economics in the DeVoe Moore Center for the Study of Critical Issues in Economic Policy at Florida State University. Professor Gwartney, who received his doctoral degree from the University of Washington, served as Chief Economist of the Joint Economic Committee of the U.S. Congress from 1999 to 2000. He is the author of numerous books and articles, including *Economic Freedom of the World* and *What Everyone Should Know about Economics and Prosperity*—a book that has been translated into 14 languages. His writing has appeared in the *Wall Street Journal*, *New York Times*, and *Investor's Business Daily*, among many others.

Richard L. Stroup

Richard Stroup is Professor of Economics at Montana State University, and Senior Associate at the Political Economy Research Center. With a Ph.D. in economics from the University of Washington, Professor Stroup has served as Director of the Office of Policy Analysis at the Department of the Interior and has been published widely in professional journals. He is a contributing editor of numerous books on the economics of resources and the environment, and has lectured throughout the United States and abroad to professional and general audiences.

Russell S. Sobel

Russell Sobel is an Associate Professor of Economics at West Virginia University. Receiving his Ph.D. in economics from Florida State University in 1994, Professor Sobel regularly teaches courses in both principles of economics and public economics. His enthusiastic teaching style has earned him many university teaching awards, and he regularly gives lectures at economic education outreach programs on basic economic principles. Professor Sobel's research focuses on the economic effects of state and local tax policy specifically, and on political behavior in general.

David A. Macpherson

David Macpherson is a new addition to the authorship team. The Abba Lerner Professor of Economics at Florida State University, he has received two university-wide awards for teaching excellence. Professor Macpherson is also the author of many articles in leading labor economics and industrial relations journals—including the *Journal of Labor Economics*, *Journal of Human Resources*, and *Industrial and Labor Relations Review*. His current research interests include pensions, discrimination, labor unions, and the minimum wage. Professor Macpherson received his undergraduate degree and Ph.D. from Pennsylvania State University.

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