

fifth edition

Micro economics

COLANDER

MICROECONOMICS

Fifth Edition

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Middlebury College



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Dedicated to the memory of Frank Knight and
Thorstein Veblen, both of whose economics have significantly
influenced the contents of this book.



MICROECONOMICS

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About the Author

David Colander is the Christian A. Johnson Distinguished Professor of Economics at Middlebury College. He has authored, coauthored, or edited 35 books and over 100 articles on a wide range of economic topics.

He earned his B.A. at Columbia College and his M.Phil and Ph.D. at Columbia University. He also studied at the University of Birmingham in England and at Wilhelmsburg Gymnasium in Germany. Professor Colander has taught at Columbia College, Vassar College, and the University of Miami, as well as having been a consultant to Time-Life Films, a consultant to Congress, a Brookings Policy Fellow, and Visiting Scholar at Nuffield College, Oxford. In 2001–2002, he was the Kelley Professor of Distinguished Teaching at Princeton University.

He belongs to a variety of professional associations and has served on the board of directors and as vice president and president of both the History of Economic Thought Society and the Eastern Economics Association. He has also served on the editorial boards of the *Journal of Economic Perspectives*, *The Journal of Economic Education*, *The Journal of Economic Methodology*, *The Journal of the History of Economic Thought*, *The Journal of Socio-Economics*, and *The Eastern Economic Journal*.

He is married to a pediatrician, Patrice, who has a private practice in Middlebury, Vermont. In their spare time, the Colanders designed and built their oak post-and-beam house on a ridge overlooking the Green Mountains to the east and the Adirondacks to the west. The house is located on the site of a former drive-in movie theater. (They replaced the speaker poles with fruit trees and used the I-beams from the screen as support for the second story of the carriage house and the garage. Dave's office and library are in the former projection room.)



Preface

"Imagine . . . a textbook that students enjoy!" That comment, from Glen Waddell, who teaches at Purdue, was e-mailed to me as I was struggling to write the preface to the fourth edition. That comment still captures what I believe to be the most distinctive feature of my book. I've always felt that the books students read in their courses should speak to them and be as enjoyable as possible to read. Those beliefs continue to be the guiding principle for my writing.

▲ For Those Who Are New to the Book

For those of you who haven't used earlier editions, let me briefly describe where I see this book fitting in the panoply of top-selling books. Principles books are often categorized as old-style or new-style. I like to think of the flavor of this book as neither old- nor new-style, but instead cutting-edge style. Much of the conceptual foundations for the theory underlying it are derived from the new work in behavioral economics, nonlinear dynamics, complexity, and strategic game theory.

Within this new-style work, everything is less certain than in either the new- or the old-style theory. That cutting-edge style sees economic theory taking us only so far in answering policy questions about whether or not the government should intervene in the economy. At the cutting edge of modern theory, no side is totally right or totally wrong in the ongoing policy debates. It's that ongoing debate about policy that makes economics so interesting to me.

Another way in which principles books are classified is on the easy-medium-difficult spectrum. This book is definitely in the medium range. Based on writing style alone, it would probably be placed in the easy range, but since it tackles difficult conceptual topics that will challenge even the brightest students, it should be considered a medium-range text. Why do I choose that combination? Because I believe that most students have the ability to understand economic concepts even though on exams it often appears as if they have serious problems. In my opinion many of those problems are not conceptual; rather, they are problems in motivation, reading, and math. The economics found in principles courses is not students' highest priority; it certainly wasn't mine when I was 18. I'm continually amazed at how many supposedly not-so-good students are

conceptually bright. The reality is that most principles books bore this MTV generation. To teach them effectively, we've got to get their attention and hold it.

One way I try to get students' attention is to use a colloquial style. The book is written in a style that talks to students and makes them feel that in the textbook they have a second teacher who is urging them on to study harder, and trying to explain the material to them. That colloquial style helps with one of the biggest problems in the course—getting students to read the book. Some professors don't always like the style, but even some of those have written me that they use the book anyway because their students will read it. And if the students have read the book, teaching is more rewarding.

Another way the book relates to students is through its focus on policy. This book is not written for future economics majors, because most students aren't going to go on in economics. It is written for students who will probably take only one or two economics courses in their lifetime. These students are interested in policy, and what I try to present to them is the basics of economic reasoning as it relates to policy questions. So, throughout the book, I turn the discussion to policy. This discussion presents policy as students see it in the news: policy questions are seldom clear-cut; a book that presents policy any other way is unfair to students.

A final way in which this book differs from some of the others is that it emphasizes the importance of institutions and history. Modern work in game theory and strategic decision making is making it clear that the implications of economic reasoning depend on the institutional setting. To understand economics requires an understanding of existing institutions and the historical development of those institutions. In a principles course, while we don't have time to present much about history and institutions, we can at least let students know that we know that these issues are important. And that's what I try to do.

▲ For Those Who Have Used the Book Before

Those of you who have used earlier editions will find that this fifth edition has the same basic structure and tone as the fourth edition, and that it has fewer changes than in previous revisions. The reason for the fewer

changes is that reviewers said that in the last edition I'd reached a nice equilibrium—I'd made the book consistent with the standard presentations, but I also had kept enough of the historical and institutional approaches and informal, student-friendly writing style to make the book distinctive. I guess the process of reviewing and rewriting does finally lead to something like a steady-state equilibrium. But even in the steady state, changes are still necessary to ensure that (1) the views provided express the latest standard views of economists, and (2) that the exposition relates as closely as possible to recent economic events. Let me briefly take you through the changes.

Changes in the Introductory Section (Chapters 1–5)

The introductory section had the largest revisions. I significantly reorganized and reworked Chapters 2 and 3 to make the book easier to use and to allow more choice in presentation of this material. Specifically, Chapter 2 is now titled "Trade, Trade-Offs, and Government Policy"; it focuses on the production possibility curve, comparative advantage, and trade. To keep the focus on policy so that students are not presented with a tool out of context, I moved the discussion of the roles of government previously found in Chapter 5 to this chapter. Chapter 3 is now titled "The Evolving U.S. Economy in Perspective." It covers economic systems, institutions, the U.S. economy, and the problems of regulating trade both domestically and internationally. It concludes with a discussion of how globalization has affected the U.S. economy.

The following should give you a sense of the chapter-by-chapter changes that were made in the introductory section:

- Chapter 1 (Economics and Economic Reasoning): I added a discussion of economics as an observational science.
- Chapter 2: (Trade, Trade-Offs, and Government Policy): The chapter now centers on a discussion of comparative advantage, the production possibility curve, and government policy toward trade. Finally, since this is the first chapter in which I use graphs in an analytic manner, I end it with a graphing appendix.
- Chapter 3 (The Evolving U.S. Economy in Perspective): This chapter now discusses both economic systems and economic institutions, concluding with a policy discussion of globalization.
- Chapter 4 (Supply and Demand): This chapter presents the basic issues that students need to know about supply and demand for the macro course, including the effect of shifting demand and

supply curves and the limitations of supply/demand analysis.

- Chapter 5 (Using Supply and Demand): This chapter gives many real-world examples and deepens students' understanding of the supply/demand model. It begins with two real-world examples of supply and demand, and no longer includes discussions of the roles of government (now covered in Chapter 2). Third-party-payer markets are an addition to this chapter.

Changes in Chapters 6–21

The biggest change in these chapters involved reorganizing them to make them better fit the way most people teach the course. I moved up the antitrust chapter to the section covering market structure; I also moved up the factor market section to earlier in the book. This allowed me to collapse the two policy sections into one. The goals of these changes were to match the structure to the way most people teach the course and to make it easier for professors to pick and choose among the policy chapters. The majority of the other changes in the micro section involved improving the exposition and updating examples. The following list should give you a brief idea of the type of changes I made. (A more extensive list can be found on the book's website.)

Section I: Microeconomics: The Basics

- Chapter 6 (Describing Supply and Demand: Elasticities): I eliminated the term *arc elasticity* to simplify the presentation, updated the estimates of elasticities, and added new examples.
- Chapter 7 (Taxation and Government Intervention): Consumer surplus and producer surplus are now introduced in this chapter (moved from Chapter 4).

Section II: Foundations of Supply and Demand

- Chapter 8 (The Logic of Individual Choice): I expanded some examples and clarified the importance of the budget constraint.
- Chapter 9 (Production and Cost Analysis I): I added a short discussion of corporations and issues of accounting, and clarified that all fixed costs are assumed to be sunk costs.
- Chapter 10 (Production and Cost Analysis II): I added additional problems and exercises relating to technical and economic efficiency.

Section III: Market Structure and Policy

- Chapter 11 (Perfect Competition): I updated the shutdown decision example to refer to Kmart.

- Chapter 12 (Monopoly): I added a discussion of monopolists that failed so that students see that monopolies may make a loss.
- Chapter 13 (Monopolistic Competition, Oligopoly, and Strategic Pricing): I added examples about Microsoft and Amazon, and added a box on John Nash.
- Chapter 14 (Real-World Competition and Technology): I reworked this chapter significantly by moving the discussion of globalization to Chapter 3, and concentrating the discussion on technology and the process of competition.
- Chapter 15 (Antitrust Policy and Regulation): I updated the discussion of the Microsoft case and added newer examples throughout.

Section IV: Factor Markets

- Chapter 16 (Work and the Labor Market): I moved the appendix on nonwage income and property rights into a box within the chapter and added a discussion of the living-wage movement.
- Chapter 17 (Who Gets What? The Distribution of Income): I added a box about Armatya Sen's views of the goals of society and a box assessing the 1996 welfare-to-work law.

Section V: Applying Economic Reasoning to Policy

- Chapter 18 (Government Policy and Market Failures): I shortened the discussion of licensing and health care.
- Chapter 19 (Politics and Economics: The Case of Agricultural Markets): I updated the discussion of farm laws to include the 2002 agricultural support bill.
- Chapter 20 (Microeconomic Policy, Economic Reasoning, and Beyond): I updated the value-of-human-life statistics.
- Chapter 21 (International Trade Policy): I added a discussion of empirical measures of trade, updated examples, and added a new box on the forces of antiglobalization.

▲ A Final Comment

A number of my friends keep asking me why I spend so much thought and time about what goes into the book. The answer is that I care about teaching economic ideas, which I think is the most important job that society has assigned to academic economists. Research is nice, but good teaching is priceless, and if the writing and the ideas in this book contribute to good teaching, then I'm happy.

As I get older, I find that I'm happier with less grandiose goals, and to have turned a few students on to economics seems like a worthwhile legacy.

▲ Ancillaries

All reviewers agreed that the fourth edition's ancillaries were top rate. We have continued to work hard to maintain that level of excellence.

Study Guide

This guide—written by myself, Douglas Copeland of Johnson County Community College, and Jenifer Gamber—reviews the main concepts from each chapter and applies those concepts in a variety of ways: short-answer questions, matching terms with definitions, problems and applications, a brain teaser, multiple-choice questions, and potential essay questions. Since students learn best not by just knowing the right answer but by understanding how to get there, each answer comes with an explanation. Timed cumulative pretests help students prepare for exams.

Instructor's Manual

In the fifth edition, Tom Adams of Sacramento City College continues to maintain the high standard set in previous editions. Class preparation is easier than ever. "Chapter Overview" and "What's New" provide a quick review of each chapter. "What's New" will be invaluable when modifying lecture notes to fit the new edition. The manual provides you with comprehensive lecture outlines, but it also offers help for inevitable classroom trouble spots. "Discussion Starters" will help engage your students and keep them thinking. "Tips for Teaching Large Sections," written by Gail Hoyt of the University of Kentucky for micro and Dave Colander for macro, offers innovative ideas for teaching very large classes. "Student Stumbling Blocks" provides additional explanations or examples that help clarify difficult concepts. "Ties to the Tools" helps bring those text boxes into the classroom; a comprehensive list of relevant URLs brings the Internet in too. Every chapter's 10-question "Pop Quiz" will help students prepare for exams. The "Case Studies" provide contemporary, real-world economic examples. The entire instructor's manual is available in print, on the Instructor's CD-ROM, and on the Colander website.

Test Banks

Susan Dadres of Southern Methodist University revised Test Banks A and B (the 5,500-question multiple-choice test banks). Each question is categorized by chapter learning objective; level of difficulty (easy, medium, hard); skill

being tested (recall, comprehension, application); and type of question (word problem, calculation, graph). In addition, James Chasey has tagged all the questions that are best suited for a high school AP course. Approximately 30 percent of the questions are new or revised. Each question was reviewed by Jenifer or myself for accuracy, clarity, and consistency with the textbook. They are available in print form and in the Diploma electronic test generating system on the Instructor's CD-ROM.

Test Bank C, revised by Rashid Al-Hmoud of Texas Tech University, consists of over 300 short-answer questions, essay questions, and graphical and mathematical problems. Questions vary in level of difficulty and type of skill being tested. They are available in print and on the Instructor's CD-ROM.

DiscoverEcon

The DiscoverEcon software, developed by Gerald Nelson of the University of Illinois at Urbana-Champaign, is the best-selling academic economics software. It functions like an interactive text; software chapters parallel text chapters, and software pages include specific page references to the text. Each chapter of the software includes a multiple-choice quiz, essay questions with online links, two Web questions, and match-the-terms exercises. Interactive graphs, animated charts, and live tables allow students to manipulate variables and study the outcomes. E-submission is a new feature of DiscoverEcon to accompany the fifth edition. Using the Web-based version, instructors can now set up their courses for e-submission so that all exercise results for each student can be viewed and downloaded to other Windows applications. For those instructors using a course management system, specific "pages" in DiscoverEcon can now be linked to specific parts of the course website. This makes student navigation and therefore self-assessment easier than ever for both student and instructor.

The software is available online with a password code card; it is also available on a single CD that can be installed and run over a network. Link to DiscoverEcon online through the Colander book website: www.mhhe.com/economics/colander5.

PowerPoint Presentation

Anthony Zambelli of Cuyameca College has once again prepared an extensive slide program that includes all text exhibits and key concepts. He has reduced the number of slides in each chapter to give the presentation more focus. They are available on CD-ROM and on our website.

Overhead Transparencies

We offer all key text exhibits in full-color acetate form for use with overhead projectors.

Economics Web Newsletter

This electronic newsletter contains 10 questions related to current economic events that can be used as an in-class quiz and reprints one recent *Wall Street Journal* article along with 5 in-depth questions (and answers) that are tied to specific text chapters. Seven new exercises will be added each semester.

Classic Readings in Economics

This collection includes selections from the writings of economists, such as Smith, Marx, Hayek, or Veblen, who have raised questions that changed the direction of economic thinking. This material is especially useful for courses that stress the importance of economic ideas.

Economics: An Honors Companion


The *Honors Companion* presents mathematical techniques that underlie numerous basic economic concepts. It presupposes a solid student background in algebra and geometry and some familiarity with basic calculus, thereby giving *Microeconomics, Fifth Edition*, flexibility for use in more rigorous classes.

▲ www.mhhe.com/economics/colander5

The Online Learning Center with PowerWeb to accompany Colander's fifth edition is a website full of exciting new content that follows the text chapter by chapter. Students and instructors alike will find a wealth of new online resources.

For the Student Center, Douglas Copeland of Johnson County Community College has prepared chapter-level study aids, including Chapter Introductions, Tutorials (3–5 problems per chapter using interactive graphing applets), and Practice Exercises (3–5 problems per chapter, with answers). Students can also choose from four levels of multiple-choice quizzes: easy, medium, hard, and an assortment, plus Learning Objectives, end-of-chapter Web Questions, Web Newsletters, a section called Writing about Economics, a Glossary, a Colloquial Glossary, and answers to even-numbered end-of-chapter questions.

Kit Taylor of Bellevue Community College has developed a Current Events section, updated quarterly, with "mini-readers" that use *New York Times* and *Business Week* articles to explore economics in the news today. Each new section will include suggested Web resources for further research, brief background notes, suggested paper topics—and will tie it all to the appropriate book chapters. Kit has



also updated the WebNotes from the book; this feature extends the text discussion onto the Web. WebNotes are signified in the book by a globe icon in the margin and shown here on the left. In addition, a *New York Times* Web feed presents students with economics-related news headlines. Thanks to embedded PowerWeb content, students can get quick access to real-world news and essays that pertain to economics.

Instructors will find downloadable PowerPoints, the Instructor's Manual, Sample Syllabi, a link to Dave Colander's own website, and Help for AP Courses. We also provide a link to "Best Practices for Teaching Principles of Economics," a compilation of brief exercises provided by professors across the country that is edited by Kim Marie McGoldrick and Peter Schuhmann.

The entire website content can be delivered multiple ways—through the textbook website, through PageOut, or within a course management system (i.e., WebCT or Blackboard).

I'm very proud of the ancillary package. I think you will find that its high quality, enormous diversity, and exceptional utility make the book a complete learning system.

▲ People to Thank

A book this size is not the work of a single person, despite the fact that only one is listed as author. So many people have contributed so much to this book that it is hard to know where to begin thanking them. But I must begin somewhere, so let me begin by thanking the fifth edition reviewers, whose insightful comments kept me on track.

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