

EDWIN MANSFIELD

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GARY YOHE

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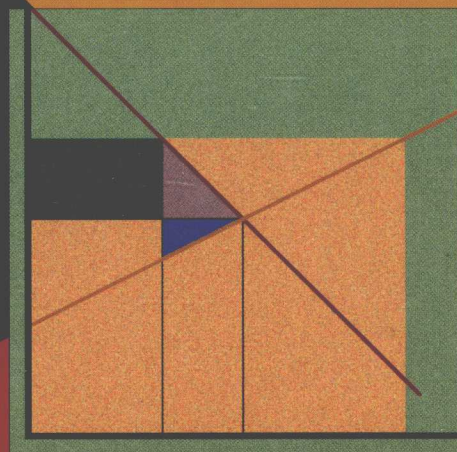
MICRO

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EDWIN MANSFIELD  
and  
GARY YOHE

# MICROECONOMICS

T H E O R Y / A P P L I C A T I O N S

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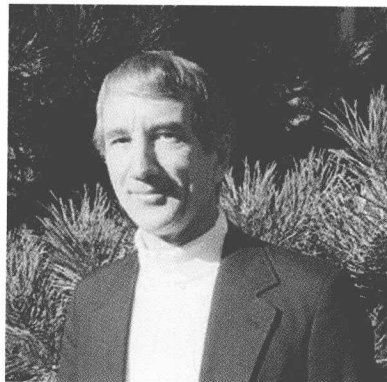
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## About the Authors

GARY YOHE is professor of economics at Wesleyan University and a collaborator at the Center for Integrated Study of the Human Dimensions of Global Change at Carnegie Mellon University. A Phi Beta Kappa graduate of the University of Pennsylvania, he received his M.S. in mathematics from the State University of New York at Stony Brook and his Ph.D. in economics from Yale University. Professor Yohe is the author of more than eighty-five articles. In his research he applies the first principles of microeconomic analysis to decision making under uncertainty and explores the trade-off between mitigating climate change and abating its potential damage. Professor Yohe has served as chair of the economics department at Wesleyan, as well as director of research and sponsored programs. He is an advisor and funded researcher for a variety of domestic and international organizations, including the National Science Foundation, the Department of Energy, the Socio-Economic Data Archive Center funded by NASA, the United States Climate Research Program, the International Human Dimensions Program, the United Nations Environment Program, the World Meteorological Program, the World Climate Research Program, and the Intergovernmental Panel on Climate Change.



EDWIN MANSFIELD graduated from Dartmouth College, and received his M.A. and Ph.D. degrees from Duke University. Before coming to the University of Pennsylvania, where he served on the economics faculty for many years, Professor Mansfield taught at Carnegie-Mellon, Yale, Harvard, and California Institute of Technology. The author of over two hundred articles and thirty books, Professor Mansfield's textbooks in economics, microeconomics, managerial economics, and statistics have been adopted at more than 1,000 colleges and universities around the world.

# Preface

The landscape of microeconomics has changed dramatically since this book first appeared. At the time of the First Edition, various ideas fundamental to this Tenth Edition—like the role of risk and uncertainty, strategic behavior, and asymmetric information—were just beginning to take their now-significant places at the research frontier. Reflecting the contemporary approach, this Tenth Edition devotes three complete chapters to those topics and addresses them at numerous points in other chapters. Moreover, today microeconomics sheds light on applied topics that were relatively unknown to previous generations of students: computing the value of information and the costs of inequity, understanding the role of insurance in a modern economy and the problems of coping with moral hazard and adverse selection, exploring the power of market-based incentives in the design of wide-ranging policies, contemplating the difficulties involved in discounting extremely distant or uncertain futures, and trying to comprehend the ramifications of global externalities like climate change. These and other current applications now appear in the book before you.

My goal in coauthoring *Microeconomics: Theory and Applications* was to bring a fine textbook, one I had always admired above the rest for its excellent treatment of microeconomic fundamentals, to a new generation of students. To do that I have stuck to Edwin Mansfield's central objective: to explain microeconomic theory in the clearest and most interesting way possible and to indicate the wide range of practical applications of microeconomic theory. I have tried to pursue this objective in a contemporary mode, while continuing to emphasize microeconomic fundamentals above all else. Thus, this Tenth Edition stresses the role of competitive markets in the promotion of economic efficiency and the effects of government intervention in the marketplace. Further, it shows how the principles of cost-benefit analysis are rooted in the concept of economic efficiency. It also takes up the complications that arise when asymmetric information affects the decisions of buyers and sellers and the underlying structure of markets. And it offers expanded coverage of game theory and decision making under uncertainty. Several of the specific revisions are outlined below:

- Changes to Chapter 13, on game theory, provide greater emphasis on repeated games. Later, in Chapters 15 (“Investments”), 18 (“Asymmetric Information”), and 19 (“Public Goods, Externalities, and the Role of Government”), several new boxed examples appear in which I apply game theory in these areas.
- Throughout the book, boxed examples in the form of worked problems serve the dual purpose of reinforcing the theory and applying it to real events and issues. The following examples are among the many that are either new or substantially updated: “*Attracting Quality Students with Partial Scholarships*,” “*Hospitals and the Health Insurance Bind*,” “*Are Two Consultants Better Than One?*” “*Is a CEO Really Worth Half a Billion Dollars Per Year?*” “*The Microsoft Finding and the Value of Startup Software Companies*,” “*Two-Part Tariffs in the National Football League*,” “*The International Supply of Crude Oil*,” and “*Economic Efficiency and the Global Policy to Combat Climate Change*.”
- The book contains five cross-chapter cases appearing at the ends of Parts Two through Six. Two of these—“Production and Cost Theory at Work: The Cost of Climate Policy” (Part Three) and “Shaking the Tree of Global Telecommunications Markets” (Part Four)—are new to the Tenth Edition; the others have been revised.
- The treatment of decision making under uncertainty in Chapter 6 now looks at the value of information both in the context of expected monetary value calculations for risk-neutral actors and in the context of certainty-equivalent insurance computations for risk-averse actors. This is all done from the perspective of the practical need to determine value in the economic context.
- Many changes in the Tenth Edition lie in the details. In updating the tone of the book, each line of text has been scrutinized with an eye toward today’s students. Examples have been altered and replaced, illustrations have been updated, phrasing and style have been refreshed, always with the goal of reaching out to the student reader. Toward this end, the book’s colorful new design will also contribute.

As with previous editions, a workbook and study guide are available to accompany the text. *Microeconomic Problems: Case Studies and Exercises for Review*, Tenth Edition, revised by James Peoples of University of Wisconsin at Milwaukee, guides students toward an understanding of the theories comprising and underlying microeconomics. Problems and questions are provided that test students’ skills in applying microeconomic theory to real-world situations. *Microeconomic Problems* now contains about 1,100 questions and problems, together with their solutions. This book also contains numerous case studies.

An *Instructor’s Manual and Test-Item File* is available to qualified instructors. In addition to teaching suggestions for each chapter, it includes a test bank of multiple-choice questions and problem sets that not only reflects the decision-making emphasis of the text, but also develops theory as a set of principles that yields insights into everyday problems. Kathryn Nantz has revised this volume for the Tenth Edition, creating a fresh and varied menu of teaching materials, and this is the place to record my thanks to her.

Test questions are also available in digital form in the Norton TestMaker application. Information on ordering the program can be obtained from the publisher.

Finally, I have prepared a set of PowerPoint Lectures, one for each chapter of the book. Instructors may download these files from the publisher's Web site and adapt them for course use as they see fit.

Many instructors and reviewers have contributed in important ways to this and the previous editions. For previous editions this includes: Charles A. Berry, University of Cincinnati; Byron Brown, Michigan State University; Eleanor Brown, Pomona College; Neil Bruce, University of Washington; Donald Cell, Cornell College; Yongmin Chen, University of Colorado; Alvin Cohen, Lehigh University; Marshall Colberg, Florida State University; Michael A. Crew, Rutgers University at Newark; James Dana, Northwestern University; Avinash Dixit, Princeton University; Robert Dorfman, Harvard University; Catherine Eckel, Virginia Polytechnic Institute; Allan Feldman, Brown University; Alan Fisher, California State University at Fullerton; J. Fred Giertz, University of Illinois; William Gunther, University of Alabama; Richard Harmstone, Pennsylvania State University; William Holohan, University of Wisconsin at Milwaukee; David R. Kamerschen, University of Georgia; Theodore E. Keeler, University of California, Berkeley; Elizabeth Sawyer Kelley, University of Wisconsin at Madison; Jonathan Kesselman, University of British Columbia; Thomas Kniesner, Indiana University; Charles Knoeber, North Carolina State University; John Laitner, University of Michigan; Richard Levin, Yale University; C. Richard Long, Georgia State University; Mark Machina, University of California San Diego; Paul Malatesta, University of Washington; Lawrence Martin, Michigan State University; M. R. Metzger, University of Central Oklahoma; Hajime Miyazaki, Ohio State University; David Molina, North Texas State University; Kathryn Nantz, Fairfield University; John Neufeld, University of North Carolina; Mancur Olson, University of Maryland; John Palmer, University of Western Ontario; C. Barry Pfitzner, Randolph-Macon College; Robert Pollak, University of Washington; Richard Porter, University of Michigan; Charles Ratliff, Davidson College; David J. Ravenscraft, University of North Carolina, Chapel Hill; Robert E. Rosenman, Washington State University; Anthony Ruffolo, Portland State University; Sol S. Shalit, University of Wisconsin at Milwaukee; Barry Siegel, University of Oregon; N. J. Simler, Macalester College; A. Michael Spence, Stanford University; Daniel Sullivan, Northwestern University; Richard Sylla, New York University; W. James Truitt, Baylor University; Gordon Tullock, University of Arizona; David Vrooman, St. Lawrence University; A. R. Whitaker, U.S. Naval Academy; and Richard Zeckhauser, Harvard University.

In revising the Tenth Edition, I benefited from the insights of James Dearden, Lehigh University; Hadi Dowlatabadi, Carnegie Mellon University; Maxim Engers, University of Virginia; Richard Miller, Wesleyan University; Gilbert Skillman, Wesleyan University; Kenneth Strzepek, University of Colorado; and Kealoha Widdows, Wabash College.

Thanks also to Ed Parsons, my editor at Norton, and his colleagues Mark Henderson, Jane Carter, and Ann Marcy, and to manuscript editor Traci



Nagle and the proofreader Rosanne Fox. This revision would not have been possible without their outstanding efforts. My family, too, deserves special thanks. My labors on this project imposed a cost on them, which they bore with characteristic love and support.

I have always been a fan of Edwin Mansfield's micro text because he did such a wonderful job making microeconomics clear, interesting, and compelling. I am grateful to Lucile Mansfield and the people at Norton for trusting me to carry on Professor Mansfield's fine tradition. I have attempted to add without subtracting, and I hope that I have succeeded.

G.Y.

Middletown, Connecticut, 1999

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