

Principles of
Microeconomics



James R. Kearl

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D. C. HEATH AND COMPANY
Lexington, Massachusetts Toronto



About the Author

Currently Professor of Economics at Brigham Young University, Professor Karl received his Ph.D. in economics from MIT in 1975. His economic research and journal publications for the first five years centered on housing markets, mortgage instruments, liquidity, and inflation. In 1978 he did post-doctoral work in law and economics at Harvard. Since then, his research and publications have focused primarily on law and economics, income and wealth distribution, and economic mobility. He was a White House Fellow in 1983-1984, working as a special assistant to the Secretary of Defense and then as special assistant to the U.S. Trade Representative. From June 1986 to November 1989, he worked at BYU as Dean of General and Honors Education and then as Associate Academic Vice President. He returned to full-time teaching in 1991, and in 1992 received the Maeser Distinguished Teaching Award, BYU's highest teaching award.

Preface

This is a time of extraordinary change. To pick up a newspaper means to confront on a weekly basis stories of economic experimentation after the demise of communism, as well as news about one of the worst economic downturns in the industrial economies in over fifty years. The field of economics, too, has seen vast growth in knowledge in the last decade. Anyone trying to stay current by reading the leading academic journals has a difficult time at best.

I wrote this text in an attempt to capture some of the flavor and excitement of recent events. In doing so, I became aware of the burden facing all authors of new principles of economics texts: by trying to capture some of this newer knowledge, basic texts have grown into mammoth encyclopedias with entire catalogs of topics, often intimidating instructor and student alike. Most principles texts now offer a little knowledge on almost everything. Although I have failed to write the shortest book on the market, this text covers fewer topics than many of its competitors.

The approach to pedagogy reflected in this text is best summarized by two key focuses:

1. fewer topics, but topics in greater depth
2. less memorization, but more problem-solving.

In short, this text stresses *learning by doing*.

Nearly every chapter ends with worked-out sample problems that assist the student to develop analytical skills. These quantitative and qualitative sample problems are followed by an extensive range of end-of-chapter problem sets and essay questions. Hints to solving these problems are found at the end of the text. Additionally, the student workbook, written by Mark Rush of the University of Florida, is unusual in its focus on problem-solving. Professor Rush's workbook uses a rich selection of real-world data, around which he has developed a series of thought-provoking questions.

In this text, the core concepts of microeconomics unfold in an unusual way, a way that should facilitate student understanding of a price system. Chapters 3–11 focus on how a price system works when left to itself—that is, with minimal government intervention. The more active role of government is then explained in a series of chapters starting with Chapter 12. The salient virtue of this organization is that Chapters 3–11 devote more attention to supply and demand in action, the roles of elasticities and opportunity costs in determining relative prices, and, most important, substitution effects (contrasting the short run and the long run). The instructor who covers these chapters and their end-of-chapter problems will find that students gain an excellent grasp of how markets work.

This text pays special attention to the role of incentives in influencing the behavior of people and organizations. Incentives are a fundamental idea given too little attention in other basic economics texts. Chapters 1 and 2 discuss incentives and property rights extensively, and most chapters have boxed applications called “Incentives and Behavior.”

Focusing on how markets clear does not come at the expense of understanding the important role of government in the economy. In fact, the place of government in the economy and in the conduct and economic effects of public policy are important themes in this text. Coverage of government starts in Chapter 12, a unique chapter that explores and contrasts various ways in which a government can choose to distort an economy: price floors, price ceilings, taxes, and subsidies. Chapters 13–15 cover market power and public policy. Chapters 16–19 cover externalities, public goods, and trade and tax policy, while Chapter 23 discusses economic fairness and poverty.

The trend in new and revised elementary economics texts is to accord a greater role to

understanding international aspects of the economy. Because I endorse this trend, this text offers an early chapter (Chapter 4) on both the trade model *and* exchange rate theory—the first text to do so. With these important analytical tools established early, the student can follow international implications for standard economic theory more meaningfully as they are integrated into the body of the text.

Order of Presentation

It is important to note that the introductory foundations material has topics drawn from both microeconomics and macroeconomics. For example, it is easy, convenient, and important to develop the role of money in reducing the transaction costs that accompany exchange and specialization. Once the idea of money has been explained fully, it is also useful to discuss aggregate measures of output and prices. Although this approach is somewhat unconventional, it makes it much easier for the student to distinguish real and nominal variables, to use various aggregate measures in the micro chapters when appropriate, and to develop some of the microeconomic material with examples that refer to price level or aggregate output. Introducing these measures also has the advantage of tying together what the student hears most often on the news with the study of economics at an early point. Finally, it provides a clear distinction between relative prices and the price level, as well as between changes in relative prices and changes in the price level.

Considerable effort is made to explore the foundations of economic behavior and, particularly, the foundations of market economies. Thus Chapters 1 and 2 begin immediately with simple models that explore the consequences of scarcity for an individual, and then for a society. Responses to the opportunity costs that follow from scarcity include the foundations of economic activity—exchange and specialization. Scarcity also leads to competition, which in turn creates the potential for conflict, however. This suggests a central question for any economy or society: How can potential conflicting interests be accommodated and coordinated? Exchange and specialization are important mechanisms for coordinating competing interests. They do not occur in the abstract, however. Rather, they occur within specific institutional settings, and understanding the foundations of economic activity requires a grasp of the institutional settings

within which exchange, specialization, competition, and coordination occur. The introductory discussion focuses on several important institutional arrangements, including property rights, contracts, firms, intermediaries, markets, and money. Each is developed from the original exchange-and-specialization models as a response to the incentives for individuals and firms to capture the gains from exchange and specialization, to minimize transaction costs, or to overcome shirking or opportunistic behavior.

Chapters 1 and 2 also introduce the theme of incentives: incentives that derive from the interactions of institutional arrangements, scarcity, and rivalry among individuals or firms as well as incentives that are purposefully or inadvertently determined by public policy. Thinking about, looking for, analyzing, changing, and responding to incentives is a central theme of this book, and the role of incentives is woven into the textual materials in virtually every chapter. Hence, this text's approach is not so much "Here is what might happen," but rather, "How can this be understood given the incentives and institutional structure within which individuals and firms make choices?"

Following the foundational material in Chapters 1 and 2, markets are discussed in both domestic (Chapter 3) and international (Chapter 4) settings. International trade and some international institutional arrangements (for example, the use of several different kinds of money rather than a single one and the resulting development of foreign exchange markets) are first discussed in Chapter 4, not in a concluding or optional section at some later point in the text. This early introduction allows examples throughout the text to be drawn from a wide variety of settings, not just from within the U.S. economy. It also means that policy discussions can extend from domestic consequences to the interesting, important, and illustrative international ones.

This text looks at important public policy debates and asks some basic questions. Is it better to rely more on markets or government when dealing with certain kinds of problems? How do specific public policies affect markets? And how does market behavior in turn affect the development of specific public policies? In this regard, the text tells a connected, consistent, compelling, and even stimulating tale. The plot is simple:

Resources are scarce. Because of scarcity, two problems arise. First, individuals and societies must make choices and these choices are costly.

Second, individual and group activities compete with other individual and group activities. This competition requires some kind of social coordination.

Scarcity also stimulates important economic activities, particularly the *exchange* of goods, services, and resources between individuals and between economies, as well as the *specialized* production activities in which most of us participate. Exchange and specialization in turn stimulate the development of social arrangements, including money, firms, intermediaries, contract rules, and property rights. In addition, the search for gains from exchange and specialization foster the integration of economies across national borders.

Every society must decide how to confront the consequences of scarcity and to determine what form of organization best takes advantage of the gains from exchange and specialization. Free markets are extraordinarily useful devices that force individuals to consider the costs of their decisions, organize economic activities, coordinate competing individual and group activities, and take advantage of gains associated with exchange and specialization. These “market successes” contribute to individual well-being in very important ways and make an economy based on free markets attractive.

For a variety of reasons, however, governments choose to distort the market outcomes that would occur otherwise. In addition, free markets may encounter allocational difficulties. That is, markets do not always organize activities in a way that makes the costs associated with scarcity apparent. Markets do not always coordinate competing activities effectively. Thus, markets may lead to monopolies, pollution, poor information, diminished social services, unfair distribution of income, unemployment, inflation, or economic stagnation. These difficulties are market failures that need to be remedied because they undermine personal well-being. Importantly, however, for each market failure there exists, at least in principle, an effective public policy remedy. But alas, governmental efforts to solve these problems are not free from difficulties themselves—they often produce unintended and adverse outcomes.

We are left, then, with an extraordinarily important public policy issue: How should a society balance its reliance on less-than-perfect markets to organize economic activity against the less-than-fully-effective governmental remedies that are intended to offset the imperfect market outcomes? This question cannot be answered without under-

standing how markets work—what they do well and when problems can arise—and how governmental activities and policies affect how markets work. When appropriate, the book outlines what cannot be well understood or known. It thus conveys the notion that not everything is settled and, therefore, that economics is a lively and evolving discipline.

In developing the broad policy theme, this text focuses intensively on the properties of competitive markets. Beginning with an exploration of the meaning of rational and self-interested behavior, this text develops the idea of demand traditionally (with considerable emphasis given to the size of the responsiveness to incentives, particularly those following changes in relative prices), short-run competitive supply, and long-run competitive supply. In the latter, the text emphasizes the dynamic nature of competitive markets. The concept of allocational efficiency as well as other types of efficiency are explored, and the notions of consumer and producer surplus are introduced. These subjects are covered in Chapters 5–11. This material is reasonably demanding, but I believe that the payoff from pushing to this point is high because, after competitive markets have been developed carefully, the public policy debates about the role of markets, as well as possible alternatives to markets, can be explored more fully and the policy effects on efficiency and short- and long-run market adjustments can be better understood. Hence, instead of introducing price ceilings and price floors as examples of the power of supply-and-demand analysis—the traditional presentation of these ideas—Chapter 12 brings together the policies that affect specific markets. This chapter considers the distortions that specific policies create in otherwise competitive markets. Of course, this material also serves to illustrate the power of supply-and-demand analysis and the properties of markets, but I believe that the context is more useful in the larger policy theme that the book develops.

The following five chapters (Chapters 13–17) introduce the three classic market failures: monopoly, externality, and public-good problems. In each case, the careful and extensive development of competitive markets provided earlier creates a context within which the student can understand these market failures and focus on efficiency losses and coordination problems. The analysis of a pure monopoly is extended to include cartels and price discrimination. We then consider settings in which

several firms have market power, and invite students to think about strategic behavior by these firms. This section is followed by Chapter 16, a policy chapter that focuses on possible remedies and incorporates results from experimental economics. Positive and negative externalities are then introduced, and policy remedies and problems explored. Public goods in general and information in particular are considered in Chapter 17. The discussion of information in this chapter leads naturally to an analysis of searching and, when given the high cost of searching, to a discussion of risky decision-making when information is incomplete. The topics of adverse selection and moral hazard conclude the chapter.

Two public policy chapters (Chapters 18 and 19) follow. The first focuses on international trade policy, which receives more attention here than in other texts. I feel that this is necessary, given the increased economic integration across national borders and the recent proliferation of regional trade agreements. The second looks at public finance and tax policy and, in particular, questions of tax incidence.

There are three chapters (Chapters 20–22) on resource markets. The first, Chapter 20, covers basic concepts of resources, marginal product, and substitution. Chapter 21, on labor markets, puzzles over why wages differ across an economy and invites the student to think about the incentives

created by differential wages and, hence, possible explanations for their persistence. Chapter 22, on capital markets, focuses on net present value, returns to investment, and the economics of natural resources. The text concludes with Chapter 23, which involves the student in the debate about equity and the meaning of fairness in an economic setting. Although the chapter provides the usual array of data on income distribution, it also pays attention to mobility and possible tradeoffs—not just between efficiency and greater equality, but also between greater equality at a moment in time and mobility over time. The chapter is designed to be provocative.

An introduction to reading graphs. An appendix on understanding graphs is included at the end of the text.

More advanced material. Two appendixes develop consumer theory and demand analysis using an ordinal rather than a cardinal approach (including indifference curves); and a third develops production theory and supply analysis using isoquants.

If you have any suggestions after using this text, please write to me.

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Acknowledgments

This text, like any project of this sort, is the product of interactions with and assistance and support from a large number of individuals.

Two very capable undergraduates (both now pursuing graduate degrees in economics), Brigitte C. Madrian and Meghan Busse, read and commented on various drafts and assisted in developing special materials that were incorporated in the book. A number of students in introductory economics classes provided helpful, if pointed, comments on versions of the text that were used in one form or another for classroom instruction. More generally, I want to acknowledge a debt to the several thousand students I have taught and from whom I have learned so much about economics and about teaching and learning economics.

Reviews by professional colleagues were extraordinarily helpful. Comments by Mark Rush and Mark Machina were particularly detailed, extensive, interesting, and useful. I express special appreciation for them. (I am particularly pleased that Mark Rush joined the project and has provided the student workbook to accompany the text.) I thank all the reviewers listed below who, in each case, provided helpful comments.

Richard Anderson, Texas A&M University

James Bradley, University of South Carolina

Michael J. Brennan, Wesleyan University

Louis P. Cain, Loyola University, Chicago

Mary Cookingham, Michigan State University

Christopher M. Cornwell, University of Georgia

Gary Donald Ferrier, Southern Methodist University

Gary M. Galles, Pepperdine University

Edward Gullason, University of Hartford

Jan M. Hansen, University of Wisconsin—Eau Claire

John S. Heywood, University of Wisconsin—Milwaukee

William Hogan, University of Massachusetts—Dartmouth

Larry Huckins, Baruch College

Beth F. Ingram, University of Iowa

Gregory Lieu, Tuskegee University

Mark Machina, University of California—San Diego

Drew E. Mattson, Anoka Ramsey Community College

Eija Multasuo, Eastern Michigan University

Malcolm Robinson, University of Cincinnati

Mark Rush, University of Florida

Ronald Soligo, Rice University

Donald A. Wells, University of Arizona

Jeffrey Wrase, Arizona State University

Over the years, the book's overall editor, George Lobell, provided encouragement and prodding in innumerable ways. There simply would be no book without George's sustained interest and enthusiasm. With pleasure, I acknowledge the contribution of Stephen Wasserstein, who greatly assisted as developmental editor and became a good-humored listener with whom to discuss matters when frustrations mounted. Special thanks, in addition, to Anne Rebecca Starr who provided very careful and meticulous attention to the details of moving the project from manuscript to publication, and to Judith Miller for her wonderful design. Thanks also to all members of the D. C. Heath staff who assisted in the preparation of this book.

Finally, I express appreciation to my wife, Linda, and to our children for patience, good humor, time, and the sustaining interest and support they provided.

To the Student

You are confronted with a big book, a seemingly endless parade of definitions, and what might appear at first to be a curious approach to problems—lots of problems. It's easy to be overwhelmed by it all, by what looks like a lot of stuff to memorize. *But don't memorize!* Yes, you need to become familiar with and learn the vocabulary of economics, but you will find that easier when you see the technical terms in context. Beyond this, however, I repeat my earlier advice: Don't approach this course as one with a lot of material to be memorized. *This is a course in analysis.* Your instructor and this text are trying to get you to think *about* and think *through* problems in a particular way. In this regard, a handful of ideas and general principles are somewhat relentlessly applied in situation after situation. You will learn how to use these ideas and how to apply them in a large number of settings; that is, you'll be learning by doing. You should not approach each chapter as a new and different topic. To do so would be overwhelming. Instead, you ought to look for common threads from what has come before. If you do, the material will become much more manageable. Learning in this way is cumulative; that is, one idea builds on another and much of what you read and study is either a particular application of earlier ideas or is derived from a synthesis of those ideas. As a consequence, if you get behind or try to skip material, you will be in deep trouble—you will find things increasingly confusing. The text's conversational style is designed to engage you in a dialogue that illustrates basic ideas and invites you to anticipate what is coming next. But you will *not* learn economics just by reading! You will only learn it by working through a number of challenging problems. Again, you will only learn by doing.

Learning by doing requires lots of doing. End-of-chapter problems require problem-solving

skills. Work them. Talk about them. Puzzle over them. Look for other examples of similar problems. You should note that the end-of-chapter questions are not *exactly* answered in the Selected Answers to Questions and Problems at the end of the text. Rather, hints and leading questions invite you to “do” rather than memorize. The excellent workbook that accompanies this text develops these skills more broadly.

Beyond this, however, I believe it is important and useful to talk a lot about economics—to explain approaches and solutions to problems, policy proposals, and so forth in your own words to your friends, classmates, roommate, study group, mother, or even the mirror. Talking about economics is extraordinarily useful. First, it tests whether your ideas actually make sense. As you try to explain ideas and talk through solutions to problems, you will run into areas where you say to yourself, “I really don't know how to explain this,” or, “This doesn't sound convincing.” Your subsequent study can then be more focused. Second, sharing insights means that you can learn from others—how they see and explain particular issues. I believe that there is much to be learned by trying to distill and sort through a variety of perspectives. Third, talking about economics with friends or in a study group is nonthreatening; hence, it's a great place to make mistakes. A deeper understanding follows from mistakes when you explore and ultimately understand them. Finally, talking aloud about economics is a useful test of whether you really understand the material. If, after studying the material, you can't explain it to someone else, you really don't know it. In this regard, I tell my students that if they have developed a true understanding of a particular concept, idea, principle, or application, they ought to be able to give my lecture on it, albeit a week or two after I've given it.

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