



THIRD EDITION

MICROECONOMICS

Michael L. Katz | Harvey S. Rosen

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Preface

WHY WE WROTE THIS BOOK

This book is about microeconomic theory and how it is used to analyze and evaluate contemporary market systems. Understanding markets is important for every well-educated citizen. Throughout the world, societies are debating, sometimes violently, the merits of market-oriented approaches to dealing with social problems. Some nations with long histories of central planning are turning to markets. At the same time, within several market-oriented economies, critics are arguing that the government should take over more functions from private markets. Understanding these controversies requires a firm grounding in microeconomics.

Modern Topics

Economists have studied markets for over 200 years, but several innovations in recent decades have contributed important new insights. For example, traditionally it was assumed that all market participants had perfect certainty about the consequences of their actions. In contrast, modern economics recognizes that the world is pervaded by uncertainty, and this has important consequences for individual behavior and market outcomes. A cursory examination of the leading professional journals indicates that among today's researchers attention to uncertainty is now essentially routine. In textbooks, however, it is still either ignored or regarded as an "advanced" topic. We believe that this material is part of the "core" of economics, and it should be presented as such to students. In this book, uncertainty and other central modern topics, such as game theory and asymmetric information, are given the same careful treatment as traditional issues.

A natural question is whether such subjects are intrinsically too hard for most students. True, in the professional journals these topics are often presented in articles of formidable technical difficulty. But the reason that these theories have taken such a firm hold on the profession is that, fundamentally, they are very intuitive. We believe that with careful and patient exposition, they can be made accessible to all students using only simple algebra and graphs. Many users of earlier editions of *Microeconomics* commented that they initially had reservations about their students' ability to deal with the "advanced" topics, but these fears proved to be groundless. Indeed, one instructor told us that his students were able to cope with the material on asymmetric information better than the traditional subjects, because the former seemed more realistic to them!

Applications

On the subject of realism—one of our goals is to make clear the links between microeconomics and the real world. Readers of previous editions reported that they liked our examples and wanted more. As believers in consumer sovereignty, we were happy to oblige. Readers of the current edition will see the theory of the consumer used to analyze actual price and income data from contemporary Russia; the value of information illustrated by Hollywood executives' efforts at

market research; the theory of externalities applied to the issue of cigarette taxation; and many other examples of microeconomics in action. Generally we do not box off the applications and case studies from the rest of the text. Rather, they are integrated into discussions of the theory, a pedagogical approach that we have found works well.

Modern Organization

In addition to including new subjects, this book has a somewhat novel organizational scheme. Conventionally, a section called something like “Factor Markets” appears near the end of microeconomics books. Input markets are treated there, long after the basic theories of consumer and firm behavior have been covered. In contrast, modern economic theory integrates the treatment of commodity and factor markets. Households’ input supplies and commodity demands both derive from the maximization of utility subject to a budget constraint. To drive this point home, we discuss both phenomena in the part of the book devoted to household behavior. Similarly, we present business output and input decisions together as joint implications of profit maximization, not as unrelated choices. This treatment provides students with a more coherent view of how the various pieces of a market economy fit together. At the same time, it exhibits the power and versatility of economic tools. Users of previous editions told us they agree.

A second organizational distinction is the placement of the chapter on welfare economics. Economists rely heavily on welfare economics for assessing the consequences of market imperfections. It would therefore seem sensible to present welfare economics prior to discussing market imperfections. Nevertheless, this topic appears near, or at, the end of most texts. This book covers welfare economics as soon as the competitive model is completely developed. The discussion of welfare economics sets the stage for subsequent chapters that explain how various market failures arise, what the consequences are, and the implications for public policy.

A third organizational innovation is that we begin our discussion of the firm by laying out the theory in a quite general form. In particular, we derive two rules for finding the profit-maximizing output level that are valid for any profit-maximizing firm. We take this approach for two reasons. One, by first deriving these rules in their general form, students are able to see the power of the economic theory of the firm: it provides a coherent set of basic principles that can be applied in a wide variety of market settings. The unified approach also has the advantage of presenting the student with less to remember—he or she has to learn these concepts only once. The later chapters then serve to reinforce and amplify the basic themes laid out at the beginning.

The other reason for covering the implications of profit maximization at the start of the theory of the firm is that the basic rules derived in that discussion show the importance of the concepts of marginal cost and average cost for economic decision making. This means that when we study production and cost functions in the following chapters, students know the reason why these concepts receive so much attention. In the traditional arrangement of chapters, where the cost chapter comes before any discussion of profit maximization, the study of marginal and average cost curves is a sterile exercise in curve manipulation. In fact, unless we have already made some assumption about the firm’s interest in profit maximization, how do we know that the firm is even interested in minimizing its production costs?

A final innovation is that, in response to requests from several instructors, we have included a separate chapter on game theory. While closely tied to the chapter on oligopoly, the game theory chapter discusses the much broader applicability of game theory to a variety of real world problems. Because we are aware of the time constraints that many instructors face, we have written this chapter so that it can easily be skipped without loss of continuity.

Treatment of Costs

The subject of costs is another area in which we have departed from tradition. The standard treatment of cost is to begin by defining economic costs as opportunity costs. So far, so good. But then, the typical book goes on to define the expenditures on factors of production that are fixed in the short run as “fixed costs”—despite the fact that these expenditures are not *economic costs*. All is not lost, of course, because the next step in the standard treatment is to tell students that what they really should care about is short-run variable costs, not short-run total cost. This approach is needlessly confusing and complicated. Here, we consistently apply the definition of economic cost as opportunity cost. In addition to having the virtue of logical consistency, this approach is simpler than the traditional one. The firm is concerned with its short-run economic cost in the short run, and its long-run economic cost in the long run. It is thus a simple matter to state the rules by which a firm finds its profit-maximizing output level, whether we are talking about the short run, or the long run.

Comments from users of the first two editions confirm what we have experienced in our own classrooms: students have a much easier time with the approach taken here than with the traditional one. However, several instructors suggested to us that it would be useful to present our approach in a way that seamlessly blends with the one that students may have learned in earlier courses. In response, we have made numerous modifications throughout the chapters on the theory of the firm to achieve this consistency. Our aim is to achieve backward compatibility as we introduce a new (and, we believe, improved) development of cost theory.

PEDAGOGICAL FEATURES

The chapters are broken up into several numbered sections, each of which develops a major theme. Each of these sections ends with a short “Section Recap,” which summarizes its main points. Breaking up the chapters in this way gives students a “breather” before they move ahead. In addition, it provides instructors an easy way to pick and choose topics for assigning. However, it has long been understood that no matter how clear a book’s exposition and organization, passive reading of new material does not lead to its mastery. As Jean-Jacques Rousseau noted, “To read little and meditate a great deal upon our reading . . . that is the way to thoroughly digest it.” To facilitate this digestive process, interspersed throughout the chapters are “Progress Check” questions. These are straightforward exercises whose answers appear at the end of the book. A student who is unable to answer a Progress Check question correctly should go back and reread the preceding pages before moving forward. More challenging exercises appear at the end of every chapter. These problems encourage students to apply and extend the principles that they have learned.

As stressed above, the only mathematics in the text is high school algebra and geometry. However, for instructors who would like to use this book in a calculus-based course, we have included two appendices (after Chapters 3 and 9) that reinterpret certain key results from the theories of the household and the firm using calculus.

Supplements

Study Guide to accompany Microeconomics

Robert Rosenman, Washington State University

Each chapter of this completely revised supplement offers a discussion of chapter goals, a case study application project, multiple-choice questions, and problems of varying levels of difficulty for your students. The integration of mathematical, graphical, and verbal explanations is emphasized throughout.

Instructor's Manual to accompany Microeconomics

Robert Rosenman, Washington State University

The Instructor's Manual has been extensively revised for this edition of *Microeconomics*. It includes lecture outlines and discussion suggestions for each chapter, as well as alternative examples and exercises. Also, where appropriate, suggestions for interactive classroom activities are provided. Finally, the answers to the end-of-chapter questions can be found in this supplement.

Test Bank to accompany Microeconomics

Christopher Stevens, Washington State University

The Test Bank, which has also been extensively revised, offers approximately 40 multiple-choice questions for each chapter. The level of difficulty is indicated for each question, and page references are provided to direct you to the related text coverage.

Computerized test banks are now available in Windows and Macintosh versions. The test generator allows instructors to select questions randomly, add and edit questions and equations, save and reload tests, create different versions of each test, attach graphics to questions and answers, select questions by level of difficulty, and write to word-processing files.

Overhead Transparency Acetates to accompany Microeconomics

This supplement offers selected illustrations from the text in an acetate format, allowing for easy integration into your classroom presentation.

Applied Price Theory Courseware

Howard Marvel (Macintosh format); David Boyd (Windows format)

This interactive program, available in both Macintosh and Windows formats, allows students to experiment with various economic models. Students can enter values and immediately see the impact of their choice on an economic model, thus reinforcing the graphical techniques used in microeconomic analysis.

The Development of *Microeconomics*, Third Edition: Your Story

The development of this new edition of *Microeconomics* was truly a collaborative effort—an active process in which you, microeconomics instructors from across the country, participated. Before we touched a word of the second edition, we distributed over 1,000 market surveys asking for your input and guidance in this revision process. You responded in great numbers, providing us with insight into the focus and direction of your courses, your teaching methods, and the skills and preferences of your students. This input, combined with that gleaned from a second e-mail survey, provided us with the base that we needed to create this edition of *Microeconomics*.

Before you is the fruit of your labors, tailored by the masterful hands of Michael Katz and Harvey Rosen. At your direction, the authors have made several significant changes to this edition of *Microeconomics*. Most notably, the coverage of game theory has been expanded, reflecting the increased emphasis that modern topics are receiving in your classrooms. This material is now presented as Chapter 16. Also in response to your feedback, Professors Katz and Rosen have modified the treatment of cost to provide a presentation that is more compatible with the approach that your students may have learned in their introductory courses. The authors have made numerous modifications to the theory of the firm material in order to create a consistent, logical approach to this topic.

Finally, at your request, the ancillary materials for *Microeconomics* have been significantly revised. Because you indicated that your students needed better support materials, we completely overhauled the Study Guide, beginning from scratch to create a more comprehensive, interesting, and useful learning tool for your students. Also, for your use, we have a new Test Bank and an extensively revised Instructor's Manual.

The revisions mentioned here are only a few among many, but they are illustrative of your impact on our work in the creation of the third edition of *Microeconomics*. Thank you for the time and effort that you expended in this development process. Your active involvement is clearly a reflection of the level of dedication and enthusiasm that you have for your profession and for your students. We hope that you are pleased with this—your—final product.

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**M.L.K.
H.S.R.**

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