

MICROECONOMICS

Price Theory in Practice



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Microeconomics

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For Raburn “Mac” Williams, economist *extrordinaire* and friend.

Thanks,

RLM

For Pat, Jennifer, and Christopher, your encouragement and help was very important.

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Preface

Imagine the following survey question:

What are the most important tools that your students need to learn in order to become good economists?

We believe that if this survey question were sent out to all teaching economists today, most would answer the following way:

The tools of microeconomics are essential.

We agree that a strong foundation in microeconomic theory is a critical part of a student's understanding of the economic world around us. Our overall goal in writing *Microeconomics: Price Theory in Practice* is straightforward—to provide students with the most solid microtheoretic foundation that they are able to absorb. The key to our technique lies in a judicious blending of modern microeconomic theory with real-world applications and problems. We believe the result is a text with sophisticated core theory, modern topics, and meaningful applications *that work in the classroom*.

As you will see, we focus on theory and look at the most current applications of it, and in addition, we provide a significant series of learning tools that translate the message with meaning. We believe this book offers *more* pedagogical aids than other microeconomics texts today. Finally, students will see mathematical concepts that are presented both intuitively and through algebra and calculus.

ORGANIZATION AND MODERN TOPICS

While we follow a somewhat traditional organization, we add unique treatments. This text started out with several specific content and organizational goals:

- Modernize the treatment of microeconomics with new and current examples.
- Bring the modern theory of the firm—transaction costs, agency problems, asymmetry information, game theory, and bilateral contracting—into the standard discussion of firms and markets.

- Emphasize the constraints individuals face as they make optimal choices, particularly the time constraint.
- Treat pricing issues, auctions, and bargaining as important subjects in an intermediate textbook.
- Incorporate results from the finance literature on how markets adjust to risk and uncertainty.

In tackling these goals, we decided that this book could not become a special interest text. Our sequence of material is standard: introductory material, consumer behavior, theory of the firm, market structures, and general equilibrium. Within this sequence, however, we made a systematic effort to modernize and improve the core material. *Microeconomics: Price Theory in Practice* covers the main core of microeconomic theory and will appeal to a broad range of instructors.

A complete listing of the modern topics we cover would take several pages. Here is a sample: bilateral contracting, search theory, asymmetric information, strategic competition and game theory, bargaining, the agency problem, pricing issues and auctions, and the role of futures and swap markets.

HOW WE TREAT MATHEMATICS

There is no one right way to use and teach mathematics in an intermediate microeconomics text. Some students may be comfortable with both algebra and calculus. Others may not be. We researched the development of microeconomics in professional journals and other textbooks. Many texts face an identity crisis: They don't know how to address these preferences in their treatment of mathematics in modern microeconomics. To satisfy all levels of mathematical preparation, we have come up with what we think is an ideal mathematical presentation format.

Most of the mathematical treatment in this text is intuitive. Whenever it is not, we present an intense work-through. Calculus is used in appendices and occasionally in a chapter feature that we call Math Notepad. Math Notepad boxes show students the steps used to derive a particular result, but they are not necessary for the text discussion. Additionally, when necessary and appropriate, we present alternative mathematical treatments in footnotes, sometimes in algebra, sometimes in a calculus format. We also present numerous verbal explanations of the mathematics followed by examples.

Our solution includes a graphical approach to convey *all core concepts*. In addition, we add extra graphs if they are necessary to help explain a particularly difficult concept. There are over 200 graphs in this book. With the help of our many reviewers, we have reworked the graphs to make them crystal clear.

APPLICATIONS AND MORE APPLICATIONS

Although some instructors do not believe that it is possible to teach theory through example, most will agree that it is at least possible to excite students about the meaningful scope of intermediate micro theory by providing them with numerous current examples. As emphasized above, our text is strong on

theory, but it was developed using a noncalculus approach. Theory is reinforced with example after example. Countless hours were spent researching and developing examples that fit the text material, illustrating both new and traditional concepts. We have gone beyond the occasional brief boxed application so common in today's textbooks. We present two different types of applications—Price Theory in Practice and Policy Applications and Evaluation.

EXTENSIVE PEDAGOGICAL TEACHING AIDS WITHIN EACH CHAPTER

Solid modern theory does little good to a student who either cannot understand it, retain it, or apply it. To help students learn, we have developed what we believe is the most extensive set of pedagogical features ever presented in an intermediate microeconomics text.

Preview Questions

Four to eight preview questions start every chapter. These questions focus student attention on the key concepts that the chapter addresses. They can be viewed as chapter learning objectives. They are not presented in a vacuum, however. The chapter comes full circle when the student revisits these preview questions in the chapter summary.

Chapter Opening Vignette

Every chapter opens with a real-world vignette that examines a current business situation requiring microeconomic thinking. It can be viewed as your “lecture launcher” to introduce the students to the theory that will follow.

Margin Definitions

Throughout the text, when an important term is first introduced, it is bold-faced and explained. In addition, a glossary definition appears in the margin.

Cartoons

Economics does not always have to be serious. So we have provided a few choice cartoons to lighten the load for your students.

Price Theory in Practice

In addition to examples developed in the text, each chapter includes two or more examples developed as a special feature. These modern examples reinforce the chapter material by applying microeconomic principles to the world at large. They are relevant and current, and they often take a cross-disciplinary stance. Many are international in scope. Topics include the allocation of time in different countries (Chapter 4), the agency problem at the IRS (Chapter 7), production techniques and the building of the tunnel under the English Channel (Chapter 8), rebuilding the U.S. embassy in Moscow (Chapter 9), the Solomon Brothers Treasury auction scandal (Chapter 12), pricing strategies and Disney theme parks (Chapter 12), David Letterman's marginal revenue

(Chapter 14), the future value of television time (Chapter 15), and the gains from trade with Mexico because of NAFTA (Chapter 16).

Learning Exercises

Students use the theory and application from the preceding several pages to solve a Learning Exercise related to each Price Theory in Practice example. These in-chapter questions reinforce student understanding of the concepts just covered. The answers to the Learning Exercises are provided at the end of the text.

Math Notepad

When appropriate, mathematical proofs and mathematical notes are presented in a separate boxed format. Here is where the tools of algebra and calculus are used. The Math Notepad gives the instructor complete flexibility in how much mathematics to use in class. These features offer more detail on mathematical concepts, showing students how to work through the steps of important results.

Policy Application and Evaluation

This teaching feature provides an in-depth examination of some policy application aspect of microeconomics. These boxed features present questions that policymakers currently face. Information is provided on all sides, and students are asked to focus on the economic aspects of the issue. A point-counterpoint format closes with an examination of normative arguments. Critical thinking questions are presented: questions are posed and students are encouraged to draw their own conclusions, because, as the text stresses, ultimately policy positions are normative. For example: Should the purchase and sale of human organs be legal? (Chapter 3) What's happening in the U.S. Postal Service? (Chapter 6) How fairly is executive pay allocated? (Chapter 7) How productive is U.S. labor? (Chapter 8)

ABUNDANCE OF CHAPTER-ENDING PEDAGOGY

Beyond the standard chapter-ending format, we have developed an integrated way to make sure that students have understood what they read. We provide the following additional learning tools:

Chapter Summary

This summary addresses each *preview question* linked to its chapter section. We then link that to a brief description of the principle involved. Students will find that by first looking at the chapter preview questions and then revisiting them in the summary, they can better master the major concepts in each chapter.

Trouble Spots

Virtually every discussion of a major topic in intermediate microeconomics will have certain spots that cause trouble for students. Our many years of teaching

experience, have allowed us to catalog these trouble spots. They are presented in summary table form. The concept, or trouble spot, is presented with a reminder of how to recognize it. Finally, students are told what to do about each trouble spot.

Review Questions

These questions concentrate on identifying principles and forcing the economic way of thinking.

Price Theory Problems

The problem sets found at the end of each chapter require more rigor than the review questions. They involve application of microeconomic principles.

Writing Exercises

Just because students may want to become economists does not mean that they should not have additional practice in writing. These unique writing assignments require students to apply microeconomic principles to their own real-world situations.

A COMPLETE LEARNING/TEACHING SYSTEM: THE SUPPLEMENTS

Gone are the days when an intermediate price theory book could be sold without a host of supplementary teaching and learning materials. A good text requires an even better supplement package to help instructors present the material effectively and to help students grasp the material quickly. The following supplements are available with *Microeconomics: Price Theory in Practice*.

INSTRUCTOR'S MANUAL

Written by Chris Bell of the University of North Carolina—Asheville. Each chapter of the Instructor's manual contains an outline that provides teaching suggestions and offers theoretical extensions of the chapter content, additional examples for class discussions, and additional short problems with answers. The manual also includes answers to the end-of-chapter questions from the main text.

TEST BANK

We were fortunate to obtain the services of Scott Bloom of North Dakota State University in writing this *Test Bank*. An experienced author in his own right, Professor Bloom has generated almost 1,000 test questions that you can use throughout your course. The test bank is available in both printed and electronic formats.

STUDY GUIDE

A *Study Guide* by Andrew Dane of Angelo State University offers the student a variety of tools to reinforce their understanding of the text. Each chapter contains a review of key points in the chapter, twenty or more multiple-choice questions, two to three solved problems, and ten problems or more for the student to solve. An answer section at the end of each chapter provides answers to that chapter's questions and problems.

TRANSPARENCY MASTERS

A set of 53 transparency masters reproduce key graphs from the text. These visual aids will enhance classroom presentation of each chapter. The masters are contained in the *Instructor's Manual* and are also available in an electronic classroom presentation format.

SOFTWARE

Six software modules are available for the IBM-PC covering elasticity, consumer choice, competition, monopoly, input markets, and game theory. Written by Richard Alston and Wan Fu Chi of Weber State College, the modules encourage students to explore the graphical and analytical relationships described in the text. Numerous problem-solving exercises using the software modules are provided in a new accompanying booklet prepared by Sarah L. Glavin of Boston College.

ACKNOWLEDGMENTS

We cannot claim that we undertook the task of preparing this text alone. There are many who have helped make this project a success. We had the help of numerous kind but critical reviewers. They forced us to increase rigor and expand applications, and they helped us create a much better book for your students. The 34 reviewers have left a permanent imprint on the final form of the text. They offered patient and detailed comments that went far beyond what we had expected. We thank them all many times over for their efforts:

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Our HarperCollins editor, John Greenman, encouraged us at all phases of the project and kept us on track. For that we are appreciative. A very special debt is owed to Patricia Nealon, our developmental editor, who worked tirelessly through the manuscript many times, always pushing us in the right direction and inspiring us to make the text better and better. We also wish to thank Melanie Salvati, our project editor, and John Callahan, the designer.

As long as most people work to the point at which marginal revenue equals marginal cost, no book will ever be perfect. Ours is no exception. We know that those of you who use it may find points on which you wish to comment. We gladly will accept and acknowledge any comments or criticisms from instructors and students alike. It is with your help that we will continue to make this text better and better in later editions.

Roger LeRoy Miller
Raymond P.H. Fiske

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