

Managerial Economics

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Edition

WILLIAM F. **SAMUELSON**
STEPHEN G. **MARKS**



WILEY

EIGHTH EDITION

Managerial Economics

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EIGHTH EDITION

Managerial Economics

To Our Families

W. F. S

S. G. M

P R E F A C E

The last 25 years have witnessed an unprecedented increase in competition in both national and world markets. In this competitive environment, managers must make increasingly complex business decisions that will determine whether the firm will prosper or even survive. Today, economic analysis is more important than ever as a tool for decision making.

OBJECTIVES OF THIS BOOK

The aims of this textbook are to illustrate the central decision problems managers face and to provide the economic analysis they need to guide these decisions. It was written with the conviction that an effective managerial economics textbook must go beyond the “nuts and bolts” of economic analysis; it should also show how practicing managers use these economic methods. Our experience teaching managerial economics to undergraduates, MBAs, and executives alike shows that a focus on applications is essential.

KEY FEATURES

Managerial Decision Making

The main feature that distinguishes *Managerial Economics*, Eighth Edition, is its consistent emphasis on managerial decision making. In a quest to explain economics per se, many current texts defer analysis of basic managerial decisions such as optimal output and pricing policies until later chapters—as special applications or as relevant only to particular market structures. In contrast, decision making is woven throughout every chapter in this book. Each chapter begins with a description of a real managerial problem that challenges students to ponder possible choices and is concluded by revisiting and analyzing the decision in light of the concepts introduced in the chapter. Without exception, the principles of managerial economics are introduced and analyzed by extended decision-making examples. Some of these examples include pricing airline seats (Chapter 3), competing as a commercial day-care provider (Chapter 7), fighting global warming (Chapter 11), choosing between risky research and development projects (Chapter 12), and negotiating David Letterman’s *Late Show* contract (Chapter 15). In addition to reviewing important concepts, the summary at the end of each chapter lists essential decision-making principles.

The analysis of optimal decisions is presented early in the book. Chapter 2 introduces and analyzes the basic profit-maximization problem of the firm. Chapter 3 begins with a traditional treatment of demand and goes on to apply demand analysis to the firm’s optimal pricing problem. Chapters 5 and 6 take a closer look at production and

cost as guides to making optimal managerial decisions. The emphasis on decision making continues throughout the remainder of the book because, in our view, this is the best way to teach managerial economics. The decision-making approach also provides a direct answer to students' perennial question: How and why is this concept useful? A list of real-world applications used throughout the text appears on the inside of the front cover.

New Topics

At one time, managerial economics books most closely resembled intermediate microeconomics texts with topics reworked here and there. Due to the advance of modern management techniques, the days when this was sufficient are long past. This text goes far beyond current alternatives by integrating the most important of these advances with the principal topic areas of managerial economics. Perhaps the most significant advance is the use of game theory to illuminate the firm's strategic choices. Game theoretic principles are essential to understanding strategic behavior. An entire chapter (Chapter 10) is devoted to this topic. Other chapters apply the game-theoretic approach to settings of oligopoly (Chapter 9), asymmetric information and organization design (Chapter 14), and negotiation (Chapter 15).

A second innovation of the text is its treatment of decision making under uncertainty. Managerial success—whether measured by a particular firm's profitability or by the international competitiveness of our nation's businesses as a whole—depends on making decisions that involve risk and uncertainty. Managers must strive to envision the future outcomes of today's decisions, measure and weigh competing risks, and determine which risks are acceptable. Other managerial economics textbooks typically devote a single, short chapter to decision making under uncertainty after devoting a dozen chapters to portraying demand and cost curves as if they were certain.

Decision making under uncertainty is a prominent part of *Managerial Economics*, Eighth Edition. Chapter 12 shows how decision trees can be used to structure decisions in high-risk environments. Chapter 13 examines the value of acquiring information about relevant risks, including competing in high-risk auction and procurement settings. Subsequent chapters apply the techniques of decision making under uncertainty to topics that are on the cutting edge of managerial economics: organization design and negotiation.

A third innovation is the expanded coverage of international topics and applications. In place of a stand-alone chapter on global economic issues, we have chosen to integrate international applications throughout the text. For instance, early applications in Chapters 2 and 3 include responding to exchange-rate changes and multinational pricing. Comparative advantage, tariffs and quotas, and the risks of doing international business are additional applications taken up in later chapters. In all, 14 of the 16 chapters contain international applications. In short, our aim is to leave the student with a first-hand appreciation of business decisions within the global economic environment.

A fourth innovation is the inclusion of end-of-chapter spreadsheet problems. In the last 25 years, spreadsheets have become the manager's single most important quantitative tool. It is our view that spreadsheets provide a natural means of modeling managerial

decisions. In their own way, they are as valuable as the traditional modeling approaches using equations and graphs. (This admission comes from a long-ago college math major who first saw spreadsheets as nothing more than “trivial” arithmetic and a far cry from “true” programming.) Optimization is one hallmark of quantitative decision making, and with the advent of optimizer tools, managers can use spreadsheets to model problems and to find and explore profit-maximizing solutions. A second hallmark is equilibrium analysis. Again, spreadsheet tools allow immediate solutions of what otherwise would be daunting sets of simultaneous equations.

Spreadsheets offer a powerful way of portraying economic decisions and finding optimal solutions without a large investment in calculus methods. We have worked hard to provide a rich array of spreadsheet problems in 14 of the 15 principal chapters. Some of these applications include optimal production and pricing, cost analysis with fixed and variable inputs, competitive market equilibrium in the short and long runs, monopoly practices, Nash equilibrium behavior, identifying superior mutual fund performance, and the welfare effects of externalities. In each case, students are asked to build and analyze a simple spreadsheet based on an example provided for them. In addition, a special appendix in Chapter 2 provides a self-contained summary of spreadsheet optimization. In short, using spreadsheets provides new insights into managerial economics and teaches career-long modeling skills.

Organization, Coverage, and Level

This textbook can be used by a wide range of students, from undergraduate business majors in second-level courses to MBA students and executive program participants. The presentation of all topics is self-contained. Although most students will have taken an economics principles course in their recent, or not so recent, past, no prior economic tools are presumed. The presentations begin simply and are progressively applied to more and more challenging applications. Each chapter contains a range of problems designed to test students’ basic understanding. A number of problems explore advanced applications and are indicated by an asterisk. Suggested references at the end of each chapter direct students to extensions and advanced applications of the core topics presented in the chapter.

Although this text has many unique features, its organization and coverage are reasonably standard. All of the topics that usually find a home in managerial economics are covered and are in the usual sequence. As noted earlier, the analytics of profit maximization and optimal pricing are presented up front in Chapter 2 and the second part of Chapter 3. If the instructor wishes, he or she can defer these optimization topics until after the chapters on demand and cost. In addition, the book is organized so that specific chapters can be omitted without loss of continuity. In the first section of the book, Chapters 4 and 5 fit into this category. In the second section of the book, Chapters 7, 8, and 9 are core chapters that can stand alone or be followed by any combination of the remaining chapters. The book concludes with applications chapters, including chapters on decision making under uncertainty, asymmetric information, negotiation, and linear programming that are suitable for many broad-based managerial economics courses.

Analyzing managerial decisions requires a modest amount of quantitative proficiency. In our view, understanding the *logic* of profit-maximizing behavior is more important than mathematical sophistication; therefore, *Managerial Economics*, Eighth Edition, uses only the most basic techniques of differential calculus. These concepts are explained and summarized in the appendix to Chapter 2. Numerical examples and applications abound throughout all of the chapters. In our view, the best way for students to master the material is to learn by example. Four to six “Check Stations”—mini-problems that force students to test themselves on their quantitative understanding—appear throughout each chapter. In short, the text takes a quantitative approach to managerial decision making without drowning students in mathematics.

THE EIGHTH EDITION

While continuing to emphasize managerial decision making, the Eighth Edition of *Managerial Economics* contains several changes.

First, we have extensively revised and updated the many applications in the text. Analyzing the pricing of Amazon’s Kindle; using regression analysis to estimate box-office revenues for film releases; assessing the impact of OPEC’s oil cartel; judging the government’s antitrust case against Microsoft; or weighing the challenges of corporate governance in the aftermath of the financial crisis—these are all important and timely economic applications.

Second, we have highlighted and expanded an applications feature called *Business Behavior*. The rapidly growing area of behavioral economics asks: How does actual decision making behavior and practice compare with the prescriptions of economics and decision analysis? In many cases, the answer is that decisions rely on psychological responses, heuristic methods, and bounded rationality as much as on logic and analysis. In almost every chapter, we take deliberate time to provide an assessment (based on cutting-edge research findings) of real-world decision-making behavior, noting the most common pitfalls to avoid.

Throughout the text, we have included a wide range of end-of-chapter problems, from basic to advanced. Each chapter also contains a wide-ranging discussion question designed to frame broader economic issues. We have also updated each chapter’s suggested bibliographic references, including numerous Internet sites where students can access and retrieve troves of economic information and data on almost any topic.

The Eighth Edition examines the economics of information goods, e-commerce, and the Internet—topics first introduced in previous editions. While some commentators have claimed that the emergence of e-commerce has overturned the traditional rules of economics, this text takes a more balanced view. In fact, e-commerce provides a dramatic illustration of the power of economic analysis in analyzing new market forces. Any analysis of e-commerce must consider such issues as network and information externalities, reduced marginal costs and transaction costs, pricing and revenue sources, control of standards, e-commerce strategies, product versioning, and market segmentation, to name just a few topics. E-commerce applications appear throughout the text in Chapter 3 (demand), Chapter 6 (cost), Chapters 7 and 9 (competitive effects), and Chapter 14 (organization of the firm).

Finally, the Eighth Edition is significantly slimmer than earlier editions. Inevitably, editions of textbooks grow longer and longer as authors include more and more concepts, applications, and current examples. By pruning less important material, we have worked hard to focus student attention on the most important economic and decision-making principles. In our view, it is better to be shorter and clearer than to be comprehensive and overwhelming. Moreover, most of the interesting examples have not been lost, but rather have been moved to the Samuelson and Marks website at www.wiley.com/college/samuelson, where they can be accessed by instructors and students.

ANCILLARY MATERIALS

Study Guide The student study guide is designed to teach the concepts and problem-solving skills needed to master the material in the text. Each chapter contains multiple-choice questions, quantitative problems, essay questions, and mini-cases.

Instructor's Manual, Test Bank, and PowerPoints The Instructor's Manual includes suggestions for teaching managerial economics, additional examples to supplement in-text examples, suggested cases, references to current articles in the business press, anecdotes, follow-up on text applications, and answers to the back-of-chapter problems. The test bank contains over 500 multiple-choice questions, quantitative problems, essay questions, and mini-cases.

Respondus Test Bank The test bank is available electronically in Respondus format on the book companion site.

Online Chapter Chapter 17 is now available on the book companion site at www.wiley.com/college/samuelson.

All instructor materials are available by accessing Wiley's website at www.wiley.com/college/samuelson

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The **Wiley E-Text: Powered by VitalSource** gives students anytime, anywhere access to the best economics content when and where they study: on their desktop, laptop, tablet, or smartphone. Students can search across content, highlight, and take notes that they can share with teachers and classmates.

Wiley's E-Text for *Managerial Economics, 8th edition* takes learning from traditional to cutting edge by integrating inline interactive multimedia with market-leading content. This exciting new learning model brings textbook pages to life—no longer just a static e-book, the E-Text enriches the study experience with dynamic features:

- **Interactive Tables and Graphs** allow students to access additional rich layers and “hot areas” of explanation by manipulating slider controls or clicking on embedded “hotspots” incorporated into select tables and graphs

- **Practice Quizzes** allow students to practice as they read and thereby receive instant feedback on their progress
- **Audio-Enhanced Graphics** provide further explanations for key graphs in the form of short audio clips.

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