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Managerial Economics

Theory, Applications, and Cases

FIFTH
EDITION

MANAGERIAL ECONOMICS

Theory, Applications, and Cases

Fifth Edition

Dedication:

To Edwin Mansfield, a pioneer of managerial economics

Recent thought on culture describes it as the process by which knowledge is passed between generations. Most cultures use two devices to learn, teaching and copying, with both being independent of any genetic influences. We've used both in presenting this Fifth Edition of *Managerial Economics*. It is our vision of the future, based on the wisdom of the past.

Succession is an issue many ponder but few act upon timely. It knows no legal bounds, being faced both by families and corporate entities. In the transfer of intellectual property (i.e., ideas), both groups face succession issues. We feel extremely lucky that both the Mansfield family and W. W. Norton acted in a timely manner and fostered the exchange process. We thank both of them for all their helpful advice.

Professor Mansfield was a true pioneer of managerial economics. Before him, most viewed the field as theory with a "wink and nod" link to application. Though this link differentiates managerial from microeconomics, few ventured more than a cursory link to reality. Mansfield's vision changed this by hardwiring theory to practice. Today, this standard still differentiates the two fields. (And, if anything, today's micro textbooks are more applied.) Professor Mansfield instilled each chapter with an actual business situation, and then for good

measure, sprinkled shorter cases throughout the theory. If you needed an example for class, the Mansfield text was a very reliable source.

This pioneering style was likely fueled by his eclectic nature; for only those who integrate ideas across disciplines can marry theory to practice. Professor Mansfield's knowledge covered economics, operations, technology management, and statistics. The three of us joke about how it has taken three to replace what one covered himself—a fact that attests to Ed's breadth of knowledge.

It is upon this legacy that we present the fifth edition. It, like any generational transfer, builds the future on the past. Some things remain the same, others change. Our criteria for justifying changes was whether it helped us better integrate the Mansfield tradition within the changing landscape of what we call the business world. We see five mainstays of this tradition:

1. to tightly couple practice to theory;
2. to use formal analysis;
3. to use mathematics as a tool, not an end;
4. to update materials to remain current with the changing business landscape; and
5. to listen and learn from the experiences of readers and instructors.

The three of us teach the managerial economics course at The Wharton School. It is required for most MBA students, taken in their first semester. Eight years ago, The Wharton School completely revised its curriculum to better prepare students for the business world. This curriculum change coincided with Wharton's enhanced standing in the rankings of business schools.

Our charge was to develop a class to help students transfer economic principles to the business world, to make economics a decision-making norm (in ten weeks or less), which required impact in both short- and long-term memory. During our six-week run, we could command our share of time and effort as well as any of the other five classes students were taking. So we knew what to expect in the short run. But, what about the long run? When humans process information, they must transfer bytes from short- to long-term memories. Much gets lost in the switch, and that which does never returns unless short-term picks it up again. Ours was the only economics course taken by most students, so our ideas would have to make the switch with seemingly little reinforcing support. In two years, MBA students get bombarded (and often overwhelmed) by millions of information bytes. In school, ideas play the ultimate survivor game—you don't just get voted out, you cease to exist.

To make the memory jump to long-term, we felt the course had to accomplish several goals. One was to establish economics as a decision-making framework, to get students to see past the equations and graphs and understand why, as managers, they want to follow its general percepts, like marginal analysis or backward induction. Another message we wanted to convey was the integrative nature of economics—its ideas permeate all business disciplines. So an under-

standing of economics now will help the student better understand finance and marketing later.

A third goal was to accomplish the above without sacrificing the formal analysis that underlies rational choice. For without it, knowledge is speculative. The objectivity of mathematics brings focus to a business discussion. After all, most managers realize that demand should increase if prices drop, but fewer are able to quantify the sales increase. We wanted to produce managers that could do the latter. Our final goal was to acknowledge that at times managers can be boundedly rational. We wanted to show students how boundedly rational managers might act and help them to understand how behavior is affected.

We kept these four goals in mind in revising this book, and they will direct our future efforts. This edition represents the path we will follow in the future. Though our contributions to this edition are substantial, they represent a beginning toward our goal of producing a book that students use even after they graduate. The most important changes in the Fifth Edition include:

1. **A New Chapter on Auctions.** Recent years have seen an explosion in the use of auctions. New auction businesses like eBay and Priceline.com have attracted millions of customers, and businesses of various sorts have begun to rely on auctions to purchase materials and to buy and sell equipment. More than ever before, modern managers need to know a few things about auctions. How does the design of an auction affect its outcome? What are the best bidding strategies for different types of auctions? How do auctions compare to other types of markets? Such questions are answered in Chapter 15.

2. **A New Chapter on Moral Hazard and the Principal-Agent Problem.** Businesses are driven by incentives. For instance, in the most simple case, classic economic models look at firms as profit maximizers compelled by competition to minimize costs. But this is only part of the story. What about the incentives of employees, managers, and the owners who employ them? Do employees always focus on the economic goals of the firm, or do factors like personal comfort come into play? Or, what if an owner's economic interest in selling her company bumps into the senior manager's desire for job stability? In the real world of business, incentives can become misaligned in countless ways. Chapter 16 looks at two of the most general incentive problems—moral hazard and the principal-agent problem—with applications to executive compensation, conflicts between shareholders and their creditors, and product liability.

3. **New Cases and Applications.** This textbook has long been viewed as the best expression of Edwin Mansfield's special talents as an economist and business consultant. As one who spent a great deal of time applying microeconomics in the business world, Professor Mansfield believed deeply in the power of example. Accordingly, applications have always been used liberally throughout this book. For the Fifth Edition, we have embraced this tradition by introducing a variety of new applications. They are consistently interwoven into

the main body of the text, and they also appear in a variety boxed inserts. Every step of the way, students are presented with economic ideas and their applications and real instances when the ideas at hand have been critical to solving managerial problems. Multiple cases and applications appear in each chapter of the book (see the endpapers). Many of these cases are new or significantly revised in this edition including:
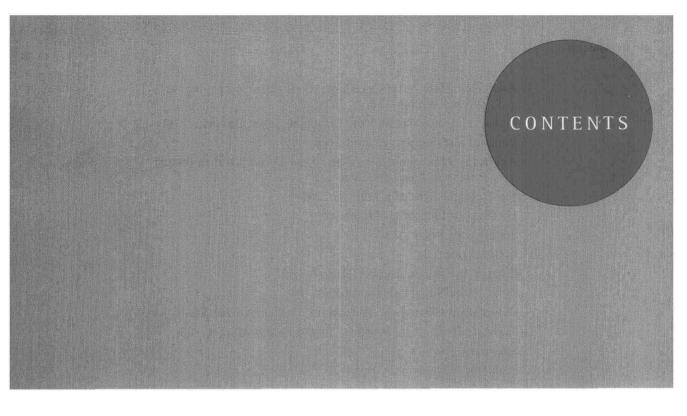
- Shell Gains by Giving Safe-Driving Advice
- Using Patents to Maintain Market Power
- Verizon Local Calling Plans
- Yield Management at American Airlines
- Japan's Tax Man Leans on Foreign Firms
- The Use of Sophisticated Pricing within an Auction Format
- Auction Design at Freemarkets, Inc.
- The Composition of CEO Pay
- Do Directors Act on Behalf of Shareholders or Managers?

4. **An E-Media Package** which addresses the desire of the business student and the need of the business instructor to integrate electronic media into the curriculum. The Fifth Edition comes complete with a power group of electronic ancillaries, including:

- **Spreadsheet Exercises** This completely new set of exercises—replacing those offered with the Fourth Edition—is available to qualified adopters free of charge. The exercises consist of 40 Microsoft Excel files. Some of the exercises are tutorial in nature, designed to help students work through various principles and models. Others are set up as labs, suitable for use as homework problems. These exercises have been prepared by Stephen Erfle of Dickinson College.
- **Economics News Server** News articles from the *New York Times* will be e-mailed to a list serve to which students and instructors subscribe. The articles will reach the subscriber as an e-mail message, with a brief opening commentary relating the article to material in the textbook. Approximately two articles will be sent out each week of the academic year.
- **XanEdu Course Pack Edition** New for the Fifth Edition, and in partnership with XanEdu.Com, Norton will offer a special XanEdu Edition of *Managerial Economics* (5e). XanEdu.Com, a wing of Proquest Information and Learning, offers electronic course packs for higher education markets, using an archive of articles from thousands of periodicals and content providers. Instructors who order this special edition will provide their students with access to a course pack customized for MEC5. In addition to the specially selected articles, this course pack will include the XanEdu search engine for Proquest's full archive of economics content. Students can search for articles on all sorts of topics related to business and economics.

- **PowerPoint Slides** All the figures in the textbook will be reproduced for PowerPoint and available for download from the book's Internet site.

5. **New Four-Color Design.** Along with the book's new emphasis, we introduce a new look. The attractive four-color design of our figures makes it easier for students to understand the relevant concepts. It also signals to teachers that our Fifth Edition warrants a fresh evaluation.

The textbook also continues to be accompanied by the *Study Guide and Casebook,* which for this edition was revised by Thomas Donley of DePaul University, and the *Instructor's Manual and Test-Item File* by Kathryn Nantz of Fairfield University.

Finally, teachers familiar with previous editions will note that two chapters, one on linear programming and another on capital budgeting, have been dropped to make room for new material. Surveys of users of the textbook reported a large majority no longer convering these subjects in their classes. Even so, the chapters from the Fourth Edition are available in electronic form and free of charge to any adopter of the Fifth Edition.

In preparing this Fifth Edition, we benefited from the feedback and suggestions of the following reviewers, survey respondents, and colleagues, to whom we offer our thanks: Sheryl B. Ball, Virginia Polytechnic Institute and State University; Thomas Donley, DePaul University; Stephen Erfle, Dickinson College; Maria Gamba, University of Findley; Susan P. Gilbert, Emory University; Walton Padelford, Union University; Richard Sheehan, Notre Dame University; Robert Stewart, Rutgers University; Ali Tarhouni, University of Washington; Peter Touamnoff, Marquette University; and Chun-sheng Zhou, University of California at Riverside.

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