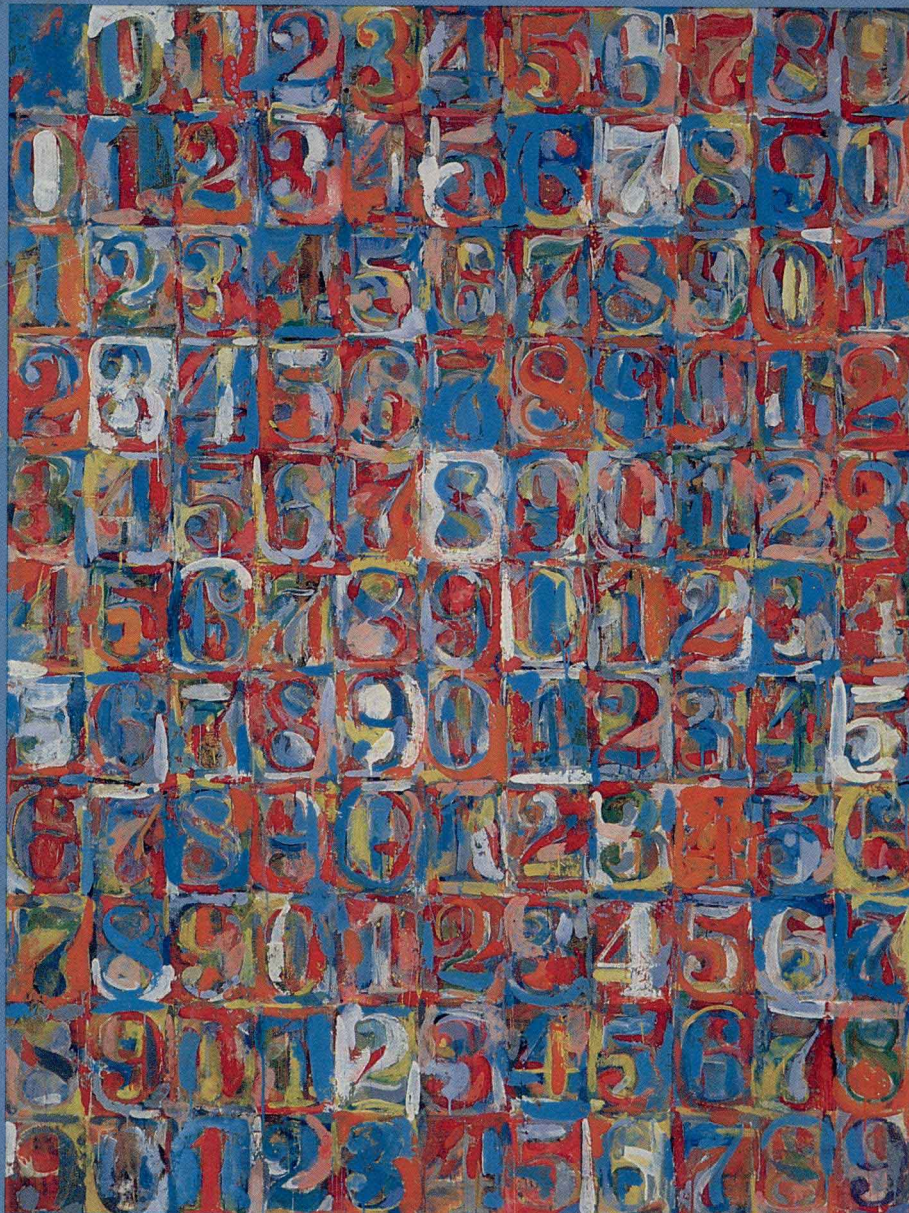


5TH EDITION
MANAGERIAL
ECONOMICS



JAMES L. PAPPAS / MARK HIRSCHHEY

5TH EDITION

**MANAGERIAL
ECONOMICS**

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To Christine, Jessica, and Nicholas—MH

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PREFACE

In the years since the first edition of *Managerial Economics* was published, successful management has become even more complex and challenging. This complexity is a natural by-product of the dramatic, often radical, changes that have been occurring in our economic environment. Widespread volatility in the prices and availability of such basic goods and services as food, energy, and credit greatly affect people, firms, and government. Uncertainty about resource prices and availability, rapid changes in technology, and increases in international competition have produced major transformations in the context and process of managerial decision making. In such an environment, sound economic analysis takes on even greater importance—whether the decision-making unit is an individual, household, firm, nonprofit organization, or government agency.

Managerial Economics, Fifth Edition, is designed to provide a solid foundation of economic understanding for use in managerial decision making. This text offers a rigorous treatment of economic theory and analysis, focusing on the use of managerial economics tools and techniques in specific decision-making settings. Examples and problems illustrate the application of theory to a wide variety of practical situations. The nature of the decision process and the role that economic analysis plays in that process are emphasized throughout.

Although both micro- and macroeconomic relationships have implications for managerial decision making, this revision of *Managerial Economics* continues to concentrate primarily on a set of microeconomic topics that are particularly important. The book begins by developing an economic model of the firm. The rationale for using this model to examine firm behavior and the important role of profits are

both examined. The demand for a firm's products plays a major role in determining the profitability and ongoing success of its overall operation. Thus, demand analysis is an essential area of study in managerial economics. Similarly, the efficiency with which resources are acquired and utilized is also an important determinant of firm success. Production theory and cost analysis, which examine the economics of resource allocation and employment, are studied to improve decision making in this important area.

The markets in which a firm operates significantly affect managerial decisions. Market structure analysis provides a foundation for studying the external economic environment and for examining the pricing practices required for successful management of an enterprise. Capital budgeting is also important for successful management. From the firm's point of view, capital budgeting is the keystone of the long-range planning process. From society's viewpoint, capital budgeting is important because it involves the allocation of scarce capital resources. The importance of government activity to the business environment, including the constraints it imposes on management, requires us to examine regulation and the field of antitrust law. Finally, managerial decision making involves attempts to optimize behavior under conditions of risk or uncertainty. Optimization and risk-analysis procedures have been developed for use in economic analysis, and a number of these procedures are described in this book.

Although *Managerial Economics* takes a problem-solving approach, our focus is on the economics, not the mathematics, of the managerial decision process. Quantitative tools are introduced to assist the student in gaining greater insight into the method of economic analysis, as well as to facilitate the practical use of economics in decision situations.

A particularly important feature of *Managerial Economics*, Fifth Edition, is its attempt to depict the firm as a cohesive, unified organization. A basic valuation model is constructed and used as the underlying economic model of the firm. Each topic in the text is then related to an element of the model. In this process, management is seen to involve an integration of the accounting, marketing, production, personnel, and finance functions. This integrating process is particularly valuable for consolidating the materials covered and for demonstrating that important business decisions are *interdisciplinary* in the truest sense of the word. Our students have found that the presentation of the business firm as a unified whole, rather than as a series of discrete, unrelated areas, is one of the most valuable aspects of the study of managerial economics.


CHANGES IN THE FIFTH EDITION

The world in which managerial decisions are made is constantly changing and so a textbook must be modified and updated to maintain its value as an educational resource. This revision of *Managerial Economics* contains several substantial improvements, in response to student and instructor reactions as well as to developments in the field. Several of the most significant additions, changes, and features follow.

Content

- The material on interpreting regression equations and the use of regression statistics in Chapter 4 has been extensively revised. This coverage is now more complete and user-oriented.
- This edition also introduces a new chapter on forecasting, Chapter 5. This chapter covers a wide range of topics relevant for both short-run operating decisions as well as the long-range planning process. Both quantitative and qualitative methods of forecasting are covered, as are various means for assessing and improving forecast accuracy.
- Chapter 6, *Production*, now develops optimal input combinations by emphasizing the relationships among factor productivity, value of output, and resource employment. It also shows that these relationships are equally valuable in analyzing the production of *both* goods and services.
- Chapter 7, *Cost Analysis*, has been expanded to provide more complete coverage of topics such as minimum efficient scale, economies of scope, and learning (or experience). Again, this expanded coverage is designed to enhance students' understanding of the practical relevance of economic analysis.
- The material on market concentration has been expanded in Chapter 10, *Market Structure*. It includes an extensive updated discussion of the data available from both private and public sources. This enables us to deal more explicitly with how to identify and analyze the market in which a firm sells its products or services.
- Chapter 12, *The Role of the Government in the Market Economy*, now contains a thorough treatment of equity and efficiency issues involved in defining the scope of regulation, and, increasingly, in defining the scope of deregulation. Questions of property rights and the government's role in both assisting and directing the private economy are fully examined.
- *Decision Making under Uncertainty*, Chapter 13, has been placed immediately preceding *Capital Budgeting*, Chapter 14. This change reflects the sequencing of materials used by the majority of managerial economics instructors. In addition, coverage of the probability concept and game theory has been moved from an appendix into the chapter.

Pedagogy

- Each chapter now integrates extended real-world applications of chapter concepts. These are simple numerical examples and solved problems that emphasize the practical implications of the materials covered. Students seem to find this approach a useful way to understand the relevance of managerial economics. A special symbol  in the margin indicates the location of these solved problems and examples.
- The end-of-chapter problems have undergone extensive revision. The problem sets cover a wide variety of decision situations and illustrate the role of economic analysis throughout the firm. The end-of-chapter questions and problems vary from simple to more complex. They are designed to assist the

student in acquiring a practical working facility with the tools and techniques of economic analysis. The problems have been class tested.

- Many chapters now conclude with short cases that illustrate chapter concepts in real company situations.
- A new math appendix has been added to Chapter 2. This will help students review key techniques in math analysis.

ANCILLARIES

- The *Instructor's Manual* contains teaching suggestions and complete solutions for all chapter questions and problems.
- The *Study Guide* contains a summary of major concepts for each chapter, an outline of the most important relationships developed, and an expanded set of solved problems. We believe that this new edition will make what is already an extremely valuable resource for students even more so.
- A comprehensive *Test Bank*, the first ever offered to accompany a managerial economics text, is now available. It contains a variety of multiple-choice questions, one-step, and multi-step problems for every chapter. Full solutions follow all problems. With a selection of over 700 questions and problems, exam preparation should be easy and quick.
- A *Computerized Test Bank* for Apple and IBM microcomputers is also available to users of *Managerial Economics*. It is free upon adoption of the text.

ACKNOWLEDGMENTS

We are grateful to the many individuals who aided in the preparation of *Managerial Economics*, Fifth Edition. Many helpful suggestions and valuable comments have been received from instructors and students who have used previous editions. Numerous reviewers have also provided insights and assistance in clarifying difficult presentations. Among those who have been especially helpful in the development of this edition of *Managerial Economics* are: Douglas Adie, Wheaton College; Dean Baim, Pepperdine University; William Beatty, Sul Ross State University; George C. Dery, University of Lowell; William Green, Sam Houston State University; Kathleen Hereford, University of Maryland; George Hoffer, Virginia Commonwealth University; Ron Koot, Pennsylvania State University; Janet Rives, University of Northern Iowa; Peter Schwarz, University of North Carolina at Charlotte; Eleanor Snellings, Virginia Commonwealth University; and Tom Staley, San Francisco State University. We would also like to give special recognition to Gaines Liner and Ted Amato of the University of North Carolina at Charlotte for their work on the *Test Bank* and to Tom Staley who did extensive manuscript reviewing and problem checking.

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Every effort has been made to minimize errors in the text. We invite readers to correspond with us directly concerning corrections, suggestions for further improvements of clarity, or related matters.

Economic efficiency is an essential ingredient in the successful management of both private- and public-sector organizations. The field of managerial economics continues to undergo significant changes in response to the challenges imposed by the complexities of managerial decision making in a rapidly changing environment. It is stimulating and exciting to participate in these developments. We sincerely hope that this fifth edition of *Managerial Economics* will contribute to a better understanding of the application of economic theory and methodology to managerial practice.

February 1987

James L. Pappas, Tampa, Florida

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