ECONOMICS FOR MANAGERS

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McGRAW-HILL BOOK COMPANY

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London Madrid Mexico Montreal New Delhi Panama Paris São Paulo Singapore
Sydney Tokyo Toronto

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1234567890 FGRFGR 78321098

This book was set in Times Roman by Black Dot, Inc.
The editors were J. S. Dietrich, Bonnie E. Lieberman, and Frances A. Neal;
the designer was Albert M. Cetta;
the production supervisor was Dominick Petrellese.
The drawings were done by ECL Art Associates, Inc.
Fairfield Graphics was printer and binder.

Library of Congress Cataloging in Publication Data

Stokes, Charles J
Economics for managers.

Includes bibliographies and index.
1. Managerial economics. 2. Industrial management—Mathematical models. I. Title.
HD30.22.S8 330'.02'4658 77-16414
ISBN 0-07-061663-9

PREFACE

Managerial Economics, Economics of the Firm, and Business Economics are common titles of courses in applied economics. These courses are often in the core of MBA programs. They are also offered in the upper division or junior-senior sequence in undergraduate business administration throughout North America. I have written this book for students in just such courses. For almost twenty years, I have taught this course at the University of Bridgeport, the University of Colorado, Andrews University, and elsewhere to thousands of both undergraduate and graduate students. Using that wealth of experience, I have focused on a how-to-do-it approach to economics.

I am conscious that few students who take this course will be business economists. Nonetheless, I want them to gain from reading this book an understanding of how they can use what they have learned about economics now and as they advance in their business and government careers. Because in recent years there has been a veritable explosion of both knowledge and application of economic tools in management, this book emphasizes three major principles:

- It is oriented to the firm and to management
- It shows the relevance of economic concepts in actual management situations
- Cases and text are integrated

The presence of thousands of business economists in government and industry, the growth of large corporate economics departments as well as the development of economics management consulting firms have all led to a professionalization of business economics. There is much greater agreement both about what business economists do and about what they should know. Management has a much clearer idea of how to use the results of economic research in making decisions. These important changes mean that although a book on managerial economics is easier to write today, it must meet tougher standards.

As a consulting economist for some large domestic corporations as well as for overseas firms and governments, I have written this book with a good idea of what management wants and needs. I know how the work of economists is judged, and how it is used. Those who read this book will find my treatment of demand, costs, pricing, location decisions, and antitrust matters, among other things, tempered by experience.

Having served at various times as chairman of the board of a bank, corporate director, college trustee, government official, foundation consultant, and senior member of the Brookings Institution, I have had the opportunity to hire economists, to utilize their output, and to present their results to executives and directors. I hope that this experience plus my teaching will provide students with economics relevant to real-life situations.

I have tried to lay a foundation for what mathematics students may need in this book by what I think will be a useful review in Chapter 2 (Numbers, Models and Managerial Economics). For many students there will be no need for such a review, and instructors will, of course, be guided accordingly. For those instructors who wish to present a more intensive analysis of demand and cost theory, Chapters 4 (Statistical and Econometric Analysis of Demand) and 6 (The Production Function and Linear Programming) have been added. For undergraduate courses as well as for those graduate courses in managerial economics with less of a mathematical emphasis, these chapters can be omitted.

Benefit/cost analysis is separated both from capital budgeting and from an analysis of managerial effectiveness. Chapter 12 is intended to give "a state of the art" review of this form of cost and managerial effectiveness evaluation.

Every chapter except Chapter 2 presents at least one case. The cases were selected both for their illustrative value as examples of economics in action and for their teaching effectiveness. Some instructors will want to use them as the focus of their courses. The Instructors' Manual contains both suggested answers for each case and ways to use the case in class discussion. In the Instructors' Manual, too, are other shorter cases as well as batteries of questions, problems, and tests for each chapter.

I owe a heavy debt to those many professors, here in the United States and in Canada as well as overseas, who have used and commented upon my publications over the years. Their suggestions and criticisms have affected, as I think they will see, the form and content of this volume. I am especially indebted to the late Francis X. DiLeo, Dean of the College of Business Administration, a close friend for many years, for his help and inspiration. My colleagues Jerral Nelson, Norman Douglas, and Robert H. Persons, among others, have used various preliminary forms of the current presentation. I must also express my thanks to my other readers and reviewers, H. Marshall Booker (The Christopher Newport College of the College of William and Mary), James F. Crawford (Georgia State University), Erwin Mayer (Western Washington State College), Erwin E. Nemmers (Northwestern University), John Pisciotta (University of Southern Colorado), Franklin E. Robeson (University of Maryland), and Ronald P. Wilder (University of South Carolina), for their help

in making this book fit their teaching requirements. Students, among them Fred Prior, Harvey James, Tim Berkel, Otto Densk, Mike Litwinski, and Bob Bialecki, have influenced my thinking greatly. They also helped me to see how to improve my presentation. And what shall I say about Stephen Dietrich, my editor, except thanks for applying the spurs and tightening the reins at the right time.

Charles J. Stokes

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MANAGERIAL ECONOMICS AND MANAGERIAL ECONOMISTS

Key Concepts

business problem
case analysis
decision relationships
economic tools
management science
management task
managerial economics
managerial economist
operations research
problem formulation
problem solving

What Is Ahead in This Chapter

This chapter begins with a general description of how managerial economics began, who managerial economists are, and how they do what they do. Knowing who these economists are and what they do will help you to see how economics is used in large and small corporations, in government agencies, in policy making, and in consulting.

But don't think that managerial economics is a different kind of economics from principles of economics or from public economics. It isn't. It is neither an easier and less theoretical field nor a more difficult. Managerial economics is a selection from the toolbox of economic principles. It is a collection of those methods and those kinds of analysis that have direct application to management.

Admittedly, there was a tendency some years ago for managerial economics textbooks to "write down." Some authors and even some instructors assumed that business administration students and businessmen really didn't need to know very many economic tools to understand how to use economics in management. Though the feeling was not shared by all economists, there was a perception that much of economic theory actually wasn't relevant to the average business situation. Others, of course, felt that operations research people dominated the management field anyway.

Things have changed dramatically since then. Not only have operations research people and management scientists found it necessary to use ever more complex tools from the economics principles toolbox, but businessmen began to find it essential to have managerial economists on their staffs. Whatever managerial economics was, it became evident that it led to much better management.

Take the case of the president of Brown-Root in Houston who, in some desperation, paused in the middle of an intensive but seemingly directionless planning meeting to call the University of Texas in Austin. He told the head of the economics department he wanted a managerial economist "and soon."

The department head searched among the graduates for such a person and finally found one to send to Houston. When the managerial economist arrived, Brown-Root's president said to him, "I don't know what you do or how you do it, but I do know that I need you. Get in that office and start doing 'managerial economics' and see if you can get us out of this mess."

Contributions of Managerial Economics

One of the special contributions of economics to management is its capacity to identify the key elements in the decision-making process. Out of the welter of facts, economics concentrates upon a few important decision relationships. Managerial economics permits a thorough analysis of these key factors. If a firm's managers want to enlarge their products' share of the market, a knowledge of managerial economics will enable them to determine the dimensions of the market, the kind of competition they face, and the techniques, if any, that will help them to follow the course they propose and to measure the effectiveness of their decision.

In a sense, economics in the United States has always focused on managerial concerns. Very early, American economic writers became interested in the challenges of a fast-growing economy and in the problems of American businessmen who attempted to build enterprises to satisfy the special demands of a new nation. American economists were asked to comment on, to oppose or to support, or, at times, to provide solutions for all kinds of business problems in railroads, steel, oil, sugar, tobacco, and other industries.

Management uses managerial economics to make problem solving easier, improve the quality of decisions, reduce the amount of time required to make good decisions, increase the frequency of correct solutions, or provide some combination of these benefits.

What Do Managerial Economists Do?

Whether they are called "managerial economists," "business economists," "company economists," or just plain economists, managerial economists are now found in every kind of enterprise, regardless of the size of the business, the area of specialization, or the location of company headquarters. There were more than 10,000 managerial economists in the United States by the middle 1970s and the number was growing steadily. Most large firms and commercial banks employ several economists; sometimes there is a large staff of economists as at the Citibank of New York, General Electric, IBM, or Prudential Life. While there is a concentration of managerial economists in New York, Chicago, San Francisco, Boston, Philadelphia, and Los Angeles, regional centers such as Miami, Dayton, Phoenix, Seattle, and Kansas City also have large and growing numbers. Trade associations, business consultants, brokerage houses, and even legal and accounting firms maintain staffs of managerial economists. So do many local, state, and federal agencies as well as the Federal Reserve bank system and the Federal Home Loan bank system. In addition to commercial banks, mutual savings banks, savings and loan associations, and bank holding companies employ managerial economists. The chairman of the Council of Economic Advisers during the presidency of Gerald Ford was a prominent managerial economist, Alan Greenspan, on leave from his position as head of a leading New York economic consulting firm.

The National Association of Business Economists, a professional organization of managerial economists, at various times has prepared case histories of managerial economics careers from which several of the following episodic descriptions are taken. The remainder of the seven reports are derived from interviews with practicing managerial economists.

Seven Managerial Economists and What They Do

Dr. P is an executive vice-president and economist at one of the nation's largest savings banks. He began his career as a professor of economics in a medium-sized Southeastern college. Later he was on the staff of a large trade association prior to coming to his current position.

As a managerial economist, he has had a wide range of duties, including the preparation of business forecasts, position papers on issues facing the industry his trade association served, speeches for corporation executives, testimony before Congressional committees, training programs for analysts and executives, and financial programs for new businesses.

In his savings bank executive position, it is his task to determine the general direction the bank should take, to discover new and possible fields of endeavor, and to assess their costs and benefits for his bank; he is also expected to provide a general set of guidelines for the president and the board of trustees in the continuing management of the bank. Dr. P is both an economist and a manager. He has the pleasure and the responsibility of carrying out his own recommendations. He has come to that stage of his career where he has shifted from adviser to decision maker.

Ms. R directs the economic research activity of a large manufacturing company which produces a broad line of consumer and capital goods and provides consumer services as well. Her job is to provide the senior management of this firm with economic and market forecasts, along with analyses of all pertinent information about the environment in which the various lines of the firm's business are being conducted. She plays a key role in determining the corporate strategy in major markets. The results of her work are relied on in short- and long-range financial, profit, and market planning. She also helps in the evaluation of capital budgets, including proposals to expand into new markets.

As director of economic research and senior economist, she has a staff of six managerial economists to assist in business forecasting, in tracking the indicators of business position, in developing models of business activity, and in speech writing as well as employee, stockholder, and public relations activities.

In her first position with the company, she was concerned with technical model building, which was in line with her mathematical training. She moved up to head of her department as she acquired an ever widening concern with all phases of economic activity. Her functions continue to expand as management learns to rely more and more on its economic staff.

Mr. O is a business economics consultant. He is frequently hired by the economics staffs of major companies and by the managements of smaller firms to provide general forecasts of the national economy. These forecasts serve as the basis for managements' more detailed analyses of internal operations. Mr. O is a specialist in more than forecasting, with interests in petroleum economics, corporate financial planning, and the money market.

On a typical day in his consulting firm, the first activity may be the dictating of a newsletter to his clients. Following that, there is a meeting with the senior officer of a client seeking advice on the proposed construction of a European facility. What the client wants is a way to determine economic feasibility. At lunch, with another client, Mr. O traces the likelihood of important changes in Defense Department procurement policies and their impact on that client firm's sales.

During the afternoon, he meets with his staff to work over a statistical model where there are some thorny problems in theory as well as in data input. Later, he spends time on the development of an input-output model for a multiproduct company. In all that he does he draws upon economics, mathematics, statistics, law, and accounting, as well as political science and sociology. Indeed, he finds it necessary to remain up-to-date and even to learn new techniques constantly so he can be ready to serve his clientele.

Ms. W is an investment economist for one of the larger New York trust companies. Her activities are as diverse as those of her employer; they include stock market forecasting, portfolio selection, money market projection, and watching key business indicators, as well as extensive personal contact within and outside the trust company. She takes an active part in efforts to expand the economic advisory services of the bank and is responsible for planning major seminars to enable clients to understand how to improve the management of their affairs.

Ms. W began as an economist for a Federal Reserve bank and then moved to a small investment company. From there, she went to Washington to work in macroeconomics for a government agency and then back to New York. She has found that a successful managerial economist must be willing to change directions when necessary and must be able to respond to new and varied challenges.

Dr. H is the senior economist and a vice-president on the corporate staff of one of the country's largest communications firms. Because the firm is also involved in many areas of manufacturing, both in the United States and overseas, Dr. H's job involves continual calls on his talents. While his principal task is the preparation of the firm's situation forecast, for which he uses the services of several of the major economic forecasting firms, he must be ready to provide inputs into all phases of a complex planning structure.

The firm has a five-year revolving planning cycle. Each spring, management reviews the accomplishments of the year just ended and extends its plan five years further into the future. While the emphasis is on profitability and assessment of the impact of new technology, evaluation of market competitors as well as changing supply conditions are part of the planning process. Dr. H and his staff are expected to have at hand such necessary information