MANAGERIAL ECONOMICS

CORPORATE ECONOMICS AND STRATEGY

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PREFACE

Most textbooks on managerial economics contain chapters on demand analysis, production, cost analysis, the theory of the firm, market structures, and capital budgeting. This text is no exception in that it too contains these core topics. However, there is a fundamental difference between this book and other managerial economics texts: This is the first textbook on the subject to recognize and acknowledge an important new approach to decision making, known as *corporate strategy,* that emerged in the 1970s.

The major premise of this book is that the single most important application of microeconomics to practical business problems is in strategic planning, which lies at the heart of the firm's long-term resource allocation problem. Given a set of corporate goals and objectives, and a set of assumptions about the company's economic, competitive, regulatory, factor-supply, technological, and international environments, strategic planning is a threefold problem: a *portfolio* problem, an *investment* problem, and a *strategy selection* problem. Which businesses should the company be in? What level of investment should be made in each business? Which specific financial, marketing, and production strategies should each business follow? *Corporate economics* is defined as the integration of microeconomics and strategic planning.

To understand the firm's economic and competitive environments, we must consider both demand theory (Chapter 2) and empirical demand analysis and econometrics (Chapter 3). The study of production and cost functions in Chapter 4 is necessary to enhance our knowledge of the factor-supply and technological environments of the firm. The regulatory and international environments can affect the firm through its demand, cost, and production functions.

The firm's factor-input and product-output decisions are analyzed in Chapter 5 using conventional marginal analysis and linear programming. Although relatively few firms employ optimization techniques as strategic planning tools, optimization is a useful conceptual framework through which to view the interdependence of the firm's portfolio, investment, and strategy selection problems.

Having developed the basic elements of microeconomics in Chapters 2 through 5, we apply microeconomics to the firm's competitive environment in Chapters 6 through 8. We formulate and analyze competitive markets in Chapter 6, industrial organization and competitive analysis are the topics of Chapter 7, and Chapter 8 treats antitrust and government regulation.

In Chapters 9 and 10 the microeconomic theory of the firm is extended to include capital investment decisions and decision making under risk and uncertainty.

The final three chapters are concerned with the direct application of microeconomics to corporate strategic planning. After outlining the elements of strategic planning in Chapter 11, we argue that microeconomics, instead of accounting, should be the language of strategic planning. Two different types of strategic planning models, those of competitive strategy and simulation, are described in Chapter 12. Finally, Chapter 13 covers the "politics of corporate economics," which concerns the practical problem of integrating corporate economics and strategy into the decision-making process.

Armed with the analytical tools and the microeconomic conceptual framework outlined in this book, the reader should be able to come to grips with solutions to the three major interdependent problems of business: the portfolio problem, the investment problem, and the strategy selection problem.

Throughout the entire book substantial emphasis is placed on practical examples to illustrate the application of corporate economics to the "real world." Based on the authors' extensive consulting experience with over 200 major corporations, the book attempts to combine microeconomic theory, strategic planning, and the analytical tools used in both fields.

This book is aimed at three different groups: (1) managerial decision makers who use corporate economics to make decisions, (2) corporate economists who specialize in the application of microeconomics to problems of the firm, and (3) advanced undergraduate and beginning graduate students in business and economics who expect to use corporate economics in the future.

The reader who has had a basic course in calculus will find numerous applications in footnotes and appendixes. However, readers who have had only high school algebra should have little difficulty with this book. In several sections some previous knowledge of elementary statistics should prove helpful. Appendixes are included on calculus, optimization, and the simplex method of linear programming. Each chapter has a set of review problems and questions.

We are grateful to the Literary Executor of the late Sir Ronald A. Fisher, F.R.S., to Dr. Frank Yates, F.R.S., and to the Longman Group Ltd., London, for permission to reprint Table III from their book *Statistical Tables for Biological, Agricultural, and Medical Research* (6th ed., 1974).

We are indebted to dozens of graduate students in the Department of Economics and the Fuqua School of Business at Duke University who served as willing experimental subjects for over two years, while earlier drafts of this book were being tested in the classroom. Michele H. Mann provided valuable editorial assistance throughout the development of the book.

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QUESTIONS AND PROBLEMS

This book is aimed at (1) managerial decision makers who use corporate economics to make decisions, (2) corporate economists who specialize in the application of microeconomics to problems of the firm, and (3) undergraduate and graduate students who expect to use corporate economics in the future as managerial decision makers, corporate economists, or both.

Since the intended audience for this book includes those who specialize in corporate economics and those who merely use some of the tools associated with corporate economics as aids to decision making, we shall use the terms "corporate economist" and "decision maker" interchangeably. Although we recognize that some corporate economists are stereotyped as researchers who make few decisions, we are concerned primarily with the application of corporate economics to decision making. Rather than always referring to corporate economists and decision makers, we will tend to use only one of these designations at a time.

UNCERTAINTY IN TODAY'S CORPORATIONS

The decade of the 1970s has imposed on corporate executives a degree of uncertainty which has not been seen since the end of World War II. As the external economic environment faced by large and small firms alike has become more uncertain and complex, corporations have been forced to treat economics much more seriously than in the past. During the past 10 years, corporate economists have come into their own as an integral part of the top management team of many large companies. It is appropriate to begin this book on corporate economics by defining some of the forms of economic uncertainty which have been exerting tremendous pressure on corporations, problems which corporate economists are being asked to help solve.

Economic Recessions

The memory of the 1974–1975 recession still lingers in the minds of many corporate executives who anticipated neither the timing nor the depth of the most