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双语教学丛书

管理经济学

（第4版）（注释版）

Managerial Economics (Fourth Edition)

H·克雷格·彼得森（H.Craig Petersen）
W·克里斯·刘易斯（W.Cris Lewis） 著

中国人民大学出版社
Pearson Education

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Preface

Managerial economics is an interesting and fundamental part of the business curriculum; however, it can be a difficult course for some students.[1] Mastering the subject requires a good understanding of how the basic concepts of economics can be combined with the tools of mathematics and statistics in order to analyze and make business decisions.[2] However, in the process of studying managerial economics, students can get mired in the minutiae of data, graphs, equations, and definitions. One result is that they may fail to fully appreciate the value of the framework of economic principles as a tool for decision making.[3]

Part of the difficulty in teaching managerial economics can be explained by the limitations of existing textbooks. Some texts devote so much time to manipulating data, deriving equations, and explaining the subtleties of statistics that they leave students without a good grasp of basic economic principles.[4] Others provide extensive discussions of these principles, but are almost totally devoid of good examples that allow the student to see how these concepts can be applied. The approach used here is to focus on concept and application in as straightforward a manner as possible.

[1]管理经济学是企业管理课程中一门颇具吸引力的基本学科，但对有些学生来说，学习这门课程可能很困难。

[2]掌握这门课程需要很好地理解经济学的基本概念是如何与数学和统计学的工具相结合的，以用来分析和制定企业决策。

[3]结果是他们往往未能充分认识到经济学原理的基本框架作为决策制定工具的真正价值。

[4]有些教科书把大量时间用于数据的演算、方程的推导和对统计学难点的解释上，以致学生们不能很好地掌握经济学的基本原理。

Objectives

Managerial Economics, Fourth Edition, is written with two primary objectives in mind. First, it is intended that students will receive a complete and rigorous introduction to basic principles of microeconomics. Albert Einstein once commented that things should be made as simple as possible, but not more so.[5] In this text we have tried to follow

[5]爱因斯坦曾说，事情应当做得越简单越好，而不是越多越好。

this counsel. Esoteric and peripheral points have been avoided in order to concentrate on fundamental economic principles. However, difficult concepts have been included when it was determined that they could provide important insights for decision making. Care has been taken to ensure that the exposition of these concepts is as clear and uncomplicated as possible.

The second objective in writing *Managerial Economics* is to demonstrate how application of economic theory can improve decision making. This goal is realized by use of a concept/example format throughout the book.[6] The approach involves first introducing basic concepts of managerial economics and then using these principles to analyze decisions faced by managers.[7] In addition, numerous case studies and solved problems have been included to illustrate these principles and to stimulate interest in related topics. The use of the concept/example format makes the text more readable and facilitates learning by allowing students to see how economics can be used in decision making.[8]

[6]写本书的第二个目的是要说明经济学理论是怎样用来改进决策制定的。这一目标是通过在全书中使用概念/例题的方式来实现的。

[7]方法是首先介绍管理经济学的基本概念，然后用这些原理去分析管理者面临的决策。

[8]采用概念/例题的方式，提高了这本教材的可读性，使学生们能知道如何在决策制定中应用经济学原理，从而有助于学生学习。

Features

A course in managerial economics taught at one university may be quite different from that offered at another school. Although it is impossible to provide a text that will meet the preferences of all instructors, *Managerial Economics* is designed to be suitable for many uses. For an undergraduate course, coverage of the first thirteen chapters provides a good understanding of basic economic principles and their applications. For an MBA curriculum or a more comprehensive undergraduate course, additional topics can be selected from the remaining six chapters as time permits.

One of the most difficult choices we faced in writing *Managerial Economics* involved the level of mathematics to be used in the text. Some course instructors use calculus, whereas others prefer a graphic and algebraic presentation. We have opted for a compromise position. There are some topics that are more easily understood using calculus. Accordingly, basic calculus (usually nothing more than taking a derivative) is used to discuss selected concepts in some chapters.[9] For those students who have not had calculus, the appendix to chapter 2 provides the necessary background to follow these presentations. For courses with greater emphasis on calculus, there are calculus footnotes.[10] In addition, most chapters have supplementary problems that are clearly designated as requiring calculus for their solution.

[9]相应地，初级的微积分(通常仅为求导)在一些章节中被用来讨论可选概念。

[10]那些微积分较重要的章节，都给出微积分的脚注。

In addition to the concept/example format previously mentioned, *Managerial Economics* includes other special features to facilitate student learning. Each chapter has key concepts listed at the end of major sections. Together with the chapter outline and summary, these key concepts can aid in the review of material. Case studies interspersed throughout the chapters show how economic tools are relevant for decision makers. Solved problems included in the chapters are designed to provide guidance in working out problems. Discussion questions and problems are included at the end of each chapter. Many chapters also include separate sets of problems requiring calculus and/or a computer for their solution. Finally, an Integrating Case Problem is included at the end of each of the eight sections of the book.

Changes in the Fourth Edition

New Material

The basic organization of the book has been maintained. A variety of new material has been added, however, and increased emphasis has been given to the objective of maximization of shareholder value. New material on the principal-agent problem and the need to align the interests of the two groups gives structure to the shareholder value concept. The addition of an appendix on consumer choice theory complements the material on demand theory and analysis in chapter 3. A major new section on managing risk (including insurance, diversification, and hedging) provides better integration in chapter 14 (Risk and Decision Making). Other new material has been added on such topics as factor productivity, stages of production, and contestable markets. In addition, a number of new case examples drawn from "real-world" experiences have been included.

Perhaps the single most important new pedagogical feature is the addition of eight integrated case study problems, one at the end of each major section of the book. These problems integrate material from the chapters in the section (and, in some cases, from earlier chapters as well) in the form of major student assignments. The use of some or all of these cases allows for more in-depth analysis by students than is provided by the end-of-chapter problems.

Additional Problems

More than 50 additional end-of-chapter problems have been added. Some of these are focused on the new material; others increase the base of problems available on existing topics.

Support Materials

The following support materials are available for use with the fourth edition of *Managerial Economics*.

1. Study Guide. The student study guide includes a summary of key concepts and equations for each chapter. The fourth editions' study guide includes more problems as well as extra problems requiring calculus. All problems are accompanied by detailed solutions.
2. TOOLS Software. The highly successful TOOLS Software has been rewritten for a Windows environment and is now not only visually more exciting but is even easier for the student to use. This software contains routines for time value of money problems, multiple regression, statistics of a probability distribution, trend projection, input/output projections, linear programming, benefit-cost analysis, and other quantitative techniques that enable students to solve reasonably complex problems without making tedious calculations. Students can download the TOOLS Software and User Manual directly from *www.prenhall.com/petersen*.
3. Instructor's Manual with Test Bank. The Instructor's Manual includes answers for the discussion questions and solutions for problems found at the end of each text chapter. The Test Bank portion of the manual includes a greatly expanded base of multiple-choice questions. There are more than 1 000 such questions in addition to 150 examination problems.
4. Prentice Hall Custom Test. A computerized version of the test bank (in Windows format) is also available to adopters. Using PH Custom, instructors can easily edit, add, or delete questions from the test bank and generate their own tailor-made exams.

H. Craig Petersen
W. Cris Lewis
Logan, UT
April 1998

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Part One

Getting Started

Chapter 1 Introduction to Managerial Economics

Preview

For most purposes, economics can be divided into two broad categories: microeconomics and macroeconomics.[1] *Macroeconomics* is the study of the economic system as a whole.[2] It includes techniques for analyzing changes in total output, total employment, the consumer price index, the unemployment rate, and exports and imports. Macroeconomics addresses questions about the effect of changes in investment, government spending, and tax policy on exports, output, employment, and prices. Only aggregate levels of these variables are considered.[3] But concealed in the aggregate data are countless changes in the output levels of individual firms, the consumption decisions of individual consumers, and the prices of particular goods and services.[4]

[1]在大多数情况下，经济学可以被分为两大类：微观经济学和宏观经济学。

[2]宏观经济学把经济体系作为总体来研究。

[3]它是对总产量、总就业量、消费者价格指数、失业率和进出口的变化进行分析的技术。它着重处理的问题是投资、政府开支、出口税收政策、产量、就业水平和价格水平的变化可能带来的影响。它只考虑这些变量的总水平。

[4]但在这些总量数据的背后,隐匿着个体企业产量的变化、个体消费者消费决策的变化,以及特定产品和服务价格的变化。

[5]尽管在报纸和电视上宏观经济问题和政策常受到人们的关注,但是经济的微观层面也很重要,它与管理者面临的日常问题息息相关。

[6]微观经济学集中研究经济中单个行为主体的行为,即企业、个人及其在市场中的相互作用。

[7]管理经济学可以被看成是微观经济学的应用学科。管理经济学是对微观经济学中经理们最感兴趣且对他们来说最重要的部分的应用。

[8]这类问题包括需求、生产、成本、定价、市场结构和政府管制等。

[9]这些原理的合理运用会提高管理决策的水平,增加利润,提升企业价值。

[10]一般来说,管理经济学可以被目标导向型的管理者用于以下两个方面。

[11]第一,如果现有经济环境给定,管理经济学原理能为评价资源在企业内部的有效配置提供分析框架。

[12]第二,这些原理能帮助管理者对各种经济信号做出反应。

[13]以后各章所介绍的工具能够通过扩大和加强管理者决策时所用的分析框架来提高决策效率。因此,懂得管理经济学原理的应用,能使企业和管理者的价值都得到提高。

[14]为了在后面更好地展开对管理经济学技能的讨论,在本章中我们将首先概要地介绍在市场经济中消费者、企业和资源所有者之间的相互关系;然后探讨企业的性质和目标以及利润作为使企业对消费者产量需求做出反应的一种激励因素的重大意义;接下来,讨论所有者和管理者之间存在不同目标的可能性(即委托人—代理人问题);

Although macroeconomic issues and policies command much of the attention in newspapers and on television, the microdimensions of the economy are also important and are often more relevant to the day-to-day problems facing the manager. [5] *Microeconomics* focuses on the behavior of the individual actors on the economic stage, that is, firms and individuals and their interaction in markets. [6]

Managerial economics should be thought of as applied microeconomics. It is an application of the part of microeconomics that focuses on the topics that are of greatest interest and importance to managers. [7] These topics include demand, production, cost, pricing, market structure, and government regulation. [8] A strong grasp of the principles that govern the economic behavior of firms and individuals is an important managerial talent. The rational application of these principles should result in better managerial decisions, higher profits, and an increase in the value of the firm. [9]

In general, managerial economics can be used by the goal-oriented manager in two ways. [10] First, given an existing economic environment, the principles of managerial economics provide a framework for evaluating whether resources are being allocated efficiently within a firm. [11] For example, economics can help the manager determine if profit could be increased by reallocating labor from a marketing activity to the production line. Second, these principles help managers respond to various economic signals. [12] For example, given an increase in the price of output or the development of a new lower-cost production technology, the appropriate managerial response would be to increase output. Alternatively, an increase in the price of one input, say labor, may be a signal to substitute other inputs, such as capital, for labor in the production process.

The tools developed in the following chapters will increase the effectiveness of decision making by expanding and sharpening the analytical framework used by managers to make decisions. Thus, a working knowledge of the principles of managerial economics can increase the value of both the firm and the manager. [13]

This chapter sets the stage for the development of managerial economic skills. First, the interrelationships among consumers, firms, and resource owners in a market economy are outlined. Next, the nature and objective of the firm and the importance of profit as an incentive for firms to respond to consumer demands for output are discussed. Following that, the potential for owners and managers to have different objectives (i. e. , the principal-agent problem) is discussed. Finally, the role of economics in decision making is considered. [14]

The Circular Flow of Economic Activity

Individuals and firms are the fundamental participants in a market economy. Individuals own or control resources that have value to firms because they are necessary inputs in the production process. These resources are broadly classified as labor, capital, and natural resources.[15] Of course, there are many types and grades of each resource. Labor specialties vary from street sweepers to brain surgeons; capital goods range from brooms to computers. Most people have labor resources to sell, and many own capital and/or natural resources that are rented, loaned, or sold to firms to be used as inputs in the production process.[16] The money received by an individual from the sale of these resources is called a factor payment. This income to individuals then is used to satisfy their consumption demands for goods and services.[17]

The interaction between individuals and firms occurs in two distinct arenas. First, there is a product market where goods and services are bought and sold. Second, there is a market for factors of production where labor, capital, and natural resources are traded.[18] These interactions are depicted in Figure 1—1, which describes the circular flow of income, output, resources, and factor payments in a market economy.

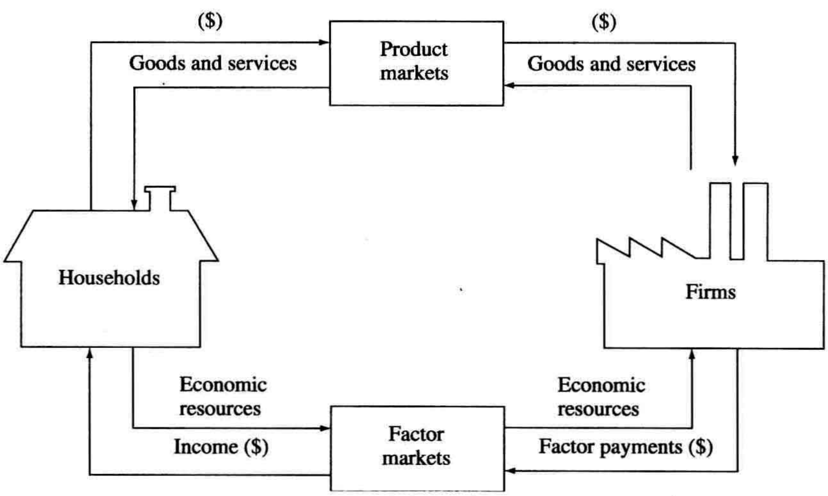

Figure 1—1 Circular Flow of Income, Output, Resources, and Factor Payments

In the product market shown in the top part of the figure, individuals demand goods and services in order to satisfy their consumption desires. They make these demands known by bidding in the product market for these goods and services. Firms, anxious to earn profits, respond to these demands by supplying goods and services to that market.[19] The firm's production technology and input costs determine the supply conditions, while consumer preferences and income (i. e., the ability to pay) determine the demand conditions. The interaction of supply and demand determines the price and quantity sold.[20] In the product market, purchasing power, usually in the form of money, flows from consumers to firms. At the same time, goods and services flow in the opposite direction—from firms to consumers.[21]

The factor market is shown at the bottom of Figure 1—1. Here, the flows are the reverse of those in the product market.[22] Individuals

最后,讨论经济学在决策制定中的作用。

[15]个人和企业是市场经济的基本参与者。个人拥有或控制对企业有价值的资源,因为这些资源是生产过程必需的投入品。从广义上这些资源可分为劳动力、资本和自然资源。

[16]大多数人都拥有可供出售的劳动力资源。许多人拥有资本和(或)自然资源,这些资源可被企业租、借或购买,并被企业作为投入品用于生产过程。

[17]个人通过出售这些资源而得到的货币称为生产要素支付。这笔个人收入可用来满足人们对产品和服务的消费需求。

[18]个人和企业之间的相互作用发生在两个不同的领域:首先,有一个产品市场,产品和服务在这里买卖。其次,有一个生产要素市场,劳动力、资本和自然资源在这里交易。

[19]在图 1—1 顶部所示的产品市场中,个人需要产品和服务以便满足他们的消费需求。他们通过在产品市场中为这些产品和服务出价,而让这些需求为人所知。企业为了获得利润,对这些需求做出反应,即向市场供应这些产品和服务。

[20]企业的生产技术和投入成本决定供给的条件,而消费者的选择和收入(即支付能力)则决定需求条件。供给和需求的相互作用决定出售的价格和数量。

[21]在产品市场中,通常以货币形式表现的购买力从消费者向企业流动。同时,产品和服务按相反方向流动——从企业流向消费者。

[22]在图 1—1 的底部显示了生产要素市场,这里各项要素流动的方向和产品市场恰好相反。

are the suppliers in the factor market. They supply labor services, capital, and natural resources to firms that demand them to produce goods and services. Firms indicate the strength of their desire for these inputs by bidding for them in the market.[23] The flow of money is from firms to individuals, and factors of production flow from individuals to firms. The prices of these productive factors are set in this market.[24]

Prices and profits serve as the signals for regulating the flows of money and resources through the factor markets and the flows of money and goods through the product market.[25] For example, relatively high prices and profits in the personal computer industry in the 1980s signaled producers to increase production and send more units of output to the product market. To produce more computers, more labor and capital were required. Firms raised the prices they would pay for these resources in the factor market to signal resource owners that higher returns were now available. The result was rapid growth in the personal computer industry as resources were bid away from other industries. In the early 1990s, this market became very competitive and prices fell substantially. Although total unit sales increased, the profit on each computer was smaller, and some firms struggled to keep total profit at an acceptable level. Consumers benefited greatly as better and more powerful computers became available at lower and lower prices.

In the market economy depicted by this circular flow, individuals and firms are highly interdependent; each participant needs the others.[26] For example, an individual's labor will have no value in the market unless there is a firm that is willing to pay for it. Alternatively, firms cannot justify production unless some consumers want to buy their products. As a result, all participants have an incentive to provide what others want. All participate willingly because they have something to gain by doing so. Firms earn profits, the consumption demands of individuals are satisfied, and resource owners receive wage, rent, and interest payments.[27] If some do not benefit by buying and selling in these markets, they are not required to do so. Thus, one can be sure that no individual is made worse off by voluntary trade in these factor and product markets. Indeed, the gains that accrue to the individual participants form the essence of a market economy.[28]

The Nature of the Firm

In order to earn profits, the firm organizes the factors of production to produce goods and services that will meet the demands of individual consumers and other firms. The concept of the firm plays a central role in the theory and practice of managerial economics. Thus, a significant part of this text is focused on production, cost, and the organization of firms in the marketplace. These topics form the basis for what is known in economics as the theory of the firm.[29] An understanding of the reason for the existence of firms, their specific role in the economy, and their objective provides a background for that theory.[30]

[23]个人是要素市场的供给者。他们向企业提供劳动力服务、资本和自然资源,以便企业用来生产产品和提供服务。企业通过在市场上出价来表明自己对这些投入要素的渴求程度。

[24]货币从企业流向个人,而生产要素则从个人流向企业。生产要素的价格就是在生产要素市场里确定的。

[25]价格和利润被视为调节要素市场中货币和资源的流动与产品市场中货币和产品的流动的信号。

[26]在这个循环流动的市场经济里,个人和企业是紧密依存的,每个参与者都需要其他参与者。

[27]企业能得到利润,个人的消费需求能得到满足,资源所有者能得到工资、租金和利息。

[28]因而就能确保通过在要素和产品市场中的自愿交易,任何个人的情况都不会变得更坏。实际上,个人参与者的这种不断得益,正是市场经济的实质所在。

[29]为了获得利润,企业把生产要素组织起来,以生产产品和提供服务,来满足个人消费者和其他企业的需求。企业的概念在管理经济学的理论和实践中起着重要的作用。这本教材的重要内容就是围绕着市场中企业的生产、成本和组织来展开的。这些内容构成经济学中所称的企业(厂商)理论的基础。

[30]了解企业存在的原因、它在经济中所起的特定作用和它的目标,就为更好地学习这一理论提供了背景知识。