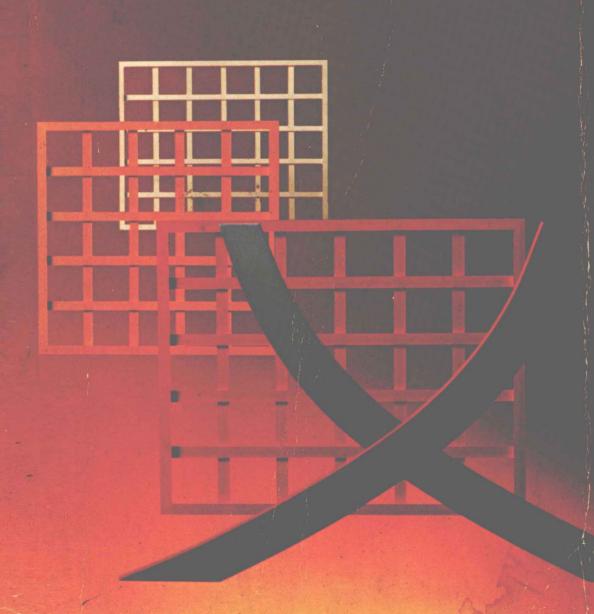


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Second Edition



An Introduction to MICROECONOMICS SECOND EDITION

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AN INTRODUCTION TO MICROECONOMICS

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To the memory of Jacob Viner and Alvin Hansen teachers and scholars extraordinary

Preface

Economics is like the music of Mozart. On one level, it holds great simplicity: Its basic ideas can be quickly grasped by those who first encounter it. On the other hand, below the surface there are fascinating subtleties that remain a challenge even to those who spend a lifetime in its study. We therefore hold out this promise. In this introductory study, you will learn a great deal about how the economy works-the simple principles governing economic life that must be recognized by those in government and business who make policy decisions. At the same time, we can also quarantee that you won't be able to master it all. You should be left with an appreciation of the difficult and challenging problems of economics that remain unsolved.

Perhaps some day you will contribute to their solution.

HOW TO USE THIS BOOK

We have tried to design this book to make the basic propositions of economics as easy as possible to grasp. Key steps in the argument are emphasized with boldface type, and definitions are printed in red. These highlights should be studied carefully during the first reading, and during later review. (A glossary is provided at the back of the book, containing a list of definitions of terms used in this book plus other common economics terms that you

may encounter in class or in readings.) The basic arguments of each chapter are summarized in the Key Points at the end of the chapter, and the new concepts introduced in the chapter are also listed.

When you read a chapter for the first time, don't worry about what is in the boxes. This material is optional; it is set aside from the text to keep the main argument as simple and straightforward as possible. (Several types of material are presented in the boxes. Some boxes provide levity or color-for example, Kurt Vonnegut's tale in Box 23-3 of the Handicapper-General whose aim is to ensure that people will not only start out equal but also finish that way. Other boxes present detailed theoretical explanations; they are not needed to grasp the main argument.) If you want to glance at the boxes that are fun and easy to read, fine. But when you first read a chapter, don't worry about those that contain more difficult material. On the first reading, you may also skip starred (*) sections of the text, along with the footnotes and appendixes; these also tend to be more difficult. Come back to them later, after you have mastered the basic ideas. And listen to your instructor, who will tell you which of the boxes and starred sections are most important for your course.

Economics is not a spectator sport. You can't learn just from observation; you must work at it. When you have finished reading a chapter, work on the problems listed at the

end; they are designed to reinforce your understanding of important concepts. [The starred (*) problems are either based on material in a box, or are more difficult questions designed to provide a challenge to students who want to do more advanced work.] Because each chapter builds on preceding ones, and because the solution to some of the problems depends on those that come before. remember this important rule: Don't fall behind in a problem-solving course. To help you keep up, we recommend Peter Howitt's Study Guide (second edition), which is designed specially to assist you in working through each chapter. It should be available in your bookstore.

TO THE INSTRUCTOR

In the second edition, there are two new chapters:

Chapter 13, on regulation. When is regulation in the interests of the firms being regulated, and when is it not? Was there too much regulation during the 1970s? Is there a risk of an overreaction? May there be too little regulation during the 1980s?

Chapter 22, on energy. This chapter studies energy policy, in the light of the conflict between efficiency and equity. In the face of the rapid escalation of international oil prices. similar rises in the prices of domestic oil and its products were desirable from the viewpoint of efficiency. But it was generally considered unfair to allow domestic oil prices to skyrocket, and thus provide oil producers with a bonanza at the expense of consumers. Consequently, a complex price control system was used during the 1970s. And the decontrol of oil prices was accompanied by a windfall profits tax. This chapter also discusses alternative sources of energy, including the environmental problems with some sources. (Oil prices appear not only in this chapter, but are also a recurring topic in this second edition.)

As we have added new material, we have

continued to aim at the three major objectives we set in the first edition. The first two objectives grew out of questions that arose in our teaching—and out of our uneasiness regarding the answers.

For macroeconomics, covered in a companion volume, An Introduction to Macroeconomics, the principal question was this: After studying introductory economics, are students able to understand public controversies over such topics as the level of government spending and taxation, the desirability of wage and price controls, and monetary policies? Are we training our students to understand the front pages of the newspaper? For many years, the introductory course was aimed at teaching students how policy should be run; that is, at providing a cookbook of "right" answers. While many books express more doubts and qualifications than was the case a decade ago. our course is focused even more strongly in this direction, as we build up to the seven controversial questions dealt with in the chapters of Part 3: Is fiscal or monetary policy the key to aggregate demand? How can inflation exist at the same time as a high rate of unemployment? How does the economy adjust to inflation, and what are the temporary and the lasting effects of inflation? To what extent should we attempt to "fine tune" the economy? Why is the economy unstable? Why have productivity and growth been so disappointing in recent years? Should exchange rates be fixed or flexible?

While there are no simple, indisputably "correct" answers to these questions, we believe that the major issues can be presented clearly to beginning economics students, thereby providing them with an understanding of important, recurring public debates over macroeconomic policy.

For microeconomics—in this volume—the question was this: Does the introductory study of microeconomics lack coherence? To the student, does microeconomics tend to become

just one thing after another-a guided tour through the economist's workshop, introducing as many polished pieces of analytic machinery as possible for later use in more advanced courses? Most students do not continue to advanced economics courses. For them, there is little point in concentrating on analytic techniques for their own sake, when time could be spent studying interesting policy issues instead. Even for those who do continue in economics, we doubt that it is useful to focus so heavily on analytic techniques. True, such a focus gives students some head start in their later courses: but it also increases the risk that they will be bored by repetition, and will miss some of the forest while concentrating on the trees. Therefore, we follow a simple rule of thumb: In introducing analytical concepts, we focus on those most useful in studying policy questions.

At the same time, we have been able to go some distance in accommodating users' requests for additional analytic material. For example, we now introduce the chapter on costs and supply with the production function. showing how a firm uses it to calculate its costs curves as a step in finding its profitmaximizing output (Chapter 9). We believe that the economist's distinction between the long run and the short run is clarified by the presentation of the long-run production function (Table 9-5), and the short-run production function as a row within this table. (A discussion of production isoquants is provided in the Appendix to Chapter 9.) A new box in Chapter 9 describes the equilibrium of the firm using total cost and total revenue curves: but the emphasis in this chapter remains on marginal cost and marginal revenue. In addition, we now emphasize the importance of entry in determining the long-run supply curve, and the long-run response of a competitive market to changes in demand. (We now also emphasize the importance of labor mobility in Chapter 18.)

In the second edition, as in the first, we have attempted to make microeconomics

more interesting by organizing our discussion around two continuing themes: **efficiency** and **equity**. In Part 2, our focus is on efficiency, and we accordingly emphasize marginal curves: For efficiency, equating marginal cost and marginal benefit is the key. And the study of marginal curves leads naturally to consumer surplus and producer surplus, which are building blocks for the study of income distribution and equity in Part 3.

In recent years, the topic of equity has increased in importance. At least until the beginning of the Reagan administration, the government has been redistributing an increasing percentage of income as our national income has grown. The discussion of income redistribution leads us to one of the most interesting—but discouraging—recent developments in microeconomics. For years, many economists regarded the negative income tax as a way of resolving the equity/efficiency conflict. However, extensive experimental evidence from Seattle and Denver has led observers to be far less optimistic—as we explain in Chapter 24.

The second edition also describes developments in the theory of public choice (Chapter 15). We consider the problem of the oppressive majority; logrolling (when it is in conflict with the public interest, and when it may actually promote it); and the theory of bureaus—why, in a world in which private monopolies may employ too few resources, public monopolies may employ too many.

Other new or greatly expanded topics in the second edition include Robert Coase's theory of property rights; the many roles of a union in addition to bargaining for higher wages; a more subtle and extensive discussion of the labor bargaining process and the reasons that strikes occur; and an expanded discussion of rent. (In Chapter 20, we now explicitly consider two reasons for rent: First, there may be differences in the productivity and incomes of factors in their present occupations; second, there may be differences in their productivity and incomes in their best alterna-

tive occupations—that is, there may be differences in their opportunity costs. Other introductory books typically examine one or the other source of rent, but not both.)

LOOKING AHEAD

Because we have attempted to make the discussion build up in orderly steps, we recommend that teachers look ahead to later passages before introducing certain subjects. Specifically:

We recommend that instructors who wish to teach indifference curves read not only the first indifference curve appendix (in Chapter 8), but also the second (in Chapter 10) before introducing this topic to their classes. In the second appendix, we consider a topic not found frequently in elementary tests; namely, how indifference curves can be used to illustrate the way in which a perfectly competitive economy results in an efficient allocation of resources. Students find this an interesting topic. And this use of indifference curves fits directly into our emphasis on efficiency throughout Part 2 of this book.

The central theme of Part 2—economic efficiency—is laid out in Chapter 10. In order to prepare the groundwork for this chapter, we would recommend that instructors read it before beginning to teach Chapters 7, 8, and 9.

OTHER POINTS OF INTEREST

Finally, we draw your attention to a number of ways in which our treatment differs from that of many competing books.

●In emphasizing efficiency and the gains from specialization, we have given greater attention to economies of scale than is frequently the case. In Chapters 3 and 16, economies of scale are given billing almost equal to comparative advantage. In our opinion, economies of scale are an important source of gain from specialization, and they should not be avoided because of the difficult analytic prob-

lems to which they lead. (Most of the analytic problems can be avoided in an introductory text.)

- We place more than usual emphasis on externalities—both negative (Chapter 14) and positive (Chapter 15).
- ●Because of our emphasis on major themes and problems, our discussion of international economics is organized differently than in most books. The gains from trade and the effects of protection fit into the topic of efficiency, and therefore they are included in Part 2 (Chapters 16 and 17). But exchange rate arrangements are most closely related to such issues as inflation and unemployment, and they are therefore included in the macroeconomic volume. By keeping international topics next to related domestic topics, we hope to counteract the neglect of international economics in many introductory courses
- •Students are introduced to the important idea of dynamic efficiency. Any detailed analysis of dynamic efficiency has traditionally been regarded as too difficult for an elementary course. Initially we sympathized with this view, until we discovered that most beginning students *can* handle a problem like the most efficient pattern of resource use over time (optional Box 21-3).
- We show how conflicts can exist not only between objectives (such as equity and efficiency), but also between groups of people in the economy. For example: The theory of comparative advantage illustrates how foreign trade can increase a nation's real income. We go one step further, to emphasize how trade affects various groups differently. Low-cost imports benefit consumers, but they hurt competing domestic producers. It is easy for students to identify such winners and losers. They thereby can appreciate the irony of complaints about agricultural price supports from business executives who benefit from tariffs that prop up the prices of the goods they produce. Moreover, this identification of different groups (and the differences in their political power) helps the student to answer one of the

basic questions raised by the theory of public choice: Why is there a difference between what the government *should* do, and what it *does* do?

We wish to thank. . .

In developing this second edition, we have shamelessly accumulated intellectual debts to our colleagues and coworkers. Special thanks go to the editing and production staffs of McGraw-Hill. In particular we should like to thank our editor, Mike Elia. We remain in debt

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Biography

Biography briefs
of four influential economists
Adam Smith
Alfred Marshall
Karl Marx
Lord John Maynard Keynes

Two of the great traditional economists, and . . .



Adam Smith (1723-1790)

odern economics is often dated from 1776, the year that Adam Smith published his Inquiry into the Nature and Causes of the Wealth of Nations. In the same year, the Declaration of Independence was signed in Philadephia. The timing was not entirely a coincidence. The Declaration of Independence proclaimed the freedom of the American colonies from British rule. The Wealth of Nations put forth the doctrine of economic freedom.

In his book, Smith argued for economic liberalism—that is, free enterprise within a country and free trade among countries. The government should interfere less in the market place; it should leave people alone to pursue their own self-interest. Smith believed that there is an "invisible hand" that causes the producer to promote the interests of society. Indeed, "by pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it." [In advocating laissez faire (French for "leave it alone"), Smith did however recognize that government inter-

vention might be desirable in some circumstances; for example, when the nation's defense is at stake.]

Smith was born in 1723, soon after his father died, in the small Scottish seaport of Kirkaldy, where some of the townsfolk still used nails as money. It is said that when he was 4, he was carried off by gypsies, who later abandoned him. One biographer comments: "He would have made, I fear, a poor gypsy."

He remained a bachelor throughout his life. "I am a beau in nothing but my books" was the way he described his lack of appeal for the opposite sex. He suffered from severe absent-mindedness. One biographer describes how Smith, the most illustrious citizen of Edinburgh, would stroll its streets "with his eyes fixed on infinity and his lips moving in silent discourse. Every pace or two he would hesitate as if to change his direction, or even reverse it." In his mannerisms he may have been awkward, but when he picked up a pen, he became a giant; he was one of the foremost philosophers of his age.

His writing caught the eye of Charles Townshend, an amateur economist of great wit but little common sense. (As British Chancellor of the Exchequer, he was responsible for the tea tax that brought on the American Revolution.) When Townshend offered Smith the lucrative job of tutoring his ward, Smith accepted and spent 4 years in Switzerland and France, where he met Voltaire and other leading French philosophers. When the brother of his ward was murdered on a French street, Smith returned to Britain. There, thanks to a pension provided by Townshend, he completed *The Wealth of Nations*.

This was his second and last book. He went into semiretirement, occasionally revising his books and beginning two new ones. But he wrote that "the indolence of old age, tho' I struggle violently against it, I feel coming fast upon me, and whether I shall ever be able to finish either is extremely uncertain." He lost the struggle, dying at the age of 67—but not before he had his two unfinished works burned.

y blending themes developed by other economists and by adding his own contributions, Alfred Marshall became the father of modern microeconomics (the detailed study of how individual goods are produced and priced).

Marshall was born in 1842 in Clapham, then a green suburb of London. His father, a cashier in the Bank of England, was a man of tyrannical disposition who wrote a book called *Man's Rights and Woman's Duties*. As a good Victorian, he exercised strong parental control: He overworked his son, insisted that he prepare himself for the Ministry, and even made him promise not to play chess—"a waste of time." This childhood repression may have left lasting scars: For the rest of his life, Marshall remained fearful of idleness, hypercritical of his own writing, and nervous about his health almost to the point of hypochondria.

Young Marshall did eventually rebel against the father, rejecting the Oxford scholarship he had won to study classics and theology and turning to mathematics instead. This was important to him later in economics: He used diagrams to illustrate economic theory (for which, it is said, some students have never forgiven him). Marshall eventually became a professor at Cambridge, where he reigned over the British economics profession for almost 25 years until his retirement in 1908. He was everyone's idea of a professor—white hair, white mustache, and bright eyes.

Although a man of overflowing ideas, Marshall—like Adam Smith—was in no hurry to rush into print. Just as Smith had burnt his unfinished writing, Marshall threw much of his into the wastebasket. He kept back printed proofs of one book for 15 years before allowing it to be published. Such long delays meant that many of the ideas he had developed and taught years before had become common knowledge by the time they reached the printed page. (Indeed, this makes it difficult for historians to



Aifred Marshall (1842-1924)

sort out exactly what he discovered and what he did not.)

Marshall's masterpiece was his *Principles of Economics*, first published in 1890. One of his concerns was the problem of poverty: "The study of the causes of poverty is the study of the causes of the degradation of a large part of mankind."

The many dimensions of Marshall's genius are perhaps best summarized by this tribute:

The master-economist must possess a rare combination of gifts. He must be mathematician, historian, statesman, philosopher. ... He must be purposeful and disinterested ...; as aloof and incorruptible as an artist; yet sometimes as near the earth as a politician.

This tribute was written by Marshall's most illustrious student, John Maynard Keynes, who himself achieved such fame that he is described on the following right page.

... two critics who established traditions of their own



Karl Marx (1818-1883)

orkers of the world unite; you have nothing to lose but your chains." This popular paraphrase of Marx's most famous quote illustrates his passionately held views. In his writings, passages of dry economics are punctuated by emotional outbursts against the existing economic system. Marx is most eloquent when he describes the misery of the working class in England over a century ago. On the other hand, he is least convincing when he predicts that this misery will increase.

Whereas Smith and Marshall believed in free enterprise—with the government intervening only in special circumstances—Karl Marx believed the free enterprise system should, and inevitably would, be replaced by a wholly different system: communism. Under communism the nation's wealth (capital) would be held, not individually, but instead by everyone collectively. Das Kapital (or Capital, in its English translation) was Marx's most important book; and the

Communist Manifesto (written with Friederick Engels in 1848, the year when revolutionary fires swept across Europe) is still the most celebrated pamphlet in the history of communism.

Marx was born in 1818 in the city of Trier in the Prussian Rhineland, now part of West Germany. As an undergraduate at the University of Bonn and as a graduate student in Berlin, he became increasingly associated with radical groups; his best friend was jailed for radical activity. (Although Marx in later life had periodic difficulties with the authorities, the only day he ever spent in jail was when he was a student—on a charge of being drunk and disorderly.)

Marx was a man of great contradictions. He remained something of an intellectual recluse. avoiding other economists and sociologists, with whom he might have had much to discuss. Despite his broad intellectual attainments, he was the victim of strange obsessions. (He believed that Lord Palmerston, the British foreign minister, was an agent of the Russians.) He was determined not to let a capitalist society turn him into a "money-making" machine, yet he was willing to live off gifts from Engels, himself a capitalist. Marx was an affectionate father, yet he sacrificed the health of his children because he could seldom bring himself to seek paid employment. (His one steady source of earned income was writing articles for the New York Herald Tribune.) Before Engels was able to afford sizable gifts. Marx lived with his family in poverty; once they were evicted and their possessions seized. Several of his children died. "a sacrifice to [capitalist] misery." In one case his wife had to borrow to buy a coffin.

In 1883, broken by the death of his wife and eldest daughter, and having made the remarkable statement that has bewildered his disciples ever since ("I am not a Marxist"), Marx died. He could little realize the influence he would have on history. Today about one-third of the world lives in a communist system, where Marx is revered. In much of the other two-thirds of the world, he is viewed as the most controversial economist who ever lived.

lust as Marshall fathered modern microeconomics, so Keynes became the father of modern macroeconomics (the broad-brush study of the economy "in the large," focusing on overall employment and production). Keynes' great contribution to economics is The General Theory of Employment, Interest and Money, published in 1936. This book was eagerly anticipated: Keynes was already famous for his views on a variety of topics, from the gold standard to the 1919 peace treaty imposed on Germany. Moreover, it was widely known that he was writing on the economic problem that concerned people most in the 30s: the worldwide depression, when there were 14 million unemployed in the United States alone.

The General Theory turned out to be a blistering attack on traditional (classical) economists who believed that, with time, unemployment would cure itself. Not so, said Keynes. Unemployment could persist. In such circumstances, the government should step in and increase its spending. Then more goods would be produced, and more people put to work.

In the 19th century, Karl Marx had prophesied the doom of the existing economic system. Keynes recognized that the system had serious flaws, but he believed that it could be reformed. Thus, his views lay somewhere between those of a laissez faire economist like Adam Smith and those of a revolutionary like Karl Marx.

Keynes was born in 1883, the year that Karl Marx died. Keynes' father was an eminent logician and political economist and his mother was a justice of the peace and mayor of Cambridge, England. The intellectual gifts of their son were almost immediately evident; by age 6, young Keynes was trying to figure out how his brain worked. On scholarship at Eton, Keynes blossomed. He grew a mustache, bought a lavender waistcoat, and developed his life-long taste for champagne. Then he went to undergraduate studies at Cambridge, where his brilliance was quickly evident to his teachers, including Alfred Marshall.

Keynes went from success to success. Biog-



John Maynard Keynes (1883-1946)

raphers have speculated that, just as Marx's prophecy of economic doom reflected the privation that marked his personal life, so Keynes's optimistic promotion of solutions reflected a life of accomplishment. At only 28, he became editor of the most prestigious British economic journal, a post he held for most of the rest of his life. He became a teacher at King's College. Cambridge, and a shrewd investor. Under his financial guidance, a small £30,000 King's College fund was expanded by more than ten times. And by applying himself for only half an hour each morning-before he got out of bed-he was able to earn a personal fortune of more than \$2 million through speculation on the foreign currency and commodity markets. (But his own personal success did not soften his harsh judgment of the costs to society when the public becomes caught up in a whirlpool of speculation: "When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done.")

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