

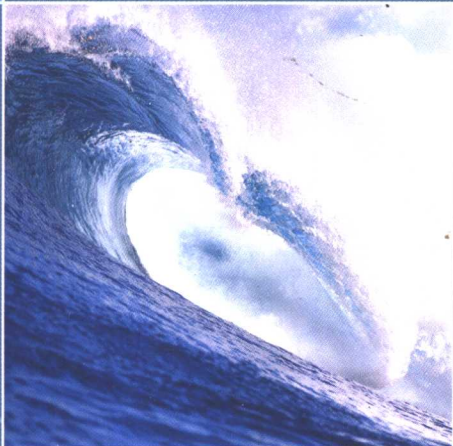
微观经济学

〔第3版〕

影印版

Microeconomics
A Modern Approach

• Andrew Schotter



高等教育出版社
Higher Education Press



Pearson Education
出版集团

微观经济学

[第3版]

影印版

Microeconomics
A Modern Approach

• Andrew Schotter



高等教育出版社
Higher Education Press



Pearson Education
出版集团

图字:01-2002-3789号

English reprint edition copyright © 2002 by PEARSON EDUCATION NORTH ASIA LIMITED and HIGHER EDUCATION PRESS. (Microeconomics: A Modern Approach from Addison Wesley Longman, Inc.'s edition of the Work)

Microeconomics: A Modern Approach, 3e by Andrew Schotter Copyright © 2001.
All Rights Reserved.

Published by arrangement with the original publisher, Pearson Education, Inc., publishing as Addison Wesley Longman, Inc.

This edition is authorized for sale only in the People's Republic of China (excluding the Special Administrative Regions of Hong Kong and Macau).

图书在版编目(CIP)数据

微观经济学 = Microeconomics / (美)斯科特(Schotter, A.)著. —影印本. —北京: 高等教育出版社, 2002. 10
ISBN 7-04-011673-1

I. 微 II. 斯 III. 微观经济学 - 英文
IV. F016

中国版本图书馆CIP数据核字(2002)第069694号

微观经济学

安德鲁·斯科特

出版发行 高等教育出版社

社 址 北京市东城区沙滩后街55号

邮政编码 100009

传 真 010-64014048

购书热线 010-64054588

免费咨询 800-810-0598

网 址 <http://www.hep.edu.cn>

<http://www.hep.com.cn>

经 销 新华书店北京发行所

印 刷 北京中科印刷有限公司

开 本 787×1092 1/16

印 张 49 75

字 数 1 400 000

版 次 2002年10月第3版

印 次 2002年10月第1次印刷

定 价 51.30元

本书如有缺页、倒页、脱页等质量问题,请到所购图书销售部门联系调换。

“本书封面贴有 Pearson Education 出版集团激光防伪标签,无标签者不得销售”

版权所有 侵权必究

出 版 前 言

为适应经济社会发展的需要,以高质量的高等教育迎接经济全球化和新科技革命的挑战,培养数以千万计的高质量专门人才,教育部明确要求各高等院校创造条件使用英语等外语进行公共课和专业课教学,从而缩短我国在有关专业教学上与国际先进水平的差距,同时不断提升我国大学生的外语水平。其中一个重要的措施是在高等学校推动使用外语优秀教材。

为使高校学生能够及时使用世界先进水平的经济管理类新教材,高等教育出版社受教育部高教司委托,聘请熟悉国内外教学和学科发展水平的专家,从欧美现行教材中遴选、引进了这批具有国际领先水准的英文版教材,以影印形式出版,供开设相应课程的高等学校选用。

引进这批教材时,遴选和评定的依据主要有以下几个方面:(1)引进的教材与1998年教育部颁行的专业目录及后来批准的目录外专业所规定的主要课程相对应,内容符合专业培养目标和教学要求。(2)版本要新。国外的大学教科书一般三年左右即修订再版一次,增补新的内容。这批教材选择的都是国外权威教科书的最新版本,内容涵盖了相应学科最新进展的介绍和现实案例的分析。(3)内容规范简明,适合教学。由于这批影印教材主要是针对我国大学本科层次经济管理类专业的基础课程和主干课程的,专家们在选择时充分考虑了内容的严谨、规范以及表述的准确性,同时考虑了使用外语教材可能遇到的课时限制问题,在内容相同的几种流行版本中选择相对简明的薄本。另外,按照教育部的要求,这批教材的定价采取了与国内版教材相同的标准。

由于这批教材的作者所在国家的经济、政治、社会文化等与我国均有所不同,书中内容和观点难免有偏颇和错误之处,希望读者在阅读时注意鉴别。

我们希望这批影印教材的出版,对各高等院校的经济管理类专业的教学有所促进和帮助。

高等教育出版社

2002年9月

About the Author



Andrew Schotter is Professor of Economics, Faculty of Arts and Sciences, New York University. From 1983 to 1988 he was codirector of the C. V. Starr Center for Applied Economics at New York University and has served as chair from 1988 to 1993 and from 1996 to 1999. Professor Schotter received his B.S. degree from Cornell University and his M.A. and Ph.D. degrees from New York University. His areas of special interest in teaching are microeconomic theory, game theory, and experimental economics. His areas of special interest in research are applications of game theory to economics, microeconomics, experimental economics, and theories of economic and social institutions.

These interests are reflected in the many articles that Professor Schotter has contributed to economics journals and in the books he has written and edited. In addition to *Microeconomics: A Modern Approach*, he is the author of *Free Market Economics: A Critical Appraisal* and *The Economic Theory of Social Institutions*. He has edited *Selected Economic Writings of Oskar Morgenstern* and (with Steven Brams and Gerhard Schwödiauer) *Applied Game Theory*.

Professor Schotter's wide-ranging professional activities have also included serving as a member of the editorial board of the *American Economic Review* and *Experimental Economics* and as an Associate Editor for *Games and Economic Behavior*, doing consulting work for businesses and financial institutions, giving testimony before the Joint Economic Committee of the United States Congress on the cost of the tort system, and serving as a visiting scholar at the University of Paris, the University of Venice, the Institution for Advanced Studies in Vienna, and the Russell Sage Foundation. In 1993 he was given the Kenan Enterprise Award for his contributions to the economic theory of free markets.

Professor Schotter is married to Anne Howland Schotter, a Professor of English Literature at Wagner College in New York. They have two children, Geoffrey and Elizabeth, who have lent their names to the two archetypes of economic agents in the model society their father has created to illustrate microeconomic theory in this book.

Preface

Why did I decide to write a text for the intermediate microeconomics course? Over the years I have become concerned about how we teach microeconomics to undergraduates, especially undergraduates who are taking intermediate and advanced courses. My greatest concern is that our traditional undergraduate courses are presenting economics as a dead science, one with no unsolved puzzles and no unanswered questions. This is odd, because graduate education in microeconomics is filled with such puzzles and questions, and we teach graduate students to evaluate and criticize theories rather than merely to accept them. Yet somehow we permit our undergraduates to gain the impression that previous generations of economists have solved all the puzzles and answered all the questions and that their task as students is simply to learn a set of established principles. As a result, most undergraduates look on their microeconomics text as something akin to the Bible—as a source of divine wisdom. The truth is, however, that economics is an amazingly dynamic science that periodically undergoes waves of change that sweep out old ideas and bring in new ones. Unfortunately, although there are some fine microeconomics books that do a good job of explaining economic principles, few discuss the exciting things that are happening on the frontiers of our science. ■

A Fresh Approach

This book attempts to deal with the concerns just outlined by taking a distinctively modern approach to undergraduate education in microeconomics. I see no reason why undergraduates should not be swept up in the excitement over such issues as finding a solution to the free-rider problem, dealing with economic problems from the perspective of game theory, using controlled laboratory experiments to test economic postulates, or dealing in a rigorous way with problems of moral hazard, adverse selection, and asymmetric information. Of course, I am not proposing that a microeconomics text should skim on the presentation of the fundamentals such as supply-and-demand analysis and perfectly competitive markets. What I am saying is that a microeconomics text should be like a good meal. It should consist not only of staples such as meat and potatoes but also of some interesting side dishes. Otherwise, the meal will be rather dull and the diners may lose their appetites fairly quickly.

However, giving students a sense of the excitement of new approaches to solving economic problems is only part of the reason why we should make some basic changes in the intermediate microeconomics course. There is also a need to nurture a spirit of critical analysis in students. *The development of critical thinking skills should start in our undergraduate economics courses and not wait for graduate studies.*

Another problem that I have encountered in teaching intermediate microeconomics is that there seems to be no overriding principle that ties together the various chapters of the text. One finds a wide array of theories mixed together with many real-world examples, mathematical applications, and explanatory diagrams but no underlying theme or themes

to unify this massive amount of material. I think that there is a better way to present intermediate microeconomics to students. This book offers a consistent unifying model that runs through every chapter. I have been able to use such an approach because I define microeconomics somewhat differently here than other authors do in their books. For me microeconomics is a tool that helps us understand why societies have the various economic institutions that they do have. For example, I believe that microeconomics helps us to understand why the United States has insurance companies, regulated monopolies, and paper money. It is the role of microeconomics to explain how these institutions, among others, were created by the individual utility-maximizing actions of a myriad of social agents.

The Structure of the Book

Chapter 1 introduces the unifying theme of the book: how economic institutions develop to solve problems that arise in a society. Our model begins to unfold in Chapter 2, when the students encounter a primitive society that lacks any institutions except the state and property rights. As the book progresses, this society becomes more and more institutionally complex. Its agents create institutions to handle the problems that inevitably accompany advances in the nature and level of its economic activities. For example, in Chapter 4, when the problem of exchange must be faced, competitive markets develop. In Chapter 14, when the problem of uncertainty emerges, insurance companies are created.

As the model unfolds, the students examine the fundamentals of microeconomic theory: consumers and their preferences, demand and behavior in markets, exchange, production and its technology, and cost and choice (Chapters 2 through 6). Next, the students learn about game theory and strategic business analysis (Chapter 7), the nature of the firm and its internal organization (Chapter 8), and the structure of markets—monopolistic, oligopolistic, and perfectly competitive markets (Chapters 9 through 13). Then, the students encounter uncertainty and the emergence of insurance (Chapter 14), general equilibrium and the origins of the free-market and interventionist ideologies (Chapter 15), informational market failures caused by problems of moral hazard and adverse selection (Chapter 16), externalities (Chapter 17), public goods and the role of government (Chapter 18), and input markets and the origins of class conflict (Chapter 19).

The net result of presenting the content of the course within the framework of a unified model is that the students can relate the theory they are learning to a society and its people. In effect, all the chapters of the book form one large-scale application of microeconomic theory. In my teaching experience, this approach has been very successful with students because it allows them to view microeconomics in more human terms than is usually the case.

One note of caution: For this approach to work properly, it is essential that students read Chapter 1. Otherwise, they will not understand the model as it develops in the remainder of the book.

How This Book Differs from Others

This book breaks with tradition in a number of different ways.

Cohesive Narrative. As I have already noted, this book tells one continuing story that ties all the chapters together. Rather than treating intermediate microeconomics as a series of

unrelated topics, it presents the content of the course within the context of a society that starts out in a primitive state of nature and gradually develops the characteristics and institutions of a modern economy. While I have found that this approach has great pedagogical advantages, I am sure that some instructors will not be inclined to teach the subject in such a manner. To these people, I would say that it is quite possible to play down the narrative in class. You will find that you can continue to teach supply-and-demand analysis and all the usual topics without becoming deeply involved in the model presented in the text. Yet it will be there as a frame of reference for your students when they do their reading assignments.

Some Organizational Differences. The chapter sequence in this book differs from that in most, if not all, other texts for the intermediate microeconomics course. One of these organizational differences arises from my belief that perfect competition is best understood as the limit of a process of entry into monopolistic and oligopolistic industries. Perfect competition results when entry becomes unrestricted. Therefore, instead of presenting perfect competition before monopoly and oligopoly, I cover those market structures first and then show that perfect competition can be seen as their limiting case. Such an approach fits well in the model used in this book because it is likely that when production was first discovered in primitive societies, the earliest markets were monopolistic and oligopolistic rather than perfectly competitive. Probably, perfectly competitive markets emerged at a later stage of economic development.

A traditional sequence for teaching intermediate microeconomics is to cover the theory of the consumer first, cover the theory of the firm next, and then cover market structures beginning with perfectly competitive markets. This order is abandoned here. Instead, after establishing the theory of the consumer and the theory of the producer, I present monopolies and oligopolies when I introduce the coverage of market structures. Then I discuss the entry prevention schemes of incumbents and the devices that potential entrants use to overcome such schemes. When these schemes fail, unlimited entry occurs and perfectly competitive markets develop. Any instructor who finds this approach too unorthodox can easily present the chapters on market structure in the conventional order.

An Emphasis on Game Theory and Strategic Analysis. The analytical tools used in this book also require some discussion. It is written in a simple, straightforward manner that should be comprehensible to a wide variety of students, but it does require that students be willing to think. One of the major analytical tools used here is game theory. Chapter 7 introduces students to the fundamentals of game theory and shows them how it can serve as a tool for strategic business analysis. Game theory is then used throughout the remaining chapters as a means of understanding the different strategies of the various parties to a situation. My experience has been that presenting economic and social problems to students in the form of games is a very effective way to help them grasp such problems in their entirety.

Of course, until recently, intermediate microeconomics books have given very limited coverage to game theory. Often it was simply mentioned in passing or it was relegated to an appendix of the chapter on oligopoly. Today, with the increasing interest in game theory, a few books are giving it more coverage, but none makes extensive use of it as a tool for strategic analysis, as this book does.

Encouragement of Critical Thinking. To help students see economics as a dynamic science, I devote a considerable amount of space to criticisms of the theories presented. In some chapters, this is done through a device that I call “consulting reports.” These reports suggest possible solutions to problems that our model society faces, such as how to regulate natural monopolies. Usually, the solution provided by a consulting report reflects the views of a well-known economist. After each report, I examine the theory it propounds, raising criticisms that have probably occurred to the students and citing the arguments of other economists who support the theory or disagree with it.

In most cases, I intentionally leave some doubt as to which side of the controversy has won. I hope that this approach to presenting microeconomic theory will stimulate debate in the classroom and encourage students to develop a spirit of critical analysis. Rather than simply accepting the theories they encounter because these theories were devised by famous economists, it is important that students look at every economic plan with a critical attitude, analyze its strengths and weaknesses, come to their own conclusions, and then have the confidence to defend their conclusions even though they may differ from the opinions of “experts.”

Broad Coverage of Experimental Economics. This book is unique in the amount of coverage it gives to experimental economics. It is my belief that the future of microeconomics will be heavily connected with the use of experimental tools. These tools have already proven themselves quite valuable in shedding light on some difficult theoretical issues. Therefore, at many junctures in the book, I present the results of experiments that relate to issues that are being discussed. Sometimes these experimental results form the basis for a consulting report, and sometimes they are cited as part of the critical analysis of a theory that was first proposed in a consulting report. For example, I use the preference reversal experiments of Kahneman and Tversky to warn students that although the theory of expected utility seems logical and consistent, it may not prove to be a good predictor of real human behavior. The question of whether people (or experimental subjects) actually take a free ride when the opportunity is available to them is discussed in the chapter on public goods (Chapter 18).

Of course, I also subject experimental results to criticism. Students should view conclusions drawn from empirical data with a critical eye, just as they view theoretical ideas.

Some Nontraditional Chapters That Can Enrich the Course. There are several chapters in this book that are not normally found in texts for the intermediate microeconomics course. I think that these chapters enrich the course, but it is not necessary to teach them. For example, I devote an entire chapter to the internal organization of the firm (Chapter 8). In this chapter, I investigate the issues of how best to organize work within a firm and how best to compensate workers. Because these issues are currently of great concern in business, some instructors may want to cover them. Similarly, I have devoted a chapter to the topic of entry prevention (Chapter 12), in which students learn how monopolists and oligopolists defend their markets against potential entrants and how potential entrants try to overcome these defenses. For instructors and students who are especially interested in strategic business analysis, this can be a valuable chapter. Another unconventional chapter in this book is the one on natural monopoly and the economics of regulation (Chapter 10).

I strongly believe in the principle of free disposability. If the nontraditional chapters do not fit the objectives of your course or if there is little time available, eliminate them or cover them very briefly. I have written these chapters in such a way that they can be omitted without significantly damaging the logic of the book. The same is not true for the chapter on game theory. Because this chapter provides a foundation for the applications of game theory that appear in later chapters, I would urge you to give it at least limited coverage in your course.

I have relegated topics that involve fairly difficult quantitative material to the appendixes of some chapters. Instructors with students who are more advanced, have a better math background, or are willing to work harder may want to use these appendixes.

Fresh Examples and Problems. Throughout this text, I have tried to use examples that differ from those appearing in other books. For instance, instead of the example of cars that are “lemons,” which is so often used to present the topic of asymmetric information and market failure, I have substituted the example of car mechanics who offer expert opinions to partially informed car owners. Similarly, to present the topic of adverse selection, I have used the example of tipping in restaurants. I have also attempted to make the end-of-chapter exercises and problems fresh and interesting.

One additional note about the exercises and problems: Although the use of calculus is not required in any of this material, some exercises and problems have been written so that students who are familiar with calculus can easily use it if it helps them.

Alternative Teaching Sequences. As stated above, in most texts the first market structure studied is the perfectly competitive market, usually followed by oligopoly or imperfect competition, and finally by monopoly. For reasons that will become clear as you read Chapter 9, I have chosen to present monopoly first, then oligopoly, and then perfect competition, treating it as the limit case of the oligopoly situation as entry goes to the limit. Other than this, you should feel free to choose a sequence with which you feel comfortable and skip chapters that you do not feel fit logically into the way you would like to present the material. For example, Chapter 4 on exchange usually comes at the end of a microeconomics text where the question of efficiency and welfare is discussed. I have placed this topic early in the text so that I can discuss the emergence of competitive markets. If you prefer, you can move this chapter and combine it with Chapter 15 on general equilibrium theory with production; the two should fit together nicely. Chapter 8 on the internal organization of the firm is really a chapter dealing with moral hazard at the workplace. Consequently, you could choose to teach it along with Chapter 16 on moral hazard in information economics. If you usually teach uncertainty after consumer theory, you should also feel free to take the uncertainty chapter, Chapter 15, and teach it after Chapter 3—as many texts do. Similarly, the last chapter of the book deals with the functional distribution of income. I placed it last because it would have disrupted my line of thought to place it in the middle of the book. However, I believe that this chapter can be taught at any point after the theory of perfect competition is explained in Chapter 13.

In summary, I have given a great deal of thought to the order in which I have presented information. The text has a unity of theme that is not found in any other intermediate (or graduate) texts, and that unity is one of its strengths. Consequently, following my

train of thought could be a benefit to students who like to see how each piece of the microeconomics puzzle fits together. However, I am well aware that professors have their own ideas about how material should be presented, and with that in mind, I have endeavored to make the text as flexible as possible. Chapter 1, which contains a summary of each chapter, will supply you with an overview of how all of the chapters fit together.

In the following two outlines of course syllabi, I provide two alternative chapter sequences that you can follow to teach the material. One course sequence is more traditional, while the other follows the innovations I have made to the traditional sequence. Feel free to pick and choose chapters or parts of them in order to customize your own sequence.

Course Syllabus 1: Text Sequence

Week 1:	Introduction Preface and Chapter 1	Week 10:	Perfectly Competitive Markets Chapter 13
Week 2:	The Consumer, Commodities, and Preferences Chapter 2	Week 11:	Uncertainty and the Emergence of Insurance Chapter 14
Week 3:	Demand Theory Chapter 3	Week 12:	General Equilibrium, Welfare and Equity, and Input Markets Chapters 15 and 19
Week 4:	The Emergence of Markets and Exchange Chapter 4	Week 13:	Information Economics, Moral Hazard, and Adverse Selection Chapter 16 (Chapter 8 if not taught earlier)
Week 5:	The Discovery of Production, Technology, and Cost Chapters 5 and 6	Week 14:	Externalities Chapter 17
Week 6:	Game Theory Chapter 7	Week 15:	Public Goods, and the Government as an Institutional Architect Chapter 18
Week 7:	Monopoly and Regulation Chapters 9 and 10, Chapter 8 (Optional)		
Week 8:	Oligopoly Chapter 11		
Week 9:	Entry and Entry Prevention Chapter 12		

Course Syllabus 2: Conventional Sequence

Week 1: Introduction
Preface and Chapter 1

Week 2: The Consumer, Commodities,
and Preferences.
Chapter 2

Week 3: Demand Theory
Chapter 3 (Possibly Chapter
14 on Uncertainty and
Insurance)

Week 4: The Discovery of Production,
Technology, and Cost
Chapters 5 and 6

Week 5: Perfectly Competitive
Markets
Chapter 13

Week 6: Game Theory
Chapter 7

Week 8: Oligopoly
Chapter 11

Week 9: Entry and Entry Prevention
Chapter 12

Week 10: Monopoly and
Regulation
Chapters 9 and 10

Week 11: Uncertainty and the
Emergence of Insurance
(If not covered in
week 3)
Chapter 14

Weeks 12 & 13: General

Equilibrium, Exchange
Welfare and Equity, and
Input Markets
Chapters 4, 15 and 19

Week 13: Information Economics,
Moral Hazard, and
Adverse Selection
Chapters 16 and 8

Week 14: Externalities
Chapter 17

Week 15: Public Goods, and
Government as an
Institutional Architect
Chapter 18

Changes to the Third Edition

In order to understand microeconomics correctly, a student needs to master a number of skills. He or she must be able to understand the theory in its abstract form, know how to work with it and solve problems, and appreciate the empirical implications of the theory by looking at data and testing whether what we observe is consistent with what we expect. The changes I have made in the third edition all aim to deepen these skills in the student.

One Hundred Solved Problems. A common complaint I have heard from students taking noncalculus-based microeconomics courses is a frustration they have in not being able to translate the theory they have learned into a working knowledge that will allow them to solve problems they face in their everyday life. In other words, it is one thing to understand a theory on an abstract level but another to be able to work with it on a practical level. In order to rectify this situation, I have inserted 100 solved problems in the text. These

problems are graded in terms of difficulty with some providing mere content checks (labeled “Content Review”) and others moving beyond mere review to provide students with an appreciation of how to apply the theory to solve relevant problems. This latter type is labeled “Application and Extension.” Most of the problems require simple algebra to solve and should not be difficult for the student. Whenever calculus would be useful, I have provided the necessary derivatives. For example, whenever a decision maker needs to equate the marginal cost of a decision to its marginal benefit, I provide the marginal quantities. I know of no other text that provides as many solved problems as this one does.

Experimental Evidence. If economic theories are correct, they should be verifiable or falsifiable in the lab. In other words, if the behavior predicted by economic theory cannot be replicated in an appropriately designed experimental setting, where human subjects make decisions under a set of monetary incentives that approximate those described by the theory, then the theory must be considered severely lacking. In this third edition I have more than doubled the number of experiments I have summarized as providing evidence for the theory. My point in introducing these experiments is to make the theory spring to life. Students must realize that economic theory is alive and constantly changing as new evidence is introduced to test it. It is not a weakness of the theory that it does not always prove to be 100% correct in the lab, and it is not a weakness of the experimental technique that it does not always corroborate the theory. All science must progress in this manner; the natural sciences provide a prime example of how experimental evidence and theory combine to create new theory. Why should a student be interested in a subject for which the answers are all known? A field is only of interest if you can help change it!

In-Class Economic Experiments. In my own teaching, I have found that one of the best teaching tools is the economic experiment. Before a student actually engages in a free-riding experiment, for example, the idea of choosing a dominant strategy is abstract and unreal, but experiments bring such an experience to life. However, few universities provide professors with enough class time to lecture, discuss problem sets, and run experiments. Something has to give. For this reason, I have devised a set of 12 in-class experiments that can be performed quickly and efficiently within the first 10 to 15 minutes of a class with minimal disruption. (In fact, one experiment can be done within the first 4 minutes of a class). These in-class experiments (complete with instructions to students, background material for professors, and discussion or homework questions for students) are found on the text’s website at <http://www.awl.com/Schotter>

Supplements

I know how important it is to provide strong teaching and learning supplements when offering a new approach to a traditional course. Therefore, the following items are available for use with my book.

Instructor’s Manual. I have prepared the *Instructor’s Manual with In-Class Experiments* to assist you in using the text as effectively as possible. This manual has two parts: Part I, written by me and revised by Meta Alexandra Brown, contains notes about the pedagogy of the book, suggestions about the teaching sequence, and two possible schedules for different teaching sequences. Part II also revised by Meta Alexandra Brown, provides

comments about the content and approach of each chapter, detailed solutions for all the exercises and problems in the text, and additional exercises and problems that you can use in class or for student assignments.

Transparency Masters. The Transparency Masters reproduce more than 130 of the most important diagrams that appear in the text. These visual aids should enhance your classroom presentation of each chapter.

Test Bank. William Doyle Smith of the University of Texas at El Paso has prepared the *Test Bank* for this book. He has developed a comprehensive file of questions that cover the key terms and concepts presented in every chapter of the text.

Study Guide. The *Study Guide*, which was written by Yaw Nyarko of New York University, is a handy means of review and reinforcement for students. It contains a summary of each chapter, a list of the key terms and concepts introduced in the chapter, and a variety of questions and short exercises with self-check answers that allow the students to evaluate their understanding of the chapter.

In-Class Economics Experiments. These are a series of experiments that can be done in class; each takes no longer than 10 or 15 minutes. Instructions for the student and the professor are provided. You will find them on the text's website at <http://www.awl.com/Schotter>

Website. A useful website containing in class experiments and a guide to other useful game theory and experimental economics sites.

Acknowledgments. I owe a debt of gratitude to the list of following reviewers, whose keen insights and thoughtful comments helped to shape the third edition:

Kurt J. Beron, University of Texas at Dallas
 David Faurot, University of Kansas
 Edward Greenberg, Washington University
 Thomas Gresik, Pennsylvania State University
 John Lane, London School of Economics
 Antu Panini Murshid, Rutgers University
 Craig Whittinghill, Southern Illinois University at Carbondale

Likewise, I greatly appreciate the efforts of all the reviewers of past editions, whose valuable input is still found in the present edition:

Peter Alexander, Ohio Wesleyan University
 Lee Alston, University of Illinois at Urbana-Champaign
 Niels Anthonisen, University of Western Ontario
 Jacques Crémer, Virginia Polytechnic Institute and State University
 Greg Delemeester, Marietta College
 Maxim Engers, University of Virginia
 David Finifter, College of William and Mary

Steven Goldman, University of California at Berkeley
 Ralph Gunderson, University of Wisconsin at Oshkosh
 Simon Hakim, Temple University
 Jonathan Hamilton, Duke University
 Peter Huang, Tulane University
 Edward Kittrell, Northern Illinois University
 John Nye, Washington University
 Jack Osman, San Francisco State University
 Robert Piron, Oberlin College
 Jeffrey Pliskin, Hamilton College
 Cheng-Zhong Qin, University of California at Santa Barbara
 Laura Razzolini, University of Mississippi
 Timothy Roth, University of Texas at El Paso
 Djavad Salehi-Isfahani, Virginia Polytechnic Institute and State University
 Terri Sexton, California State University at Sacramento
 Gilbert Skillman, Brown University
 Philip Sorensen, Florida State University
 James Stephenson, Iowa State University
 Ashish Vaidya, California State University at Los Angeles
 Susan Vroman, Georgetown University
 Lawrence Wohl, Gustavus Adolphus College
 Asher Wolinsky, Northwestern University
 George Zodrow, Rice University

I owe a special debt to Robert Piron of Oberlin College. His careful and thoughtful analysis helped me to make significant improvements in the content of the book and in my writing style.

In writing this new edition, I was greatly helped by a number of scholars and graduate students who shared with me their students' reactions and pointed out areas for improvement. First and foremost I must thank Tom Gresik and Efe Ok whose suggestions proved vital to this new revision.

In making the changes suggested by the reviewers above, Allen Coins, Jay Ezrielev, and Meta Alexandra Brown worked long hours with me making sure that all the changes were incorporated efficiently and correctly. In addition, let me thank my editor Mary Clare McEwing whose steady hand made the revision of the third edition run incredibly smoothly. I also appreciate the support of John Greenman, who originally acquired the manuscript.

Andrew Schotter

Brief Contents

Special Features	xvii
Preface	xxii
1 Economics and Institutions: A Shift of Emphasis	1
2 Consumers and Their Preferences	17
3 Demand and Behavior in Markets	59
4 The Problem of Exchange	127
5 The Discovery of Production and Its Technology	163
6 Cost and Choice	189
7 Game Theory and the Tools of Strategic Business Analysis	229
8 The Internal Organization of the Firm	291
9 The Age of Entrepreneurship: Monopoly	327
10 Natural Monopoly and the Economics of Regulation	367
11 The World of Oligopoly: Preliminaries to Successful Entry	407
12 Market Entry and the Emergence of Perfect Competition	453
13 Perfectly Competitive Markets	483
14 Uncertainty and the Emergence of Insurance	537
15 General Equilibrium and the Origins of the Free-Market and Interventionist Ideologies	573
16 Moral Hazard and Adverse Selection: Informational Market Failures	601
17 Externalities: The Free Market–Interventionist Battle Continues	625
18 Public Goods, the Consequences of Strategic Voting Behavior, and the Role of Government	653
19 Input Markets and the Origins of Class Conflict	695
Answers to Selected Exercises and Problems	A-1
Index	I-1

Table of Contents

Special Features Preface

xvii
xxiii

2

1

ECONOMICS AND INSTITUTIONS:	
A SHIFT OF EMPHASIS	1
1.1 Microeconomics and Institutions	1
Institutional Arrangements:	
Preordained or Arbitrary?	2
Microeconomics: A Tool for	
Understanding Institutions	2
1.2 Conventional Microeconomics	3
The Problem of Allocating	
Resources	3
Allocation Strategies	4
The Effect of Institutions on the	
Allocation Process	4
1.3 Economic Institutions Defined	5
1.4 The Emphasis of This Book	5
1.5 Economic Models	6
Mathematical Models	6
Analogies as Models	6
1.6 The Model Used in This Book	7
The Starting Point: A Primitive	
State of Nature	7
The Emergence of Markets	7
The Development of Production	
and Its Technology	8
The Rise of the Entrepreneur	
and the Firm	8
Monopoly, Oligopoly, and	
Competitive Markets	8
Strategies for Dealing With Market	
Failures and the Ideological	
Implications of These Strategies	9
1.7 Three Fundamental Institutions	10
The State	11
Property Rights	12
Economic Consulting Firms	14
1.8 Conclusions	15

CONSUMERS AND THEIR PREFERENCES

	17
2.1 The Consumption Possibility Set	18
A Primitive State of Nature:	
People and Goods	18
The Convexity Property of	
Consumption Possibility Sets	19
2.2 Rationality	21
Binary Relationships Among	
Goods	22
2.3 The Economically Feasible Set	24
Time Constraints	24
Income or Budget Constraints	25
2.4 Rationality and Choice	27
The Need for Utility Functions	27
The Continuity Assumption	28
The Existence of Continuous	
Utility Functions	29
Additive and Multiplicative	
Utility Functions	30
Cardinal and Ordinal Utility	32
2.5 Psychological Assumptions	33
Psychological Assumption 1:	
Selfishness	33
Psychological Assumption 2:	
Nonsatiation	33
Psychological Assumption 3:	
Convexity of Preferences	34
2.6 Indifference Curves	35
Indifference Curves Derived	
and Defined	35
The Shape of Indifference Curves	36
The Marginal Rate of Substitution	39
Indifference Curves and Tastes	41
2.7 Optimal Consumption Bundles	45
Characteristics of Optimal Bundles	45
2.8 Conclusions	52
2.9 Summary	52
Exercises and Problems	53