MICROECONOMICS

SECOND EDITION



ROGER A. ARNOLD

MICROECONOMICS

SECOND EDITION



ROGER A. ARNOLD

CALIFORNIA STATE UNIVERSITY, SAN MARCOS

WEST PUBLISHING COMPANY ST. PAUL NEW YORK LOS ANGELES SAN FRANCISCO

TO SHEILA, DANIEL, AND DAVID

Production Credits

Production, Prepress, Printing, and Binding by West Publishing Company

Copy Editing: Elaine Levin

Composition: Parkwood Composition Service

Indexing: Pat Lewis

Photo Credits

All photographs are supplied courtesy of the individual economists featured in the interviews.

Acknowledgments

15 Friedman, Milton, "The Methodology of Positive Economics," Essays in Positive Economics. (Chicago: The University of Chicago Press, 1953), p. 15. Reprinted with permission. 158 Samuelson, Paul. "Proof That Properly Discounted Present Values of Assets Vibrate Randomly." Copyright 1973. Reprinted from The Bell Journal of Economics with permission of the RAND Corporation. 246 Posner, Richard, A. "Theories of Regulation." Copyright 1974. Reprinted from The Bell Journal of Economics with permission of the RAND Corporation. 350 Friedman, Milton. Capitalism and Freedom. (Chicago: The University of Chicago Press, 1952), p. 191. Reprinted with permission 403, top: Buchanan, James. The Limits of Liberty, between Anarchy and Leviathan. (Chicago: The University of Chicago Press, 1975), p. 149. Reprinted with permission. 404 From the song Elected by Alice Cooper. Reprinted with permission. 505–506 Smith, Adam. The Theory of Moral Sentiments. (Oxford: Oxford University Press, 1976), p. 234. Reprinted with permission. Material from The New Palgrave: A Dictionary of Economics reprinted with permission from Macmillan Press Ltd.

COPYRIGHT © 1989 COPYRIGHT © 1992

By WEST PUBLISHING COMPANY By WEST PUBLISHING COMPANY

50 W. Kellogg Boulevard P.O. Box 64526 St. Paul. MN 55164-0526

All rights reserved

Printed in the United States of America

99 98 97 96 95 94 93 92

876543210

Library of Congress Cataloging-in-Publication Data

Arnold, Roger A.

Microeconomics / Roger A. Arnold.—2nd ed.

p. cm.

ISBN 0-314-88423-8

1. Microeconomics. I. Title.

HB172.A675 1992

338.5-dc20

91-37618 CIP

MICROECONOMICS

PREFACE

In the second edition of *Microeconomics*, I have tried to retain the strengths of the first edition, eliminate any weaknesses, and continue in my endeavor to write a text that is both exciting and pedagogically sound. It is a cliche, perhaps, but nevertheless true: one of the major motivating factors for my writing a principles text is to convey to students the excitement, richness, and power of economic analysis that I, and thousands of economics professors across the country, experience daily.

The second edition of *Microeconomics* is a cleaner, better organized, more innovative text than the first edition. I have listened to the constructive comments of numerous reviewers and colleagues, hundreds of students, the editorial staff of West Publishing Company, and the little voice inside of me, to write a book that I trust you will find worth your time.

ORGANIZATION OF THE SECOND EDITION

Section I. Economics: The Science of Scarcity. This book is organized into three sections. Section I discusses the key concepts and tools in economics. Two of the four chapters are devoted to supply-and-demand analysis. Upon completion of this section, the student should have a solid understanding of the economic way of thinking.

Section II. Microeconomics. Readers of the second edition will find the chapter organization of microeconomics the same as in the first edition—with one important change. Chapter 5, the first microeconomics chapter in the text, briefly discusses the players in microeconomics—consumers, firms, factor owners, and government—so that students know right away who and what is involved. Then it develops a "microeconomics mindset" the student can use to organize, categorize, and understand the myriad topics in microeconomics as he proceeds to read on. The "mindset" came by asking this question: What is microeconomics about? Here is my three-part answer.

First, the student learns that microeconomics is about consumers, firms, and factor owners sharing a reality: each has an objective, each faces constraints, and each has to make choices. Objectives-Constraints-Choices. For example, consumers' objective is to maximize utility, and they are constrained by their limited incomes and by the positive prices for each good. Given limited purchasing ability, the consumer will attempt to gain as much utility as possible from each dollar spent. In practice, this is done by *choosing* marginal analysis in making consumption decisions—by comparing additional (marginal) benefits and additional (marginal) costs of each purchase. In short, the trilogy of objectives-constraints-choices gives our microeconomic discussion of consumers focus. The student quickly sees the key elements around which the whole discussion takes place.

Second, students learn that microeconomics is about the interaction between consumers and firms, and between firms and factor owners, in market settings. In

PREFACE

xxiii

short, microeconomics is about markets. Once the student understands this, and realizes that much of what she learns has to do with the interactions of economic agents, we can go on to specify different types of market settings—e.g., perfectly competitive, monopolistic, and so on.

Third, microeconomics is about the workings of markets with and without government intervention. The student is instructed to examine both the *purpose* and the *effects* of government's involvement in markets. The *effects*, in particular, can be related to the objectives, constraints, and choices of consumers, firms, and factor owners. To illustrate, suppose government decides to tax firms. We would want to know how the tax affects the objectives, constraints, and choices of the firm, and then how the (perhaps) changed behavior on one side of the market (supply side) affects overall market outcomes.

In conclusion, the microeconomics mindset the student carries through his learning microeconomics includes the following points:

- Microeconomics is about consumers, firms, and factor owners.
- Consumers, firms and factor owners each have objectives.
- They try to achieve their objectives in the face of certain constraints.
- Because they try to achieve objectives in a world of constraints, they are forced to make choices.
- They make their choices in a certain way: by weighing additional benefits and additional costs.
- Consumers and firms, and firms and factor owners, interact in market settings. In any market, there is always something being bought and something being sold.
- There exist different types of market settings.
- Government can affect the behavior of consumers, firms, and factor owners, and thus affect overall market outcomes.

The Power of Microeconomics. I believe that microeconomic tools are the most powerful tools of analysis in the social sciences. From my reading and study, I do not believe that the fields of sociology, political science, or psychology have tools of analysis that come even close to the power of the economist's microeconomic tools. However, I also believe that college students are usually unaware of thissometimes even after having taken an economics course or two. With this in mind, I have tried to sharpen the presentation of microeconomics in this edition, and mainly to apply microeconomic tools in a way that will catch the student's attention. I believe that microeconomic tools not only are powerful enough to tell students about costs, production, firms, market structures and so on, but are also powerful enough to help students gain insights into why they have the number of friends they have (why not more?), why they sometimes get bored, why they chose the major that they did, and why they are sometimes late for class, among other things. My deepest feeling is that unless we use the microeconomics tools we have at our disposal to excite students, they will continue to think that microeconomics is simply about the supply and demand for cars, or about the costs of a firm, and so on. Nobel Laureate James Buchanan once wrote that what a science [such as economics] does, or should do, is simply to allow the average man . . . to command the heights of genius. I rewrote the microeconomics section of the first edition of Economics with this statement in mind. I want students to come into the microeconomics principles class with nothing but their notebooks, pens, and an open mind, and I want them to leave feeling like they have found gold.

THINKING LIKE AN ECONOMIST: A NEW FEATURE

The authors of principles books are quick to point out that their books teach students how to think like an economist—but they never tell us how they accomplish this feat. Supposedly, students will read the book and simply figure out how economists think. It is true that some students do pick up how economists think by using this method, but too many do not. I believe that it is the author's responsibility to explicitly point out, where possible, how economists think. I have done this throughout this book, at appropriate places. These places are easily identifiable throughout the text.

ECONOMICS IN OUR TIMES: APPLICATIONS

Gary Becker, in his interview in this book, said that the way to give students a good feel for economics is to show them "how to use it to understand the world about them." I believe Becker is exactly right. In the classroom, I have found that students get unusually excited over economics when I use it to provide them with insights into their world. After all, the student is rational; raise the benefits of learning economics relative to the costs, and he will want to learn more economics. I have tried to make the applications in this book as exciting and relevant to the student as I could. Some people may feel that a few of the applications are a little offbeat, and are not ordinary. Well, I hope so. I don't think that we have to continually use the same old applications to illustrate economic analysis to our students. We can break out of the mold sometimes, get a little daring, and just have some fun.

INTERSPERSED QUESTIONS: ANTICIPATING WHAT THE READER WANTS TO ASK

Often when I read books I wish the author were around so that now and then I could ask a question. I think students feel the same way when they are reading an economics textbook such as this one. That is why I have interspersed throughout the text questions that the reader might have come up with as he or she is reading along. Then, I have answered these questions.

INTERVIEWS: SOME NEW, MANY UPDATED

It is one thing to have the author of a text discuss the economic way of thinking, and it is quite another to read what Gary Becker has to say about it. It is one thing to have the author of a text discuss supply and demand analysis, and it is quite another to have Vernon Smith discuss it. There are 13 interviews with well-known economists in this text. The economists interviewed include Gary Becker, George Stigler, Gordon Tullock, William Baumol, John Kenneth Galbraith, Walter Williams, Murray Weidenbaum, Harold Demsetz, James Buchanan, Lester Thurow, Irma Adelman, Allen Kneese, and Vernon Smith. Many of the interviews are new and many are updated from the first edition.

INTERNATIONAL COVERAGE

With international economic news making front-page headlines, it is imperative to present students with a book that clearly identifies how international economic events affect the U.S. economy and how U.S. economic events affect the world economy. This edition of *Microeconomics* has international economics thoroughly integrated throughout.

A MODERN BOOK

The second edition of *Microeconomics* continues in the tradition of the first edition: to present the reader with a truly modern book. Topics added to the second edition include experimental economics, environmental economics, economic changes in Eastern Europe and the Soviet Union, and the Japanese economy, among others.

SUPPLEMENTS: PRINTED, COMPUTERIZED, AND LASER TECHNOLOGY

The supplements that go along with this book include:

- Study Guides
- MicroGuide Computerized Study Guide
- Instructor's Manual
- Enrichment Lectures
- Test Bank (over 6,000 questions)
- WestTest Microcomputer Testing
- Study Wizard Software Package (Computer Software for Microeconomics and Macroeconomics)
- Transparencies
- Video disc/Videotape

Study Guide. The Study Guide was principally written by Thomas Wyrick of Southwest Missouri State University. Each chapter explains, reviews, and tests the student on important facts, concepts, and diagrams found in corresponding chapters in this book. Chapter parts include an introduction to and purpose of each chapter, a review of concepts from earlier chapters, a fill-in-the-blank review of concepts to be learned, and problems and exercises. I wrote the self-test that ends each chapter.

MicroGuide Computerized Study Guide. The computerized study guide allows students to sit at the computer and quiz themselves on text material chapter by chapter. The questions are taken from the printed study guide. Students can choose any chapter or combination of chapters and the program will provide multiple-choice, true/false, matching, and fill-in-the-blank questions. Special features include: feedback on the correct answer and page-referencing to the main text, grading at the end of each session, the option to print quiz questions and results. MicroGuide is available for IBM PCs/compatibles with 512K or Macintoshes with Hypercard.

PREFACE

XXVi

Instructor's Manual. The Instructor's Manual was written by Keith A. Rowley, formerly of Baylor University. It offers detailed lecture assistance for this book. Chapter parts include an overview of each text chapter, a list of chapter objectives, a list of key terms, a detailed chapter outline with lecture notes, and answers to end-of-chapter questions.

Enrichment Lectures. Twenty-five lectures with accompanying transparencies are included in the supplement package. The lectures are on current topics of high interest to instructors and students alike. The lectures were prepared by Keith Rowley and Thomas Wyrick.

Test Bank. The double-size test bank contains more than 6,000 test questions. Approximately 1,000 questions are new, with special emphasis on graphing-related problems. The test bank was prepared by Patricia Freeman of University of Southern Louisiana and Dusan Stojanovic of Washington University.

WestTest Microcomputer Testing. The new WestTest 2.0 testing system for either IBM PCs and compatibles or Macintoshes allows you to choose, create, edit, store, and print exams and answer keys. The system is menu-driven with a new desktop format and the options of using keystrokes or a mouse, accelerators, and function keys.

The New Economics Study Wizard 2.0 Software Package. There is a microeconomics software package that comes with this book. The software package was developed by Dennis Muraoka of California State University at Long Beach. The software package has the following components: a graphics tutorial that is animated and annotated and contains a quiz on the graphs; terms and definitions in the form of a game; and a quiz that provides a review for the exam. Hardware requirements: IBM PC/compatibles, DOS 2.0 or higher with minimum 256K available in RAM. Graphics tutorials require CGA, EGA, or VGA with color monitor. At the end of each chapter in the text, students will find questions and problems. A few of the questions and problems have a logo next to them, indicating that the material in these questions and problems can be used in conjunction with the software package.

Transparencies. 150 transparencies (many in color) of key exhibits in the text are available for classroom use.

Video Disc/Videotape. I am excited about the fact that the second edition of *Economics* comes with a supplement like this one. Laser technology now makes it possible, with a touch of a button, to access key diagrams from the text. Not only that but the illustrations are presented in such a way that students can clearly and in proper time sequence see how the diagrams are built. Suppose the instructor wants to show students the intricacies of supply-and-demand analysis. He or she pushes the button, and there is a demand curve. Push the button again, and a supply curve appears. Push again, and the equilibrium point is identified. Push again, there is equilibrium price. And so on. For students this is a way to understand diagrams by seeing how they are built. For instructors, this is a way to offer step-by-step explanations and diagrammatics with simply a push of a button.

The new video disc also makes it possible to access footage from the popular

Economics U\$A* series which was funded by the Annenberg/CPB project. This is a way to bring real-world economic events (sights, sounds, and analysis) into the classroom. Economics has never been more real and relevant to students. (All the video segments which appear on the disc are also available on videotape presented as clips in the same order in which they appear on the disc.)

IN APPRECIATION

This book could not have been written and published without the generous and expert assistance of many people. A deep debt of gratitude is owed to the reviewers of the first edition, the reviewers of the second edition, and the numerous persons who have offered constructive comments and suggestions on one or both of the editions.

First Edition Reviewers and Others I Wish to Thank

Jack Adams

University of Arkansas, Little Rock

William Askwig

University of Southern Colorado

Michael Babcock Kansas State University

Dan Barszcz

College of DuPage, Illinois

Robert Berry

Miami University, Ohio

George Bohler Florida Junior College

Tom Bonsor

Eastern Washington University

Michael D. Brendler Louisiana State University

Baird Brock

Central Missouri State University

Kathleen Bromley

Monroe Community College, New York

Kathleen Brook

New Mexico State University

Douglas Brown Georgetown University

Ernest Buchholz

Santa Monica Community College,

California
Gary Burbridge

Grand Rapids Junior College, Michigan

Maureen Burton

California State Polytechnic University, Pomona Carol Carnes

Kansas State University

Paul Coomes

University of Louisville, Kentucky

Eleanor Craig University of Delaware

Diane Cunningham
Glendale Community College, California

Wilford Cummings Grosmont College, California

Douglas C. Darran

University of South Carolina

Edward Day

University of Central Florida

Johan Deprez

University of Tennessee

James Dietz

California State University, Fullerton

Stuart Dorsey

University of West Virginia

Richard Douglas

Bowling Green State University, Ohio

Natalia Drury

Northern Virginia Community College

Lu Ann Duffus

California State University, Hayward

John Eckalbar

California State University, Chico

John Elliott

University of Southern California

Charles Fischer

Pittsburg State University, Kansas

John Gemello

San Francisco State University

Carl Guelzo

Cantonsville Community College,

Maryland

Jan Hansen

University of Wisconsin, Eau Claire

John Henderson

Georgia State University

Ken Howard

East Texas Baptist University

Mark Karscig

Central Missouri State University

Stanley Keil

Ball State University, Indiana

Richard Kieffer

State University of New York, Buffalo

Gene Kimmett

William Rainey Harper College, Illinois

Luther Lawson

University of North Carolina

Frank Leori

College of San Mateo, California

Kenneth Long

New River Community College, Virginia

Michael Magura

University of Toledo, Ohio

Bruce McCrea

Lansing Community College, Michigan

PREFACE

xxviii

^{*}Economics U\$A was produced by Educational Film Center. Copyright © 1986 by Educational Film Center.

Gerald McDougall

Wichita State University, Kansas

Kevin McGee

University of Wisconsin, Oshkosh

François Melese

Auburn University, Alabama

Herbert Miliken

American River College, California

Richard Miller

Pennsylvania State University

Ernest Moser

Northeast Louisiana University

Farhang Niroomand

University of Southern Mississippi

Eliot Orton

New Mexico State University

Marty Perline

Wichita State University, Kansas

Harold Petersen Boston College Douglas Poe

University of Texas, Austin

Joseph Rezny

St. Louis Community College, Missouri

Terry Ridgway

University of Nevada, Las Vegas

Thomas Romans

State University of New York, Buffalo

Robert Ross

Bloomsburg State College, Pennsylvania

Keith A. Rowley

Baylor University, Texas

Anandi Sahu

Oakland University, Michigan

Richard Scoggins

California State University, Long Beach

Alan Sleeman

Western Washington University

John Sondey University of Idaho Shahram Shafiee

North Harris County College, Texas

Paul Seidenstat

Temple University, Pennsylvania

Robert W. Thomas

Iowa State University

Roger Trenary

Kansas State University

Richard L. Tontz

California State University, Northridge

Bruce Vanderporten

Loyola University, Illinois

Richard O. Welch

University of Texas at San Antonio

Thomas Weiss University of Kansas Donald A. Wells University of Arizona

John Wight

University of Richmond, Virginia

Thomas Wyrick

Southwest Missouri State University

Second Edition Reviewers and Others I Wish to Thank

Scott Bloom

North Dakota State University

Thomas Carroll

University of Nevada, Las Vegas

Larry Cox

Southwest Missouri State University

Diane Cunningham
Los Angeles Valley College

Emit Deal
Macon College
Charles Van Eaton
Hillsdale College

Michael Fabritius

University of Mary Hardin Baylor

Frederick Fagal Marywood College Ralph Fowler Diablo Valley College

Bob Gillette

Texas A&M University

Lynn Gillette

Indiana University, Indianapolis

Simon Hakim Temple University

Lewis Karstensson

University of Nevada, Las Vegas

Abraham Kidane

California State University, Dominguez

Hills

W. Barbara Killen University of Minnesota

J. David Lages

Southwest Missouri State University

Anthony Lee

Austin Community College

Marjory Mabery

Delaware County Community College

Bernard Malamud

University of Nevada, Las Vegas

Michael Marlowe

 ${\it California\ Polytechnic\ State\ University},$

San Louis Obisto

Phil J. McLewin

Ramapo College of New Jersey

Tina Quinn

Arkansas State University

Terry Ridgway

University of Nevada, Las Vegas

Paul Snoonian
University of Lowell

Paul Taube

Pan American University

Roger Trenary

Kansas State University

Mark Wheeler

Bowling Green State University

Thomas Wyrick

Southwest Missouri State University

I offer my sincerest thanks to the thirteen (13) economists who appear in the interviews in this book. Each was generous with his or her time, genuinely interested in reaching students, and always gracious. Their contributions have greatly added to the range and richness of views found in this book.

I offer my sincerest gratitude to Thomas Wyrick (Southwest Missouri State University), who, besides writing the study guide, read the entire manuscript and provided detailed comments and invaluable suggestions. My thanks to Keith Row-

PREFACE

xxix

此为试读,需要完整PDF请访问: www.ertongbook.com

ley (formerly of Baylor University), who wrote the instructor's manual and enrichment lectures. My heartfelt appreciation to Patricia Freeman (University of Southwestern Louisiana) who wrote questions for and organized the test bank and to Dusan Stojanovic (Washington University) who wrote questions for the test bank.

My deepest debt of gratitude goes to Clyde Perlee, Jr., editor-in-chief of West's college division. He continues to be my inspiration for writing the best book I know how to write. He is one of those persons who you know has made your life better just by being who he is. I am extremely fortunate that he is my editor and my friend. My many thanks to Bill Stryker, production editor, who has the ability to produce a book that is better than an author has a right to hope for. My belief—that he is the best at what he does—continues to be confirmed. I am also grateful to Theresa O'Dell, developmental editor. She worked hard and capably supervising all the details of the supplement package and she continues to make working on this project fun.

My thanks also go to Kristin J. McCarthy and Ellen Stanton for their work on the marketing program and to Beth Hoeppner for her work on the video disc. In addition, my gratitude to Elaine Levin for her excellent copy-editing.

My deepest appreciation goes to my wife, Sheila. She is always there with her support, encouragement, understanding, and love. Finally, I want to thank my two sons: Daniel, who is four years old, and David, who is 17 months old. Watching them, in everything they do, from sleeping to tearing the house apart, is one of the great pleasures of life.

CONTENTS IN BRIEF

AN INTRODUCTION TO ECONOMICS 1

| PART I Chapter 1 | Economics: The Science of Scarcity 3 What Economics Is About 5 |
|---------------------|--|
| Appendix A | Working with Graphs 23 |
| Chapter 2 | Fundamentals of Economic Thinking: Within the Production Possibilities Frontier (PPF) Framework 33 |
| Chapter 3 | Supply, Demand, and Price: Theory 46 |
| Chapter 4 | Supply, Demand, and Price: Applications 73 |
| | |

MICROECONOMICS 89

| PART II | Microeconomic Fundamentals 91 |
|------------|--|
| Chapter 5 | An Introduction to Microeconomics 93 |
| Chapter 6 | The Logic of Consumer Choice 100 |
| Appendix B | Budget Constraint and Indifference Curve Analysis 115 |

CONTENTS IN BRIEF

| Chapter 7 | Elasticity 124 |
|------------------------|---|
| Chapter 8 | The Firm 146 |
| Chapter 9 | Production and Costs 163 |
| PART III Chapter 10 | Microeconomic Theories (Product Markets) 185 Perfect Competition 187 |
| Chapter 11 | Monopoly 211 |
| Chapter 12 | Monopolistic Competition and Oligopoly 234 |
| PART IV Chapter 13 | Microeconomic Theories (Factor markets) 257 Factor Markets: With Emphasis on the Labor Market 259 |
| Chapter 14 | Wages, Unions, and Labor 281 |
| Chapter 15 | Interest, Rent, and Profit 299 |
| PART V Chapter 16 | Microeconomic Problems and Public Policy 315 Agriculture: Problems and Policies 317 |
| Chapter 17 | The Distribution of Income and Poverty 331 |
| Chapter 18 | Antitrust, Business Regulation, and Deregulation 358 |
| Chapter 19 | Market Failure: Externalities, The Environment, and Public Goods 376 |
| Chapter 20 | Public Choice: Economic Theory Applied to Politics 402 |

THE WORLD ECONOMY 417

| PART VI | International Economics: Theory and Policy | 419 |
|------------|---|-----|
| Chapter 21 | International Trade 421 | |
| Chapter 22 | International Finance 445 | |

PART VII Economic Growth, Development, and Alternative

Economic Systems 475

Chapter 23 Economic Growth and Development 477

Chapter 24 Alternative Economic Systems: Theory, Practice, and

Evolutionary Aspects 494

CONTENTS

AN INTRODUCTION TO ECONOMICS 1

| PART I | Economics: The Science of Scarcity 3 |
|------------|---|
| Chapter 1 | What Economics Is About 5 Five Questions About Economics 6 What Is Economics? 6 |
| | What Do Economists Study? 6 |
| | What Is the Economic Way of Thinking? 6 |
| | Why Study Economics 7 |
| | Why Study Economics in the 1990s? 7 |
| | Scarcity, Choice, and Opportunity Cost 8 |
| | Scarcity 8 |
| | Thinking Like an Economist 9 |
| | Scarcity Implies Choice 9 |
| | Choice and Opportunity Cost 10 |
| | Thinking Like an Economist 11 |
| | Opportunity Cost and Behavior 11 |
| | The Nature and Role of Theory 12 |
| | Why Build Theories? 12 |
| | What Is a Theory? 12 |
| | Building and Testing a Theory 13 |
| | How Do We Judge Theories? 14 |
| | Scientific Thinking 16 |
| | The Association-Causation Issue 16 |
| | The Fallacy of Composition 17 |
| | The Ceteris Paribus Condition: Taking One Thing at a Time 17 |
| | Economic Categories 17 |
| | Positive and Normative Economics 17 |
| | Macroeconomics and Microeconomics 20 |
| | Chapter Summary 20 |
| | Key Terms 22 |
| | Questions and Problems 22 |
| Appendix A | Working With Graphs 23 |
| | How to Read Graphs 23 |
| | Slope of the Line 25 |
| | The Slope of a Curve 25 |
| | The 45° Line 25 |

ECONOMICS IN OUR TIMES

What Does Scarcity Have to Do With the Number of Friends You Have? 10

ECONOMICS IN OUR TIMES

Interview: Gary Becker 18

Pie Charts 26

Bar Graphs 27

Line Graphs 27

Appendix Summary 30

Questions and Problems 31

CONTENTS

ix

Chapter 2

Fundamentals of Economic Thinking: Within the Production Possibilities Frontier (PPF) Framework 33

The Production Possibilities Frontier Framework 34

Resources 34

The Production Possibilities Frontier 34

Scarcity 36

Choice 36

Opportunity Cost 36

Economic Growth 38

Efficiency 38

Unemployed Resources 41 The Efficiency Criterion 41

Three Economic Questions Every Society Must Answer 42

Chapter Summary 42

Key Terms and Concepts 44

Ouestions and Problems 44

Chapter 3

Supply, Demand, and Price: Theory 46 Demand 47

About Demand 47

From the Law of Demand to a Demand Schedule to a Demand

Curve 48

The Market Demand Curve 48

How Much of a Good Buyers Are Willing to Buy Depends on

Price, Among Other Things 48

Factors That Can Cause the Demand Curve to Shift 50

A Change in Quantity Demanded versus a Change in

Demand 53

An Exercise: Learning to Keep the Law of Demand Straight 54

Supply 54

What is Supply? 54

The Law of Supply 54

Why Most Curves Are Upward Sloping 57

The Market Supply Curve 57

Factors That Can Cause the Supply Curve to Shift 57

A Change in Supply versus a Change in Quantity Supplied 60

The Market: Putting Supply and Demand Together 61

Supply and Demand at Work at an Auction 61

Learning the Language of Supply and Demand: A Few Important

Terms 62

Moving to Equilibrium: What Happens to Price When There Is a

Surplus or a Shortage? 62

Moving to Equilibrium: Maximum and Minimum Prices 64

Changes in Equilibrium Price and Quantity 67

Absolute and Relative Prices 69

Price as a Rationing Device 74

Price as a Transmitter of Information 75

Using Relative Price to Think Like an Economist 69

Chapter Summary 70

Key Terms and Concepts 71

Questions and Problems 72

Chapter 4

Supply, Demand, and Price: Applications 73 Price 74

CONTENTS

ECONOMICS IN OUR TIMES

Interview: Vernon Smith 65

ECONOMICS IN OUR TIMES

Economic Growth: An Expanding

PPF Ends the Political Tug-of-

War, for a While 40

X