CONTEMPORARY ECONOMICS AMES R. KEARL

CONTEMPORARY ECONOMICS

James R. Kearl

Brigham Young University

for Linda, Jocelyn, Candace, Derek, Jonathan, and Tyler

Library of Congress Cataloging-in-Publication Data

```
Kearl, J. R.

Contemporary economics / James R. Kearl.
p. cm.
Includes index.
ISBN 0-673-18717-9: $18.00 (est.)
1. Economics. I. Title.
HB171.5.K36 1989
330—dc19 88-23569
CIP
```

Copyright © 1989 Scott, Foresman and Company. All Rights Reserved. Printed in the United States of America.

1 2 3 4 5 6 — RRW — 93 92 91 90 89 88

To the Instructor

Contemporary Economics is intended to be a serious introduction to economics suitable for a one-semester course comparable in quality and rigor to the traditional two-semester courses offered at many schools. In this sense, the text is closer to the common two-semester encyclopedic text than it is to most of the one-semester texts on the market. Contemporary Economics is necessarily more focused than the larger two-semester texts, many of which present economics in a smorgasbord fashion. A small number of themes are developed in a consistent, sequential manner. There is a logical development that gives order to the topics treated and ties the topics together in such a way that later chapters build on earlier chapters in terms of analysis and sophistication. Most of the more specialized topics covered in individual chapters in other texts have not been ignored, but are treated as applications of the specific, broader ideas developed.

Contemporary Economics does not focus on a particular subset of the collection of topics of a larger text, nor does it adopt a single perspective on economics. It tries to teach first and foremost how markets work, and, secondarily, how governmental activities must necessarily affect markets. Individual and market behavior are viewed, in a sense, as constraints on governments that determine, along with whatever policy is pursued, the actual outcome that the policy achieves. At the same time, Contemporary Economics suggests that markets do not always work well. Attention is paid to the critical assumptions that ought to be examined in the public-policy debate about the intertwined roles of markets and governmental policy.

Contemporary Economics has two different aims. For students who will not continue in economics, the text tries to provide a sensible introduction to the way that a market economy works and how a market economy and governmental

policies interact. The institutional arrangements and workings of the economy discussed are those that are generic to "market economies."

For students who will continue in economics, the text tries to stimulate thought—first, about what are the questions, problems, and issues of interest and importance in economics, and second, about the different ways that one might approach these questions, problems, and issues.

Contemporary Economics begins with an introduction that poses the central policy issue: How should a society balance its reliance on decentralized markets against centralized governmental activities in responding to the problems posed by scarcity (how to effectively use scarce resources and best coordinate competing interests)? The text is then divided into five parts. Each part begins with a short introduction that lists the key ideas and themes that will be developed in the chapters that follow. The hope is that a student will be able to step back occasionally and see the broader issues and themes amid the particulars of each chapter. I have made extensive use of boxed examples to extend the material in the text. Many of these are empirical in nature, providing "real world" perspectives on the somewhat more abstract material in the body of the text. Each chapter ends with a list of review questions designed to stimulate thought and serve as the basis for formal and informal discussion. Answers to selected questions are provided at the end of the text along with an extensive glossary.

For the most part, the development in Parts II (microeconomics and market efficiency), III (microeconomics and market failure), and IV (macroeconomics) is quite traditional. Part I (exchange, specialization, institutional arrangements, and "tools") is somewhat "nontraditional." It is my view, however, that the common starting place for economics textbooks (supply and demand followed by microeconomics or macroeconomics) does not provide an appro-

priate foundation for understanding *why* markets may be important. Therefore, this text starts with exchange and specialization. In addition, the usual approach does not confront the coordination problem which is at the heart of any debate over the appropriate balance between markets (decentralized coordination) and government (centralized coordination) in an economy.

Part I also mixes traditional micro and macro topics in a "nontraditional" way. It is easy, convenient, and important to develop the role of money in reducing the transaction costs that accompany exchange and specialization. It is then useful to examine other devices that also lower transaction costs, including firms and property rights. However, once the idea of money has been developed, it is also useful to discuss measurement issues. The early development of money makes an easy transition into measurement issues and the use of money measures of prices and other things throughout the remainder of the text. As a consequence, it is easier to make the distinction between real and nominal variables and to use various aggregate measures in the micro chapters when appropriate. Introducing these measures at this point also has the advantage of tying what the student hears most frequently on the news to the text at an early point. Finally, it provides a clear distinction between relative prices and the price level, and between changes in relative prices and changes in the price level.

The text attempts to balance micro issues and macro issues, but it does so by weaving them together to some degree. Thus, while Parts II and III can be thought of as "microeconomics" and Part IV as "macroeconomics," the role of money is introduced in chapter 4. Price indices and aggregate output measures are introduced in chapter 6. Labor and capital markets (including investment) are discussed at some length in chapter 13. Chapters 20 through 25 (Part IV) then build on these beginnings. The text does not treat macroeconomics as something apart from the rest of economics. Traditional macro issues are treated as a natural extension of the underlying themes in the text: How do market economies work, and how do government policies affect how markets work?

In our modern world, international issues are of increasing importance. Rather than treat them completely separately, I have woven many of the traditional topics in this area through the text. For example, the discussion of exchange and specialization in chapter 2 first focuses on individuals, then on economies. The micro effects of trade are dealt with in chapter 12. In addition, chapter 12 uses currency markets as an extended example of supply-demand analysis. Chapter 14 deals, in part, with distortions of international trade. Finally, chapter 24 considers some of the macroeconomic consequences of the movement of commodities and assets between economies. Many of the boxed examples throughout the text also focus on international issues.

A teacher's manual is available which includes model syllabi, answers to end-of-chapter questions, some supplementary materials for selected chapters, and a test bank.

A study guide, by John Leadley of Illinois State University, provides a concept review of each chapter, including key graphs and equations. The study guide also includes short applications, multiple choice questions, and problems, all with full solutions.

Many individuals have contributed to this text, which has had an extraordinarily long gestation period. I wish to thank in particular Brigitte Condie Madrian, my research assistant, and George Lobell, Bruce Kaplan, and Mark Grimes, my editors at Scott, Foresman and Company. The following individuals reviewed various parts of the text and provided valuable comments and criticisms:

Jack Adams University of Arkansas, Little Rock		
Cameron Bailey	Middlesex Community College,	
	Connecticut	
David Fairris Williams College		
Robert Fredericksen North Central Technical		
	Institute	
Martin Giesbrecht	Wilmington College	
Roger Goldberg	Ohio Northern University	
Richard Hansen	University of Northern Iowa	
Judy Lee Klein	Mary Baldwin College	
Stephen E. Lile	Western Kentucky University	
William Luksetich St. Cloud State University		
Drew E. Mattson	Anoka Ramsey Community	
College		
John Pisciotta	Baylor University	
Frank W. Puffer	Clark University	
Alden F. Shiers	California Polytechnic State	
	University	
David R. Smith	D. S. Lancaster Community	
College		
Philip E. Sorensen	Florida State University	

To the Student: An Overview

Contemporary Economics tries to tell a connected, consistent, compelling, and even stimulating tale. The plot is simple:

Resources are scarce. Because of scarcity, two problems arise. First, individuals and societies must make choices and these choices will be costly. Second, individual and group activities will compete with other individual and group activities which, as a consequence, will require some kind of social coordination.

Scarcity also stimulated important economic activities, particularly the *exchange* of goods, services, and resources between individuals and between economies, and the *specialized production* activities in which most of us participate. Exchange and specialization, in turn, stimulate the development of social arrangements, including money, firms, intermediaries, contract rules, and property rights, to fully exploit the gains associated with these two economic activities.

Every society has to decide how it will confront the problems that are a consequence of scarcity and determine what organization will best take advantage of the gains from exchange and specialization. It turns out that free markets are useful devices in forcing individuals to consider the costs of their decisions, organizing economic activities, coordinating competing individual and group activities, and taking advantage of gains associated with exchange and specialization. These "market successes" contribute in very important ways to your well-being and make an economy based on free markets attractive.

For a variety of reasons, however, governments choose to distort the market outcomes which would otherwise occur. In addition, free markets may encounter allocational difficulties. That is, markets may not always organize activities in such a way that the costs associated with scarcity are apparent. Nor do markets always coordinate competing activities in effective ways. Thus, markets may lead to monopolies, pollu-

tion, poor information, few social services, an unfair distribution of income, unemployment, inflation, or economic stagnation. These difficulties are "market failures" that need to be remedied because they undermine personal well-being. Importantly however, for each market failure there exists, at least in principle, an effective public-policy remedy. But alas, governmental efforts to solve these problems are not free from difficulties themselves and often produce unintended and adverse outcomes.

We are left, then, with the extraordinarily important public-policy issue: How should a society balance its reliance on "less-than-perfect" markets to organize economic activity against the "less-than-fully-effective" governmental remedies whose intended effect is to offset the imperfect market outcomes?

While *Contemporary Economics* pursues the simple plot just outlined, it has two other important themes as well: First, how do markets work? Second, how do governmental activities and policies affect how markets work?

Part I begins by tracing the consequences that follow when individuals have to deal with scarcity, or in words more familiar to an economist, when individuals confront constraints. We will find that scarcity forces individuals to make choices and that choices have costs. We will also find that social coordination problems emerge when groups of individuals confront constraints because scarcity also leads to competition.

We then focus on the foundation of economic activity: the enormous benefits that come when individuals (and economies) can exchange, and because they can exchange, specialize in productive activities. Exchange and specialization are carefully and extensively explored. It turns out that exchange and specialization are ways of dealing with the problems of costs and competition posed by scarcity. In addition, and of particular importance, the gains from exchange and

specialization stimulate the development of institutional arrangements that allow groups of individuals to capture the enormous benefits associated with these two economic activities.

Some institutional arrangements have properties such that when individuals pursue only their own interests, the well-being of others is enhanced; some do not. This poses a serious problem for society since we must choose the kind of institutional arrangements to adopt in order to facilitate economic activity. This problem has several dimensions that can be illustrated by a series of questions: How can selfinterested motives be accommodated to take advantage of the benefits associated with exchange and specialization? How can a stable social order emerge when individuals pursue their own interests and have little interest in the social order per se? How does a decentralized economy choose to produce some goods and not others? Is it able to respond to the interests of those who live within it? Are some allocations of resources, goods, and services better than other allocations? Why? How does the distribution of goods and services change when the allocation of resources changes? Why does economic activity appear to ebb and flow, with unemployment at times and inflation at other times? Why do some economies grow while others stagnate?

Although exchange and specialization provide the possibility for enormous gains in individual well-being, they are also costly. It turns out that the gains from exchange and specialization are such that new institutional arrangements may arise in any economy in order to minimize some of these costs. These arrangements include things with which you are quite familiar, like money, and some with which you may be less familiar (at least as arrangements whose purpose is to lower transaction costs), like financial institutions, business firms, brokers, property rights, and contracts.

The problems of accommodating exchange and specialization are particularly interesting when individuals are self-interested and when scarcity imposes constraints and creates costs. Since the pursuit of self-interest appears to play an important role in our lives, the meaning of self-interest is also explored in Part I, including an analysis of rational choice and marginal decision making.

Part I ends on a slightly different note, but one that is very important for the progress of economics as a social science or discipline—the ability to measure economic activity. With money, an economy has a useful measuring device (a unit of account), and as a consequence some kinds of economic activities can be measured and monitored. This allows us to mark our economic progress; it also allows us to conveniently summarize economic data in ways that are easy to communicate and understand. Thus in the concluding chapter in Part I, we consider some common measures of prices and output that are available because money can be used as a way of accounting for economic activity.

Part II focuses on markets. This section is the "nuts and bolts" of the text: How do markets work? How are prices, profits, and production decisions determined? What role do prices and profits play? How do markets organize exchange, stimulate specialization, and accommodate competing interests? What is a market equilibrium? How do markets adjust? How responsive are prices and production decisions to changes in the economic environment?

The section begins with an introduction to the general ideas of relative prices, demand, supply, equilibrium, adjustment, and elasticity. We then explore more carefully the idea of demand. This is followed by an analysis of short-run supply, short-run market adjustment, and short-run market equilibrium. This "short-run analysis" is, in turn, followed by an analysis of long-run supply, long-run market adjustment, and long-run market equilibrium. The respective roles of relative prices, profits, and rents in market adjustments are emphasized. We then explore the idea of efficiency, or put differently, the sense in which markets contribute to your well-being.

Since markets within an economy are linked to markets in other economies by international trade, we next consider the effects of the international flow of goods, services, and resources on the domestic use of resources and on domestic market prices, adjustment, and market equilibrium. We then consider the markets for two important resources—labor and capital. The analysis of these markets, while of considerable interest in its own right, is also important in understanding the coordination problems discussed at length in Part IV.

This section ends with an extended discussion of the ways in which competitive markets are distorted or changed by government policies.

These market distortions include price ceilings, price floors, taxes, subsidies, prohibitions on market activities, restrictions on entry or exit, and barriers to international trade. The effects of each of these distortions on relative prices, profits, rents, market adjustment, equilibrium, and efficiency are considered.

Having outlined the "successes" of competitive markets and the "distortions" of market outcomes by public policies, we next consider (in Parts III and IV) the various ways in which markets "fail" and some of the possible policy responses to these "market failures." Separate chapters are devoted to monopoly, externality, and public good problems. The general idea of a monopoly is probably familiar to you, externalities and public goods may be less so. The former includes problems such as pollution and environmental degradation; the latter includes problems such as parks, roads, and national defense. Monopolies, externalities, and public goods are problems in the sense that if a market is monopolized, or has externality difficulties, or if markets try to allocate public goods, inefficient uses of scarce resources will result. Imperfect information and uncertainty may also create problems in a market economy. The nature of these problems is also explored in Part III.

The concluding chapter in Part III addresses the issues of economic justice and a fair distribution of goods and services. The purpose of this effort is to engage you in a dialogue about the meaning of "fair" in a market context and to provide evidence about the way that the U.S. economy distributes rewards among the participants in the economy.

Part IV considers three particularly important aspects of market failure: unemployment, output cycles, and inflation. Instead of focusing on particular markets, we will examine the behavior of the economy as a whole. In a large, complex economy, lack of coordination among certain markets may lead to periods in which resources are unemployed or in which most prices are increasing or decreasing. We would like to understand why this is so.

In this section, we focus on the price level, real and nominal aggregate output, employment, unemployment, aggregate demand, and aggregate supply. A simple model of aggregate supply (the total value of all goods and services produced by an economy) is developed that depends

upon how individuals and firms respond to information about the economy, particularly as they make labor supply and labor demand decisions. It turns out that economies appear to adjust differently in the *short run* than they do in the *long run*. Hence, we distinguish between the two. The intent of this effort is to try to understand why economies have unemployed resources, inflation, and fluctuating output. In addition, however, supply-side economic policies, which have been of considerable interest in the past several years, are introduced in a simple setting in which tax policy affects the labor market and, hence, long-run aggregate supply.

You should be forewarned that there are a number of unresolved puzzles in this area. For example, it is not clear why some markets do not quickly reach an equilibrium, particularly the labor market. One possibility is that there are informational difficulties that create adjustment problems. If these informational difficulties cause problems in labor markets, an economy may, for a time, have unemployed resources. However, such problems are not likely to persist for extended periods of time and, hence, an economy with unemployed resources will likely move toward full employment in the long run. Since there are many unanswered questions in this important area, the discussion in these chapters focuses on what we know and what we do not know about the aggregate outcome for an economy that relies on markets.

The development of aggregate demand introduces a traditional distinction that economists make between consumption, investment, and government uses of real output. The problem of coordinating decisions to consume and save with investment decisions is explored. It is possible that as an economy adjusts, these coordination problems affect the level of aggregate demand. If they do, the resulting changes in aggregate demand may then force adjustments in labor markets. Unless labor markets adjust quickly to such changes, the results will be particularly costly for the economy: individuals may be unemployed. Hence, movements in aggregate demand are thought to be an important source of fluctuations or cycles in real output, the price level, and employment opportunities.

There are two kinds of economic policies that may be able to offset real output, price level, or employment changes: fiscal policy and monetary policy. Fiscal policy directly affects aggregate demand through the government's use of real resources. The government can increase its use of such resources and stimulate the economy or it can decrease its use of such resources and dampen economic activity. The government can also indirectly influence private uses of real resources, including private consumption, saving, and investment decisions, by changing the taxes that individuals or firms must pay. Government expenditure and tax changes that are specifically directed at offsetting aggregate demand changes or at stimulating aggregate supply are collectively referred to as fiscal policies.

Monetary policy is the use of the government's control of the money supply to offset aggregate demand changes, but is somewhat less direct in its effects than fiscal policy. Money is used as a device to lower transaction costs. Money is also used as an instrument for holding wealth. But while money is almost unique in its use in transactions, it is only one of many assets which an individual might use to hold wealth. The kinds of assets individuals choose to hold depends, in part, on the earnings or interest payments associated with the various assets. One way that monetary policy affects the economy is through its effect on these interest rates.

In order to understand the relationship between monetary policy and aggregate demand, we begin (chapter 23) by examining the role of banks and the Federal Reserve System in the creation of money. There are a number of ways that the Federal Reserve can affect the quantity of money in the U.S. economy, including open-market operations (where the Federal Reserve buys and sells bonds), changing the discount rate (the interest rate the Federal Reserve charges for loans to banks), and changing the reserve requirement (the amount of reserves that banks must keep on deposit against accounts that they issue to individuals). Monetary policy is explored in terms of the effect of these policy tools on interest rates and hence on aggregate demand.

The analysis in this part of the text concludes with a discussion of the government budget constraint, government budget deficits and their pos-

sible effects on private investment, and the effects of the movement of commodities and assets between economies. Since this is an area of substantial change and some turmoil, we will explore those areas where different views about the critical parameters that determine the effectiveness of public policies, individual behavior, or the "essential" interactions in the economy would make a difference in the policy perspective that might be adopted.

Part V concludes the text by pointing to the problems of making public economic policy when individuals, in self-interested ways, attempt to use governmental policy processes to increase their own wealth. In particular, we will examine the efforts of individuals to use the power of the government to create economic benefits for some people, as well as the economic effects of competition among individuals for these benefits. These efforts sometimes create policies that are not consistent with the market problems they were intended to solve. How we balance the problems associated with markets with the problems associated with government intervention is the important question in public policy. It is a question without a firm answer for all times and all places—the balance changes from time to time and between generations. What you discover as you think carefully about economics will prepare you to be an effective participant in the debate about how we ought to balance these choices.

Learning about technical details, while often not much fun, is important in being able to respond intelligently and critically to the claims about the economy that you will frequently encounter. Such details necessarily get you focused on small issues rather than on the larger picture or theme. However, since it is often easy to become so caught up in details that we "miss the forest for the trees," I encourage you to return frequently to this overview and to that provided at the beginning of each part of the text so that you can keep a clear sense of the direction in which the text is leading you.

J. R. Kearl

Contents

EXAMPLE 1.3

EXAMPLE 1.4 EXAMPLE 1.5

To the Student: An Overview xxii

PART ONE Exchange, Specialization, and Transaction Costs 2

CHAPTER ONE Scarcity, Choices, and Costs 4

Scarcity and Constraints 4 Choices 5	The Social Coordination Problem 13 Self-Interested Individual Behavior
Choices about Leisure and Work	Methods of Social Coordination
Choices about What to Produce and	The Effects of Self-Interested Interactions 15
Consume	Everyone Is Worse Off
Choices about Present versus Future	Some Are Better-Off (But Only Because
Consumption	Others Are Worse Off)
Costs 6	Everyone Is Better-Off
Opportunity Costs	Individual Outcomes and Social
Constraints and Opportunity Costs	Aggregation 19
A Production-Possibilities Frontier	The Inference Problem 21
The Effect of Different Leisure-Work	Individual Behavior versus Social Structure
Choices	The Perspective of an Economist
The Effect of Skill and Resource Availability	The Public-Policy Problem
An Aside: Logical Models 11	Summary 22
Scarcity, Competition, and Conflict 12	Discussion and Thought Questions 23
EXAMPLE 1.1 The Changing Cost of Your Edu	ication 7
EXAMPLE 1.2 Choosing a Job 10	

CHAPTER TWO Exchange and Specialization 24

Invoice Prices and Opportunity Costs

The Opportunity Costs of Watching TV

Does It Cost to Limit Speeds to 55 MPH?

Exchange and the Invisible Hand 24

More Is Preferred to Less

Different Individual Preferences

A Fortuitous Interaction

Exchange

Learning from the Simple Exchange Model

Specialization and the Invisible Hand 27

Crusoe's Ability to Produce and Consume

Friday's Ability to Produce and Consume Specialization Specialization and Productivity Relative Costs Deciding on Specialization Relative Prices 32 Four Important Points 32 Opportunity Costs and Specialization

16

19

Comparative versus Absolute Advantage Distributing the Gains Maximizing Output

International Trade 36

EXAMPLE 2.1 Life in a Suq 32 Interdependence 37 Summary 37

Discussion and Thought Questions 37

CHAPTER THREE Social Choices 39

Aggregate Production Possibilities 39

An Aggregate Production-Possibilities

Frontier

Increasing Social Costs 40

Aggregate Consumption Possibilities

Choosing Between Arms and Food

Efficient Use of Resources 43

Relative Prices and Production 43

Relative Prices and Decentralized Choices

The Aggregate Effects of a Change in a

Relative Price

Distribution of Income Within an

Economy 44

Relative Price Changes and Distribution

Effects of International Trade

Making Social Choices 47

Economic Growth 48

Production of Capital

Dramatic Changes in Resources and

Production Possibilities

Summary 51

Discussion and Thought Questions 52

EXAMPLE 3.1 Oil Price Changes 45

EXAMPLE 3.2 Can a High-Wage Economy Compete with Low-Wage Economies?

EXAMPLE 3.3 Trade and Jobs 47

EXAMPLE 3.4 The Social Costs of a Volunteer Army 50

Costly Transactions, Money, CHAPTER FOUR and the Rules of the Game 53

Money 54

Problems with Barter

Using Money Instead of Bartering

Acceptability

Uniformity

Divisibility

Stability of Value

Historical Development

Intrinsic Worth versus Legal Tender

Intermediaries 58

Direct versus Indirect Exchange

Intermediaries and Productivity

Firms 60

Team Production

The Monitoring Problem

Hierarchical Organizations

Opportunistic Behavior

Households 63

55 EXAMPLE 4.1 Vasectomies and Leaky Radiators

Is Barter Really This Bad? EXAMPLE 4.2

Further Specialization Developing Labor Resources

Restrictions on Property Rights

Discussion and Thought Questions 70

Transaction Costs and Property Rights

Rules of the Game 65

Property Rights

Expectations

Incentives

Contracts

Summary 70

Ownership

46

EXAMPLE 4.3 Life in a Suq, Once Again 62
EXAMPLE 4.4 The Importance of Reputation in the Diamond Market

CHAPTER FIVE Economic Choice and Marginal Analysis 72

Making Choices 72

Deciding Who Should Choose

Traditional Choices Random Choices

Purposeful Choices

Rational Choices and Information 73

Comparability

Consistency

Information

Problems Due to Lack of Information

Motive versus Constraints

Maximization and Marginal Analysis 76

Diminishing Marginal Returns

Marginal Benefits

Marginal Costs

Choosing the Best Option

The Margin Matters, Not the Average

Sunk Costs Are Irrelevant The Equi-Marginal Principle

The Importance of Marginal Analysis

Marginal Decision-making

Description versus Prescription 87

Summary 88

Discussion and Thought Questions 88

EXAMPLE 5.1 Preferences for Children 74

EXAMPLE 5.2 Diminishing Returns in Emissions Control 76

EXAMPLE 5.3 Diminishing Returns in Cotton-Dust Control 7

EXAMPLE 5.4 The Diamond-Water Paradox 81

EXAMPLE 5.5 Are Criminals Rational? 84

EXAMPLE 5.6 Sunk Costs and Electrical Utilities 85

EXAMPLE 5.7 Sunk Costs and Mistakes 87

CHAPTER SIX Measuring Economic Activity 89

Money as a Unit of Account 89

Relative Prices and Money Measures of

Prices 89

The Effects of Inflation and Deflation

The Price Level and Price Indices 90

A Price Index for a Single Good

Measuring Inflation and Deflation

The Period of Measurement

A Price Index for Many Goods

Common Price Indices

The Purchasing Power of Money

Problems with Price Indices

A Useful Approximation

Measuring Output 96

Price Changes and GNP

Non-Market Activities and GNP

Underground Economy and GNP

Financial and Second-Hand Transactions

and GNP

Population Change and GNP

Individual Well-Being and GNP

National Income Accounts 101

Summary 102

Discussion and Thought Questions 103

EXAMPLE 6.1 Where the Domestic Money Is Not the Unit of Account 90

EXAMPLE 6.2 Price Level versus Relative Price Changes 92

EXAMPLE 6.3 Different Consumption Patterns 94

EXAMPLE 6.4 Changes in the Consumption Pattern Over Time 95

EXAMPLE 6.5 The CPI's New Basket 98

PART TWO Markets for Goods, Services, and Resources: Prices, Profits, Adjustment, and Equilibrium 104

CHAPTER SEVEN Markets 106

Suppliers and Demanders 107 Market Supply Measuring Relative Prices Measuring Quantities Supply Curves Market Demand Creating Markets Adjustment 110 **Excess Supply Excess Demand** Eliminating Excess Supply Eliminating Excess Demand Predictability Equilibrium 113 Adjustment and Equilibrium 114 A Shift in Demand

A Shift in Supply
Other Possible Adjustments

An Aside: A Change in Demand or Supply
versus A Change in Quantity Demanded or
Quantity Supplied 116

Elasticity 117
Price Elasticity of Demand
Measuring the Elasticity of Demand
Calculating Elasticities
The Importance of the Elasticity of
Demand
Price Elasticity of Supply
The Importance of the Elasticity of Supply
Summary 124

Discussion and Thought Questions 124

EXAMPLE 7.1 What Happens When Demand Shifts, I? 111
EXAMPLE 7.2 What Happens When Demand Shifts, II? 113
EXAMPLE 7.3 What Happens When Supply Shifts? 118
EXAMPLE 7.4 A Supply Shift 121
EXAMPLE 7.5 Elasticity of Demand and a Supply Shift 123

CHAPTER EIGHT Demand 126

Explaining Behavior: The Economic Approach 126 The First Law of Demand and Behavior Subtleties of Behavior and Demand Demand 128 Individual Choices When Relative Prices Change Substitution Substitution and Maximization Diminishing Marginal Satisfaction Willingness-to-Pay Market Demand 133 The First Law of Demand Evidence Consumers and Market Demand Learning About Individual Consumers from the Market Demand

Willingness-to-Pay and Market Demand

The Market Price

Economizing

Willingness-to-Pay versus Ability-to-Pay Changes in Demand When Other Prices Change 138 Complements Substitutes Changes in Demand When Individual Income Changes 141 Normal Commodities Inferior Commodities Other Things That Affect Demand 142 Transaction Costs Transportation Costs Determining the Price Population Changes Changes in Tastes and Preferences The First Law of Demand, Once Again 145 The Second Law of Demand 148 Estimating the Size of the Elasticity of Demand

Elasticity of Demand and the Relative Income Elasticity of Demand Importance of Commodities in Cross Price Elasticity of Demand **Individual Budgets** Exceptions to the Law of Demand 152 Substitution Over the Short and Long Term Summary 153 An Aside: Other Elasticities 150 Discussion and Thought Questions 153 EXAMPLE 8.1 Who Believes Demand Curves Slope Downward? The Demand for Vanity EXAMPLE 8.2 129 The Demand for Charitable Giving EXAMPLE 8.3 Is a Brown Paper Bag as Good as Cellophane? EXAMPLE 8.4 Is Gasoline in the Suburbs a Substitute for Gasoline in the City? EXAMPLE 8.5 135 The Demand for Shakespeare EXAMPLE 8.6 137 Public Policy and Income and Substitution Effects EXAMPLE 8.7 144 The Income Elasticity for Wives EXAMPLE 8.8 145 The Demand for Dental Care EXAMPLE 8.9 Price, Income, and Cross Price Elasticities EXAMPLE 8.10 147

CHAPTER NINE Short-Run Competitive Supply 155

Firms 155 Short-Run Marginal Costs 163 Integration and Organization Profit Maximization and a Firm's Competitive Ownership and Profits Supply 165 Time Horizons and a Firm's Stock of To Produce or Not to Produce 166 Capital Market Supply 167 Profits 157 Learning about Individual Firms from the Market Supply Revenues Adjustment and Equilibrium Revisited 168 Costs Profit Maximization 158 An Increase in Demand Competitive Markets 160 A Decrease in Demand Competitive Markets and a Firm's Demand A Decrease in Supply Schedule Incentives to Adjust When a Firm's Output Has a Greater Summary 171 Elasticity than the Market Demand Discussion and Thought Questions 171 Marginal Revenues for a Firm in a Competitive Market 162

EXAMPLE 9.1 Elasticity of Supply in Agricultural Markets 164

CHAPTER TEN Long-Run Competitive Supply 173

Profits and Incentives to Exit or Enter 173 Average Costs, Marginal Costs, and Profits, Long-Run Market Equilibrium 174 More Generally Long-Run Consequences of Short-Run The Relationship Between Averages and **Economic Profits** Marginals Entry and Long-Run Supply 182 Long-Run Consequences of Short-Run New Entrants and Existing Firms **Economic Losses** Long-Run Adjustment 186 Long-Run Consequences of Zero Economic Constant Long-Run Average Costs **Profits** Increasing Long-run Average Costs Average Costs 176 Average Costs, Marginal Costs, and Profits Decreasing Long-Run Average Costs

EXAMPLE 10.1 Entry in China 176 Entry in the Camera Market, Circa 1982 EXAMPLE 10.2 177 Entry in the Mail Order Catalog Business EXAMPLE 10.3 178 Do Capital and Labor Really Substitute for Each Other? EXAMPLE 10.4 187 EXAMPLE 10.5 Airline Deregulation and Entry 190 Technological Change and the Cost of Electrical Power EXAMPLE 10.6 191 The Evolution of Computer Prices EXAMPLE 10.7 194 CHAPTER ELEVEN Prices, Profits, and Competitive Markets 195 Prices, Rationing, and Production Competitive Markets and Allocative Incentives 195 Efficiency An Increase in the Demand for a The Same Equilibrium Market Price for All Commodity Consumers A Decrease in the Demand for a The Same Equilibrium Market Price for All Commodity **Producers** An Increase in the Costs of Producing a The Same Equilibrium Market Price for Commodity Consumers and Producers Price and Profits Another Way of Looking at Allocative Prices and Profits: Market Information 202 Efficiency Prices and Information Technical Efficiency Profits and Information about the Learning to Form Conclusions about Allocation of Capital Efficiency Interesting Implications of Allocational Prices and Profits: Market Links 204 Arbitrage Efficiency Efficiency 207 Summary 216 Allocation Efficiency Discussion and Thought Questions 216 Market Linkages 196 EXAMPLE 11.1 Producing Substitutes in Labor Markets EXAMPLE 11.2 198 EXAMPLE 11.3 Oops! 206

Technological Innovation 192

Contraction 192

Summary 193

Entry and Exit or Expansion and

Discussion and Thought Questions 194

and Currencies 218

CHAPTER TWELVE International Markets for Commodities

International Trade and Domestic
Markets 218
The Effect of Imports on Domestic Markets
The Effects of Changes in the World Price
The Supply of Imports
The Effect of Imports
The Effect of Changes in the World Price
The Demand for Exports
Efficiency

4

Competition for Rents 189

Higher Costs?

Who Gets the Rents?

Why Might New, Entering Firms Have

Do Rents Serve Any Useful Purpose?

Distortions
Imports, Exports, and the Markets for Foreign
Exchange 225
The Market for Foreign Exchange
Appreciation of the Dollar
Depreciation of the Dollar
The Effects on Other Currencies

Comparative Advantage

Import Prices and the Foreign Exchange Purchasing Power Parity Summary 235 Market The Trade Deficit Discussion and Thought Ouestions 236 Why Do Foreigners Hold U.S. Dollars? Foreign Competition and the Domestic Automobile Industry EXAMPLE 12.1 228 EXAMPLE 12.2 Free Trade? 230 EXAMPLE 12.3 Quotes in International Trade: The Sugar Case **Exchange Rate Calculations** EXAMPLE 12.4 232 Factors Affecting the Foreign Exchange Value of the Dollar EXAMPLE 12.5 235 Markets for Resources 237 CHAPTER THIRTEEN Markets for Labor 237 **Expectations and Investment** The Supply of Labor Discounting Substitution and Income Effects The Further in the Future, the Lower the Elasticity of Supply Present Discounted Value The Demand for Labor Changes in the Interest Rate Elasticity of Demand Investment and the Interest Rate A Market for Labor Elasticity of Demand Why Do Wages Differ? Stocks, Bonds, Loans, and Investments Lack of Physical Mobility Supplying Financial Resources and the Compensating Differentials Interest Rate **Ability Differences** Elasticity of Supply A Market for Financial Resources Human Capital Why Do Interest Rates Differ? Discrimination Unions Summary 266 Markets for Capital 254 Discussion and Thought Questions 267 Pigeons Have Backward-Bending Labor Supply Schedules 243 EXAMPLE 13.1 Aggregate Labor Supply and Wages 249 EXAMPLE 13.2 EXAMPLE 13.3 Productivity 250 Differences in Incomes Across Jobs 251 EXAMPLE 13.4 Problems with Mobility 255 EXAMPLE 13.5 Risks and Salaries EXAMPLE 13.6 Are Higher Salaries Really Associated with More Productive Performance? EXAMPLE 13.7 257 Present Discounted Value of BA Degrees 258 EXAMPLE 13.8 Unions and Wages EXAMPLE 13.9 EXAMPLE 13.10 Do Unions Affect Wages? 261 Substitution in Resource Markets 262 EXAMPLE 13.11 EXAMPLE 13.12 The Decision Not to Build a Supersonic Transport 263 EXAMPLE 13.13 Owners, Managers, and the Market for Corporate Control 265 CHAPTER FOURTEEN **Government-Imposed Market Distortions**

Price Ceilings 268
The Effects of a Price Ceiling
The Problem of Rationing
Alternative Rationing Procedures
Reallocation

Innovations Around Price Ceilings
Long-Run Effects
Scarcity versus Shortage
Efficiency
Price Floors 282

The Effects of a Price Floor Income Tax Surpluses and the Problem of Disposal Excess Profits Tax Innovations Around Price Floors Subsidies 299 Long-Run Effects The Effects of a Subsidy Efficiency Subsidizing Consumers Directly Subsidizing Producers Directly Restrictions on Entry 288 Why Restrict Entry? Efficiency Licensing Who Gets the Subsidy? Non-Price Competition Long-Run Effects Distortions of International Trade 303 Substitutes **Prohibited Activities Tariffs** Taxes 294 **Ouotas** The Effects of a Tax on a Particular Tariffs versus Quotas Other Non-Tariff Barriers Commodity or Resource Who Pays the Tax? Summary 307 Discussion and Thought Questions 308 The Government's Tax Revenue Efficiency Long-Run Effects Price Controls and the Natural Gas Market EXAMPLE 14.1 270 Minimum Wages EXAMPLE 14.2 272 Are Minimum Wages Discriminatory? EXAMPLE 14.3 EXAMPLE 14.4 A Sticky Mess EXAMPLE 14.5 The Peanut Problem 275 Shifting Supply to Maintain a Price Support, I? EXAMPLE 14.6 276 EXAMPLE 14.7 Shifting Supply to Maintain a Price Support, II? EXAMPLE 14.8 Restricting Entry into Financial Planning Services EXAMPLE 14.9 "A Sweet Deal for Kiwifruit" EXAMPLE 14.10 What Is an Entry Restriction Worth? EXAMPLE 14.11 Licensing Barbers and Entry Restrictions 282 EXAMPLE 14.12 Entry Restrictions and Illegal Activities: The Cab Market 285 EXAMPLE 14.13 Will Taxing Beer Save Lives? EXAMPLE 14.14 Who Pays the Social Security Tax? EXAMPLE 14.15 Import Quotas and the Automobile Market 294 EXAMPLE 14.16 "Yes, We (Greeks) Have No Bananas"

PART THREE Market Failure and the Misallocation of Resources: Problems of Efficiency and Fairness 310

CHAPTER FIFTEEN Monopoly 312

Market Power 312

Marginal Revenue and Market Price 313

Marginal Revenue Equals Market Price for a
Competitive Firm

When a Monopolist Increases Its Output,
the Market Price Falls

Marginal Revenue Is Less Than Market
Price for a Monopolist

The Response of a Monopolist 318

Competition versus Monopoly 318

The Effects of Different Market Structures
Market Failure: Inefficiency
Barriers to Entry 320

Ownership of a Natural Resource as a
Barrier to Entry
Technological Barriers and a Natural
Monopoly
Legal Barriers