PART I  Introduction

Chapter 1  Thinking Like an Economist  3
Economics: Studying Choice in a World of Scarcity  4
Applying the Cost-Benefit Principle  5
   Economic Surplus  6
   Opportunity Cost  6
   The Role of Economic Models  7
Four Important Decision Pitfalls  8
   Pitfall 1: Measuring Costs and Benefits as Proportions Rather Than Absolute Dollar Amounts  8
   Pitfall 2: Ignoring Opportunity Costs  9
   Pitfall 3: Failure to Ignore Sunk Costs  10
   Pitfall 4: Failure to Understand the Average–Marginal Distinction  11
Normative Economics versus Positive Economics  14
Economics: Micro and Macro  15
The Approach of This Text  15
Economic Naturalism  16

ECONOMIC NATURALIST 1.1: Why do many hardware manufacturers include more than $1,000 worth of “free” software with a computer selling for only slightly more than that?  17

ECONOMIC NATURALIST 1.2: Why don’t auto manufacturers make cars without heaters?  17

ECONOMIC NATURALIST 1.3: Why do the keypad buttons on drive-up automatic teller machines have Braille dots?  18

Summary  19
Core Principles  19
Key Terms  19
Review Questions  19
Problems  20
Answers to In-Chapter Exercises  21
Appendix: Working with Equations, Graphs, and Tables  23

Chapter 2  Comparative Advantage: The Basis for Exchange  35
Exchange and Opportunity Cost  36
   The Principle of Comparative Advantage  37

ECONOMIC NATURALIST 2.1: Where have all the .400 hitters gone?  39
   Sources of Comparative Advantage  40

ECONOMIC NATURALIST 2.2: Televisions and videocassette recorders were developed and first produced in the United States, but today the United States accounts for only a
minuscule share of the total world production of these products. Why did the United
States fail to retain its lead in these markets?  41
Comparative Advantage and Production Possibilities  41
  The Production Possibilities Curve  41
  How Individual Productivity Affects the Slope and Position of the PPC  44
  The Gains from Specialization and Exchange  46
  A Production Possibilities Curve for a Many-Person Economy  47
Factors That Shift the Economy’s Production Possibilities Curve  49
  Why Have Some Countries Been Slow to Specialize?  51
  Can We Have Too Much Specialization?  52
Comparative Advantage and International Trade  53
ECONOMIC NATURALIST 2.3: If trade between nations is so beneficial, why
are free-trade agreements so controversial?  53
Summary  54
Core Principles  54
Key Terms  54
Review Questions  54
Problems  55
Answers to In-Chapter Exercises  56

Chapter 3  Supply and Demand: An Introduction  59
What, How, and for Whom? Central Planning versus the Market  61
Buyers and Sellers in Markets  62
  The Demand Curve  63
  The Supply Curve  64
Market Equilibrium  66
  Rent Controls Reconsidered  69
  Pizza Price Controls?  72
Predicting and Explaining Changes in Prices and Quantities  73
  Shifts in Demand  74
ECONOMIC NATURALIST 3.1: When the federal government implements a large
pay increase for its employees, why do rents for apartments located near Washington
Metro stations go up relative to rents for apartments located far away from
Metro stations?  76
  Shifts in the Supply Curve  77
ECONOMIC NATURALIST 3.2: Why do major term papers go through so many more
revisions today than in the 1970s?  79
  Four Simple Rules  80
ECONOMIC NATURALIST 3.3: Why do the prices of some goods, like airline tickets to
Europe, go up during the months of heaviest consumption, while others, like sweet corn,
go down?  82
Markets and Social Welfare  83
  Cash on the Table  83
  Smart for One, Dumb for All  84
Summary  86
Core Principles  86
Key Terms  87
Review Questions  87
Problems  87
Answers to In-Chapter Exercises  88
Appendix: The Algebra of Supply and Demand  91
**Chapter 6**  
*Perfectly Competitive Supply: The Cost Side of the Market*  
Thinking about Supply: The Importance of Opportunity Cost  166  
Individual and Market Supply Curves  168  
Profit-Maximizing Firms in Perfectly Competitive Markets  169  
  - Profit Maximization  169  
  - The Demand Curve Facing a Perfectly Competitive Firm  170  
  - Production in the Short Run  171  
  - Some Important Cost Concepts  172  
  - Choosing Output to Maximize Profit  173  
  - A Note on the Firm’s Shutdown Condition  175  
  - Average Variable Cost and Average Total Cost  175  
  - A Graphical Approach to Profit Maximization  175  
  - Price = Marginal Cost: The Maximum-Profit Condition  177  
  - The “Law” of Supply  179  
Determinants of Supply Revisited  180  
  - Technology  180  
  - Input Prices  180  
  - The Number of Suppliers  181  
  - Expectations  181  
  - Changes in Prices of Other Products  181  
Applying the Theory of Supply  181  

**ECONOMIC NATURALIST 6.1:** When recycling is left to private market forces, why are many more aluminum beverage containers recycled than glass ones?  181  

**Chapter 7**  
*Efficiency and Exchange*  191  
Market Equilibrium and Efficiency  192  
  - Efficiency Is Not the Only Goal  195  
  - Why Efficiency Should Be the First Goal  195  
The Cost of Preventing Price Adjustments  196  
  - Price Ceilings  196  
  - Price Subsidies  199  
  - First-Come, First-Served Policies  201  

**ECONOMIC NATURALIST 7.1:** Why does no one complain any longer about being bumped from an overbooked flight?  201
Marginal Cost Pricing of Public Services  204
Taxes and Efficiency  206
  Who Pays a Tax Imposed on Sellers of a Good?  206
ECONOMIC NATURALIST 7.2: How will a tax on cars affect their prices in the long run?  207
  How a Tax Collected from a Seller Affects Economic Surplus  208
  Taxes, Elasticity, and Efficiency  210
  Taxes, External Costs, and Efficiency  211
Summary  212
Key Terms  212
Review Questions  213
Problems  213
Answers to In-Chapter Exercises  215

Chapter 8  The Quest for Profit and the Invisible Hand  217

The Central Role of Economic Profit  218
  Three Types of Profit  218
The Invisible Hand Theory  221
  Two Functions of Price  221
  Responses to Profits and Losses  222
  The Importance of Free Entry and Exit  228
Economic Rent versus Economic Profit  229
The Invisible Hand in Action  230
  The Invisible Hand at the Supermarket and on the Freeway  230
ECONOMIC NATURALIST 8.1: Why do supermarket checkout lines all tend to be roughly the same length?  230
  The Invisible Hand and Cost-Saving Innovations  231
  The Invisible Hand in Regulated Markets  231
ECONOMIC NATURALIST 8.2: Why do New York City taxicab medallions sell for more than $300,000?  232
ECONOMIC NATURALIST 8.3: Why did major commercial airlines install piano bars on the upper decks of Boeing 747s in the 1970s?  233
  The Invisible Hand in Antipoverty Programs  234
  The Invisible Hand in the Stock Market  234
ECONOMIC NATURALIST 8.4: Why isn’t a stock portfolio consisting of Canada’s 50 “best-managed companies” a particularly good investment?  237
The Distinction between an Equilibrium and a Social Optimum  238
  Smart for One, Dumb for All  239
ECONOMIC NATURALIST 8.5: Are there “too many” smart people working as corporate earnings forecasters?  239
Summary  240
Key Terms  241
Review Questions  241
Problems  241
Answers to In-Chapter Exercises  243

Chapter 9  International Trade  245

Comparative Advantage as a Basis for Trade  246
Production and Consumption Possibilities and the Benefits of Trade  247
  Consumption Possibilities with and without International Trade  248
A Supply and Demand Perspective on Trade 254
    Winners and Losers from Trade 258
    Protectionist Policies: Tariffs and Quotas 259
ECONOMIC NATURALIST 9.2: Why do consumers in the United States pay more than double the world price for sugar? 261
ECONOMIC NATURALIST 9.3: Who benefited from, and who was hurt by, voluntary export restraints on Japanese automobiles in the 1980s? 263
    The Inefficiency of Protectionism 264
Outsourcing 266
ECONOMIC NATURALIST 9.4: Is PBS economics reporter Paul Solman’s job a likely candidate for outsourcing? 266
Summary 268
Key Terms 268
Review Questions 268
Problems 269
Answers to In-Chapter Exercises 271
Appendix: An Algebraic Approach to Trade Analysis 275

PART 3 Market Imperfections

Chapter 10 Monopoly and Other Forms of Imperfect Competition 283
Imperfect Competition 284
    Different Forms of Imperfect Competition 284
    The Essential Difference between Perfectly and Imperfectly Competitive Firms 286
Five Sources of Market Power 287
    Exclusive Control over Important Inputs 287
    Patents and Copyrights 287
    Government Licenses or Franchises 287
    Economies of Scale (Natural Monopolies) 287
    Network Economies 288
Economies of Scale and the Importance of Start-Up Costs 289
ECONOMIC NATURALIST 10.1: Why does Intel sell the overwhelming majority of all microprocessors used in personal computers? 291
Profit Maximization for the Monopolist 292
    Marginal Revenue for the Monopolist 292
    The Monopolist’s Profit-Maximizing Decision Rule 294
    Being a Monopolist Doesn’t Guarantee an Economic Profit 296
Why the Invisible Hand Breaks Down under Monopoly 297
Using Discounts to Expand the Market 299
    Price Discrimination Defined 299
ECONOMIC NATURALIST 10.2: Why do many movie theaters offer discount tickets to students? 300
    How Price Discrimination Affects Output 300
    The Hurdle Method of Price Discrimination 303
    Is Price Discrimination a Bad Thing? 305
    Examples of Price Discrimination 306
ECONOMIC NATURALIST 10.3: Why might an appliance retailer instruct its clerks to hammer dents into the sides of its stoves and refrigerators? 307
Chapter 12

ECONOMIC NATURALIST 12.4: What is the purpose of free speech laws?  357
ECONOMIC NATURALIST 12.5: Why does government subsidize the planting of trees on hillsides?  357
   The Optimal Amount of Negative Externalities Is Not Zero  357
   Compensatory Taxes and Subsidies  358
Property Rights and the Tragedy of the Commons  360
   The Problem of Unpriced Resources  360
   The Effect of Private Ownership  362
   When Private Ownership Is Impractical  363
ECONOMIC NATURALIST 12.6: Why do blackberries in public parks get picked too soon?  363
ECONOMIC NATURALIST 12.7: Why are shared milkshakes consumed too quickly?  363
Positional Externalities  365
   Payoffs That Depend on Relative Performance  365
ECONOMIC NATURALIST 12.8: Why do football players take anabolic steroids?  365
   Positional Arms Races and Positional Arms Control Agreements  366
   Social Norms as Positional Arms Control Agreements  368
Summary  370
Key Terms  370
Review Questions  370
Problems  371
Answers to In-Chapter Exercises  373

Chapter 13

The Economics of Information  375
How the Middleman Adds Value  376
The Optimal Amount of Information  378
   The Cost-Benefit Test  378
   The Free-Rider Problem  379
ECONOMIC NATURALIST 13.1: Why is finding a knowledgeable salesclerk often difficult?  379
ECONOMIC NATURALIST 13.2: Why did Rivergate Books, the last bookstore in Lambertville, New Jersey, recently go out of business?  379
   Two Guidelines for Rational Search  380
   The Gamble Inherent in Search  381
   The Commitment Problem When Search Is Costly  382
Asymmetric Information  383
   The Lemons Model  384
   The Credibility Problem in Trading  385
   The Costly-to-Fake Principle  386
ECONOMIC NATURALIST 13.3: Why do firms insert the phrase “As advertised on TV” when they advertise their products in magazines and newspapers?  386
ECONOMIC NATURALIST 13.4: Why do many companies care so much about elite educational credentials?  387
   Conspicuous Consumption as a Signal of Ability  387
ECONOMIC NATURALIST 13.5: Why do many clients seem to prefer lawyers who wear expensive suits?  388
   Statistical Discrimination  388
ECONOMIC NATURALIST 13.6: Why do males under 25 years of age pay more than other drivers for auto insurance?  388
   Adverse Selection  390
   Moral Hazard  390
Disappearing Political Discourse  391
PART 4 Economics of Public Policy

Chapter 14 Labor Markets, Poverty, and Income Distribution 399
The Economic Value of Work 400
The Equilibrium Wage and Employment Levels 402
  The Demand Curve for Labor 402
  The Supply Curve of Labor 403
  Market Shifts 404
Explaining Differences in Earnings 405
  Human Capital Theory 405
  Labor Unions 405
ECONOMIC NATURALIST 14.1: If unionized firms have to pay more, how do they manage to survive in the face of competition from their nonunionized counterparts? 407
  Compensating Wage Differentials 407
ECONOMIC NATURALIST 14.2: Why do some ad copy writers earn more than others? 407
  Discrimination in the Labor Market 408
  Winner-Take-All Markets 410
ECONOMIC NATURALIST 14.3: Why does Renée Fleming earn millions more than sopranos of only slightly lesser ability? 410
Recent Trends in Inequality 411
Is Income Inequality a Moral Problem? 412
Methods of Income Redistribution 414
  Welfare Payments and In-Kind Transfers 414
  Means-Tested Benefit Programs 414
  The Negative Income Tax 415
  Minimum Wages 416
  The Earned-Income Tax Credit 417
  Public Employment for the Poor 418
  A Combination of Methods 419
Summary 420
Key Terms 421
Review Questions 421
Problems 421
Answers to In-Chapter Exercises 423

Chapter 15 The Environment, Health, and Safety 425
The Economics of Health Care Delivery 426
  Applying the Cost-Benefit Criterion 426
  Designing a Solution 428
  The HMO Revolution 429
ECONOMIC NATURALIST 15.1: Why is a patient with a sore knee more likely to receive an MRI exam if he has conventional health insurance than if he belongs to a health maintenance organization? 429

Paying for Health Insurance 430

ECONOMIC NATURALIST 15.2: In the richest country on Earth, why do so many people lack basic health insurance? 431

Using Price Incentives in Environmental Regulation 432

Taxing Pollution 432

Auctioning Pollution Permits 434

Workplace Safety Regulation 435

ECONOMIC NATURALIST 15.3: Why does the government require safety seats for infants who travel in cars, but not for infants who travel in airplanes? 439

Public Health and Security 440

ECONOMIC NATURALIST 15.4: Why do many states have laws requiring students to be vaccinated against childhood illnesses? 440

ECONOMIC NATURALIST 15.5: Why do more Secret Service agents guard the president than the vice president, and why do no Secret Service agents guard college professors? 441

Summary 442

Key Terms 443

Review Questions 443

Problems 443

Answers to In-Chapter Exercises 445

Chapter 16

Public Goods and Tax Policy 447

Government Provision of Public Goods 448

Public Goods versus Private Goods 448

Paying for Public Goods 450

ECONOMIC NATURALIST 16.1: Why don’t most married couples contribute equally to joint purchases? 452

The Optimal Quantity of a Public Good 453

The Demand Curve for a Public Good 453

Private Provision of Public Goods 455

ECONOMIC NATURALIST 16.2: Why do television networks favor Jerry Springer over Masterpiece Theater? 456

Additional Functions of Government 458

Externalities and Property Rights 458

Local, State, or Federal? 459

Sources of Inefficiency in the Political Process 460

Pork Barrel Legislation 460

ECONOMIC NATURALIST 16.3: Why does check-splitting make the total restaurant bill higher? 460

ECONOMIC NATURALIST 16.4: Why do legislators often support one another’s pork barrel spending programs? 461

Rent-Seeking 461

Starve the Government? 463

What Should We Tax? 464

Summary 466

Key Terms 467

Review Questions 467

Problems 467

Answers to In-Chapter Exercises 469
PART 5  Macroeconomics: Issues and Data

Chapter 17  Macroeconomics: The Bird’s-Eye View of the Economy  473

The Major Macroeconomic Issues  475
  Economic Growth and Living Standards  475
  Productivity  477
  Recessions and Expansions  478
  Unemployment  479
  Inflation  480
  Economic Interdependence among Nations  481

Macroeconomic Policy  483
  Types of Macroeconomic Policy  483
  Positive versus Normative Analyses of Macroeconomic Policy  484

Aggregation  485

Studying Macroeconomics: A Preview  487
  Summary  488
  Key Terms  488
  Review Questions  489
  Problems  489
  Answers to In-Chapter Exercises  490

Chapter 18  Measuring Economic Activity: GDP and Unemployment  491

Gross Domestic Product: Measuring the Nation’s Output  492
  Market Value  492

ECONOMIC NATURALIST 18.1: Why has female participation in the labor market increased by so much? What explains the trends illustrated in Figure 18.1?  494
  Final Goods and Services  495
  Produced within a Country during a Given Period  498

The Expenditure Method for Measuring GDP  499

GDP and the Incomes of Capital and Labor  503

Nominal GDP versus Real GDP  504

ECONOMIC NATURALIST 18.2: Can nominal and real GDP ever move in different directions?  506

Real GDP Is Not the Same as Economic Well-Being  508
  Leisure Time  508

ECONOMIC NATURALIST 18.3: Why do people work fewer hours today than their great-grandparents did?  508
  Nonmarket Economic Activities  509
  Environmental Quality and Resource Depletion  509
  Quality of Life  510
  Poverty and Economic Inequality  510

But GDP Is Related to Economic Well-Being  510
  Availability of Goods and Services  511
  Health and Education  511

ECONOMIC NATURALIST 18.4: Why do far fewer children complete high school in poor countries than in rich countries?  512

ECONOMIC NATURALIST 18.5: How do economists identify the determinants of happiness?  513

The Unemployment Rate  513
  Measuring Unemployment  514
  The Costs of Unemployment  515
Chapter 21  Workers, Wages, and Unemployment in the Modern Economy 585

Five Important Labor Market Trends 586
- Trends in Real Wages 586
- Trends in Employment and Unemployment 587

Supply and Demand in the Labor Market 588
- Wages and the Demand for Labor 588
- Shifts in the Demand for Labor 590
- The Supply of Labor 593
- Shifts in the Supply of Labor 594

Explaining the Trends in Real Wages and Employment 595

ECONOMIC NATURALIST 21.1: Why have real wages increased by so much in the industrialized countries? 595

ECONOMIC NATURALIST 21.2: Since the 1970s, real wage growth in the United States has slowed, while employment has expanded rapidly. What accounts for these trends? 596
- Increasing Wage Inequality: The Effects of Globalization 598

ECONOMIC NATURALIST 21.3: Why has the gap between the wages of skilled and unskilled workers widened in recent years? (1) Globalization 598
- Increasing Wage Inequality: Technological Change 600

ECONOMIC NATURALIST 21.4: Why has the gap between the wages of less-skilled and higher-skilled workers widened in recent years? (2) Technological change 600

Unemployment 603
- Types of Unemployment and Their Costs 603
- Impediments to Full Employment 605
Chapter 24  Financial Markets and International Capital Flows 671
The Financial System and the Allocation of Saving to
Productive Uses 672
The Banking System 673
ECONOMIC NATURALIST 24.1: How has the banking crisis in Japan affected the
Japanese economy? 674
Bonds and Stocks 675
Bond Markets, Stock Markets, and the Allocation of Savings 679
ECONOMIC NATURALIST 24.2: Why did the U.S. stock market rise sharply in the
1990s, then fall in the new millennium? 681
International Capital Flows 682
Capital Flows and the Balance of Trade 683
The Determinants of International Capital Flows 685
Saving, Investment, and Capital Inflows 686
ECONOMIC NATURALIST 24.3: Why did the Argentine economy collapse in
2001–2002? 688
The Saving Rate and the Trade Deficit 689
ECONOMIC NATURALIST 24.4: Why is the U.S. trade deficit so large? 690
Summary 692
Key Terms 692
Review Questions 693
Problems 693
Answers to In-Chapter Exercises 695

PART 7  The Economy in the Short Run

Chapter 25  Short-Term Economic Fluctuations: An Introduction 699
Recessions and Expansions 701
ECONOMIC NATURALIST 25.1: Calling the 2001 recession 703
Some Facts about Short-Term Economic Fluctuations 704
Output Gaps and Cyclical Unemployment 707
Potential Output and the Output Gap 707
The Natural Rate of Unemployment and Cyclical Unemployment 709
ECONOMIC NATURALIST 25.2: Why has the natural rate of unemployment in the
United States apparently declined? 709
Okun's Law 710
ECONOMIC NATURALIST 25.3: Why did the Federal Reserve take measures to slow
down the economy in 1999 and 2000? 712
Why Do Short-Term Fluctuations Occur? A Preview and a Parable 713
ECONOMIC NATURALIST 25.4: Why did the Coca-Cola Company test a vending
machine that "knows" when the weather is hot? 715
Summary 716
Key Terms 716
Review Questions 716
Problems 717
Answers to In-Chapter Exercises 718
Chapter 26  Spending and Output in the Short Run  719
The Keynesian Model’s Crucial Assumption: Firms Meet Demand at Preset Prices  722
ECONOMIC NATURALIST 26.1: Will new technologies eliminate menu costs?  723
Planned Aggregate Expenditure  723
Planned Spending versus Actual Spending  724
Hey, Big Spender! Consumer Spending and the Economy  725
ECONOMIC NATURALIST 26.2: What effect did the 2000–2002 decline in U.S. stock market values have on consumption spending?  726
Planned Aggregate Expenditure and Output  728
Short-Run Equilibrium Output  730
Planned Spending and the Output Gap  733
ECONOMIC NATURALIST 26.3: Why was the deep Japanese recession of the 1990s bad news for the rest of East Asia?  737
ECONOMIC NATURALIST 26.4: What caused the 2001 recession in the United States?  737
The Multiplier  738
Stabilizing Planned Spending: The Role of Fiscal Policy  739
Government Purchases and Planned Spending  739
ECONOMIC NATURALIST 26.5: Why is Japan building roads nobody wants to use?  741
ECONOMIC NATURALIST 26.6: Does military spending stimulate the economy?  741
Taxes, Transfers, and Aggregate Spending  743
ECONOMIC NATURALIST 26.7: Why did the federal government send out millions of $300 and $600 checks to households in 2001?  745
Fiscal Policy as a Stabilization Tool: Three Qualifications  746
Fiscal Policy and the Supply Side  746
The Problem of Deficits  746
The Relative Inflexibility of Fiscal Policy  746
Summary  747
Key Terms  748
Review Questions  748
Problems  749
Answers to In-Chapter Exercises  751
Appendix A: An Algebraic Solution of the Basic Keynesian Model  753
Appendix B: The Multiplier in the Basic Keynesian Model  757

Chapter 27  Stabilizing the Economy: The Role of the Fed  759
The Federal Reserve and Interest Rates  760
The Demand for Money  760
Macroeconomic Factors That Affect the Demand for Money  763
The Money Demand Curve  764
ECONOMIC NATURALIST 27.1: Why does the average Argentine hold more U.S. dollars than the average U.S. citizen?  766
The Supply of Money and Money Market Equilibrium  767
How the Fed Controls the Nominal Interest Rate  768
ECONOMIC NATURALIST 27.2: What’s so important about the federal funds rate?  770
A Second Way the Fed Controls the Money Supply: Discount Window Lending  771
A Third Way of Controlling the Money Supply: Changing Reserve Requirements 772
Can the Fed Control the Real Interest Rate? 772
The Effects of Federal Reserve Actions on the Economy 773
Planned Aggregate Expenditure and the Real Interest Rate 774
The Fed Fights a Recession 776

ECONOMIC NATURALIST 27.3: How did the Fed respond to recession and the terror attacks in 2001? 778
The Fed Fights Inflation 778

ECONOMIC NATURALIST 27.4: Why did the Fed raise interest rates in 2004 and 2005? 780
ECONOMIC NATURALIST 27.5: Why does news of inflation hurt the stock market? 780
ECONOMIC NATURALIST 27.6: Should the Federal Reserve respond to changes in stock prices? 781
The Fed's Monetary Policy Reaction Function 782

ECONOMIC NATURALIST 27.7: What is the Taylor rule? 786
Summary 786
Key Terms 787
Review Questions 787
Problems 788
Answers to In-Chapter Exercises 790
Appendix: Monetary Policy in the Basic Keynesian Model 793

Chapter 28 Inflation, Aggregate Supply, and Aggregate Demand 795

Inflation, Spending, and Output: The Aggregate Demand Curve 796
Inflation, the Fed, and the AD Curve 797
Other Reasons for the Downward Slope of the AD Curve 798
Shifts of the Aggregate Demand Curve 799
Shifts of the AD Curve versus Movements along the AD Curve 802

Inflation and Aggregate Supply 804
Inflation Inertia 804
The Output Gap and Inflation 807
The Aggregate Demand–Aggregate Supply Diagram 808
The Self-Correcting Economy 811

Sources of Inflation 812
Excessive Aggregate Spending 812

Inflation Shocks 815

ECONOMIC NATURALIST 28.2: Why did inflation escalate in the United States in the 1970s? 816
Shocks to Potential Output 817

ECONOMIC NATURALIST 28.3: Was Greenspan right in 1996? 818
Fiscal Policy and the Supply Side 820

ECONOMIC NATURALIST 28.4: Estimating your marginal tax rate than Europeans? 824
Summary 826
Key Terms 827
Review Questions 827
Problems 827
Answers to In-Chapter Exercises 828
PART 8 The International Economy

Chapter 30 Exchange Rates and the Open Economy 863

Exchange Rates 864
Nominal Exchange Rates 864
Flexible versus Fixed Exchange Rates 867

The Determination of the Exchange Rate in the Short Run 868
A Supply and Demand Analysis 868

ECONOMIC NATURALIST 30.1: The U.S. trade deficit and the value of the dollar 870
Changes in the Supply of Dollars 871
Changes in the Demand for Dollars 872

ECONOMIC NATURALIST 30.2: Does a strong currency imply a strong economy? 873

Monetary Policy and the Exchange Rate 873

ECONOMIC NATURALIST 30.3: Why did the dollar appreciate nearly 50 percent in the first half of the 1980s? 874

ECONOMIC NATURALIST 30.4: Why did the dollar depreciate more than 25 percent in 2002–2004? 874
The Exchange Rate as a Tool of Monetary Policy 875

Fixed Exchange Rates 876

How to Fix an Exchange Rate 876

ECONOMIC NATURALIST 30.5: Should China change the way it manages its exchange rate? 879
Speculative Attacks 880

ECONOMIC NATURALIST 30.6: Can a speculative attack occur under flexible exchange rates? 882

Monetary Policy and the Fixed Exchange Rate 883
ECONOMIC NATURALIST 30.7: What were the causes and consequences of the East Asian crisis of 1997–1998? 885

ECONOMIC NATURALIST 30.8: How did policy mistakes contribute to the Great Depression? 886

Should Exchange Rates Be Fixed or Flexible? 888

ECONOMIC NATURALIST 30.9: Why have 11 European countries adopted a common currency? 889

Determination of the Exchange Rate in the Long Run 890

The Real Exchange Rate 890

A Simple Theory of Exchange Rates: Purchasing Power Parity (PPP) 892

Shortcomings of the PPP Theory 895

Summary 896

Key Terms 897

Review Questions 897

Problems 898

Answers to In-Chapter Exercises 900

Glossary G-1

Index I-1