Preface xv Reviewers xxv



1 Limits, Alternatives, and Choices 3

The Economic Perspective 4

Scarcity and Choice

Illustrating the Idea Did Zuckerberg, Seacrest, and Swift Make Bad Choices? 4

Purposeful Behavior / Marginalism: Comparing Benefits and Costs 4

Applying the Analysis Fast-Food Lines 6

Theories, Principles, and Models 6

Microeconomics and Macroeconomics 8

Microeconomics / Macroeconomics

Individuals' Economic Problem 9

Limited Income / Unlimited Wants / A Budget Line

Society's Economic Problem 12

Scarce Resources / Resource Categories

Production Possibilities Model 14

Production Possibilities Table / Production Possibilities Curve / Law of Increasing Opportunity Costs / Optimal Allocation

Applying the Analysis The Economics of War 18

Unemployment, Growth, and the Future 19

A Growing Economy

Applying the Analysis Information Technology

and Biotechnology 21

Present Choices and Future Possibilities

Summary

Terms and Concepts

Questions

Problems

Chapter One Appendix: Graphs and Their Meaning 26

Construction of a Graph / Direct and Inverse Relationships / Dependent and Independent Variables / Other Things Equal / Slope of a Line / Slope of a Nonlinear Curve

Appendix Summary

Appendix Terms and Concepts

Appendix Questions

Appendix Problems

2 The Market System and the Circular Flow 33

Economic Systems 34

The Command System / The Market System

Characteristics of the Market System 35

Private Property / Freedom of Enterprise and Choice / Self-Interest / Competition / Markets and Prices / Technology and Capital Goods / Specialization / Use of Money / Active, but Limited, Government

Four Fundamental Questions 41

What Will Be Produced?

Applying the Analysis McHits and McMisses 42

How Will the Goods and Services Be Produced? / Who Will Get the Output? / How Will the System Promote Progress?

Applying the Analysis The "Invisible Hand" 44

Applying the Analysis The Demise of the Command Systems 45

The Circular Flow Model 46

Households / Businesses / Product Market / Resource Market

Applying the Analysis Some Facts About U.S. Businesses 48

Applying the Analysis Some Facts About U.S. Households 50

Summary

Terms and Concepts

Questions

Problems



Price, Quantity, and Efficiency

3 Demand, Supply, and Market Equilibrium 56

Demand 57

Law of Demand / The Demand Curve / Market Demand / Changes in Demand / Changes in Quantity Demanded

Supply 62

Law of Supply / Market Supply / Determinants of Supply / Changes in Supply / Changes in Quantity Supplied

Market Equilibrium 66

Equilibrium Price and Quantity / Rationing Function of Prices

Applying the Analysis Uber and Dynamic Pricing 68

Changes in Demand, Supply, and Equilibrium 68

Changes in Demand / Changes in Supply / Complex Cases

Government-Set Prices 70

Applying the Analysis Price Ceilings on Gasoline 71

Applying the Analysis Rent Controls 72

Applying the Analysis Price Floors on Wheat 73

Summary

Terms and Concepts

Questions

Problems

Chapter Three Appendix: Additional Examples of Supply and Demand 79

Changes in Supply and Demand / Preset Prices

Appendix Summary

Appendix Questions

Appendix Problems

4 Elasticity of Demand and Supply 87

Price Elasticity of Demand 88

The Price-Elasticity Coefficient and Formula / Interpretations of E_d

Illustrating the Idea A Bit of a Stretch 91

The Total-Revenue Test / Price Elasticity Along a Linear Demand Curve / Determinants of Price Elasticity of Demand **Applying the Analysis** Price Elasticity of Demand and College Tuition 96

Applying the Analysis Decriminalization of Illegal Drugs 97

Applying the Analysis Excise Taxes and Tax Revenue 97

Applying the Analysis Fluctuating Farm Income 98

Price Elasticity of Supply 99

Price Elasticity of Supply: The Market Period / Price Elasticity of Supply: The Short Run / Price Elasticity of Supply: The Long Run

Applying the Analysis Antiques and Reproductions 102

Applying the Analysis Volatile Gold Prices 102

Income Elasticity of Demand 103

Normal Goods / Inferior Goods

Applying the Analysis Which Consumer Products Suffer the Greatest Demand Decreases during Recessions? 103

Cross-Elasticity of Demand 104

Substitute Goods / Complementary Goods / Independent Goods

Applying the Analysis Using Cross-Elasticity to Make Business and Regulatory Decisions 104

Summary

Terms and Concepts

Questions

Problems

5 Market Failures: Public Goods and Externalities 108

Market Failures in Competitive Markets 109

Demand-Side Market Failures / Supply-Side Market Failures

Efficiently Functioning Markets 110

Private and Public Goods 110

Private Goods Characteristics / Profitable Provision / Public Goods Characteristics

Illustrating the Idea Art for Art's Sake 113

Comparing Marginal Benefit and Marginal Cost

Applying the Analysis Cost-Benefit Analysis 115

Externalities 116

Negative Externalities / Positive Externalities

Illustrating the Idea Beekeepers and the Coase

Theorem 119

Government Intervention

Applying the Analysis Lojack: A Case of Positive Externalities 122

Applying the Analysis Reducing Greenhouse Gases 123 Society's Optimal Amount of Externality Reduction

Financing the Public Sector: Taxation 125

Apportioning the Tax Burden / Benefits Received versus Ability to Pay / Progressive, Proportional, and Regressive Taxes / Tax Progressivity in the United States

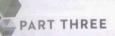
Government's Role in the Economy 129

Summary

Terms and Concepts

Questions

Problems



Product Markets

6 Businesses and Their Costs 136

The Business Population 137

Advantages of Corporations / The Principal-Agent Problem

Applying the Analysis Unprincipled Agents 139

Economic Costs 139

Explicit and Implicit Costs / Accounting Profit and Normal Profit / Economic Profit / Short Run and Long Run

Short-Run Production Relationships 144

Law of Diminishing Returns / Relevancy for Firms

Illustrating the Idea Diminishing Returns

from Study 145

Tabular and Graphical Representations

Illustrating the Idea Exam Scores 148

Short-Run Production Costs 148

Fixed, Variable, and Total Costs

Applying the Analysis Sunk Costs 150

Per-Unit, or Average, Costs / Marginal Cost

Applying the Analysis Rising Gasoline Prices 153

Long-Run Production Costs 153

Firm Size and Costs / The Long-Run Cost Curve / Economies and Diseconomies of Scale

Applying the Analysis The Verson Stamping

Machine 158

Minimum Efficient Scale and Industry Structure

Applying the Analysis Aircraft Assembly Plants versus Concrete Plants 160

Summary

Terms and Concepts

Questions

Problems

7 Pure Competition 164

Four Market Models 165

Pure Competition: Characteristics and Occurrence 166

Demand as Seen by a Purely Competitive Seller 167

Perfectly Elastic Demand / Average, Total, and Marginal Revenue

Profit Maximization in the Short Run 169

Profit Maximization / Loss Minimization and Shutdown

Applying the Analysis The Still There Motel 174

Marginal Cost and Short-Run Supply 175

Generalized Depiction / Firm and Industry: Equilibrium Price

Profit Maximization in the Long Run 178

Assumptions / Goal of Our Analysis / Long-Run Equilibrium

Applying the Analysis The Exit of Farmers from U.S. Agriculture 182

Long-Run Supply for a Constant-Cost Industry / Long-Run Supply for an Increasing-Cost Industry / Long-Run Supply for a Decreasing-Cost Industry

Pure Competition and Efficiency 185

Productive Efficiency: P = Minimum ATC / AllocativeEfficiency: P = MC

Summary

Terms and Concepts

Questions

Problems

8 Pure Monopoly 191

An Introduction to Pure Monopoly 192

Barriers to Entry 192

Economies of Scale / Legal Barriers to Entry: Patents and Licenses / Ownership or Control of Essential Resources / Pricing and Other Strategic Barriers to Entry

Monopoly Demand 194

Marginal Revenue Is Less than Price / The Monopolist Is a Price Maker

Output and Price Determination 197

Cost Data / MR = MC Rule / Misconceptions Concerning Monopoly Pricing

Economic Effects of Monopoly 200

Price, Output, and Efficiency / Income Transfer / Cost Complications

Applying the Analysis Monopoly Power in the Internet Age 204

Price Discrimination 205

Conditions / Examples / Graphical Analysis

Applying the Analysis Price Discrimination at the Ballpark 207

Monopoly and Antitrust Policy 208

Not Widespread / Antitrust Policy

Applying the Analysis United States v. Microsoft 210

Sum mary

Terms and Concepts

Questions

Problems

9 Monopolistic Competition and Oligopoly 215

Monopolistic Competition 216

Relatively Large Number of Sellers / Differentiated Products / Easy Entry and Exit / Advertising / Monopolistically Competitive Industries

Price and Output in Monopolistic Competition 218

The Firm's Demand Curve / The Short Run: Profit or Loss / The Long Run: Only a Normal Profit

Monopolistic Competition and Efficiency 220

Neither Productive nor Allocative Efficiency / Excess Capacity / Product Variety and Improvement

Oligopoly 222

A Few Large Producers / Either Homogeneous or Differentiated Products / Control over Price, but Mutual Interdependence

Illustrating the Idea Creative Strategic Behavior 223

Entry Barriers / Mergers

Oligopoly Behavior: A Game-Theory Overview 225

Illustrating the Idea The Prisoner's Dilemma 225
Mutual Interdependence Revisited / Collusion /
Incentive to Cheat

Kinked-Demand Model 227

Kinked-Demand Curve / Price Inflexibility / Price Leadership

Applying the Analysis Challenges to Price

Leadership 230

Collusion 230

Joint-Profit Maximization

Applying the Analysis Cartels and Collusion 232

Obstacles to Collusion

Oligopoly and Advertising 233

Positive Effects of Advertising / Potential Negative Effects of Advertising

Oligopoly and Efficiency 236

Inefficiency / Qualifications

Applying the Analysis Internet Oligopolies 237

Summary

Terms and Concepts

Questions

Problems

PART FOUR

GDP, Growth, and Instability

10 GDP and Economic Growth 242

Gross Domestic Product 243

A Monetary Measure / Avoiding Multiple Counting / Excluding Secondhand Sales and Financial Transactions

Measuring GDP 245

Personal Consumption Expenditures (C) / Gross Private Domestic Investment (I_g) / Government Purchases (G) / Net Exports (X_g) / Adding It Up: GDP = C + I_g + G + X_g

Nominal GDP versus Real GDP 248

Applying the Analysis The Underground Economy 249

Economic Growth 250

Growth as a Goal / Arithmetic of Growth

Illustrating the Idea Growth Rates Matter! 251

Growth in the United States

Determinants of Growth 253

Supply Factors / Demand Factor / Efficiency Factor

Production Possibilities Analysis 254

Growth and Production Possibilities / Inputs and Productivity

xi

Accounting for Growth 256

Labor Inputs versus Labor Productivity / Technological Advance / Quantity of Capital / Education and Training / Economies of Scale and Resource Allocation / Institutional Structures that Promote Growth / Other Factors

Recent Fluctuations in the Average Rate of Productivity Growth 262

Reasons for the Rise in the Average Rate of Productivity Growth Between 1995 and 2010 / Implications for Economic Growth / The Recent Productivity Slowdown

Is Growth Desirable and Sustainable? 267

The Antigrowth View / In Defense of Economic Growth

Summary

Terms and Concepts

Questions

Problems

11 Business Cycles, Unemployment, and Inflation 272

Business Cycles 273

Causes of Business Cycles / Cyclical Impact: Durables and Nondurables

Applying the Analysis Stock Prices and Macroeconomic Instability 276

Unemployment 277

Measurement of Unemployment / Types of Unemployment / Definition of Full Employment / Economic Cost of Unemployment / International Comparisons

Inflation 281

Meaning of Inflation / Measurement of Inflation / Facts of Inflation / Types of Inflation

Illustrating the Idea Clipping Coins 284

Redistribution Effects of Inflation 285

Who Is Hurt by Inflation? / Who Is Unaffected or Helped by Inflation? / Anticipated Inflation / Negative Nominal Interest

Does Inflation Affect Output? 288

Cost-Push Inflation and Real Output / Demand-Pull Inflation and Real Output

Applying the Analysis The Specter of Deflation 289

Applying the Analysis Hyperinflation 289

Terms and Concepts
Questions
Problems

12 Aggregate Demand and Aggregate Supply 292

Aggregate Demand 293

Changes in Aggregate Demand 293

Consumer Spending

Applying the Analysis What Wealth Effect? 295
Investment Spending / Government Spending / Net Export

Investment Spending / Government Spending / Net Export
Spending

Aggregate Supply 299

Aggregate Supply in the Immediate Short Run / Aggregate Supply in the Short Run / Aggregate Supply in the Long Run / Focusing on the Short Run

Changes in Aggregate Supply 304

Input Prices / Productivity / Legal-Institutional Environment

Equilibrium Price Level and Real GDP 307

Changes in the Price Level and Real GDP

Applying the Analysis Demand-Pull Inflation 308

Applying the Analysis Cost-Push Inflation 310

Downward Price-Level Inflexibility

Illustrating the Idea The Ratchet Effect 312

Applying the Analysis Recession and Cyclical

Unemployment 313

The Multiplier Effect / Self Correction?

Summary

Terms and Concepts

Questions

Problems

13 Fiscal Policy, Deficits, and Debt 318

Fiscal Policy and the AD-AS Model 319

Expansionary Fiscal Policy / Contractionary Fiscal Policy

Built-In Stability 322

Automatic or Built-In Stabilizers / Economic Importance

Evaluating Fiscal Policy 323

Applying the Analysis Recent U.S. Fiscal Policy 326

Problems, Criticisms, and Complications 329

Problems of Timing / Political Considerations / Future Policy Reversals / Offsetting State and Local Finance / Crowding-Out Effect / Current Thinking on Fiscal

The U.S. Public Debt 332

Ownership / Debt and GDP / International Comparisons / Interest Charges

False Concerns? 335

Bankruptcy / Burdening Future Generations

Substantive Issues 337

Income Distribution / Incentives / Foreign-Owned Public Debt / Crowding-Out Effect Revisited

The Long-Run Fiscal Imbalance: Social Security 339

The Future Funding Shortfall / Policy Options

Summary

Terms and Concepts

Questions

Problems



Money, Banking, and Monetary Policy

14 Money, Banking, and Financial Institutions 346

The Functions of Money 347

The Components of the Money Supply 348

Money Definition: M1 / Money Definition: M2

What "Backs" the Money Supply? 352

The Value of Money

Illustrating the Idea Are Credit Cards Money? 353

Money and Prices

The Federal Reserve and the Banking System 355

The Board of Governors / The 12 Federal Reserve Banks / FOMC / Commercial Banks and Thrifts / Fed Functions and Responsibilities / Federal Reserve Independence

The Financial Crisis of 2007 and 2008 359

The Mortgage Default Crisis / Securitization / Failures and Near-Failures of Financial Firms / The Treasury Bailout: TARP

The Postcrisis U.S. Financial Services Industry 362

The Fractional Reserve System 364

Illustrating the Idea The Goldsmiths 365

A Single Commercial Bank 366

Transaction 1: Creating a Bank / Transaction 2: Acquiring Property and Equipment / Transaction 3: Accepting Deposits / Transaction 4: Depositing Reserves in a Federal Reserve Bank / Transaction 5: Clearing a Check Drawn Against the Bank / Transaction 6: Granting a Loan (Creating Money)

The Banking System: Multiple-Deposit Expansion 373

The Banking System's Lending Potential / The Monetary Multiplier / Reversibility: The Multiple Destruction of Money

Applying the Analysis The Bank Panics of 1930 to 1933 376

Summary

Terms and Concepts

Questions

Problems

15 Interest Rates and Monetary Policy 381

Interest Rates 382

The Demand for Money / The Equilibrium Interest Rate

Illustrating the Idea That Is Interest 385

Tools of Monetary Policy 386

Open-Market Operations / Repos and Reverse Repos / The Reserve Ratio / The Discount Rate / Interest on Reserves / Relative Importance / Easy Money and Tight Money

Monetary Policy, Real GDP, and the Price Level 391

The Cause-Effect Chain / Effects of an Easy Money Policy / Effects of a Tight Money Policy

Monetary Policy in Action 395

The Focus on the Federal Funds Rate

Applying the Analysis Recent U.S. Monetary Policy 397

Applying the Analysis The Financial Crisis: The Fed Responds 399

Problems and Complications

Applying the Analysis Less than Zero 401

Summar

Terms and Concepts

Questions

Problems



International Economics

16 International Trade and Exchange Rates 406

Trade Facts 407

Comparative Advantage and Specialization 408

Illustrating the Idea A CPA and a House Painter 409

Comparative Advantage: Production Possibilities Analysis / Trade with Increasing Costs

The Foreign Exchange Market 414

Exchange Rates / Depreciation and Appreciation / Determinants of Exchange Rates

Government and Trade 418

Trade Protections and Subsidies / Economic Impact of Tariffs / Net Costs of Tariffs / So Why Government Trade Protections?

Illustrating the Idea Buy American? 421

Three Arguments for Protection 422

Increased-Domestic-Employment Argument / Cheap-Foreign-Labor Argument / Protection-against-Dumping Argument

Trade Adjustment Assistance 424

Applying the Analysis Is Offshoring of Jobs Bad? 424

Multilateral Trade Agreements and Free-Trade Zones 425

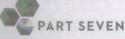
General Agreement on Tariffs and Trade / World Trade Organization / European Union / North American Free Trade Agreement / Recent U.S. Trade Deficits / Causes of the Trade Deficits / Implications of U.S. Trade Deficits

Summary

Terms and Concepts

Questions

Problems



Resource Markets

17 Wage Determination 434

A Focus on Labor 435

Labor Demand 435

Marginal Revenue Product / Rule for Employing Labor: MRP = MRC / MRP as Labor Demand Schedule

Market Demand for Labor 438

Changes in Labor Demand 438

Changes in Product Demand / Changes in Productivity / Changes in the Prices of Other Resources

Applying the Analysis Occupational Employment Trends 441

Elasticity of Labor Demand 442

Ease of Resource Substitutability / Elasticity of Product Demand / Ratio of Labor Cost to Total Cost

Market Supply of Labor 443

Wage and Employment Determination 444

Monopsony 445

Upward-Sloping Labor Supply to Firm / MRC Higher than the Wage Rate / Equilibrium Wage and Employment

Applying the Analysis Monopsony Power 447

Union Models 448

The Exclusive or Craft Union Model / The Inclusive or Industrial Union Model / Wage Increases and Job Loss

Wage Differentials 451

Marginal Revenue Productivity / Noncompeting Groups

Illustrating the Idea My Entire Life 455

Compensating Differences

Applying the Analysis The Minimum Wage 456

Summary

Terms and Concepts

Questions

Problems

18 Income Inequality and Poverty 460

Facts about Income Inequality 461

Distribution by Income Category / Distribution by Quintiles (Fifths) / The Lorenz Curve and Gini Ratio / Income Mobility: The Time Dimension / Effect of Government Redistribution

Causes of Income Inequality 465

Ability / Education and Training / Discrimination / Preferences and Risks / Unequal Distribution of Wealth / Market Power / Luck, Connections, and Misfortune

Income Inequality over Time 467

Rising Income Inequality Since 1975 / Causes of Growing Inequality

Applying the Analysis Laughing at Shrek 469

Equality versus Efficiency 470

The Case for Equality: Maximizing Total Utility / The Case for Inequality: Incentives and Efficiency / The Equality-Efficiency Trade-Off

Illustrating the Idea Slicing the Pizza 473

The Economics of Poverty 473

Definition of Poverty / Incidence of Poverty / Poverty Trends / Measurement Issues

The U.S. Income-Maintenance System 476

Social Insurance Programs / Public Assistance Programs

Summary

Terms and Concepts

Questions

Problems

Appendix Tables 483 Glossary 489 Index 501