



BRIEF CONTENTS

preface vi

part 1 **What Is Economics?**

introduction The Ordinary Business of Life 1

chapter 1 First Principles 5

chapter 2 Economic Models: Trade-offs and Trade 20

appendix Graphs in Economics 41

part 2 **Supply and Demand**

chapter 3 Supply and Demand 56

chapter 4 The Market Strikes Back 83

chapter 5 Consumer and Producer Surplus 109

part 3 **Introduction to Macroeconomics**

chapter 6 Macroeconomics: The Big Picture 138

chapter 7 Tracking the Macroeconomy 159

part 4 **The Economy in the Long Run**

chapter 8 Long-Run Economic Growth 186

chapter 9 Savings, Investment Spending, and the Financial System 210

part 5 **Short-Run Economic Fluctuations**

chapter 10 Aggregate Supply and Aggregate Demand 236

chapter 11 Income and Expenditure 269

appendix Deriving the Multiplier Algebraically 292

chapter 12 Fiscal Policy 293

appendix Taxes and the Multiplier 319

chapter 13 Money, Banking, and the Federal Reserve System 321

chapter 14 Monetary Policy 342

part 6 **The Supply Side and the Medium Run**

chapter 15 Labor Markets, Unemployment, and Inflation 368

chapter 16 Inflation, Disinflation, and Deflation 393

part 7 **Events and Ideas**

chapter 17 The Making of Modern Macroeconomics 415

part 8 **The Open Economy**

chapter 18 International Trade 436

chapter 19 Open-Economy Macroeconomics 460

Supplemental chapter: Currencies and Crises

Available on the Web, at

www.worthpublishers.com/krugmanwells, and in booklet form.

Solutions to “Check Your Understanding” Questions S-1

Macroeconomic Data 1929–2004 M-1

Glossary G-1

Index I-1

brief contents

CONTENTS

Prefacevi

Part 1 What Is Economics?

Introduction The Ordinary Business of Life ..1

Any Given Sunday 1

The Invisible Hand 2

My Benefit, Your Cost 3

Good Times, Bad Times 4

Onward and Upward 4

An Engine for Discovery 4

▶ Chapter...1 • First Principles5

Common Ground 5

Individual Choice: *The Core of Economics* 6

Resources are scarce 6

Opportunity cost: The real cost of something is what you must give up to get it 7

For Inquiring Minds: *Got a Penny?* 8

“How much?” is a decision at the margin 8

People usually exploit opportunities to make themselves better off 9

For Inquiring Minds: *Pay for Grades?* 10

Individual choice: Summing it up 10

Economics in Action: *A Woman’s Work* 10

Interaction: **How Economies Work** 11

There are gains from trade 12

Markets move toward equilibrium 13

For Inquiring Minds: *Choosing Sides* 13

Resources should be used as efficiently as possible to achieve society’s goals 14

Markets usually lead to efficiency 15

When markets don’t achieve efficiency, government intervention can improve society’s welfare 16

Economics in Action: *Restoring Equilibrium on the Freeways* 16

A Look Ahead 17

▶ Chapter...2 • Economic Models: Trade-offs and Trade20

Tunnel Vision 20

Models in Economics: Some Important Examples 21

For Inquiring Minds: *Models for Money* 21

Trade-offs: The production possibility frontier 22
Comparative advantage and gains from trade 26

Pitfalls: *Misunderstanding Comparative Advantage* 29

Comparative advantage and international trade 29

Transactions: The circular-flow diagram 30

Economics in Action: *Rich Nation, Poor Nation* 33

Using Models 34

Positive versus normative economics 34

When and why economists disagree 35

For Inquiring Minds: *When Economists Agree* 36

Economics in Action: *Economists in Government* 36

A Look Ahead 37

Chapter 2 Appendix: Graphs in Economics41

Getting the Picture 41

Graphs, Variables, and Economic Models 41

How Graphs Work 41

Two-variable graphs 41

Curves on a graph 43

A Key Concept: The Slope of a Curve 44

The slope of a linear curve 44

Horizontal and vertical curves and their slopes 45

The slope of a nonlinear curve 46

Calculating the slope along a nonlinear curve 47

Maximum and minimum points 48

Graphs That Depict Numerical Information 49

Types of numerical graphs 49

Problems in interpreting numerical graphs 52

Part 2 Supply and Demand

▶ Chapter...3 • Supply and Demand56

Gretzky’s Last Game 56

Supply and Demand: A Model of a Competitive Market 57

The Demand Curve 57

The demand schedule and the demand curve 58

Shifts of the demand curve 59

Understanding shifts of the demand curve 60

Economics in Action: *Beating the Traffic* 62

The Supply Curve 63

The supply schedule and the supply curve 63

Shifts of the supply curve 64

Understanding shifts of the supply curve 66

Economics in Action: *Down (and Up) on the Farm* 67
Supply, Demand, and Equilibrium 68

Pitfalls: *Bought and Sold?* 68

- Finding the equilibrium price and quantity 68
- Why do all sales and purchases in a market take place at the same price? 69
- Why does the market price fall if it is above the equilibrium price? 70
- Why does the market price rise if it is below the equilibrium price? 70
- Using equilibrium to describe markets 70

Economics in Action: *A Fish Story* 71

Changes in Supply and Demand 72

- What happens when the demand curve shifts 72
- What happens when the supply curve shifts 73

Pitfalls: *Which Curve Is It, Anyway?* 74

- Simultaneous shifts in supply and demand 74

For Inquiring Minds: *Supply, Demand, and Controlled Substances* 76

Economics in Action: *Plain Vanilla Gets Fancy* 76

Competitive Markets—and Others 77

A Look Ahead 78

▶ **Chapter...4 • The Market Strikes Back**83

Big City, Not-So-Bright Ideas 83

Why Governments Control Prices 84

Price Ceilings 84

- Modeling a price ceiling 85
- Why a price ceiling causes inefficiency 86

For Inquiring Minds: *The Rent Control Aristocracy* 88

- So why are there price ceilings? 88

Economics in Action: *Oil Shortages in the 1970s* 89

Price Floors 90

For Inquiring Minds: *Price Floors and Butter Cookies* 92

- Why a price floor causes inefficiency 92
- So why are there price floors? 93

Economics in Action: *“Black Labor” in Southern Europe* 93

Controlling Quantities 95

- The anatomy of quantity controls 95
- The costs of quantity controls 98

Economics in Action: *The Clams of New Jersey* 99

A Surprise Parallel: Taxes 99

- Why is a tax like a quota? 99
- Who pays an excise tax? 100
- The revenue from an excise tax 101
- The costs of taxation 102

For Inquiring Minds: *If Selling Cigarettes Is a Crime, Only Criminals will Sell Cigarettes* 103

Economics in Action: *Who Pays the FICA?* 103

A Look Ahead 104

▶ **Chapter...5 • Consumer and Producer Surplus**109

Making Gains by the Book 109

Consumer Surplus and the Demand Curve 110

- Willingness to pay and the demand curve 110
- Willingness to pay and consumer surplus 111
- How changing prices affect consumer surplus 113

For Inquiring Minds: *I Want a New Drug . . .* 115

Economics in Action: *When Money Isn't Enough* 116

Producer Surplus and the Supply Curve 116

- Cost and producer surplus 116
- Changes in producer surplus 119

Economics in Action: *Gaining from Disaster* 120

Consumer Surplus, Producer Surplus, and the Gains from Trade 121

- The gains from trade 121
- The efficiency of markets: A preliminary view 122
- A few words of caution 125

Economics in Action: *eBay and Efficiency* 126

Applying Consumer and Producer Surplus: The Efficiency Costs of a Tax 127

- Deadweight loss and elasticities 130

Economics in Action: *Missing the Boats* 132

A Look Ahead 133

Part 3 Introduction to Macroeconomics

▶ **Chapter...6 • Macroeconomics: The Big Picture**138

Disappointed Graduates 138

Microeconomics versus Macroeconomics 140

- Macroeconomics: The whole is greater than the sum of its parts 140
- Macroeconomic policy 141
- Long-run growth 141
- Economic aggregates 142

Economics in Action: *The Great Depression* 142

The Business Cycle 144

For Inquiring Minds: *Defining Recessions and Expansions* 145

Employment and Unemployment 145

- Aggregate output 146
- Taming the business cycle 148

Economics in Action: *Has the Business Cycle Been Tamed?* 148

Long-Run Economic Growth 149

For Inquiring Minds: *When Did Long-Run Growth Start?* 150

Economics in Action: *The Difference a Point Makes* 150

Inflation and Deflation 151

Economics in Action: *A Fast (Food) Measure of Inflation* 153

The Open Economy 153

Economics in Action: *North of the Border* 155

A Look Ahead 156

▶ Chapter... 7 • Tracking the Macroeconomy ...159

After the Revolution 159

The National Accounts 160

The circular-flow diagram, revisited and expanded 160

Gross domestic product 163

Calculating GDP 164

For Inquiring Minds: *Our Imputed Lives* 165

Pitfalls: *GDP: What's In and What's Out* 166

For Inquiring Minds: *Gross What?* 167

What GDP tells us 168

Economics in Action: *Creating the National Accounts* 168

Real GDP and Aggregate Output 169

Calculating real GDP 169

A technical detail: "Chained" dollars 170

What real GDP doesn't measure 171

Economics in Action: *Good Decades, Bad Decades* 172

The Unemployment Rate 173

Understanding the unemployment rate 173

Growth and unemployment 175

Economics in Action: *Jobless Recoveries* 176

Price Indexes and the Aggregate Price Level 176

Market baskets and price indexes 177

The consumer price index 178

Other price measures 179

For Inquiring Minds: *Is the CPI Biased?* 180

Economics in Action: *Indexing to the CPI* 180

A Look Ahead 181

Part 4: The Economy in the Long Run

▶ Chapter... 8 • Long-Run Economic Growth ..186

The Bad Old Days 186

Comparing Economies Across Time and Space 187

Real GDP per capita 187

Pitfalls: *Change in Levels versus Rate of Change* 188

Growth rates 189

Economics in Action: *The Luck of the Irish* 190

The Sources of Long-Run Growth 191

The crucial importance of productivity 191

Explaining growth in productivity 191

Accounting for growth: the aggregate production function 192

For Inquiring Minds: *The Wal-Mart Effect* 193

Pitfalls: *It May Be Diminished . . . But It's Still Positive* 194

What about natural resources? 196

Economics in Action: *The Information Technology Paradox* 197

Why Growth Rates Differ 198

Savings and investment spending 198

Foreign investment 199

Education 200

Infrastructure 200

Research and development 200

For Inquiring Minds: *Inventing R&D* 201

Political stability, property rights, and excessive government intervention 201

Economics in Action: *The Brazilian Breadbasket* 201

Success, Disappointment, and Failure 202

The East Asian miracle 203

Latin America's disappointment 204

Africa's troubles 204

Economics in Action: *Are Economies Converging?* 205

A Look Ahead 206

▶ Chapter... 9 • Savings, Investment Spending, and the Financial System210

A Hole in the Ground 210

Matching Up Savings and Investment Spending 211

Pitfalls: *Investment versus Investment Spending* 211

The savings–investment spending identity 211

Pitfalls: *The Different Kinds of Capital* 214

For Inquiring Minds: *Who Enforces the Accounting?* 216

The market for loanable funds 216

Savings, investment spending, and government policy 219

Economics in Action: *Budgets and Investment Spending in the 1990s* 221

The Financial System 221

Three tasks of a financial system 222

Types of assets 225

Financial intermediaries 226

Economics in Action: *Banks and the South Korean Miracle* 228

Financial Fluctuations 229

The demand for stocks 229

For Inquiring Minds: *How Now, Dow Jones?* 230

Stock market expectations 230

Stock prices and macroeconomics 231

Economics in Action: *"Irrational Exuberance"* 232

A Look Ahead 233

Part 5 Short-Run Economic Fluctuations

▶ Chapter... 10 • Aggregate Supply and Aggregate Demand236

Shocks to the system 236

Aggregate Supply 237

The short-run aggregate supply curve 237

For Inquiring Minds: *What's Truly Flexible, What's Truly Sticky* 239

Shifts of the short-run aggregate supply curve 240

The long-run aggregate supply curve 242

From the short run to the long run 244

Pitfalls: *Are We There Yet? What the Long Run Really Means* 245

Economics in Action: *Prices and Output in the Great Depression* 245

Aggregate Demand 246

Why is the aggregate demand curve downward-sloping? 247

Shifts in the aggregate demand curve 248

Pitfalls: *Changes in Wealth: A Movement Along versus a Shift of the Aggregate Demand Curve* 249

Government policies and aggregate demand 249

Economics in Action: *Moving Along the Aggregate Demand Curve, 1979–80* 250

The Multiplier 251

The AS–AD Model 254

Short-run macroeconomic equilibrium 255

Shifts of the SRAS curve 256

Shifts in aggregate demand: Short-run effects 257

Long-run macroeconomic equilibrium 258

Economics in Action: *Supply Shocks versus Demand Shocks in Practice* 260

Macroeconomic Policy 261

For Inquiring Minds: *Keynes and the Long Run* 262

Policy in the face of demand shocks 262

Responding to supply shocks 263

Economics in Action: *The End of the Great Depression* 263

A Look Ahead 264

▶ Chapter... 11 • Income and Expenditure269

Be a Patriot and Spend 269

Consumer Spending 270

Current disposable income and consumer spending 270

Shifts of the aggregate consumption function 273

Economics in Action: *Famous First Forecasting Failures* 274

Investment Spending 276

The interest rate and investment spending 276

Expected future real GDP, production capacity, and investment spending 277

Inventories and unplanned investment spending 278

Economics in Action: *A Tale of Two Investment Spending Slumps* 279

Behind Shifts of the Aggregate Demand Curve:

The Income–Expenditure Model 280

Planned aggregate spending and real GDP 281

Income–expenditure equilibrium 283

Pitfalls: *Income–Expenditure Equilibrium versus Short-Run Macroeconomic Equilibrium* 284

The multiplier process and inventory adjustment 285

Economics in Action: *Bad Times in Buenos Aires* 288

A Look Ahead 288

▶ Chapter 11 Appendix: Deriving the Multiplier Algebraically292

▶ Chapter... 12 • Fiscal Policy293

A Bridge to Prosperity? 293

Fiscal Policy: The Basics 294

Taxes, purchases of goods and services, government transfers, and borrowing 294

The government budget and total spending 295

For Inquiring Minds: *Investment Tax Credits* 296

Expansionary and contractionary fiscal policy 296

A cautionary note: Lags in fiscal policy 298

Economics in Action: *Expansionary Fiscal Policy in Japan* 298

Fiscal Policy and the Multiplier 299

Multiplier effects of an increase in government purchases of goods and services 299

Multiplier effects of changes in government taxes and transfers 300

How taxes affect the multiplier 301

Economics in Action: *How Much Bang for the Buck?* 302

The Budget Balance 304

The budget balance as a measure of fiscal policy 304

The business cycle and the cyclically adjusted budget balance 305

Should the budget be balanced? 307

Economics in Action: *Stability Pact—or Stupidity Pact?* 307

Long-Run Implications of Fiscal Policy 308

Deficits, surpluses, and debt 308

Pitfalls: *Deficits versus Debt* 309

Problems posed by rising government debt 309

Deficits and debt in practice 310

For Inquiring Minds: *What Happened to the Debt from World War II?* 312

Implicit liabilities 312

Economics in Action: *Argentina's Creditors Take a Haircut* 313

A Look Ahead 315

▶ Chapter 12 Appendix: Taxes and the Multiplier319

▶ **Chapter... 13 • Money, Banking, and the Federal Reserve System**321

A Waggon-Way Through the Air 321

The Meaning of Money 322

What is money? 322

Pitfalls: *Plastic and the Money Supply* 322

Roles of money 323

Types of money 323

Measuring the money supply 324

For Inquiring Minds: *What's with All the Currency?* 325

Economics in Action: *The History of the Dollar* 325

The Monetary Role of Banks 326

What banks do 326

The problem of bank runs 327

Bank regulation 328

For Inquiring Minds: *Is Banking a Con?* 328

Economics in Action: *It's a Wonderful Banking System* 329

Determining the Money Supply 330

How banks create money 330

Reserves, bank deposits, and the money multiplier 331

The money multiplier in reality 332

Economics in Action: *Multiplying Money Down* 333

The Federal Reserve system 334

The Fed: America's central bank 334

What the Fed does: Reserve requirements and the discount rate 335

Open-market operations 336

Economics in Action: *Building Europe's Fed* 338

A Look Ahead 338

▶ **Chapter... 14 • Monetary Policy**342

Eight Times a Year 342

The Demand for Money 343

The opportunity cost of holding money 343

The money demand curve 345

Prices and the demand for money 345

Shifts of the real money demand curve 347

The velocity approach to money demand 348

Economics in Action: *A Yen for Cash* 349

Money and Interest Rates 350

The equilibrium interest rate 350

Two models of interest rates? 351

Pitfalls: *The Target versus the Market* 351

Monetary policy and the interest rate 351

For Inquiring Minds: *Long-Term Interest Rates* 353

Economics in Action: *The Fed Takes Action* 353

Monetary Policy and Aggregate Demand 354

Expansionary and contractionary monetary policy 354

Monetary policy and the multiplier 356

Two models of interest rates, revisited 357

Economics in Action: *The Fed and the Output Gap, 1985–2004* 359

Money, Output, and Prices in the Long Run 360

Short-run and long-run effects of an increase in the money supply 360

Monetary neutrality 361

The interest rate in the long run 362

Economics in Action: *International Evidence of Monetary Neutrality* 363

A Look Ahead 364

Part 6 The Supply Side and the Medium Run

▶ **Chapter... 15 • Labor Markets, Unemployment, and Inflation**368

Two Paths to Unemployment 368

The Nature of Unemployment 369

For Inquiring Minds: *Full Employment—It's the Law* 369

Job creation and job destruction 369

Frictional unemployment 370

Structural unemployment 371

The natural rate of unemployment 373

Changes in the natural rate of unemployment 374

Economics in Action: *Eurosclerosis* 376

Unemployment and the Business Cycle 377

The output gap and the unemployment rate 377

Okun's law 379

Pitfalls: *When is a "Law" Not a Law* 379

Economics in Action: *Jobless Recoveries* 380

Why Doesn't the Labor Market Move Quickly to Equilibrium? 380

Economics in Action: *Sticky Wages in the Great Depression* 382

Unemployment and Inflation: The Phillips Curve 382

The short-run Phillips curve 383

For Inquiring Minds: *The Aggregate Supply Curve and the Short-Run Phillips Curve* 384

Inflation expectations and the short-run Phillips curve 385

The long-run Phillips curve 387

The natural rate, revisited 388

Economics in Action: *From the Scary Seventies to the Nifty Nineties* 388

A Look Ahead 389

▶ **Chapter... 16 • Inflation, Disinflation, and Deflation393**

Hourly Wages 393

Money and Inflation 394

Money and prices, revisited 394

For Inquiring Minds: *Indexing to Inflation* 397

The inflation tax 397

The Logic of Hyperinflation 398

Economics in Action: *Money and Prices in Brazil, 1985–1995* 399

Effects of Inflation 400

Winners and losers from unexpected inflation 400

Expected inflation and interest rates 401

The costs of inflation 403

The optimal rate of inflation 405

For Inquiring Minds: *A Case for Deflation?* 405

Economics in Action: *Inflation and Interest Rates in the United States* 406

Moderate Inflation and Disinflation 407

Causes of moderate inflation 407

The problem of disinflation 407

Economics in Action: *The Great Disinflation of the 1980s* 408

Deflation 410

Effects of unexpected deflation 410

Effects of expected deflation 410

Economics in Action: *Japan's Trap* 411

A Look Ahead 411

Part 7 Events and Ideas

▶ **Chapter... 17 • The Making of Modern Macroeconomics415**

Purge the Rottenness? 415

Classical Macroeconomics 416

Money and the price level 416

The business cycle 417

Economics in Action: *When did the business cycle begin?* 417

The Great Depression and the Keynesian Revolution 418

Keynes's theory 418

For Inquiring Minds: *The Politics of Keynes* 420

Policy to fight recessions 420

Economics in Action: *The End of the Great Depression* 421

Challenges to Keynesian Economics 422

The revival of monetary policy 422

Monetarism 422

Inflation and the natural rate of unemployment 425

The political business cycle 425

Economics in Action: *The Fed's Flirtation with Monetarism* 426

Rational Expectations, Real Business Cycles, and New Classical Macroeconomics 426

Rational expectations 427

Real business cycles? 427

For Inquiring Minds: *Supply-side Economics* 428

Economics in Action: *Total Factor Productivity and the Business Cycle* 428

The Modern Consensus 429

Is expansion and monetary policy helpful in fighting recessions? 430

Is fiscal policy effective in fighting recessions? 430

Can monetary and/or fiscal policy reduce unemployment in the long run? 430

Should fiscal policy be used in a discretionary way? 430

Should monetary policy be used in a discretionary way? 431

The clean little secret of macroeconomics 432

Economics in Action: *After the Bubble* 432

A Look Ahead 433

Part 8 The Open Economy

▶ **Chapter... 18 • International Trade436**

A Rose by Any Other Nation 436

Comparative Advantage and International Trade 437

Production possibilities and comparative advantage, revisited 438

The gains from international trade 440

Pitfalls: *The Pauper Labor Fallacy* 441

Sources of comparative advantage 441

For Inquiring Minds: *Does Trade Hurt Poor Countries?* 442

For Inquiring Minds: *Increasing Returns and International Trade* 443

Economics in Action: *The Comparative Advantage of the United States* 444

Supply, Demand, and International Trade 444

The effects of imports 445

The effects of exports 447

International trade and factor markets 448

Economics in Action: *Trade, Wages, and Land Prices in the Nineteenth Century* 449

The Effects of Trade Protection 450

The effects of a tariff 450

The effects of an import quota 452

Economics in Action: *Trade Protection in the United States* 452

The Political Economy of Trade Protection 453

Arguments for trade protection 453

For Inquiring Minds: *Bittersweet* 454
The politics of trade protection 454
International trade agreements and the World Trade Organization 455

Economics in Action: *Declining Tariffs* 455

A Look Ahead 456

▶ Chapter... 19 • Open-Economy

● **Macroeconomics**460

Euro Dilemmas 460

Capital Flows and the Balance of Payments 461

Balance of payments accounts 461

For Inquiring Minds: *GDP, GNP, and the Current Account* 464

Modeling private international capital flows 464

Underlying determinants of international capital flows 467

For Inquiring Minds: *Twin Deficits?* 467

Economics in Action: *The Golden Age of Capital Flows* 468

The Role of the Exchange Rate 469

Understanding exchange rates 469

Pitfalls: *Which Way Is Up?* 470

The equilibrium exchange rate 470

Inflation and real exchange rates 473

Purchasing power parity 475

For Inquiring Minds: *Burgernomics* 476

Economics in Action: *The Dollar and the Deficit* 476

Exchange Rate Policy 478

Exchange rate regimes 478

How can an exchange rate be held fixed? 478

For Inquiring Minds: *From Bretton Woods to the Euro* 481

The exchange rate regime dilemma 481

Economics in Action: *China Pegs the Yuan* 482

Exchange Rates and Macroeconomic Policy 482

Devaluation and revaluation of fixed exchange rates 483

Monetary policy under floating exchange rates 483

International business cycles 484

Economics in Actions: *The Joy of a Devalued Pound* 485

Supplemental chapter: Currencies and Crises

Available on the Web, at

www.worthpublishers.com/krugmanwells and in booklet form.

Solutions to “Check Your Understanding” Questions S-1

Macroeconomic Data 1929–2004 M-1

Glossary G-1

Index I-1