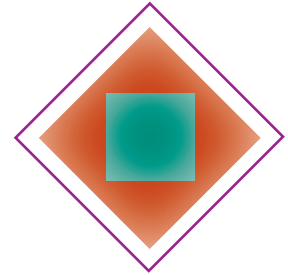


MACROECONOMICS

FOURTEENTH EDITION
GLOBAL EDITION



MICHAEL PARKIN

University of Western Ontario



Pearson

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney • Dubai • Singapore • Hong Kong
Tokyo • Seoul • Taipei • New Delhi • Cape Town • Sao Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan

PART ONE
INTRODUCTION 29

CHAPTER 1 ♦ WHAT IS ECONOMICS? 29

Definition of Economics 30

Two Big Economic Questions 31
 What, How, and For Whom? 31
 Do Choices Made in the Pursuit of Self-Interest
 also Promote the Social Interest? 33

The Economic Way of Thinking 37
 A Choice Is a Tradeoff 37
 Making a Rational Choice 37
 Benefit: What You Gain 37
 Cost: What You *Must* Give Up 37
 How Much? Choosing at the Margin 38
 Choices Respond to Incentives 38

Economics as Social Science and Policy Tool 39
 Economist as Social Scientist 39
 Economist as Policy Adviser 39

Economists in the Economy 40
 Jobs for an Economics Major 40
 Will Jobs for Economics Majors Grow? 40
 Earnings of Economics Majors 41
 Skills Needed for Economics Jobs 41
 A Diversity Challenge in the Economics
 Profession 41

*Worked Problem, Summary (Key Points and Key Terms),
 Problems and Applications, and Additional Problems and
 Applications appear at the end of each chapter.*

APPENDIX Graphs in Economics 45

Graphing Data 45
 Graphing Economic Data 46
 Scatter Diagrams 46

Graphs Used in Economic Models 48
 Variables That Move in the Same Direction 48
 Variables That Move in Opposite Directions 49
 Variables That Have a Maximum or a
 Minimum 50
 Variables That Are Unrelated 51

The Slope of a Relationship 52
 The Slope of a Straight Line 52
 The Slope of a Curved Line 53

Graphing Relationships Among More Than Two
 Variables 54
Ceteris Paribus 54
 When Other Things Change 55

MATHEMATICAL NOTE

Equations of Straight Lines 56

■ AT ISSUE, 36

■ ECONOMICS IN THE NEWS, 34

CHAPTER 2 ♦ THE ECONOMIC PROBLEM 61

Production Possibilities and Opportunity Cost 62

Production Possibilities Frontier 62

Production Efficiency 63

Tradeoff Along the *PPF* 63

Opportunity Cost 63

Using Resources Efficiently 65

The *PPF* and Marginal Cost 65

Preferences and Marginal Benefit 66

Allocative Efficiency 67

Gains from Trade 68

Comparative Advantage and Absolute Advantage 68

Achieving the Gains from Trade 70

The Liz–Joe Economy and Its *PPF* 72

Economic Growth 73

The Cost of Economic Growth 73

A Nation’s Economic Growth 74

Changes in What We Produce 74

Economic Coordination 76

Firms 76

Markets 76

Property Rights 76

Money 76

Circular Flows Through Markets 76

Coordinating Decisions 77

■ ECONOMICS IN ACTION, 74

■ ECONOMICS IN THE NEWS, 64, 78

CHAPTER 3 ♦ DEMAND AND SUPPLY 85

Markets and Prices 86

Demand 87

The Law of Demand 87

Demand Curve and Demand Schedule 87

A Change in Demand 88

A Change in the Quantity Demanded Versus a Change in Demand 90

Supply 92

The Law of Supply 92

Supply Curve and Supply Schedule 92

A Change in Supply 93

A Change in the Quantity Supplied Versus a Change in Supply 94

Market Equilibrium 96

Price as a Regulator 96

Price Adjustments 97

Predicting Changes in Price and Quantity 98

An Increase in Demand 98

A Decrease in Demand 98

An Increase in Supply 100

A Decrease in Supply 100

Changes in Both Demand and Supply 102

MATHEMATICAL NOTE**Demand, Supply, and Equilibrium** 106

■ ECONOMICS IN THE NEWS, 99, 101, 104

PART ONE WRAP-UP ♦

Understanding the Scope of Economics

Your Economic Revolution 113

Talking with

Esther Duflo 114

PART TWO
MACROECONOMIC DATA 115

CHAPTER 4 ♦ MEASURING THE VALUE OF PRODUCTION: GDP 115

- Gross Domestic Product 116
 - GDP Defined 116
 - GDP and the Circular Flow of Expenditure and Income 116
 - Why “Domestic” and Why “Gross”? 118
- Measuring U.S. GDP 119
 - The Expenditure Approach 119
 - The Income Approach 120
 - Nominal GDP and Real GDP 121
 - Calculating Real GDP 121
- The Uses and Limitations of Real GDP 122
 - The Standard of Living Over Time 122
 - The Standard of Living Across Countries 124
 - Limitations of GDP 125

APPENDIX Graphs in Macroeconomics 130

- The Time-Series Graph 130
 - Making a Time-Series Graph 130
 - Reading a Time-Series Graph 130
 - Ratio Scale Reveals Trend 131
 - A Time-Series with a Trend 131
 - Using a Ratio Scale 131

MATHEMATICAL NOTE

- Chained-Dollar Real GDP 132**
- ECONOMICS IN ACTION, 127
- AT ISSUE, 126
- ECONOMICS IN THE NEWS, 128

CHAPTER 5 ♦ MONITORING JOBS AND INFLATION 139

- Employment and Unemployment 140
 - Why Unemployment Is a Problem 140
 - Current Population Survey 141
 - Three Labor Market Indicators 141
 - Other Definitions of Unemployment 143
 - Most Costly Unemployment 144
 - Alternative Measures of Unemployment 144
- Unemployment and Full Employment 145
 - Frictional Unemployment 145
 - Structural Unemployment 145
 - Cyclical Unemployment 145
 - “Natural” Unemployment 145
 - Real GDP and Unemployment over the Cycle 146
- The Price Level, Inflation, and Deflation 148
 - Why Inflation and Deflation Are Problems 148
 - The Consumer Price Index 149
 - Reading the CPI Numbers 149
 - Constructing the CPI 149
 - Measuring the Inflation Rate 150
 - Distinguishing High Inflation from a High Price Level 151
 - The Biased CPI 151
 - Consequences and Magnitude of Bias 152
 - Alternative Price Indexes 152
 - Core Inflation 153

■ ECONOMICS IN ACTION, 140, 147

■ ECONOMICS IN THE NEWS, 154

PART TWO WRAP-UP ♦

Monitoring Macroeconomic Performance

The Big Picture 161

Talking with

Dave Donaldson 162


**PART THREE
MACROECONOMIC TRENDS 163**
CHAPTER 6 ♦ ECONOMIC GROWTH 163

- The Basics of Economic Growth 164
 - Calculating Growth Rates 164
 - Economic Growth Versus Business Cycle Expansion 164
 - The Magic of Sustained Growth 165
 - Applying the Rule of 70 166
- Long-Term Growth Trends 167
 - Long-Term Growth in the U.S. Economy 167
 - Real GDP Growth in the World Economy 168
- How Potential GDP Grows 170
 - What Determines Potential GDP? 170
 - What Makes Potential GDP Grow? 172
- Why Labor Productivity Grows 175
 - Preconditions for Labor Productivity Growth 175
 - Physical Capital Growth 175
 - Human Capital Growth 176
 - Technological Advances 176
- Is Economic Growth Sustainable? Theories, Evidence, and Policies 179
 - Classical Growth Theory 179
 - Neoclassical Growth Theory 179
 - New Growth Theory 180
 - New Growth Theory Versus Malthusian Theory 182
 - Sorting Out the Theories 182
 - The Empirical Evidence on the Causes of Economic Growth 182
 - Policies for Achieving Faster Growth 182
- ECONOMICS IN ACTION, 169, 176, 177
- ECONOMICS IN THE NEWS, 178, 184

CHAPTER 7 ♦ FINANCE, SAVING, AND INVESTMENT 191

- Financial Markets and Financial Institutions 192
 - Finance and Money 192
 - Capital and Financial Capital 192
 - Capital and Investment 192
 - Wealth and Saving 192
 - Financial Capital Markets 193
 - Financial Institutions 194
 - Funds That Finance Investment 196
- Financial Decisions and Risks 198
 - The Time Value of Money 198
 - Net Present Value 198
 - The Decision Rule 198
 - Financial Risk: Insolvency and Illiquidity 198
 - Market Risk: Interest Rates and Asset Prices 199
 - Getting Real 199
- The Loanable Funds Market 200
 - The Demand for Loanable Funds 200
 - The Supply of Loanable Funds 200
 - Equilibrium in the Loanable Funds Market 201
 - Changes in Demand and Supply 202
- Government in the Loanable Funds Market 204
 - A Government Budget Surplus 204
 - A Government Budget Deficit 204
- ECONOMICS IN ACTION, 194, 197, 202
- ECONOMICS IN THE NEWS, 206

CHAPTER 8 ♦ MONEY, THE PRICE LEVEL, AND INFLATION 213

- What Is Money? 214
 - Medium of Exchange 214
 - Unit of Account 214
 - Store of Value 215
 - Money in the United States Today 215
- Depository Institutions 217
 - Types of Depository Institutions 217
 - What Depository Institutions Do 217
 - Economic Benefits Provided by Depository Institutions 218
 - How Depository Institutions Are Regulated 218
 - Financial Technology 220
- The Federal Reserve System 221
 - The Structure of the Fed 221
 - The Fed's Balance Sheet 222
 - The Fed's Policy Tools 222
- How Banks Create Money 224
 - Creating Deposits by Making Loans 224
 - The Money Creation Process 225
 - The Money Multiplier 226
- The Money Market 228
 - The Demand for Money 228
 - Changes in the Demand for Money 228
 - The Supply of Money 229
 - Money Market Equilibrium 230
- The Quantity Theory of Money 232

MATHEMATICAL NOTE

The Money Multiplier 236

- ECONOMICS IN ACTION, 215, 220, 223, 226, 232
- AT ISSUE, 219
- ECONOMICS IN THE NEWS, 227, 234

CHAPTER 9 ♦ THE EXCHANGE RATE AND THE BALANCE OF PAYMENTS 243

- The Foreign Exchange Market 244
 - Trading Currencies 244
 - Exchange Rates 244
 - Questions About the U.S. Dollar Exchange Rate 244
 - An Exchange Rate Is a Price 244
 - The Demand for One Money Is the Supply of Another Money 245
 - Demand in the Foreign Exchange Market 245
 - Demand Curve for U.S. Dollars 246
 - Supply in the Foreign Exchange Market 247
 - Supply Curve for U.S. Dollars 247
 - Market Equilibrium 248
 - Changes in the Demand for U.S. Dollars 248
 - Changes in the Supply of U.S. Dollars 249
 - Changes in the Exchange Rate 250

Arbitrage, Speculation, and Market Fundamentals 252

- Arbitrage 252
- Speculation 253
- Market Fundamentals 254

Exchange Rate Policy 255

- Flexible Exchange Rate 255
- Fixed Exchange Rate 255
- Crawling Peg 256

Financing International Trade 258

- Balance of Payments Accounts 258
- Borrowers and Lenders 260
- The Global Loanable Funds Market 260
- Debtors and Creditors 261
- Is U.S. Borrowing for Consumption? 261
- Current Account Balance 262
- Net Exports 262
- Where Is the Exchange Rate? 263

- ECONOMICS IN ACTION, 245, 251, 253, 256, 259, 263
- ECONOMICS IN THE NEWS, 264

PART THREE WRAP-UP ♦

Understanding Macroeconomic Trends

Expanding the Frontier 271

Talking with

Xavier Sala-i-Martin 272


**PART FOUR
MACROECONOMIC FLUCTUATIONS 273**
**CHAPTER 10 ◆ AGGREGATE SUPPLY AND
AGGREGATE DEMAND 273**
Aggregate Supply 274

- Quantity Supplied and Supply 274
- Long-Run Aggregate Supply 274
- Short-Run Aggregate Supply 275
- Changes in Aggregate Supply 276

Aggregate Demand 278

- The Aggregate Demand Curve 278
- Changes in Aggregate Demand 279

**Explaining Macroeconomic Trends and
Fluctuations 282**

- Short-Run Macroeconomic Equilibrium 282
- Long-Run Macroeconomic Equilibrium 282
- Economic Growth and Inflation in the *AS-AD*
Model 283
- The Business Cycle in the *AS-AD* Model 284
- Fluctuations in Aggregate Demand 286
- Fluctuations in Aggregate Supply 287

Macroeconomic Schools of Thought 288

- The Classical View 288
- The Keynesian View 288
- The Monetarist View 289
- The Way Ahead 289

■ ECONOMICS IN ACTION, 280, 283, 284

■ ECONOMICS IN THE NEWS, 290

**CHAPTER 11 ◆ EXPENDITURE
MULTIPLIERS 297**
Fixed Prices and Expenditure Plans 298

- Expenditure Plans 298
- Consumption and Saving Plans 298
- Marginal Propensities to Consume and Save 300
- Slopes and Marginal Propensities 300
- Consumption as a Function of Real GDP 301
- Import Function 301

Real GDP with a Fixed Price Level 302

- Aggregate Planned Expenditure 302
- Actual Expenditure, Planned Expenditure, and
Real GDP 303
- Equilibrium Expenditure 304
- Convergence to Equilibrium 305

The Multiplier 306

- The Basic Idea of the Multiplier 306
- The Multiplier Effect 306
- Why Is the Multiplier Greater Than 1? 307
- The Size of the Multiplier 307
- The Multiplier and the Slope of the *AE*
Curve 308
- Imports and Income Taxes 309
- The Multiplier Process 309
- Business Cycle Turning Points 310

The Multiplier and the Price Level 311

- Adjusting Quantities and Prices 311
- Aggregate Expenditure and Aggregate
Demand 311
- Deriving the Aggregate Demand Curve 311
- Changes in Aggregate Expenditure and Aggregate
Demand 312
- Equilibrium Real GDP and the Price Level 313

MATHEMATICAL NOTE
The Algebra of the Keynesian Model 318

■ ECONOMICS IN ACTION, 301, 310

■ ECONOMICS IN THE NEWS, 316

CHAPTER 12 ♦ **THE BUSINESS CYCLE, INFLATION, AND DEFLATION** 327

- The Business Cycle 328
 - Mainstream Business Cycle Theory 328
 - Real Business Cycle Theory 329
- Inflation Cycles 333
 - Demand-Pull Inflation 333
 - Cost-Push Inflation 335
 - Expected Inflation 337
 - Forecasting Inflation 338
 - Inflation and the Business Cycle 338
- Deflation 339
 - What Causes Deflation? 339
 - What Are the Consequences of Deflation? 341
 - How Can Deflation Be Ended? 341
- The Phillips Curve 342
 - The Short-Run Phillips Curve 342
 - The Long-Run Phillips Curve 342

■ ECONOMICS IN ACTION, 330, 340, 343

■ ECONOMICS IN THE NEWS, 344

PART FOUR WRAP-UP ♦

Understanding Macroeconomic Fluctuations

Boom and Bust 351

Talking with

Emi Nakamura 352

PART FIVE
MACROECONOMIC POLICY 353

CHAPTER 13 ♦ **FISCAL POLICY** 353

- The Federal Budget 354
 - The Institutions and Laws 354
 - Highlights of the 2022 Budget 355
 - The Budget in Historical Perspective 356
 - Budget Balance and Debt 358
 - State and Local Budgets 359
 - Supply-Side Effects of Fiscal Policy 360
 - Full Employment and Potential GDP 360
 - The Effects of the Income Tax 360
 - Taxes on Expenditure and the Tax Wedge 361
 - Taxes and the Incentive to Save and Invest 362
 - Tax Revenues and the Laffer Curve 363
 - The Supply-Side Debate 363
 - Generational Effects of Fiscal Policy 364
 - Generational Accounting and Present Value 364
 - The Social Security Time Bomb 364
 - Generational Imbalance 365
 - International Debt 365
 - Fiscal Stimulus 366
 - Automatic Fiscal Policy and Cyclical and Structural Budget Balances 366
 - Discretionary Fiscal Stimulus 369
- ECONOMICS IN ACTION, 359, 361, 368, 370
- ECONOMICS IN THE NEWS, 372

CHAPTER 14 ♦ MONETARY POLICY 379

Monetary Policy Objectives and Framework 380

- Monetary Policy Objectives 380
- Operational “Stable Prices” Goal 381
- Operational “Maximum Employment” Goal 381
- Responsibility for Monetary Policy 382

The Conduct of Monetary Policy 382

- The Monetary Policy Instruments 382
- Monetary Policy Decisions 383
- Hitting the Federal Funds Rate Target 385

Monetary Policy Transmission 387

- Quick Overview 387
- Changes in Interest Rates 388
- Changes in Money and Loans 388
- Changes in Real GDP, Unemployment, and Inflation 389
- The Change in Aggregate Demand, Real GDP, and the Price Level 389
- The Fed Fights Recession 390
- The Fed Fights Inflation 392
- Loose Links and Long and Variable Lags 393
- Policy Strategies and Clarity 394

Financial Crisis: Cure and Prevention 396

- The Anatomy of the Financial Crisis 396
- The Fed’s Policy Actions in Crisis 396
- Congress’s Policy Actions in Crisis 396
- Macroprudential Regulation 397

■ ECONOMICS IN ACTION, 394

■ AT ISSUE, 386

■ ECONOMICS IN THE NEWS, 398

CHAPTER 15 ♦ INTERNATIONAL TRADE POLICY 405

How Global Markets Work 406

- International Trade Today 406
- What Drives International Trade? 406
- Why the United States Imports T-Shirts 407
- Why the United States Exports Airplanes 408

Winners, Losers, and the Net Gain from Trade 409

- Gains and Losses from Imports 409
- Gains and Losses from Exports 409
- Gains for All 409

International Trade Restrictions 410

- Tariffs 410
- Import Quotas 412
- Other Import Barriers 415
- Export Subsidies 415

The Case Against Protection 416

- Helps an Infant Industry Grow 416
- Counteracts Dumping 416
- Saves Domestic Jobs 416
- Allows Us to Compete with Cheap Foreign Labor 416
- Penalizes Lax Environmental Standards 417
- Prevents Rich Countries from Exploiting Developing Countries 417
- Reduces Offshore Outsourcing That Sends Good U.S. Jobs to Other Countries 417
- Avoiding Trade Wars 418
- Why Is International Trade Restricted? 418
- Compensating Losers 419

■ ECONOMICS IN ACTION, 406, 411, 412

■ AT ISSUE, 418

■ ECONOMICS IN THE NEWS, 414, 420

PART FIVE WRAP-UP ♦

Understanding Macroeconomic Policy

Tradeoffs and Free Lunches 427

Talking with

Stephanie Schmitt-Grohé 428

Glossary **G-1**Index **I-1**Credits **C-1**