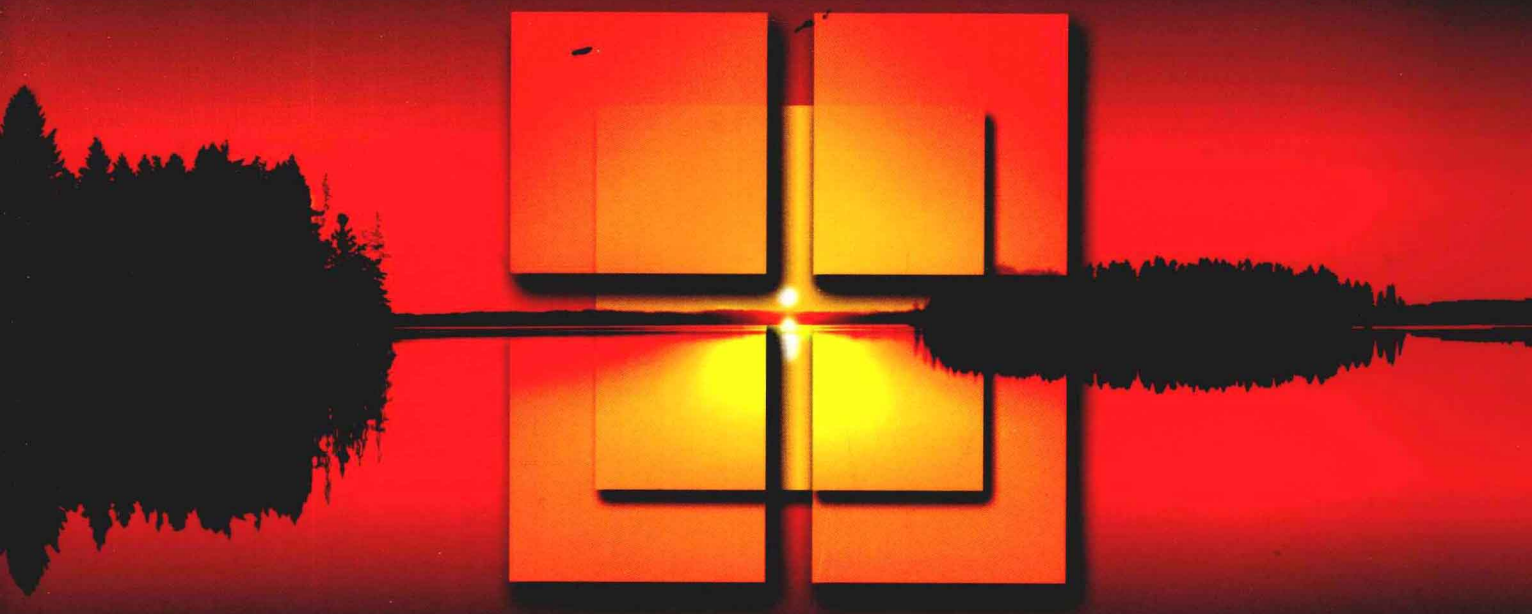


# FOUNDATIONS *of* MACROECONOMICS

Second Edition



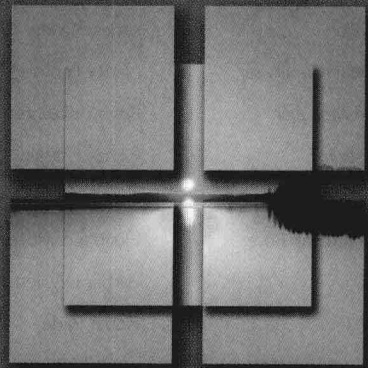
Robin Bade

Michael Parkin



# FOUNDATIONS *of* MACROECONOMICS

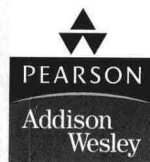
Second Edition



**Robin Bade**

**Michael Parkin**

*University of Western Ontario*



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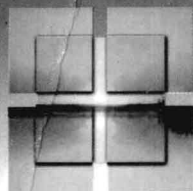
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# Macroeconomic Data

These macroeconomic data series show some of the trends in GDP and its components, the price level, and other variables that provide information about changes in the standard of living and the cost of living—the central questions of macroeconomics. You will find these data in a spreadsheet that you can download from your Foundations Web site.

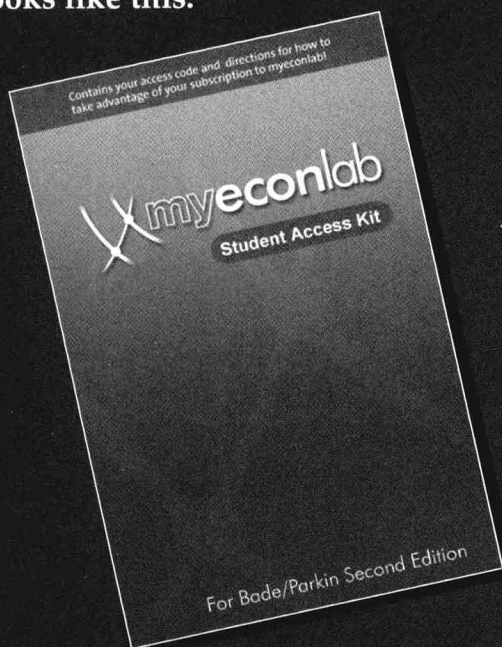
NATIONAL INCOME AND PRODUCT ACCOUNTS		1929	1933	1939	1945	1950	1955	1960	1965	1966	1967
EXPENDITURES APPROACH											
the sum of	1 Personal consumption expenditures	77.5	45.9	67.2	119.8	192.7	259.0	332.3	444.3	481.8	508.7
	2 Gross private domestic investment	16.5	1.7	9.3	10.8	54.1	69.0	78.9	118.2	131.3	128.6
	3 Government purchases	9.4	8.7	14.7	93.2	46.9	86.8	113.8	153.7	174.3	195.3
	4 Exports	5.9	2.0	3.9	6.7	12.3	17.6	25.3	35.4	38.9	41.4
less	5 Imports	5.6	1.9	3.1	7.5	11.6	17.2	22.8	31.5	37.1	39.9
equals	6 Gross domestic product	103.7	56.4	92.0	223.0	294.3	415.2	527.4	720.1	789.3	834.1
INCOMES APPROACH											
the sum of	7 Compensation of employees	51.1	29.6	48.1	123.3	155.4	225.8	296.4	399.5	442.6	475.2
	8 Proprietors' income	14.9	5.8	11.7	31.7	38.6	45.5	51.9	65.2	69.6	71.1
	9 Rental income of persons	5.6	2.5	3.3	6.1	8.7	12.8	16.2	19.2	19.9	20.4
	10 Corporate profits	10.6	-0.3	6.2	20.1	35.4	48.5	52.3	86.0	92.0	89.6
	11 Net interest	4.6	3.9	3.5	2.1	3.0	6.0	10.7	19.7	22.6	25.4
equals	12 National income	86.8	41.4	72.9	183.3	241.0	338.5	427.5	589.6	646.7	681.7
plus	13 Indirect business tax minus subsidies	6.8	7.5	9.6	18.3	22.1	31.4	39.8	54.3	60.9	63.8
	14 Consumption of fixed capital	9.4	7.2	9.1	21.0	29.7	42.8	56.9	70.8	76.5	83.1
	15 Net factor incomes from rest of world	0.7	0.3	0.4	0.4	1.5	2.5	3.2	5.4	5.2	5.5
equals	16 Gross domestic product	103.7	56.4	92.0	223.0	294.3	415.2	527.4	720.1	789.3	834.1
	17 Real GDP (billions of 1996 dollars)	822.2	603.3	903.5	1,693.3	1,686.6	2,099.5	2,376.7	3,028.5	3,227.5	3,308.3
	18 Real GDP growth (percent per year)	--	-1.4	8.1	-1.2	8.7	7.1	2.5	6.4	6.6	2.5
OTHER DATA											
	19 Population (millions)	121.8	125.6	130.9	139.9	152.3	165.9	180.7	194.3	196.6	198.7
	20 Labor force (millions)	49.2	51.6	55.2	53.9	62.2	65.0	69.6	74.5	75.8	77.3
	21 Employment (millions)	47.6	38.8	45.8	52.8	58.9	62.2	65.8	71.1	72.9	74.4
	22 Unemployment (millions)	1.6	12.8	9.5	1.0	3.3	2.9	3.9	3.4	2.9	3.0
	23 Labor force participation rate (percent)	--	--	--	57.2	59.2	59.3	59.4	58.9	59.2	59.6
	24 Unemployment rate (percent of labor force)	3.2	24.9	17.2	1.9	5.3	4.4	5.5	4.5	3.8	3.8
	25 Real GDP per person (1996 dollars per year)	6,750	4,803	6,903	12,101	11,076	12,653	13,155	15,586	16,420	16,649
	26 Growth rate of real GDP per person (percent per year)	--	-8.2	6.2	9.8	-1.8	2.7	0.8	5.1	5.3	1.4
	27 Quantity of money (M2, billions of dollars)	--	--	--	--	--	--	312.4	459.2	480.2	524.8
	28 GDP deflator (1996 = 100)	12.6	9.3	10.2	13.2	17.4	19.8	22.2	23.8	24.5	25.2
	29 GDP deflator inflation rate (percent per year)	--	-2.7	-1.2	2.7	1.1	1.7	1.4	1.9	2.9	3.1
	30 Consumer price index (1982-1984 = 100)	17.2	12.9	13.9	18.0	24.1	26.8	29.6	31.5	32.5	33.4
	31 CPI inflation rate (percent per year)	--	-5.2	-1.3	2.3	1.1	-0.3	1.5	1.6	3.0	2.8
	32 Current account balance (billions of dollars)	--	--	--	--	-1.8	0.4	2.8	5.4	3.0	2.6



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- **Diagnostic Quizzes:** Four levels of quizzes with instant grading and feedback
- **Office Hours:** A link that allows you to ask the textbook authors economics-related questions
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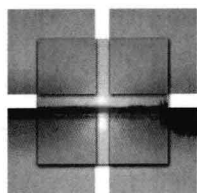


NATIONAL INCOME AND PRODUCT ACCOUNTS		1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
EXPENDITURES APPROACH											
the sum of	1 Personal consumption expenditures	558.7	605.5	648.9	702.4	770.7	852.5	932.4	1,030.3	1,149.8	1,278.4
	2 Gross private domestic investment	141.2	156.4	152.4	178.2	207.6	244.5	249.4	230.2	292.0	361.3
	3 Government purchases	212.8	224.6	237.1	251.0	270.1	287.9	322.4	361.1	384.5	415.3
	4 Exports	45.3	49.3	57.0	59.3	66.2	91.8	124.3	136.3	148.9	158.8
less	5 Imports	46.6	50.5	55.8	62.3	74.2	91.2	127.5	122.7	151.1	182.4
equals	6 Gross domestic product	911.5	985.3	1,039.7	1,128.6	1,240.4	1,385.5	1,501.0	1,635.2	1,823.9	2,031.4
INCOMES APPROACH											
the sum of	7 Compensation of employees	524.3	577.6	617.2	658.8	725.1	811.2	890.2	949.0	1,059.3	1,180.4
	8 Proprietors' income	75.4	78.9	79.8	86.1	97.7	115.2	115.5	121.6	134.3	148.3
	9 Rental income of persons	20.2	20.3	20.3	21.2	21.6	23.1	23.0	22.0	21.5	20.4
	10 Corporate profits	96.5	93.7	81.6	95.1	109.8	123.9	114.5	133.0	160.6	190.9
	11 Net interest	27.2	32.2	38.4	42.6	46.2	53.9	68.8	76.6	80.8	95.7
equals	12 National income	743.6	802.7	837.5	903.9	1,000.4	1,127.4	1,211.9	1,302.2	1,456.4	1,635.8
plus	13 Indirect business tax minus subsidies	70.8	76.7	86.7	98.1	100.4	102.5	108.6	128.8	141.3	143.3
	14 Consumption of fixed capital	90.9	99.8	109.1	118.9	130.9	142.9	164.8	190.9	209.0	231.6
	15 Net factor incomes from rest of world	6.2	6.1	6.4	7.7	8.7	12.7	15.7	13.3	17.2	20.7
equals	16 Gross domestic product	911.5	985.3	1,039.7	1,128.6	1,240.4	1,385.5	1,501.0	1,635.2	1,823.9	2,031.4
	17 Real GDP (billions of 1996 dollars)	3,466.1	3,571.4	3,578.0	3,697.7	3,898.4	4,123.4	4,099.0	4,084.4	4,311.7	4,511.8
	18 Real GDP growth (percent per year)	4.8	3.0	0.2	3.3	5.4	5.8	-0.6	-0.4	5.6	4.6
OTHER DATA											
	19 Population (millions)	200.7	202.7	205.1	207.7	209.9	211.9	213.9	216.0	218.0	220.2
	20 Labor force (millions)	78.7	80.7	82.8	84.4	87.0	89.4	91.9	93.8	96.2	99.0
	21 Employment (millions)	75.9	77.9	78.7	79.4	82.2	85.1	86.8	85.8	88.8	92.0
	22 Unemployment (millions)	2.8	2.8	4.1	5.0	4.9	4.4	5.2	7.9	7.4	7.0
	23 Labor force participation rate (percent)	59.6	60.1	60.4	60.2	60.4	60.8	61.3	61.2	61.6	62.3
	24 Unemployment rate (percent of labor force)	3.6	3.5	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.1
	25 Real GDP per person (1996 dollars per year)	17,270	17,621	17,449	17,806	18,573	19,458	19,167	18,912	19,775	20,486
	26 Growth rate of real GDP per person (percent per year)	3.7	2.0	-1.0	2.0	4.3	4.8	-1.5	-1.3	4.6	3.6
	27 Quantity of money (M2, billions of dollars)	566.8	587.9	626.4	710.1	802.1	855.2	901.9	1,015.9	1,151.7	1,269.9
	28 GDP deflator (1996 = 100)	26.3	27.6	29.1	30.5	31.8	33.6	36.6	40.0	42.3	45.0
	29 GDP deflator inflation rate (percent per year)	4.3	4.9	5.3	5.0	4.2	5.6	9.0	9.3	5.7	6.4
	30 Consumer price index (1982-1984 = 100)	34.8	36.7	38.8	40.5	41.8	44.4	49.3	53.8	56.9	60.6
	31 CPI inflation rate (percent per year)	4.3	5.5	5.8	4.3	3.3	6.2	11.1	9.1	5.7	6.5
	32 Current account balance (billions of dollars)	0.6	0.4	2.3	-1.4	-5.8	7.1	2.0	18.1	4.3	-14.3



# FOUNDATIONS *of* MACROECONOMICS





The challenge and thrill of learning a new subject is like the task of the explorers who first charted America's lakes and rivers. When we set out, we are unsure of

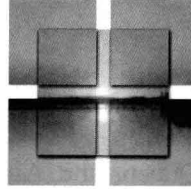
the direction to take. Along the way, we often feel lost. But as we progress forward, we see ever more clearly the path we're taking, even the parts where we felt lost, and we see how our path fits into a bigger and broader picture.

Students, like explorers, benefit enormously from the experience of those who have traveled before them and from the maps that these earlier explorers have made. They also benefit from retracing their path. And they gain perspective by pausing and looking back at where they've been.

Our aims in *Foundations of Macroeconomics* are to travel with you on a journey of discovery, to support you every step of the way so that you are never disoriented or lost, and to help you understand and appreciate the economic landscape that surrounds you.

The cover of this text symbolizes our aims. The lake is the terrain of economics that we're going to cover, understand, and appreciate. The rising sun and *Foundations* icon are our light sources—the clearest and most sharply focused explanations and illustrations of economic principles and ideas. The icon also emphasizes the idea of building blocks that fit one on top of another but that stand on a firm foundation. Each block is a small and easily handled object that can be understood on its own and then more keenly appreciated as part of a larger picture.





To Erin, Tessa, Jack,  
and Abby



# About the Authors



**Robin Bade** was an undergraduate at the University of Queensland, Australia, where she earned degrees in mathematics and economics. After a spell teaching high school math and physics, she enrolled in the Ph.D. program at the Australian National University, from which she graduated in 1970. She has held faculty appointments at the University of Edinburgh in Scotland, at Bond University in Australia, and at the Universities of Manitoba, Toronto, and Western Ontario in Canada. Her research on international capital flows appears in the *International Economic Review* and the *Economic Record*.

Robin first taught the principles of economics course in 1970 and has taught it (alongside intermediate macroeconomics and international trade and finance) most years since then. She developed many of the ideas found in this text while conducting tutorials with her students at the University of Western Ontario.



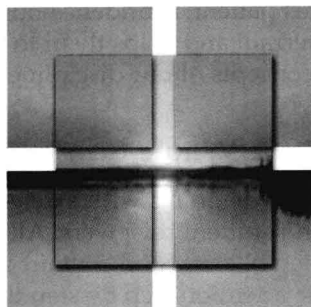
**Michael Parkin** studied economics in England and began his university teaching career immediately after graduating with a B.A. from the University of Leicester. He learned the subject on the job at the University of Essex, England's most exciting new university of the 1960s, and at the age of 30 became one of the youngest full professors. He is a past president of the Canadian Economics Association and has served on the editorial boards of the *American Economic Review* and the *Journal of Monetary Economics*. His research on macroeconomics, monetary economics, and international economics has resulted in more than 160 publications in journals and edited volumes, including the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economic Studies*, the *Journal of Monetary Economics*, and the *Journal of Money, Credit, and Banking*. He is author of the best-selling textbook, *Economics* (Addison-Wesley), now entering its Sixth Edition.

Robin and Michael are a wife-and-husband duo. Their most notable joint research created the Bade-Parkin Index of central bank independence and spawned a vast amount of research on that topic. They don't claim credit for the independence of the new European Central Bank, but its constitution and the movement toward greater independence of central banks around the world were aided by their pioneering work. Their joint textbooks include *Macroeconomics* (Prentice-Hall), *Modern Macroeconomics* (Pearson Education Canada), and *Economics: Canada in the Global Environment*, the Canadian adaptation of Parkin, *Economics* (Addison-Wesley). They are dedicated to the challenge of explaining economics ever more clearly to an ever-growing body of students.

Music, the theater, art, walking on the beach, and four fast-growing grandchildren provide their relaxation and fun.



# Preface



We began the preface to our first edition of *Foundations of Macroeconomics* by attempting to answer a question that we thought would be on many people's minds: *Why?* With Michael's book, *Economics*, Sixth Edition, an established, best-selling text, why on earth would we write a new book?

In retrospect, as we publish the Second Edition of *Foundations of Macroeconomics*, we find ourselves wondering more and more why we didn't write *Foundations* sooner. The response from the economics community has been tremendous. Clearly, many of you agree with our view that

- Most introductory economics textbooks try to do too much;
- Students too frequently get lost in a sea of detail; and
- Economics is a subject that can be learned only by doing it.

We have encountered this view from our own students, and we have heard it echoed by literally hundreds of colleagues across the United States and throughout the world. But creating a teaching and learning system that takes this view seriously is no easy task. *Foundations of Macroeconomics* is the result of our best effort to do so and to help students and teachers meet the challenges we all face.

## LOWERING THE BARRIERS TO ENTRY

Most economics professors want to teach a serious, analytical course that explains the core principles of our subject and helps students apply these principles in their lives and jobs. We are not content to teach "dumbed-down" economics. But most students drown rather than learn to swim when thrown into the deep end of the pool. In this book and its accompanying learning tools, we make painstaking efforts to lower the barriers to learning and to reach out to the beginning student.



We focus on core concepts. We steer a steady path between an overload of detail that swamps the students and a minimalist approach that leaves the student dangling with too much unsaid. We explain tough concepts with the simplest, most straightforward language possible, and we reinforce them with clear, fully explained graphs. And we offer students a rich array of active learning tools that provide alternative ways of accessing and mastering the material.

### ■ Focus on Core Concepts

Each chapter of *Foundations* concentrates on a manageable number of main ideas (most commonly three or four) and reinforces each idea several times throughout the chapter. This patient, confidence-building approach guides students through unfamiliar terrain and helps them to focus their efforts on the most important tools and concepts of our discipline.

### ■ Diagrams That Tell the Whole Story

We developed the style of our diagrams with extensive feedback from faculty focus group participants and student reviewers. All figures make consistent use of color to show the direction of shifts and contain detailed, numbered captions designed to direct students' attention step by step through the action. Because beginning students of economics are often apprehensive about working with graphs, we have made a special effort to present material in as many as three ways—with graphs, words, and tables—in the same figure. And in an innovation that seems necessary but is to our knowledge unmatched, nearly all of the information supporting a figure appears on the same page as the figure itself. No more flipping pages back and forth!

### ■ Many Learning Tools for Many Learning Styles

Our text and its integrated print and electronic learning package recognize that students have a variety of learning styles. Some learn easily by reading the textbook; others benefit from audio and visual reinforcement. All students can profit from an active learning approach. Your students' textbooks come with access to a suite of innovative learning tools, including tutorial software, an eText featuring animated graphs with audio voiceovers, interactive quizzes, and more.

## PRACTICE MAKES PERFECT

---

Everyone agrees that the only way to learn economics is to do it! Reading and remembering doesn't work. Active involvement, working problems, repeated self-testing: These are the ingredients to success in this subject. We have structured this text and its accompanying electronic and print tools to encourage learning by doing. The central device that accomplishes this goal is a tightly knit learning system based on our innovative *Checklist-Checkpoints* structure.

### ■ Checklists

Each chapter opens with a *Chapter Checklist*—a list of (usually) three or four tasks the student will be able to perform after completing the chapter. Each



Checklist item corresponds to a section of the chapter that engages the student with a conversational writing style, well-chosen examples, and carefully designed illustrations.

## ■ Checkpoints

A full-page *Checkpoint*—containing a Practice Problem with Solution and a parallel Exercise—immediately follows each chapter section. The Checkpoints serve as stopping points and encourage students to review the concept and to practice using it before moving on to new ideas. Diagrams and tables bring added clarity to the Checkpoint problems and solutions.

Each Checkpoint also contains a page reference to the corresponding material in the Study Guide as well as a reference to the corresponding section of our online learning environment. We describe these learning tools more fully below.

## ■ Chapter Checkpoints

At the end of each chapter, a *Chapter Checkpoint* summarizes what the student has just learned with a set of key points and a list of key terms. It also contains a further set of questions divided into three groups: Exercises, Critical Thinking, and Web Exercises.

## ■ Conveying the Excitement

Students learn best when they can see the point of what they are studying. We show the point in a series of *Eye On...* features. Current and recent events appear in *Eye on the U.S. Economy* boxes. We place our present experience in global and historical perspectives with *Eye on the Global Economy* and *Eye on the Past* boxes. All of our *Eye On...* boxes connect theory with reality.

## WHAT'S NEW IN THE SECOND EDITION

Much has happened in the world since the first edition of *Foundations of Macroeconomics* was written. The Bush administration took office and spurred Congress to pass a large and controversial tax cut package. For the first time in a decade, the U.S. economy slipped into recession in early 2001; many Americans saw their personal wealth decline as the stock market fell. The tragic events of September 11, 2001, left an indelible mark on our memories and brought far-reaching consequences for our economy.

*Foundations of Macroeconomics*, Second Edition, seeks to make sense of these and other major events of the early 2000s. Examples and data have been thoroughly updated to provide students with a compelling and current text that reflects the world that they live in.

In addition, we have made a number of improvements in coverage, organization, and structure, the most important of which we explain here.

## ■ Hardcover Economics Edition

By popular demand, *Foundations* is now offered as a single, hardcover volume, *Foundations of Economics*. We retain, however, our much-liked innovation of distinct



front ends for the micro and macro splits: The first four chapters of micro introduce the big ideas of microeconomics, and the first four chapters of macro introduce the big ideas of macroeconomics. The hardcover economics edition is a synthesis of the two.

### ■ One-Semester Split

We were told by many that *Foundations*, with its focus on core concepts, would be well-suited to a one-semester principles course that covers both micro and macro. A one-semester split, *Essential Foundations of Economics*, will be available in summer 2003.

### ■ Extensive Updating

Every chapter has been revised to ensure that the data used are the latest available. In most cases, our data run through 2002 and in some cases reflect events at the beginning of 2003.

### ■ More prominent placement of AS-AD

We provide an initial overview of the AS-AD model at the beginning of Chapter 8—our first macro theory chapter—to serve as the over-arching model for understanding macroeconomic performance in both the long term and the short term. The model is developed in detail and used to explain the business cycle in Chapter 14 and then used extensively to discuss stabilization policy issues in Chapters 16–18. Chapter 8 continues to provide a clear explanation of the forces that determine potential GDP and the natural unemployment rate.

### ■ Simplified Coverage of Money and Inflation

Chapter 13, “Money, Interest, and Inflation,” has been carefully revised to simplify and strengthen our explanation of the relationship between money growth and inflation in the long run and the distinction between short-run equilibrium and long-run equilibrium in the money market.

### ■ The Business Cycle and Current State of the U.S. Economy

We have switched the order of our chapters on the Keynesian cross model and multiplier (now Chapter 15) and the AS-AD model and the business cycle (now Chapter 14). The AS-AD business cycle chapter includes a new “Eye on the U.S. Economy” that describes the anatomy of the 2001 recession and slow recovery of 2002 and also looks at the factors to which the NBER paid special attention in dating the onset of the 2001 recession.

### ■ Thorough Yet Self-Contained and Optional Coverage of Keynesian Cross

Our coverage of the Keynesian cross is now located entirely within Chapter 15. We offer a thorough treatment of this topic for those who wish to teach it. But



the material is optional. It gives the student a look behind the *AD* curve, an explanation of the multiplier, and a discussion of the role of business inventories in the adjustment process that follows a change in autonomous expenditure at a business cycle turning point. The chapter also explains the relationship between the *AD* curve and the *AE* curve.

### ■ Expanded Explanation of Supply Side Effects of Fiscal Policy

Chapter 16, which explains the effects of monetary policy and fiscal policy, contains an expanded explanation of the supply side effects of fiscal policy. This chapter also includes a discussion of the Bush 2003 tax cut proposals and an account of the 2001–2002 interest rate cuts.

### ■ New Coverage of the Stabilization Policy Debate

Chapter 18, which reviews the debate on how best to use monetary policy and fiscal policy, contains a new discussion of the idea that price level targeting might result in greater stability of real GDP and so provide a “free lunch.” It also explains the Taylor rule and the McCallum rule for monetary policy and compares the operation of each of these rules with the Fed’s actual policy during the 1990s and 2000s.

### ■ Expanded End-of-Chapter Exercises

Because of the Checklist-Checkpoint organization of our text, we devote much more space to review and problem solving than other texts. Nonetheless, in this new edition we have expanded our end-of-chapter exercises to three full pages. Two pages offer a series of analytical exercises that parallel those in the Checkpoints, and one page provides a rich array of Critical Thinking and Web Exercises.

### ■ Expanded Web Resources

The Foundations Web site now delivers the e-Text—the *entire textbook*—in PDF format with hyperlinks to all the other components of our Web resources. We have prepared a Flash animation accompanied by an audio explanation of every figure in the textbook. We have created a set of new diagnostic quizzes for every Checkpoint with feedback that includes hyperlinks to the e-Text and other Web-based review materials. And we have provided a comprehensive set of Web exercises with external links for every chapter.

### ■ Course Management with MyEconLab

Every student who buys a new textbook receives a prepaid subscription to MyEconLab. New to the Second Edition of *Foundations*, MyEconLab delivers all of the resources available on the Foundations Web site in a comprehensive online course. Instructors who use MyEconLab gain access to powerful course management tools, and their students gain access to additional learning resources that we describe below.



## ORGANIZATION

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Our text focuses on core topics with maximum flexibility. We cover all the standard topics of the principles of macroeconomics curriculum. And we do so in the order that is increasingly finding favor in the principles course. We believe that a powerful case can be made for teaching the subject in the order in which we present it here. The organizing device is the idea that at full employment, the real economy is influenced by only real variables and the price level is proportional to the quantity of money. This idea has been incredibly productive in advancing our understanding of both the full employment economy and the business cycle. By having a firm understanding of the forces that determine potential GDP, the student better appreciates the more complex interactions of real and monetary factors that bring economic fluctuations. Further, the student sees that the long-term trends in our economy play a larger role in determining our standard of living and cost of living than do the fluctuations around those trends.

Deciding the order in which to teach the components of macroeconomics involves a balancing act that trades off the cumulative nature of the material against the desire to cover topics that are in the news early in the course. There is little disagreement that the place to begin is with production possibilities and demand and supply, followed by the definitions and measurement of the key macroeconomic variables. We provide a carefully paced and thoroughly modern treatment of these topics.

The course then divides naturally into three parts. The first explains the real economy at full employment (potential GDP, investment, saving, the real interest rate, and economic growth, including policies for achieving faster growth). The second explains the money economy (determining the interest rate in the short run and price level and inflation rate in the long run). The third explains economic fluctuations (interactions between the real and monetary sectors and stabilization policy issues).

Extensive reviewing suggests that most teachers agree with our view on how to organize the course. But we recognize that there is a range of opinion about sequencing, and we have structured our text so that it works equally well if other sequences are preferred. Some teachers want to follow the measurement material with the aggregate expenditure (fixed price level) model and aggregate demand and aggregate supply. Money and economic fluctuations come next. And the influences on potential GDP and economic growth either come last or are omitted. Our text supports this sequence. After Chapter 7, it is possible to jump to either Chapter 14 (AS-AD and the Business Cycle) or Chapter 15 (Aggregate Expenditure). The money chapters (11, 12, and 13) can be covered next followed by stabilization policy (Chapters 16, 17, and 18).

The flexibility chart on p. xxxvi provides detailed information that enables you to rearrange the chapters in a variety of ways. And the alternative course chart on p. xxxvii offers some suggestions of other possible paths through the book.

## A RICH ARRAY OF SUPPORT MATERIALS FOR THE STUDENT

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*Foundations of Macroeconomics* is accompanied by the most comprehensive set of learning tools ever assembled. All the components of our package are organized by Checkpoint topic so that the student may move easily between the textbook,



the Study Guide, eText, interactive tutorial, and online diagnostic quizzes, while mastering a single core concept.

The variety of tools that we provide enables students to select the path through the material that best suits their individual learning styles. The package is technology-enabled, not technology-dependent. Active learners will make extensive use of the *Foundations Interactive* tutorial and the animated graphics of eText, our online version of the textbook. Reflective learners may follow a print-only path if they prefer.

## ■ Study Guide

Neil Garston (California State University–Los Angeles), Tom Larson (California State University–Los Angeles), and Mark Rush (University of Florida) have prepared a Study Guide that is available in both print and electronic formats. The Study Guide provides an expanded Chapter Checklist that enables the student to break the learning tasks down into smaller, bite-sized pieces; self-test materials; expanded explanations of the solutions to the practice problems in the text; and additional practice problems. To ensure consistency across the entire package, the authors who wrote the questions for the Test Banks also wrote the self-test questions for the Study Guide.

## ■ Foundations Interactive

A Java and JavaScript tutorial software program that runs in a Web browser, *Foundations Interactive* contains electronic interactive versions of most of the textbook figures. The student manipulates the figures by changing the conditions that lie behind them and observes how the economy responds to events. Quizzes that use five question types (fill-in-the-blank, true-or-false, multiple-choice, complete-the-graph, and numeric) can be worked with, or optionally without, detailed feedback. *Foundations Interactive* is available through the Foundations Web site and within the MyEconLab course.

## ■ Foundations Web Site

The Foundations Web site is a powerful and tightly integrated online learning environment. For students, the site includes

- eText—the entire textbook in PDF format with hyperlinks to all the other components of the Web site and with animated figures accompanied by audio explanations prepared by us
- eStudy Guide—the entire Study Guide online
- *Foundations Interactive*—tutorials, quizzes, and graph tools that make curves shift and graphs come to life with a click of the mouse
- Diagnostic quizzes for every Checkpoint with feedback that includes hyperlinks to the e-text, e-Study Guide, and *Foundations Interactive*
- Economics in the News updated daily during the school year
- Online “Office Hours”—ask a question via e-mail, and one of us will respond within 24 hours!
- Economic links—links to sites that keep students up to date with what’s going on in the economy and that enable them to work end-of-chapter Web Exercises