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economics

Nineteenth Edit

Economics

Principles, Problems, and Policies

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University of Nebraska

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Pacific Lutheran University

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ECONOMICS: PRINCIPLES, PROBLEMS, AND POLICIES

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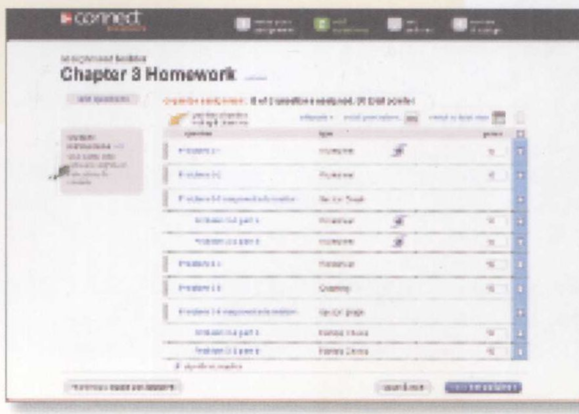

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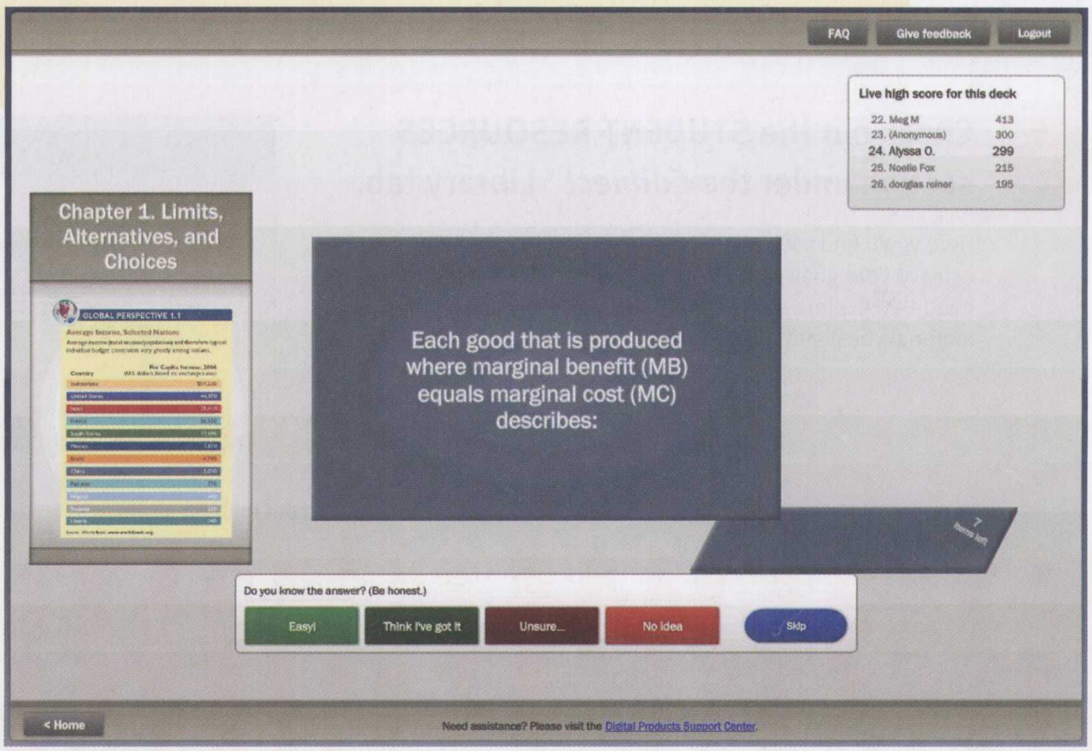

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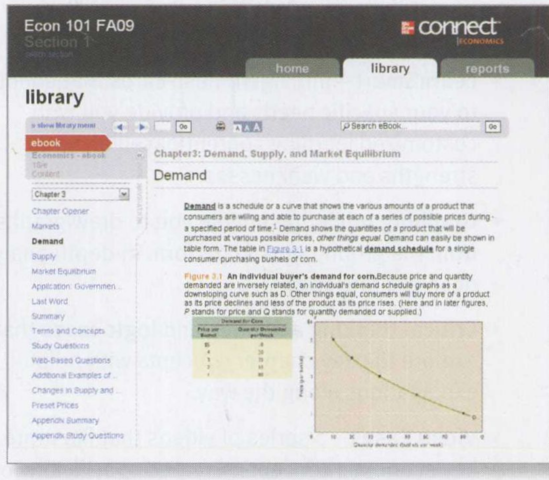

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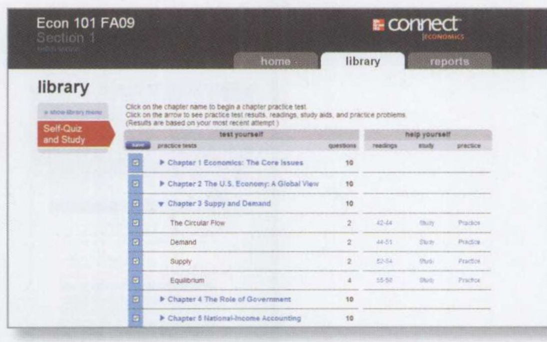

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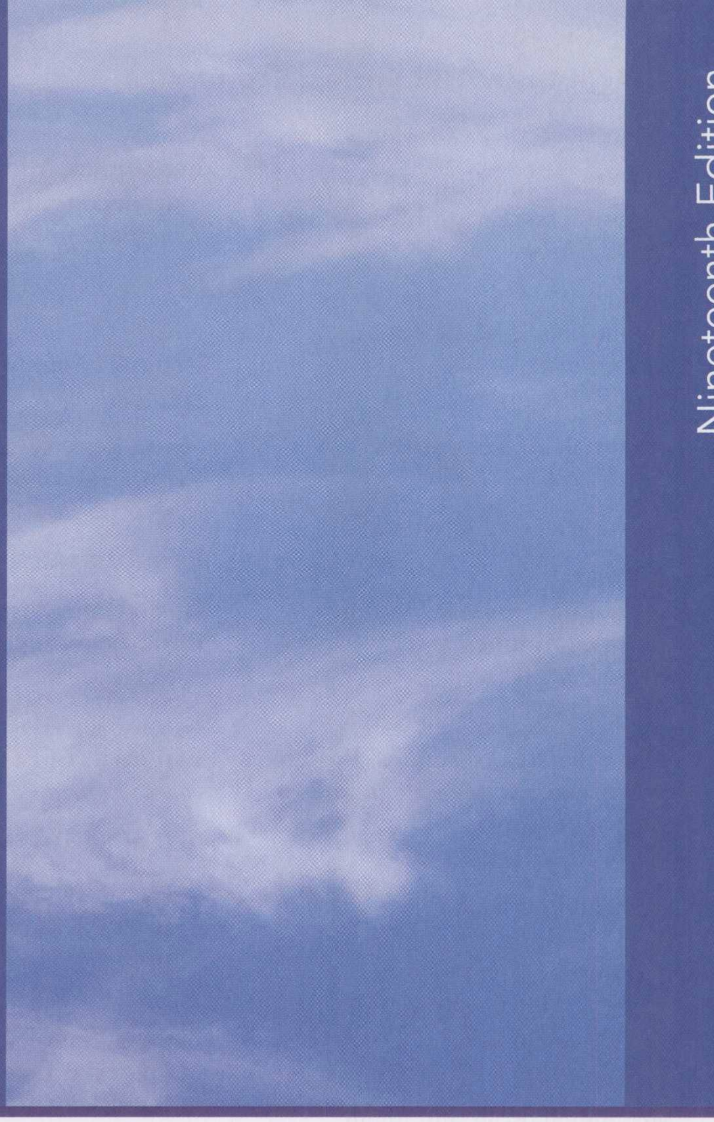

Nineteenth Edition

Economics

Principles, Problems, and Policies

The McGraw-Hill Series: Economics

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The Six Versions of McConnell, Brue, Flynn

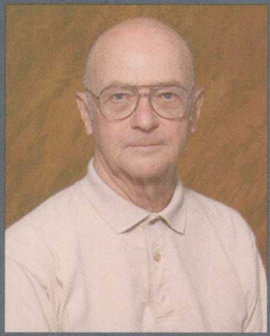
Chapter	Economics	Microeconomics	Microeconomics: Brief Edition	Macroeconomics	Macroeconomics: Brief Edition	Essentials of Economics
1. Limits, Alternatives, and Choices	x	x	x	x	x	x
2. The Market System and the Circular Flow	x	x	x	x	x	x
3. Demand, Supply, and Market Equilibrium	x	x	x	x	x	x
4. Elasticity	x	x	x	x		x
5. Market Failures: Public Goods and Externalities	x	x	x	x	x	x
6. Consumer Behavior	x	x				
7. Businesses and the Costs of Production	x	x	x			x
8. Pure Competition in the Short Run	x	x	x			x
9. Pure Competition in the Long Run	x	x	x			x
10. Pure Monopoly	x	x	x			x
11. Monopolistic Competition and Oligopoly	x	x	x			x
11W. Technology, R&D, and Efficiency (Web Chapter)	x	x				
12. The Demand for Resources	x	x				
13. Wage Determination	x	x	x			x
14. Rent, Interest, and Profit	x	x				
15. Natural Resource and Energy Economics	x	x				
16. Public Finance: Expenditures and Taxes	x	x	x			
17. Asymmetric Information, Voting, and Public Choice	x	x				
18. Antitrust Policy and Regulation	x	x				
19. Agriculture: Economics and Policy	x	x				
20. Income Inequality, Poverty, and Discrimination	x	x	x			x
21. Health Care	x	x				
22. Immigration	x	x				
23. An Introduction to Macroeconomics	x			x		
24. Measuring Domestic Output and National Income	x			x	x	x
25. Economic Growth	x			x	x	x
26. Business Cycles, Unemployment, and Inflation	x			x	x	x
27. Basic Macroeconomic Relationships	x			x		
28. The Aggregate Expenditures Model	x			x		
29. Aggregate Demand and Aggregate Supply	x			x	x	x
30. Fiscal Policy, Deficits, and Debt	x			x	x	x
31. Money, Banking, and Financial Institutions	x			x	x	x
32. Money Creation	x			x		
33. Interest Rates and Monetary Policy	x			x	x	x
34. Financial Economics	x			x		
35. Extending the Analysis of Aggregate Supply	x			x	x	
36. Current Issues in Macro Theory and Policy	x			x		
37. International Trade	x	x	x	x	x	x
38. The Balance of Payments, Exchange Rates, and Trade Deficits	x	x	x	x	x	x
39W. The Economics of Developing Countries (Web Chapter)	x			x		

*Chapter numbers refer to *Economics: Principles, Problems, and Policies*.

*A Red "X" indicates chapters that combine or consolidate content from two or more *Economics* chapters.

To **Mem** and to **Terri** and **Craig**, and to **past instructors**

About the Authors



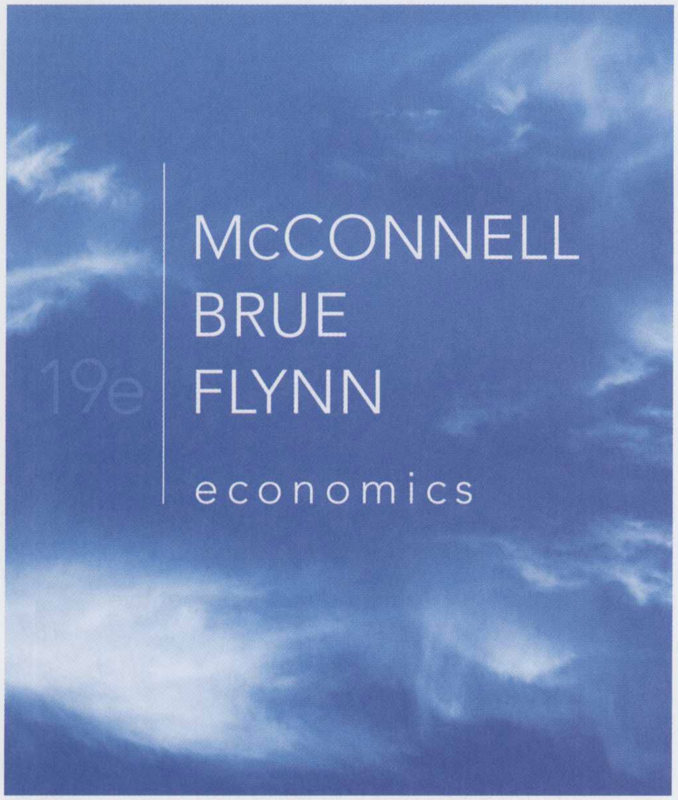
CAMPBELL R. MCCONNELL earned his Ph.D. from the University of Iowa after receiving degrees from Cornell College and the University of Illinois. He taught at the University of Nebraska–Lincoln from 1953 until his retirement in 1990. He is also coauthor of *Contemporary Labor Economics*, ninth edition; *Essentials of Economics*, second edition; *Macroeconomics: Brief Edition;* and *Microeconomics: Brief Edition* (all The McGraw-Hill Companies), and has edited readers for the principles and labor economics courses. He is a recipient of both the University of Nebraska Distinguished Teaching Award and the James A. Lake Academic Freedom Award and is past president of the Midwest Economics Association. Professor McConnell was awarded an honorary Doctor of Laws degree from Cornell College in 1973 and received its Distinguished Achievement Award in 1994. His primary areas of interest are labor economics and economic education. He has an extensive collection of jazz recordings and enjoys reading jazz history.

STANLEY L. BRUE did his undergraduate work at Augustana College (South Dakota) and received its Distinguished Achievement Award in 1991. He received his Ph.D. from the University of Nebraska–Lincoln. He is retired from a long career at Pacific Lutheran University, where he was honored as a recipient of the Burlington Northern Faculty Achievement Award. Professor Brue has also received the national Leavey Award for excellence in economic education. He has served as national president and chair of the Board of Trustees of Omicron Delta Epsilon International Economics Honorary. He is coauthor of *Economic Scenes*, fifth edition (Prentice-Hall); *Contemporary Labor Economics*, ninth edition; *Essentials of Economics*, second edition; *Macroeconomics: Brief Edition; Microeconomics: Brief Edition* (all The McGraw-Hill Companies); and *The Evolution of Economic Thought*, seventh edition (South-Western). For relaxation, he enjoys international travel, attending sporting events, and skiing with family and friends.

SEAN M. FLYNN did his undergraduate work at the University of Southern California before completing his Ph.D. at U.C. Berkeley, where he served as the Head Graduate Student Instructor for the Department of Economics after receiving the Outstanding Graduate Student Instructor Award. He teaches at Scripps College (of the Claremont Colleges) and is the author of *Economics for Dummies* (Wiley) and coauthor of *Essentials of Economics*, second edition; *Macroeconomics: Brief Edition*; and *Microeconomics: Brief Edition* (all The McGraw-Hill Companies). His research interests include finance and behavioral economics. An accomplished martial artist, he has represented the United States in international aikido tournaments and is the author of *Understanding Shodokan Aikido* (Shodokan Press). Other hobbies include running, traveling, and enjoying ethnic food.

List of Key Graphs

Preface



Welcome to the 19th edition of *Economics*, the best-selling economics textbook in the world. An estimated 14 million students have used *Economics* or its companion editions, *Macroeconomics* and *Microeconomics*. *Economics* has been adapted into Australian and Canadian editions and translated into Italian, Russian, Chinese, French, Spanish, Portuguese, and other languages. We are pleased that *Economics* continues to meet the market test: nearly one out of four U.S. students in principles courses used the 18th edition.

Fundamental Objectives

We have three main goals for *Economics:*

- Help the beginning student master the principles essential for understanding the economizing problem, specific economic issues, and policy alternatives.
- Help the student understand and apply the economic perspective and reason accurately and objectively about economic matters.
- Promote a lasting student interest in economics and the economy.

What's New and Improved?

One of the benefits of writing a successful text is the opportunity to revise—to delete the outdated and install the new, to rewrite misleading or ambiguous statements, to introduce more relevant illustrations, to improve the organizational structure, and to enhance the learning aids.

We trust that you will agree that we have used this opportunity wisely and fully. Some of the more significant changes include the following.

Restructured Introductory Chapters

We have divided the five-chapter grouping of introductory chapters common to *Economics*, *Microeconomics*, and *Macroeconomics* into two parts. Part 1 contains Chapter 1 (Limits, Alternatives, and Choices) and Chapter 2 (The Market System and the Circular Flow). The content in Part 2 has changed and now consists of three chapters: Chapter 3 (Demand, Supply, and Market Equilibrium), Chapter 4 (Elasticity), and Chapter 5 (Market Failures: Public Goods and Externalities).

The chapters in Part 2 are much more concept-oriented and analytical and much less general and descriptive than in the previous edition. Our new approach responds to suggestions by reviewers made over the years to:

- Locate the elasticity chapter immediately after the supply and demand chapter.
- Put the elasticity chapter into *Macroeconomics* for those who cover elasticity in their macro course.
- Eliminate the mainly descriptive Chapter 4 on the private and public sectors and move the relevant content to where it fits more closely with related micro and macro materials.
- Provide a single chapter on international trade, rather than two separate chapters that have overlapping coverage (Chapters 5 and 37 in the 18th edition).
- Boost the analysis of market failures (public goods and externalities) in the introductory sections to complement and balance the strong but highly stylized introduction to the market system discussed in Chapter 2.

Our new approach embraces these suggestions. For micro instructors, the new ordering provides a clear supply-and-demand path to the subsequent chapters on consumer and producer behavior. For macro instructors, the new ordering provides the option of assigning elasticity or market failures or both. And because this content is both optional and modular, macro instructors can also skip it and move directly to the macroeconomic analysis.

The content on the United States in the global economy that appeared in Chapter 5 of the 18th edition is now integrated into Chapter 37 (International Trade). Because Chapter 37 draws only on production possibilities analysis and supply and demand analysis, it can be assigned at any point after Chapter 3 (Demand, Supply, and Market Equilibrium). Therefore, instructors who want to introduce international economics early in their courses can assign Chapter 37 within the introductory chapters found in Parts 1 and 2.

For instructors who prefer Chapter 5 of the prior edition to Chapter 37 of the new edition, we have fully updated the previous Chapter 5 content and made it freely available for viewing and printing at both the instructor and student portions of our Web site, **www.mcconnell19e.com**. Look for it under the new category called Content Options for Instructors (COI). This substitute for Chapter 37 is fully supported by both the instructor supplement package and the student supplement package.

New "Consider This" and "Last Word" Pieces

Our "Consider This" boxes are used to provide analogies, examples, or stories that help drive home central economic ideas in a student-oriented, real-world manner. For instance, a "Consider This" box titled "McHits and McMisses" illustrates consumer sovereignty through a listing of successful and unsuccessful products. How businesses exploit price discrimination is driven home in a "Consider This" box that explains why ballparks charge different admission prices for adults and children but only one set of prices at their concession stands. These brief vignettes, each accompanied by a photo, illustrate key points in a lively, colorful, and easy-to-remember way. We have added 16 new "Consider This" boxes in this edition.

CONSIDER THIS . . .

The Fable of the Bees

Economist Ronald Coase received the Nobel Prize for his so-called **Coase theorem,** which pointed out that under the right conditions, private individuals could often negotiate their own mutually agreeable solutions to externality problems through *private bargaining* without the need for government interventions like pollution taxes.

This is a very important insight because it means that we shouldn't automatically call for government intervention every time we see a potential externality problem. Consider the positive externalities that bees provide by pollinating farmers' crops. Should we assume that beekeeping will be underprovided unless the government intervenes with, for instance, subsidies to encourage more hives and hence more pollination?

As it turns out, no. Research has shown that farmers and beekeepers long ago used private bargaining to develop customs and payment systems that avoid free riding by farmers and encourage beekeepers to keep the optimal number of hives. Free riding is avoided by the custom that all farmers in an area simultaneously hire beekeepers to provide bees to pollinate their crops. And farmers always pay the beekeepers for their pollination services because if they didn't, then no beekeeper would ever work with them in the future—a situation that would lead to massively reduced crop yields due to a lack of pollination.

The "Fable of the Bees" is a good reminder that it is a fallacy to assume that the government must always get involved to remedy externalities. In many cases, the private sector can solve both positive and negative externality problems on its own.

Our "Last Word" pieces are lengthier applications or case studies that are placed near the end of each chapter. For example, the "Last Word" section for Chapter 1 (Limits, Alternatives, and Choices) examines pitfalls to sound economic reasoning, while the "Last Word" section for

LAST Word Carbon Dioxide Emissions, Cap and Trade, and Carbon Taxes

Cap-and-trade systems and carbon taxes are two approaches to reducing carbon dioxide (CO_2) emissions.

Externality problems are property rights problems. Consider a landfill. Because the owner of the landfill has full rights to his land, people wishing to dump their trash into the landfill have to pay him. This payment implies that there is no externality: He happily accepts their trash in exchange for a dumping fee. By contrast, because nobody owns the atmosphere, all air pollution is an externality, since there is no way for those doing the polluting to work out a payment to compensate those affected by the pollution or for those threatened with pollution to simply refuse to be polluted on.

Conventional property rights therefore cannot fix the externalities associated with air pollution. But that does not mean property rights can't help fight pollution. The trick to making them work is to assign property rights not to the atmosphere itself, but to *polluting* the atmosphere. This is done in "cap-and-trade" systems, under which the government sets an annual limit, or cap, to the number of tons of a pollutant that firms can emit into the atmosphere.

Consider carbon dioxide, or CO_2. It is a colorless, odorless

climate change, specifically global warming. To reduce CO_2 emissions, the U.S. government might set a cap of 5 billion tons of CO_2 emissions per year in the United States (which would be about 10 percent below 2009 emissions levels for that molecule). The government then prints out emissions permits that sum to the limit set in the cap and distributes them to polluting firms. Once they are distributed, the only way a firm can legally emit a ton of CO_2 is if it owns a permit to do so.

Under this policy, the government can obviously adjust the total amount of air pollution by adjusting the cap. This by itself improves efficiency, because the cap imposes scarcity. Because each firm has only a limited number of permits, each firm has a strong incentive to maximize the net benefit that it produces from every ton of pollution that it emits. But the *cap-and-trade* scheme leads to even greater improvements in efficiency, because firms are free to trade (sell) them to each other in what are referred to as *markets for externality rights.*

For instance, suppose Smokestack Toys owns permits for 100 tons of CO_2 emissions and that it could use them to produce toy cars that would generate profits of $100,000. There is a power plant, however, that could make up to $1 million of profits by using those 100 tons of emissions permits to generate electricity. Because firms can trade their permits, Smok

Chapter 5 (Market Failures: Public Goods and Externalities) examines cap-and-trade versus carbon taxes as policy responses to excessive carbon dioxide emissions. There are 10 new "Last Word" sections in this edition.

If you are unfamiliar with *Economics*, we encourage you to thumb through the chapters to take a quick look at these highly visible features.

New Content on Behavioral Economics

We have added new material covering the consumer-choice aspects of behavioral economics to the end of our chapter on Consumer Behavior (Chapter 6 of *Economics* and *Microeconomics*). The new material on behavioral economics covers prospect theory, framing effects, loss aversion, anchoring effects, mental accounting, and the endowment effect. The behavioral economics theory and examples are tightly focused on consumer-choice applications so as to flow smoothly from, and build upon, the standard utility-maximization theory and applications developed earlier in the chapter. The new material is intentionally at the end of the chapter, not only to show that behavioral economics extends standard theory (rather than replacing or refuting it) but also so that the new material is modular and thus can be skipped by instructors without loss of continuity. A new "Consider This" box on the "hedonic treadmill" and a new "Last Word" section on "nudges" bolster our overall coverage of behavioral economics.

Divided Pure Competition Chapter

We have divided the very long pure competition chapter (Chapter 9 of the 18th edition) into two logically distinct chapters, one on pure competition in the short run (Chapter 8) and the other on pure competition in the long run (Chapter 9). These more "bite-sized" chapters should improve student retention of the material. Students will first master the logic behind the $MC = MR$ rule for setting output as well as the short-run shutdown condition. Students will then be able to pause to test their understanding of this content through end-of-chapter questions and problems and other supporting materials before moving on to the next chapter's coverage of pure competition in the long run.

We have also combined several table/figure pairs to improve pedagogy in the short-run chapter. In previous editions, the material for this chapter featured three figures that corresponded with the data in three separate tables. We have now combined all three such table/figure pairs, placing each data table directly above its accompanying figure to increase student comprehension. We have also used background highlights on equilibrium numbers in the tables to enable students to more easily move back and forth from references in the body to equilibrium numbers in the tables.

New Public Finance Chapter

By moving the discussion of market failure from Chapter 16 of the 18th edition to Chapter 5 of the 19th edition, we have made room for a new Chapter 16 (Public Finance: Taxation and Expenditures). This traditional public finance chapter adds considerable new content to existing material that previously appeared in Chapter 4 (The U.S. Economy: Private and Public Sectors) and Chapter 17 (Public Choice Theory and the Economics of Taxation). The material adopted from Chapter 4 of the 18th edition includes a circular flow diagram with government; an overview of Federal, state, and local tax revenues and expenditures; and explanations of marginal and average tax rates. The material adopted from Chapter 17 of the 18th edition includes discussions of the benefits-received and ability-to-pay principles of taxation; an explanation of progressive, regressive, and proportional taxes; tax incidence and efficiency losses due to taxation; and the redistributive incidence of the overall tax-spending system in the United States.

This chapter's new material includes a short section on government employment that is built around two pie charts. The first gives a breakdown of what fractions of state and local government employees are dedicated to certain tasks. The second gives a similar accounting for Federal government employees.

Also new to this chapter are "Consider This" boxes on state lotteries and value-added taxes and a "Last Word" section reviewing recent research on the redistributive effects of the *combined* taxation and spending system in the United States.

The new public finance chapter is followed by a restructured chapter covering asymmetric information, voting, and public choice. Reviewers agreed with us that this new two-chapter set covering the microeconomics of government is a major improvement over the prior edition.

New Discussions of the Financial Crisis and the Recession

Our modernization of the macroeconomics in the previous edition has met with great success, measured by reviews, instructor feedback, and market response. We recast the entire macro analysis in terms of the modern, dominant paradigm of macroeconomics, using economic growth as the central backdrop and viewing business fluctuations as significant and costly variations in the rate of growth. In this paradigm, business cycles result from demand shocks (or, less often, supply shocks) in conjunction with inflexible short-run product prices and wages. The degree of price and wage stickiness decreases with time. In our models, the *immediate short run* is a period in which both the price level and wages are not only sticky, but stuck; the *short run* is a period in which product prices are flexible but wages are not; and the *long run* is a period in which both product prices and wages are fully flexible. Each of these three periods—and thus each of the models based on them—is relevant to understanding the actual macro economy and its occasional difficulties.

In this edition, we have mainly focused on incorporating into our new macroeconomic schema an analysis of the financial crisis, the recession, and the hesitant recovery. We first introduce the recession in Chapter 23 (An Introduction to Macroeconomics) via a new "Consider This" box that ties to the chapter's discussion of Buzzer Auto, demand shocks, and short-run sticky prices. In Chapter 24 (Measuring Domestic Output and National Income) we point out that the main flows in the National Income and Product Accounts usually expand over time, but not always, as demonstrated by the recession. In Chapter 25 (Economic Growth) we discuss how the recession relates to the growth/production possibilities dynamics of Figure 25.2. In Chapter 26 (Business Cycles, Unemployment, and Inflation) we provide a telling comparison of unemployment rates for various demographic groups for the prerecession year 2007 and the recession year 2009.

In Chapter 27 (Basic Macroeconomic Relationships) we have added two "Consider This" boxes, one on how the paradox of thrift applied to consumer behavior during the recession and the other on the riddle of plunging investment spending at the same time the interest rate dropped to near zero during the recession. In Chapter 28 (The Aggregate Expenditures Model) we use the recession as a timely application of how a decline in aggregate expenditures can produce a recessionary expenditure gap and a highly negative GDP gap. In Chapter 29 (Aggregate Demand and Aggregate Supply) we use the recession as a good application of how negative demand shocks can produce large declines in real output with no or very little deflation. Chapter 30

(Fiscal Policy, Deficits, and Debt) provided a terrific opportunity to bring each of these timely and relevant subjects up-to-date, and we took full advantage of that opportunity.

In Chapter 31 (Money, Banking, and Financial Institutions) we added a major new section on the financial crisis, with emphasis on the mortgage debt crisis, mortgage-backed securities, failures and near-failures of financial firms, the Treasury's TARP rescue, the Fed's extraordinary use of lender-of-last-resort facilities, and the Wall Street Reform and Consumer Protection Act of 2010. In Chapter 32 (Money Creation), we stress that the Fed now pays interest on required reserves, and we also use the "Last Word" on the bank panics of 1930–1933 to explain how the Fed handled things very differently during the recent financial crisis.

Chapter 33 (Interest Rates and Monetary Policy) features several new discussions relating to Fed policies during the recession, including a new discussion on the liquidity trap. Along with giving the Fed high marks for dealing with the crisis, we also say that some economists think the Fed contributed to the financial crisis by keeping interest rates too low for too long during the recovery from the 2001 recession. We also replaced a dated "Consider This" piece with a new one on the ballooning Fed balance sheet and the problems it could pose for monetary policy during the eventual postrecession expansion. Chapter 34 (Financial Economics) presented a new opportunity for us to demonstrate how a sharp decline of the "appetite for risk" alters the slope of the Securities Market Line (SML) and changes investment patterns between stocks and bonds.

Other mentions of the recession are spread throughout the remainder of the macro chapters, including in the discussions of macro debates, trade protectionism, and trade deficits.

Although we found these various ways to work the recession into our macro chapters, we are confident that our basic macroeconomic models will serve equally well in explaining economic recovery and expansion back to the economy's historical growth path. The new inclusions relating to the recession simply help students see the relevance of the models to what they are seeing in the news and perhaps experiencing in their own lives. The overall tone of the book, including the macro, continues to be optimistic with respect to the long-term growth prospects of market economies.

Reworked End-of-Chapter Questions and Problems

We have extensively reworked the end-of-chapter Study Questions, splitting them into questions and problems and adding many new problems. The questions are analytic and often ask for free responses, whereas the problems are mainly quantitative. We have aligned the questions and problems with the learning objectives presented at the beginning of the chapters. All of the questions and problems are assignable through McGraw-Hill's *Connect Economics;* all of the problems also contain additional algorithmic variations and can be automatically graded within the system. The new lists of questions and problems were well-received by reviewers, many of them long-time users of the book.

Current Discussions and Examples

The 19th edition of *Economics* refers to and discusses many current topics. Examples include the cost of the war in Iraq; surpluses and shortages of tickets at the Olympics; the myriad impacts of ethanol subsidies; creative destruction; aspects of behavioral economics; applications of game theory; the most rapidly expanding and disappearing U.S. jobs; oil and gasoline prices; cap-and-trade systems and carbon taxes; the value-added tax; state lotteries; the Food, Conservation, and Energy Act of 2008; consumption versus income inequality; the Patient Protection and Affordable Care Act (PPACA) of 2010; immigration issues; core inflation; China's continued rapid growth; the severe recession of 2007–2009; the paradox of thrift; the stimulus package of 2008; ballooning Federal budget deficits and public debt; the long-run funding shortfalls in Social Security and Medicare; securitization and the mortgage debt crisis; the Wall Street Reform and Consumer Protection Act of 2010; recent Fed monetary policy; the liquidity trap; the Fed's new term auction facility; the Fed's payment of interest on required reserves; the Taylor rule in relation to Fed policy; the jump in the size of the Fed's balance sheet; U.S. trade deficits; offshoring of American jobs; trade adjustment assistance; the European Union and the Euro Zone; changes in exchange rates; and many other current topics.

Chapter-by-Chapter Changes

Each chapter of *Economics*, 19th edition, contains updated data reflecting the current economy, streamlined Learning Objectives, and reorganized end-of-chapter content.

Chapter-specific updates include:

Chapter 1: Limits, Alternatives, and Choices features a new Learning Objective on consumption possibilities and a revised definition of "entrepreneur" that clarifies why risk taking is socially beneficial and, thus, why entrepreneurial ability is a valuable economic resource.

Chapter 2: The Market System and the Circular Flow includes a revised explanation of property rights, a clarified discussion of firms' motives for choosing the lowest-cost production methods, an updated "McHits and McMisses"