

 CENGAGE

N. GREGORY MANKIWI

PRINCIPLES OF
ECONOMICS



NINTH EDITION



Principles of Economics: a Guided Tour

INTRODUCTION

- 1 Ten Principles of Economics ————— *The study of economics is guided by a few big ideas.*
- 2 Thinking Like an Economist ————— *Economists view the world as both scientists and policymakers.*
- 3 Interdependence and the Gains from Trade ——— *The theory of comparative advantage explains how people benefit from economic interdependence.*

HOW MARKETS WORK

- 4 The Market Forces of Supply and Demand ———— *How does the economy coordinate interdependent economic actors? Through the market forces of supply and demand.*
- 5 Elasticity and Its Application ————— *How does the economy coordinate interdependent economic actors? Through the market forces of supply and demand.*
- 6 Supply, Demand, and Government Policies ——— *The tools of supply and demand are put to work to examine the effects of various government policies.*

MARKETS AND WELFARE

- 7 Consumers, Producers, and the Efficiency of Markets ———— *Why is the equilibrium of supply and demand desirable for society as a whole? The concepts of consumer and producer surplus explain the efficiency of markets, the costs of taxation, and the benefits of international trade.*
- 8 Application: The Costs of Taxation ————— *Why is the equilibrium of supply and demand desirable for society as a whole? The concepts of consumer and producer surplus explain the efficiency of markets, the costs of taxation, and the benefits of international trade.*
- 9 Application: International Trade ————— *Why is the equilibrium of supply and demand desirable for society as a whole? The concepts of consumer and producer surplus explain the efficiency of markets, the costs of taxation, and the benefits of international trade.*

THE ECONOMICS OF THE PUBLIC SECTOR

- 10 Externalities ————— *Market outcomes are not always efficient, and governments can sometimes remedy market failure.*
- 11 Public Goods and Common Resources ————— *Market outcomes are not always efficient, and governments can sometimes remedy market failure.*
- 12 The Design of the Tax System ————— *To fund programs, governments raise revenue through their tax systems, which are designed with an eye toward balancing efficiency and equity.*

FIRM BEHAVIOR AND THE ORGANIZATION OF INDUSTRY

- 13 The Costs of Production ————— *The theory of the firm sheds light on the decisions that lie behind supply in competitive markets.*
- 14 Firms in Competitive Markets ————— *The theory of the firm sheds light on the decisions that lie behind supply in competitive markets.*
- 15 Monopoly ————— *Firms with market power can cause market outcomes to be inefficient.*
- 16 Monopolistic Competition ————— *Firms with market power can cause market outcomes to be inefficient.*
- 17 Oligopoly ————— *Firms with market power can cause market outcomes to be inefficient.*

THE ECONOMICS OF LABOR MARKETS

- 18 The Markets for the Factors of Production
- 19 Earnings and Discrimination
- 20 Income Inequality and Poverty

These chapters examine the special features of labor markets, in which most people earn most of their income.

TOPICS FOR FURTHER STUDY

- 21 The Theory of Consumer Choice
- 22 Frontiers of Microeconomics

Additional topics in microeconomics include household decision making, asymmetric information, political economy, and behavioral economics.

THE DATA OF MACROECONOMICS

- 23 Measuring a Nation's Income
- 24 Measuring the Cost of Living

The overall quantity of production and the overall price level are used to monitor developments in the economy as a whole.

THE REAL ECONOMY IN THE LONG RUN

- 25 Production and Growth
- 26 Saving, Investment, and the Financial System
- 27 The Basic Tools of Finance
- 28 Unemployment

These chapters describe the forces that in the long run determine key real variables, including GDP growth, saving, investment, real interest rates, and unemployment.

MONEY AND PRICES IN THE LONG RUN

- 29 The Monetary System
- 30 Money Growth and Inflation

The monetary system is crucial in determining the long-run behavior of the price level, the inflation rate, and other nominal variables.

THE MACROECONOMICS OF OPEN ECONOMIES

- 31 Open-Economy Macroeconomics: Basic Concepts
- 32 A Macroeconomic Theory of the Open Economy

A nation's economic interactions with other nations are described by its trade balance, net foreign investment, and exchange rate.

A long-run model of the open economy explains the determinants of the trade balance, the real exchange rate, and other real variables.

SHORT-RUN ECONOMIC FLUCTUATIONS

- 33 Aggregate Demand and Aggregate Supply
- 34 The Influence of Monetary and Fiscal Policy on Aggregate Demand
- 35 The Short-Run Trade-off between Inflation and Unemployment

The model of aggregate demand and aggregate supply explains short-run economic fluctuations, the short-run effects of monetary and fiscal policy, and the short-run linkage between real and nominal variables.

FINAL THOUGHTS

- 36 Six Debates over Macroeconomic Policy

A capstone chapter presents both sides of six major debates over economic policy.

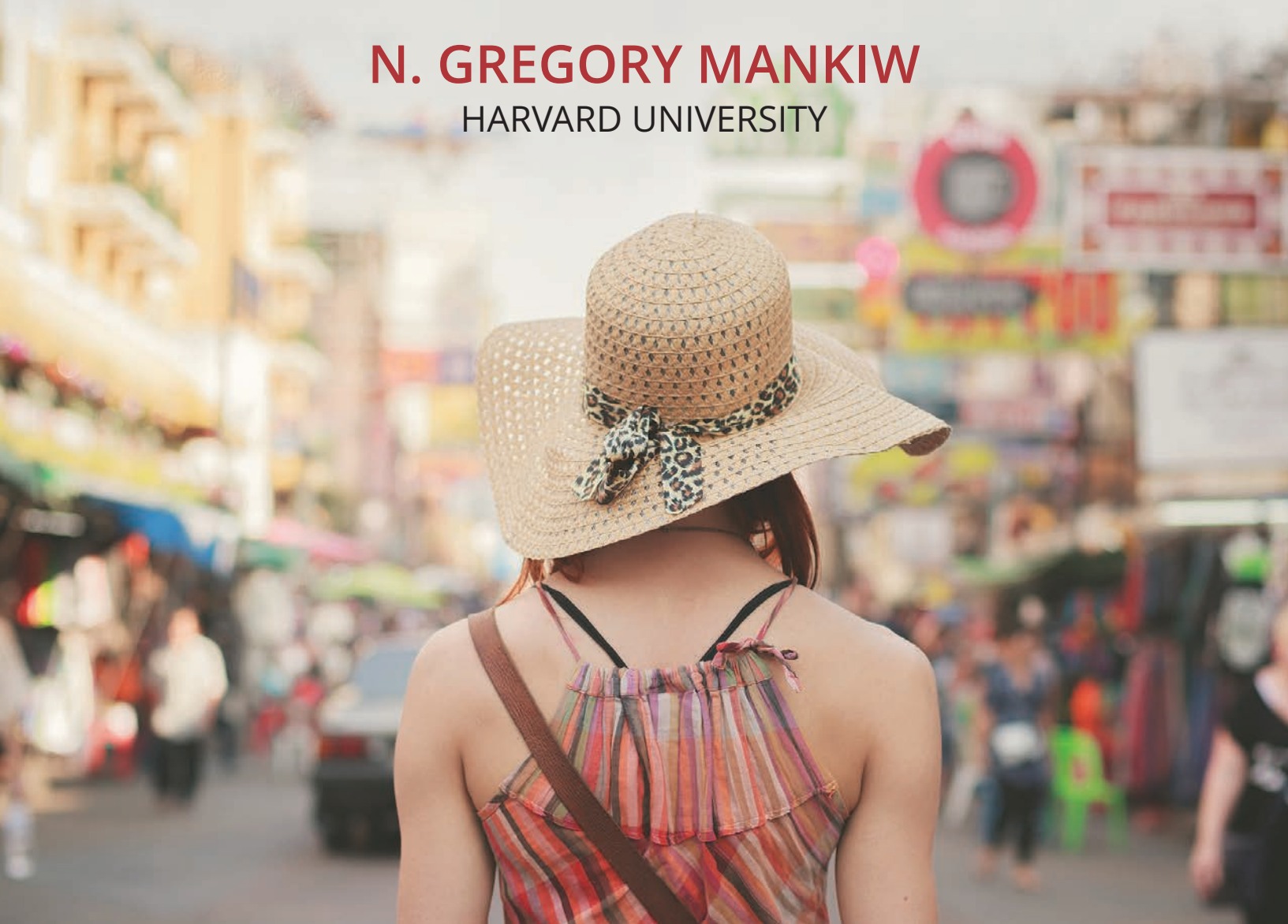


PRINCIPLES OF **ECONOMICS**

NINTH EDITION

N. GREGORY MANKIWI

HARVARD UNIVERSITY



 CENGAGE

Australia • Brazil • Mexico • Singapore • United Kingdom • United States

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*To Catherine, Nicholas, and Peter,
my other contributions to the next generation*

About the Author



JORDI CABRÉ

N. Gregory Mankiw is the Robert M. Beren Professor of Economics at Harvard University. As a student, he studied economics at Princeton University and MIT. As a teacher, he has taught macroeconomics, microeconomics, statistics, and principles of economics. He even spent one summer long ago as a sailing instructor on Long Beach Island.

Professor Mankiw is a prolific writer and a regular participant in academic and policy debates. His work has been published in scholarly journals, such as the *American Economic Review*, *Journal of Political Economy*, and *Quarterly Journal of Economics*, and in more popular forums, such as the *New York Times* and *The Wall Street Journal*. He is also author of the best-selling intermediate-level textbook *Macroeconomics* (Worth Publishers).

In addition to his teaching, research, and writing, Professor Mankiw has been a research associate of the National Bureau of Economic Research, an adviser to the Congressional Budget Office and the Federal Reserve Banks of Boston and New York, a trustee of the Urban Institute, and a member of the ETS test development committee for the Advanced Placement exam in economics. From 2003 to 2005, he served as chairman of the President's Council of Economic Advisers.



Preface: To the Instructor

During my 20-year career as a student, the course that excited me most was the two-semester sequence on the principles of economics that I took during my freshman year in college. It is no exaggeration to say that it changed my life.

I had grown up in a family that often discussed politics over the dinner table. The pros and cons of various solutions to society's problems generated fervent debate. But in school, I had been drawn to the sciences. Whereas politics seemed vague, rambling, and subjective, science was analytic, systematic, and objective. While political debate continued without end, science made progress.

My freshman course on the principles of economics opened my eyes to a new way of thinking. Economics combines the virtues of politics and science. It is, truly, a social science. Its subject matter is society—how people choose to lead their lives and how they interact with one another—but it approaches the subject with the dispassion of a science. By bringing the methods of science to the questions of politics, economics tries to make progress on the challenges that all societies face.

I was drawn to write this book in the hope that I could convey some of the excitement about economics that I felt as a student in my first economics course. Economics is a subject in which a little knowledge goes a long way. (The same cannot be said, for instance, of the study of physics or the Chinese language.) Economists have a unique way of viewing the world, much of which can be taught in one or two semesters. My goal in this book is to transmit this way of thinking to the widest possible audience and to convince readers that it illuminates much about the world around them.

I believe that everyone should study the fundamental ideas that economics has to offer. One purpose of general education is to inform people about the world and thereby make them better citizens. The study of economics, as much as any discipline, serves this goal. Writing an economics textbook is, therefore, a great honor and a great responsibility. It is one way that economists can help promote better government and a more prosperous future. As the great economist Paul Samuelson put it, "I don't care who writes a nation's laws, or crafts its advanced treaties, if I can write its economics textbooks."

What's New in the Ninth Edition?

Economics is fundamentally about understanding the world in which we live. Most chapters of this book include Case Studies illustrating how the principles of economics can be applied. In addition, In the News boxes offer excerpts from newspapers, magazines, and online news sources showing how economic ideas shed light on current issues facing society. After students finish their first course

in economics, they should think about news stories from a new perspective and with greater insight. To keep the study of economics fresh and relevant for each new cohort of students, I update each edition of this text to keep pace with the ever-changing world.

The new applications in this ninth edition are too numerous to list in their entirety, but here is a sample of the topics covered (and the chapters in which they appear):

- Technology companies are increasingly using economists to better run their businesses. (Chapter 2)
- The hit Broadway show *Hamilton* has brought renewed attention to the issue of ticket reselling. (Chapter 7)
- President Trump has taken a new and controversial approach to international trade. (Chapter 9)
- A carbon tax and dividend plan has become a focal policy in the debate about global climate change. (Chapter 10)
- Social media share many features, along with many of the problems, associated with common resources. (Chapter 11)
- The Supreme Court hears a case about international price discrimination. (Chapter 15)
- Amazon looks like it might be the next target for antitrust regulators. (Chapter 17)
- The winners and losers from immigration have become a major issue in the political debate. (Chapter 18)
- Research on tax data shows by how much the super-rich have gotten even richer. (Chapter 20)
- Some economists suggest that, despite little change in the official poverty rate, we are winning the war on poverty. (Chapter 20)
- The theory of economic growth can help explain why so many of the world's poorest nations are in sub-Saharan Africa. (Chapter 25)
- Economist Martin Feldstein explains why the United States is so prosperous. (Chapter 25)
- Cryptocurrencies may be the money of the future, or they may be a passing fad. (Chapter 29)
- Living during a hyperinflation, such as the recent situation in Venezuela, is a surreal experience. (Chapter 30)
- Recent discussion of trade deficits has included a lot of misinformation. (Chapter 32)
- The Federal Reserve has started to reassess what it means to target an inflation rate of 2 percent. (Chapter 36)

In addition to updating the book, I have refined its coverage and pedagogy with input from many users of the previous edition. There are numerous changes, large and small, aimed at making the book clearer and more student-friendly.

All the changes that I made, and the many others that I considered, were evaluated in light of the benefits of brevity. Like most things that we study in economics, a student's time is a scarce resource. I always keep in mind a dictum from the great novelist Robertson Davies: "One of the most important things about writing is to boil it down and not bore the hell out of everybody."

How Is This Book Organized?

The organization of this book was designed to make economics as student-friendly as possible. What follows is a whirlwind tour of this text. The tour will, I hope, give instructors some sense of how the pieces fit together.

Introductory Material

Chapter 1, “Ten Principles of Economics,” introduces students to the economist’s view of the world. It previews some of the big ideas that recur throughout economics, such as opportunity cost, marginal decision making, the role of incentives, the gains from trade, and the efficiency of market allocations. Throughout the book, I refer regularly to the *Ten Principles of Economics* introduced in Chapter 1 to remind students that these ideas are the foundation for all economics.

Chapter 2, “Thinking Like an Economist,” examines how economists approach their field of study. It discusses the role of assumptions in developing a theory and introduces the concept of an economic model. It also explores the role of economists in making policy. This chapter’s appendix offers a brief refresher course on how graphs are used, as well as how they can be abused.

Chapter 3, “Interdependence and the Gains from Trade,” presents the theory of comparative advantage. This theory explains why individuals trade with their neighbors, as well as why nations trade with other nations. Much of economics is about how market forces coordinate many individual production and consumption decisions. As a starting point for this analysis, students see in this chapter why specialization, interdependence, and trade can benefit everyone.

The Fundamental Tools of Supply and Demand

The next three chapters introduce the basic tools of supply and demand. Chapter 4, “The Market Forces of Supply and Demand,” develops the supply curve, the demand curve, and the notion of market equilibrium. Chapter 5, “Elasticity and Its Application,” introduces the concept of elasticity and uses it to analyze events in three different markets. Chapter 6, “Supply, Demand, and Government Policies,” uses these tools to examine price controls, such as rent-control and minimum-wage laws, and tax incidence.

Chapter 7, “Consumers, Producers, and the Efficiency of Markets,” extends the analysis of supply and demand using the concepts of consumer surplus and producer surplus. It begins by developing the link between consumers’ willingness to pay and the demand curve and the link between producers’ costs of production and the supply curve. It then shows that the market equilibrium maximizes the sum of the producer and consumer surplus. Thus, students learn early about the efficiency of market allocations.

The next two chapters apply the concepts of producer and consumer surplus to questions of policy. Chapter 8, “Application: The Costs of Taxation,” shows why taxation results in deadweight losses and what determines the size of those losses. Chapter 9, “Application: International Trade,” considers who wins and who loses from international trade and presents the debate over protectionist trade policies.

More Microeconomics

Having examined why market allocations are often desirable, the book then considers how the government can sometimes improve on them. Chapter 10, “Externalities,” explains how external effects such as pollution can render market

outcomes inefficient and discusses the possible public and private solutions to those inefficiencies. Chapter 11, “Public Goods and Common Resources,” considers the problems that arise when goods, such as national defense, have no market price. Chapter 12, “The Design of the Tax System,” describes how the government raises the revenue necessary to pay for public goods. It presents some institutional background about the U.S. tax system and then discusses how the goals of efficiency and equity come into play when designing a tax system.

The next five chapters examine firm behavior and industrial organization. Chapter 13, “The Costs of Production,” discusses what to include in a firm’s costs, and it introduces cost curves. Chapter 14, “Firms in Competitive Markets,” analyzes the behavior of price-taking firms and derives the market supply curve. Chapter 15, “Monopoly,” discusses the behavior of a firm that is the sole seller in its market. It examines the inefficiency of monopoly pricing, the possible policy responses, and the attempts by monopolies to price discriminate. Chapter 16, “Monopolistic Competition,” looks at behavior in a market in which many sellers offer similar but differentiated products. It also discusses the debate over the effects of advertising. Chapter 17, “Oligopoly,” covers markets in which there are only a few sellers, using the prisoners’ dilemma as the model for examining strategic interaction.

The next three chapters present issues related to labor markets. Chapter 18, “The Markets for the Factors of Production,” emphasizes the link between factor prices and marginal productivity. Chapter 19, “Earnings and Discrimination,” discusses the determinants of equilibrium wages, including compensating differentials, human capital, and discrimination. Chapter 20, “Income Inequality and Poverty,” examines the degree of inequality in U.S. society, alternative views about the government’s role in changing the distribution of income, and various policies aimed at helping society’s poorest members.

The next two chapters present optional material. Chapter 21, “The Theory of Consumer Choice,” analyzes individual decision making using budget constraints and indifference curves. Chapter 22, “Frontiers of Microeconomics,” introduces the topics of asymmetric information, political economy, and behavioral economics. Some instructors may skip all or some of this material, but these chapters are useful in motivating and preparing students for future courses in microeconomics. Instructors who cover these topics may assign these chapters earlier than they are presented in the book, and I have written them to facilitate this flexibility.

Macroeconomics

My overall approach to teaching macroeconomics is to examine the economy in the long run (when prices are flexible) before examining the economy in the short run (when prices are sticky). I believe that this organization simplifies learning macroeconomics for several reasons. First, the classical assumption of price flexibility is more closely linked to the basic lessons of supply and demand, which students have already mastered. Second, the classical dichotomy allows the study of the long run to be broken up into several easily digested pieces. Third, because the business cycle represents a transitory deviation from the economy’s long-run growth path, studying the transitory deviations is more natural after the long-run equilibrium is understood. Fourth, the macroeconomic theory of the long run is less controversial among economists than is the macroeconomic theory of the short run. For these reasons, most upper-level courses in macroeconomics now follow this long-run-before-short-run approach; my goal is to offer introductory students the same advantage.

I start the coverage of macroeconomics with issues of measurement. Chapter 23, “Measuring a Nation’s Income,” discusses the meaning of gross domestic product and related statistics from the national income accounts. Chapter 24, “Measuring the Cost of Living,” examines the measurement and use of the consumer price index.

The next four chapters describe the behavior of the real economy in the long run. Chapter 25, “Production and Growth,” examines the determinants of the large variation in living standards over time and across countries. Chapter 26, “Saving, Investment, and the Financial System,” discusses the types of financial institutions in our economy and examines their role in allocating resources. Chapter 27, “The Basic Tools of Finance,” introduces present value, risk management, and asset pricing. Chapter 28, “Unemployment,” considers the long-run determinants of the unemployment rate, including job search, minimum-wage laws, the market power of unions, and efficiency wages.

Having described the long-run behavior of the real economy, the book then turns to the long-run behavior of money and prices. Chapter 29, “The Monetary System,” introduces the economist’s concept of money and the role of the central bank in controlling the quantity of money. Chapter 30, “Money Growth and Inflation,” develops the classical theory of inflation and discusses the costs that inflation imposes on a society.

The next two chapters present the macroeconomics of open economies, maintaining the long-run assumptions of price flexibility and full employment. Chapter 31, “Open-Economy Macroeconomics: Basic Concepts,” explains the relationship among saving, investment, and the trade balance, the distinction between the nominal and real exchange rate, and the theory of purchasing-power parity. Chapter 32, “A Macroeconomic Theory of the Open Economy,” presents a classical model of the international flow of goods and capital. The model sheds light on various issues, including the link between budget deficits and trade deficits and the macroeconomic effects of trade policies. Because instructors differ in their emphasis on this material, these chapters are written so they can be used in different ways. Some may choose to cover Chapter 31 but not Chapter 32; others may skip both chapters; and still others may choose to defer the analysis of open-economy macroeconomics until the end of their courses.

After developing the long-run theory of the economy in Chapters 25 through 32, the book turns to explaining short-run fluctuations around the long-run trend. Chapter 33, “Aggregate Demand and Aggregate Supply,” begins with some facts about the business cycle and then introduces the model of aggregate demand and aggregate supply. Chapter 34, “The Influence of Monetary and Fiscal Policy on Aggregate Demand,” explains how policymakers can use the tools at their disposal to shift the aggregate-demand curve. Chapter 35, “The Short-Run Trade-Off between Inflation and Unemployment,” explains why policymakers who control aggregate demand face a trade-off between inflation and unemployment. It examines why this trade-off exists in the short run, why it shifts over time, and why it does not exist in the long run.

The book concludes with Chapter 36, “Six Debates over Macroeconomic Policy.” This capstone chapter considers six controversial issues facing policymakers: the proper degree of policy activism in response to the business cycle, the relative efficacy of government spending hikes and tax cuts to fight recessions, the choice between rules and discretion in the conduct of monetary policy, the desirability of reaching zero inflation, the importance of balancing the government’s budget, and the need for tax reform to encourage saving. For each issue, the chapter presents both sides of the debate and encourages students to make their own judgments.

Learning Tools

The purpose of this book is to help students learn the fundamental lessons of economics and to show how they can apply these lessons to their lives and the world in which they live. Toward that end, I have used various learning tools that recur throughout the book.

Case Studies

Economic theory is useful and interesting only if it can be applied to understanding actual events and policies. This book, therefore, contains numerous case studies that apply the theory that has just been developed.

In the News Boxes

One benefit that students gain from studying economics is a new perspective and greater understanding about news from around the world. To highlight this benefit, I have included excerpts from many newspaper and magazine articles, some of which are opinion columns written by prominent economists. These articles, together with my brief introductions, show how basic economic theory can be applied. Most of these boxes are new to this edition. And for the first time in this edition, each news article ends with “Questions to Discuss,” which can be used to start a dialogue in the classroom.

FYI Boxes

These boxes provide additional material “for your information.” Some of them offer a glimpse into the history of economic thought. Others clarify technical issues. Still others discuss supplementary topics that instructors might choose either to discuss or skip in their lectures.

Ask the Experts Boxes

This feature summarizes results from the IGM Economics Experts Panel, an ongoing survey of several dozen prominent economists. Every few weeks, these experts are offered a statement and then asked whether they agree with it, disagree with it, or are uncertain about it. The survey results appear in the chapters near the coverage of the relevant topic. They give students a sense of when economists are united, when they are divided, and when they just don’t know what to think.

Definitions of Key Concepts

When key concepts are introduced in the chapter, they are presented in **bold** typeface. In addition, their definitions are placed in the margins. This treatment should aid students in learning and reviewing the material.

Quick Quizzes

After each major section in a chapter, students are offered a brief multiple-choice Quick Quiz to check their comprehension of what they have just learned. If students cannot readily answer these quizzes, they should stop and review material before continuing. The answers to all Quick Quizzes are available at the end of each chapter.

Chapter in a Nutshell

Each chapter concludes with a brief summary that reminds students of the most important lessons that they have learned. Later in their study, it offers an efficient way to review for exams.

List of Key Concepts

A list of key concepts at the end of each chapter offers students a way to test their understanding of the new terms that have been introduced. Page references are included so that students can review the terms they do not understand.

Questions for Review

Located at the end of each chapter, questions for review cover the chapter's primary lessons. Students can use these questions to check their comprehension and prepare for exams.

Problems and Applications

Each chapter also contains a variety of problems and applications asking students to apply the material that they have learned. Some instructors may use these questions for homework assignments. Others may use them as a starting point for classroom discussions.

Alternative Versions of the Book

The book you are now holding is one of five versions of this text that are available for introducing students to economics. Cengage and I offer this menu of books because instructors differ in how much time they have and what topics they choose to cover. Here is a brief description of each:

- *Principles of Economics*. This complete version of the book contains all 36 chapters. It is designed for two-semester introductory courses that cover both microeconomics and macroeconomics.
- *Principles of Microeconomics*. This version contains 22 chapters and is designed for one-semester courses in introductory microeconomics.
- *Principles of Macroeconomics*. This version contains 23 chapters and is designed for one-semester courses in introductory macroeconomics. It contains a full development of the theory of supply and demand.
- *Brief Principles of Macroeconomics*. This shortened macro version of 18 chapters contains only one chapter on the basics of supply and demand. It is designed for instructors who want to jump to the core topics of macroeconomics more quickly.
- *Essentials of Economics*. This version of the book contains 24 chapters. It is designed for one-semester survey courses that cover the basics of both microeconomics and macroeconomics.

The accompanying table shows precisely which chapters are included in each book. Instructors who want more information about these alternative versions should contact their local Cengage representative.

TABLE 1

The Five Versions of This Book

<i>Principles of Economics</i>	<i>Principles of Microeconomics</i>	<i>Principles of Macroeconomics</i>	<i>Brief Principles of Macroeconomics</i>	<i>Essentials of Economics</i>
1 Ten Principles of Economics	X	X	X	X
2 Thinking Like an Economist	X	X	X	X
3 Interdependence and the Gains from Trade	X	X	X	X
4 The Market Forces of Supply and Demand	X	X	X	X
5 Elasticity and Its Application	X	X		X
6 Supply, Demand, and Government Policies	X	X		X
7 Consumers, Producers, and the Efficiency of Markets	X	X		X
8 Application: The Costs of Taxation	X	X		X
9 Application: International Trade	X	X		X
10 Externalities	X			X
11 Public Goods and Common Resources	X			X
12 The Design of the Tax System	X			
13 The Costs of Production	X			X
14 Firms in Competitive Markets	X			X
15 Monopoly	X			X
16 Monopolistic Competition	X			
17 Oligopoly	X			
18 The Markets for the Factors of Production	X			
19 Earnings and Discrimination	X			
20 Income Inequality and Poverty	X			
21 The Theory of Consumer Choice	X			
22 Frontiers of Microeconomics	X			
23 Measuring a Nation's Income		X	X	X
24 Measuring the Cost of Living		X	X	X
25 Production and Growth		X	X	X
26 Saving, Investment, and the Financial System		X	X	X
27 The Basic Tools of Finance		X	X	X
28 Unemployment		X	X	X
29 The Monetary System		X	X	X
30 Money Growth and Inflation		X	X	X
31 Open-Economy Macroeconomics: Basic Concepts		X	X	
32 A Macroeconomic Theory of the Open Economy		X	X	
33 Aggregate Demand and Aggregate Supply		X	X	X
34 The Influence of Monetary and Fiscal Policy on Aggregate Demand		X	X	X
35 The Short-Run Trade-Off between Inflation and Unemployment		X	X	
36 Six Debates over Macroeconomic Policy		X	X	

Supplements

Cengage offers various supplements for instructors and students who use this book. These resources make teaching the principles of economics easy for the instructor and learning them easy for the student. David R. Hakes of the University of Northern Iowa, a dedicated teacher and economist, supervised the development of the supplements for this edition. A complete list of available supplements follows this Preface.

Modules

I have written four modules, or mini-chapters, with optional material that instructors can include in their courses. For instructors using the digital version of the book, these modules can be added with a few mouse clicks. As of now, there are modules on The Economics of Healthcare, The European Union, The Keynesian Cross, and How Economists Use Data. I expect to add more modules to the library available to instructors in the years to come.

Translations and Adaptations

I am delighted that versions of this book are (or will soon be) available in many of the world's languages. Currently scheduled translations include Azeri, Chinese (in both standard and simplified characters), Croatian, Czech, Dutch, French, Georgian, German, Greek, Indonesian, Italian, Japanese, Korean, Macedonian, Montenegrin, Portuguese, Romanian, Russian, Serbian, and Spanish. In addition, adaptations of the book for Australian, Canadian, European, and New Zealand students are also available. Instructors who would like more information about these books should contact Cengage.

Acknowledgments

In writing this book, I benefited from the input of many talented people. Indeed, the list of people who have contributed to this project is so long, and their contributions so valuable, that it seems an injustice that only a single name appears on the cover.

Let me begin with my colleagues in the economics profession. The many editions of this text and its supplemental materials have benefited enormously from their input. In reviews and surveys, they have offered suggestions, identified challenges, and shared ideas from their own classroom experience. I am indebted to them for the perspectives they have brought to the text. Unfortunately, the list has become too long to thank those who contributed to previous editions, even though students reading the current edition are still benefiting from their insights.

Most important in this process has been David Hakes (University of Northern Iowa). David has served as a reliable sounding board for ideas and a hardworking partner with me in putting together the superb package of supplements. I am also grateful to Stephanie Thomas (Cornell University), who helped in the planning process for this new edition.

The following reviewers of the eighth edition provided suggestions for refining the content, organization, and approach in the ninth.

- | | | |
|--|--|---|
| Anil Aba, <i>University of Utah</i> | Miren Ivankovic, <i>Anderson University</i> | Scott Niederjohn, <i>Lakeland University</i> |
| Mark Abajian, <i>San Diego Mesa College</i> | Justin Jarvis, <i>Truman State University</i> | Carla Nietfeld, <i>Francis Marion University</i> |
| Dorian Abreu, <i>Hunter College</i> | Aaron Johnson, <i>Albany State University</i> | John Nyhoff, <i>Oakton Community College</i> |
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