For Constance, Raph, and Will
—R. Glenn Hubbard

For Cindy, Matthew, Andrew, and Daniel
—Anthony Patrick O’Brien
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Our approach in this new edition remains what it was in the first edition, published nearly 15 years ago: to provide students and instructors an economics text that delivers complete economics coverage with many real-world business examples. Our goal has been to teach economics in a “widget-free” way by using real-world business and policy examples. We are gratified by the enthusiastic response from students and instructors who have used the first six editions of this book and who have made it a best-selling economics textbook.

Much has happened in the U.S. and world economies since we prepared the previous edition, including the election of a U.S. president with a distinctive approach to economic policy. We have incorporated many of these developments in the new real-world examples and policy discussions in this edition and also in the digital resources.

New to This Edition

We are grateful to the many instructors and students who made suggestions for improvements in the previous edition. We have done our best to incorporate as many of those suggestions as possible. Here is an overview of the revisions, followed by a more detailed description.

Overview of Changes

- All the chapter openers feature either new companies or have updated information. Students can visit MyLab Economics to watch a brief video that summarizes the key points of each chapter opener.
- Chapters 1–4 include new An Inside Look features to help students apply economic thinking to current events and policy debates as they are presented in news articles. Additional news articles and analyses appear weekly on MyLab Economics.
- There are 12 new Apply the Concept features (formerly titled Making the Connection) to help students tie economic concepts to current events and policy issues. The Apply the Concept features that were retained from the previous edition are updated. Students can visit MyLab Economics to watch more than 60 videos in which we summarize the key points in each feature. Related assessment accompanies each video, so students can test their understanding before moving on to a new section of the chapter.
- There are 2 new Solved Problems and 10 heavily revised Solved Problems. This feature helps students break down and answer economic problems step by step. There are additional Interactive Solved Problems on MyLab Economics, where students can receive feedback and tutorial help.
- There is a new category of end-of-chapter material titled Critical Thinking Exercises. We were motivated to add this new category of exercises because many instructors have told us that students need help building skills in the following areas: (1) analyzing and interpreting information; (2) applying reasoning and logic to new or unfamiliar ideas and situations; (3) examining ideas and concepts from multiple perspectives; and (4) clearly communicating their findings in a brief paper or class presentation. Students can complete these exercises on MyLab Economics and receive feedback and tutorial help.
- All the figures and tables are updated with the latest data available. Video animations of all the numbered figures and select tables are located on MyLab Economics. Graded practice exercises are included with these animations.
• We have replaced or updated many of the end-of-chapter Problems and Applications. In most chapters, one or two problems include graphs or tables for students to analyze. Select chapters have a category titled Real-Time Data Exercises, and we updated some of these exercises. Students can complete these exercises on MyLab Economics and receive feedback and tutorial help.

New Content and Features by Chapter

Here is a description of key changes by chapter.

Chapter 1, “Economics: Foundations and Models,” opens with a new discussion of why Ford Motor Company manufactures cars in both the United States and Mexico. An Inside Look at the end of the chapter presents a news article and analysis of how likely it is that significant numbers of manufacturing jobs will return to the United States from overseas. New Solved Problem 1.1 analyzes the marginal benefit and marginal cost of speed limits on highways. A new Apply the Concept examines why countries trade with each other and how economic concepts can help us evaluate policy debates about tariffs on imports. Taking a principles of economics class requires students to learn different terms, models, and a new way of analyzing real-world events. It can be challenging for students, especially non-majors, to appreciate how this course can help them in a career in business or government or in a nonprofit organization. We therefore decided to add to Chapter 1 a new section that describes economics as a career and highlights the key skills students of any major can gain from studying economics.

Chapter 2, “Trade-offs, Comparative Advantage, and the Market System,” opens with an updated discussion of the resource allocation decisions managers at Tesla Motors face. An Inside Look at the end of the chapter discusses Tesla’s decision to build a factory in Nevada to mass produce lithium-ion batteries for its electric cars. A new Apply the Concept illustrates how managers at the nonprofit organization Feeding America use the market mechanism to more efficiently allocate food based on the needs of food programs around the country.

Chapter 3, “Where Prices Come From: The Interaction of Demand and Supply,” opens with a new discussion of how Coca-Cola and Pepsi-Cola responded to a fall in demand for sodas by introducing premium bottled water, sometimes called smart water. We use the market for premium bottled water to develop the demand and supply model. An Inside Look at the end of the chapter examines how McDonald’s responded to shifts in consumer demand by serving breakfast all day and offering online ordering and home delivery. There are three new Apply the Concepts: “Virtual Reality Headsets: Will a Substitute Fail for a Lack of Complements?”; “Millennials Shake Up the Markets for Soda, Groceries, Big Macs, and Running Shoes”; and “Forecasting the Demand for Premium Bottled Water.”

Chapter 4, “Economic Efficiency, Government Price Setting, and Taxes,” opens with a new discussion about the economic link between food riots in Venezuela and the rise in popularity of Uber in the United States. At the end of the chapter, An Inside Look examines problems Uber has encountered in attempting to expand its services in the United Kingdom. There are two new Apply the Concepts: “The Consumer Surplus from Uber” and “Price Controls Lead to Economic Decline in Venezuela.”

Chapter 5, “The Economics of Health Care,” opens with a new discussion of how insurance companies are dealing with the effects of the Patient Protection and Affordable Care Act of 2010. There is also a discussion of the 2017 debate in Congress over whether that act should be extensively revised.
Chapter 6, “Firms, the Stock Market, and Corporate Governance,” opens with a new comparison of the initial public offerings of Snap, Twitter, and Facebook. A new Apply the Concept explores why investors are concerned about potential corporate governance issues at Snap and other social media firms.

Chapter 7, “Comparative Advantage and the Gains from International Trade,” opens with the decision by Mondelez to move production of Oreo cookies to Mexico to provide context for a new discussion of recent debates about the North American Free Trade Agreement (NAFTA) and the Trans-Pacific Partnership (TPP). A new Apply the Concept analyzes who gains and who loses from U.S. trade with China.

Chapter 8, “GDP: Measuring Total Production and Income,” opens with a new discussion of how Ford and other car companies deal with the business cycle. A new Apply the Concept discusses an innovative Web site created by Steve Ballmer, former CEO of Microsoft, that uses the preamble to the U.S. Constitution as a framework for reorganizing macroeconomic data.

Chapter 9, “Unemployment and Inflation,” opens with a new discussion of Boeing’s decision in 2017 to lay off workers, despite a growing U.S. economy. The chapter includes an updated analysis of the reasons for the decline in labor force participation among prime-aged males. A new Apply the Concept discusses how to characterize the unemployment resulting from Boeing’s layoffs.


Chapter 11, “Long-Run Economic Growth: Sources and Policies,” begins with a new opener that uses Wisconsin-based Rexnord Corporation’s decision to relocate some production to Mexico to frame the discussion of whether that country is capable of increasing its growth rate.

Chapter 12, “Aggregate Expenditure and Output in the Short Run,” contains thoroughly updated graphs and tables.

Chapter 13, “Aggregate Demand and Aggregate Supply Analysis,” opens with a new discussion of the effect of the business cycle on KB Home and other home builders.

Chapter 14, “Money, Banks, and the Federal Reserve System,” opens with a new discussion of why many people in India are using Paytm, an app that allows users to make payments at retail stores or online. A new Apply the Concept continues the analysis of this topic by discussing why some businesses in the United States and Europe no longer accept cash.

Chapter 15, “Monetary Policy,” opens with an updated account of why interest rates on some mortgages in Europe are negative. An important new section describes the policy tools the Federal Reserve uses to manage its target for the federal funds rate, now that banks hold $2 trillion in excess reserves.

Chapter 16, “Fiscal Policy,” opens with a new discussion of the effects of federal government infrastructure spending on Vulcan Materials and other construction firms, as well as on the wider economy. A centerpiece of President Trump’s economic plan is using changes to the federal tax code, as well as other policies, to increase the annual growth rate of real GDP to 3 percent. We discuss what would be required
to achieve this goal in a new section, “Explaining Long-Run Increases in Real GDP,” and in a new Apply the Concept. New Table 16.4 summarizes how the Congressional Budget Office forecast real GDP growth for 2017–2027.

Chapter 17, “Inflation, Unemployment, and Federal Reserve Policy,” opens with a new discussion of how the Fed’s attempts to bring the economy in for a soft landing will affect General Motors, Toll Brothers, and other firms.

Chapter 18, “Macroeconomics in an Open Economy,” opens with a new discussion of the effect of fluctuations in exchange rates on Amazon’s profit. New Solved Problem 18.2 analyzes how fluctuations in the value of the yen affect Toyota, and an updated Apply the Concept considers how the Trump administration has reacted to fluctuations in the value of the dollar.

Chapter 19, “The International Financial System,” contains updated coverage of the struggles of the euro and the pressure the Trump administration has faced to label China a currency manipulator.

To make room for the new content described earlier, we have cut approximately 13 Apply the Concepts and 2 Solved Problems from the previous edition and transferred some of them to the book’s Instructor’s Manual, where they are available for instructors who wish to continue using them.

**Solving Teaching and Learning Challenges**

Many students who take a principles of economics course have difficulty seeing the relevance of the key concepts of opportunity cost, trade-offs, scarcity, and demand and supply to their lives and their careers. This reduces the willingness of some students to prepare for class and to be engaged during class. We address this challenge with contextual learning, a modern organization of content, and an extensive selection of digital assets available on MyLab Economics.

**The Foundation:**

**Contextual Learning and Modern Organization**

We believe a course is successful if students can apply what they have learned to both their personal lives and their careers, and if they have developed the analytical skills to understand what they read in the media. That’s why we explain economic concepts by using many real-world business examples and applications in the chapter openers, graphs, Apply the Concept features, An Inside Look features, and end-of-chapter problems. This approach helps majors from all disciplines become educated consumers, voters, and citizens. In addition to our widget-free approach, we have a modern organization and place interesting policy topics early in the book to pique student interest.

Students come to study macroeconomics with a strong interest in understanding events and developments in the economy. We capture that interest and develop students’ economic intuition and understanding by presenting macroeconomics in a way that is modern and based in the real world of business and economic policy. And we believe we achieve this presentation without making the analysis more difficult. We avoid the recent trend of using simplified versions of intermediate models, which are often more detailed and complex than what students need to understand the basic macroeconomic issues. Instead, we use a more realistic version of the familiar aggregate demand
and aggregate supply model to analyze short-run fluctuations and monetary and fiscal policy. We also avoid the “dueling schools of thought” approach often used to teach macroeconomics at the principles level. We emphasize the many areas of macroeconomics where most economists agree. And we present throughout real business and policy situations to develop students’ intuition. Here are a few highlights of our approach to macroeconomics:

- **A careful discussion of macro statistics.** Many students pay some attention to the financial news and know that the release of statistics by federal agencies can cause movements in stock and bond prices. A background in macroeconomic statistics helps clarify some of the policy issues encountered in later chapters. In Chapter 8, "GDP: Measuring Total Production and Income," and Chapter 9, "Unemployment and Inflation," we provide students with an understanding of the uses and potential shortcomings of the key macroeconomic statistics, without getting bogged down in the minutiae of how the statistics are constructed. So, for instance, we discuss the important differences between the payroll survey and the household survey for understanding conditions in the labor market. We explain why financial markets react more strongly to news from the payroll survey. We provide a discussion of the employment–population ratio, which is not covered in some other texts but which many economists regard as a key measure of labor market performance.

- **Early coverage of long-run topics.** We place key macroeconomic issues in their long-run context in Chapter 10, "Economic Growth, the Financial System, and Business Cycles," and Chapter 11, "Long-Run Economic Growth: Sources and Policies." Chapter 10 puts the business cycle in the context of underlying long-run growth and discusses what actually happens during the phases of the business cycle. We believe this material is important if students are to have the understanding of business cycles they will need to interpret economic events; this material is often discussed only briefly or omitted entirely in other books. We know that many instructors prefer to have a short-run orientation to their macro courses, with a strong emphasis on policy. Accordingly, we have structured Chapter 10 so that its discussion of long-run growth is sufficient for instructors who want to move quickly to short-run analysis. Chapter 11 uses a simple neoclassical growth model to explain important growth issues. We apply the model to topics such as the decline of the Soviet economy, the long-run prospects for growth in China, the implications of the slowdown in productivity growth for the U.S. economy, and the failure of many developing countries to sustain high growth rates. And we challenge students with the discussion “Why Isn’t the Whole World Rich?”

- **A dynamic model of aggregate demand and aggregate supply.** We take a fresh approach to the standard aggregate demand and aggregate supply (AD–AS) model. We realize there is no good, simple alternative to using the AD–AS model when explaining movements in the price level and in real GDP. But we know that more instructors are dissatisfied with the AD–AS model than with any other aspect of the macro principles course. The key problem, of course, is that AD–AS is a static model that attempts to account for dynamic changes in real GDP and the price level. Our approach retains the basics of the AD–AS model but makes it more accurate and useful by making it more dynamic. We emphasize two points: (1) Changes in the position of the short-run (upward-sloping) aggregate supply curve depend mainly on the state of expectations of the inflation rate; and (2) the existence of growth in the economy means that the long-run (vertical) aggregate supply curve shifts to the right every year. This "dynamic" AD–AS model provides students with a more accurate understanding of the causes and consequences of fluctuations in real GDP and the price level. Chapter 13, “Aggregate Demand and Aggregate Supply Analysis,” includes a three-layer, full-color acetate for the key introductory dynamic AD–AS graph (Figure 13.8, “A Dynamic Aggregate Demand and Aggregate Supply Model,” on page 460 and reproduced on the next page). We created this acetate to help students see how the graph builds step by step and to
help make the graph easier for instructors to present. The acetate will help instructors who want to use dynamic AD–AS in class but believe the model needs to be developed carefully. We introduce this model in Chapter 13 and use it to discuss monetary policy in Chapter 15, “Monetary Policy,” and fiscal policy in Chapter 16, “Fiscal Policy.” The material on dynamic AD–AS is presented in self-contained sections in Chapters 13, 15, and 16, so instructors may safely omit the sections on the dynamic AD–AS model without any loss in continuity to the discussion of macroeconomic theory and policy.

- **Extensive coverage of monetary policy.** Because of the central role monetary policy plays in the economy and in students’ curiosity about business and financial news, we devote two chapters—Chapter 15, “Monetary Policy,” and Chapter 17, “Inflation, Unemployment, and Federal Reserve Policy”—to the topic. We emphasize the issues involved in the Fed’s choice of monetary policy targets, and we include coverage of the Taylor rule. We also cover the new Fed’s new policy tools and the debate over whether the Fed’s policies during and after the 2007–2009 financial crisis were consistent with its mandate under the Federal Reserve Act.

- **Coverage of both the demand-side and supply-side effects of fiscal policy.** Our discussion of fiscal policy in Chapter 16, “Fiscal Policy,” carefully distinguishes between automatic stabilizers and discretionary fiscal policy. We also provide significant coverage of the supply-side effects of fiscal policy. A new section discusses the requirements for the Trump administration to hit its goal of restoring the long-run annual growth rate of real GDP to 3 percent.

- **A self-contained but thorough discussion of the Keynesian income–expenditure approach.** The Keynesian income–expenditure approach (the “45°-cline diagram,” or “Keynesian cross”) is useful for introducing students to the short-run relationship between spending and production. Many instructors, however, prefer to omit this material. Therefore, we use the 45°-cline diagram only in Chapter 12, “Aggregate Expenditure and Output in the Short Run.” The discussions of monetary and fiscal policy in Chapter 15, “Monetary Policy,” and Chapter 16, “Fiscal Policy,” respectively, use only the AD–AS model, making it possible to omit Chapter 12.

- **Extensive international coverage.** We include three chapters devoted to international topics: Chapter 7, “Comparative Advantage and the Gains from International Trade,” Chapter 18, “Macroeconomics in an Open Economy,” and Chapter 19, “The International Financial System.” Having a good understanding of the international trading and
financial systems is essential to understanding the macroeconomy and to satisfying students’ curiosity about the economic world around them. In addition to the material in our three international chapters, we weave international comparisons into the narratives of several other chapters, including our discussion of labor market policies in Chapter 17, “Inflation, Unemployment, and Federal Reserve Policy,” and central banking in Chapter 14, “Money, Banks, and the Federal Reserve System.”

- Flexible chapter organization. Because we realize that there are a variety of approaches to teaching principles of macroeconomics, we have structured our chapters for maximum flexibility. For example, our discussion of long-run economic growth in Chapter 10, “Economic Growth, the Financial System, and Business Cycles,” makes it possible for instructors to omit the more thorough discussion of these issues in Chapter 11, “Long-Run Economic Growth: Sources and Policies.” Our discussion of the Keynesian 45°-line diagram is confined to Chapter 12, “Aggregate Expenditure and Output in the Short Run,” so that instructors who do not use this approach can proceed directly to aggregate demand and aggregate supply analysis in Chapter 13, “Aggregate Demand and Aggregate Supply Analysis.” While we devote two chapters to monetary policy, the first of these—Chapter 15, “Monetary Policy”—is a self-contained discussion, so instructors may safely omit the material in Chapter 17, “Inflation, Unemployment, and Federal Reserve Policy,” if they choose to. Finally, instructors may choose to omit all three of the international chapters (Chapter 7, “Comparative Advantage and the Gains from International Trade,” Chapter 18, “Macroeconomics in an Open Economy,” and Chapter 19, “The International Financial System”), cover just Chapter 7 on international trade, cover just Chapter 18, or cover Chapters 18 and 19 while omitting Chapter 7. Please refer to the flexibility chart shown earlier on pages xviii–xix to help select the chapters and order best suited to your classroom needs.

**MyLab Economics**

**OVERVIEW**

**Reach every student by pairing this text with MyLab Economics**

MyLab is the teaching and learning platform that empowers you to reach every student. By combining trusted author content with digital tools and a flexible platform, MyLab personalizes the learning experience and improves results for each student. Learn more about MyLab Economics at www.pearson.com/mylab/economics.

**Deliver trusted content**

You deserve teaching materials that meet your own high standards for your course. That’s why we partner with highly respected authors to develop interactive content and course-specific resources that you can trust—and that keep your students engaged.

**Empower each learner**

Each student learns at a different pace. Personalized learning pinpoints the precise areas where each student needs practice, giving all students the support they need—when and where they need it—to be successful.

**Teach your course your way**

Your course is unique. So whether you’d like to build your own assignments, teach multiple sections, or set prerequisites, MyLab gives you the flexibility to easily create your course to fit your needs.

**Improve student results**

When you teach with MyLab, student performance improves. That’s why instructors have chosen MyLab for over 15 years, touching the lives of over 50 million students.
FEATURES IN THE BOOK AND SUPPORTING RESOURCES ON MYLAB ECONOMICS

Students and instructors will find the following features in the seventh edition and supporting online resources on MyLab Economics.

Business Cases and An Inside Look News Articles

Each chapter-opening case provides a real-world context for learning, sparks students' interest in economics, and helps unify the chapter. The case describes an actual company facing a real situation. The company is integrated in the narrative, graphs, and pedagogical features of the chapter. Some of the chapter openers focus on the role of entrepreneurs in developing new products and bringing them to market. For example, Chapter 2 features Elon Musk of Tesla Motors; Chapter 13 features KB Home founders Donald Kaufman and Eli Broad; Chapter 14 features Paytm founder Vijay Shekhar Sharma; and Chapter 18 features Jeff Bezos of Amazon.

Students can visit MyLab Economics to watch a brief video we developed and filmed to summarize the key points of each chapter opener.

An Inside Look is a two-page feature that shows students how to apply the concepts from the chapter to the analysis of a news article. The feature appears at the end of Chapters 1–4. An Inside Look presents an excerpt from an article, analysis of the article, a graph(s), and critical thinking questions. Additional articles that are continuously updated are located on MyLab Economics.
Solved Problems

Many students have great difficulty handling applied economics problems. We help students overcome this hurdle by including in each chapter two or three worked-out problems that analyze real-world economic issues they hear and read about in the news. Our goals are to keep students focused on the main ideas of each chapter and give them a model of how to solve an economic problem by breaking it down step by step. We tie additional exercises in the end-of-chapter Problems and Applications section to every Solved Problem. Additional Solved Problems appear in the Instructor’s Manuals. In addition, the Test Banks include problems tied to the Solved Problems in the main book. Each of the 32 Solved Problems in the printed text is accompanied by a similar Interactive Solved Problem on MyLab Economics, so students can have more practice and build their problem-solving skills. These interactive tutorials help students learn to think like economists and apply basic problem-solving skills to homework, quizzes, and exams. Each Solved Problem on MyLab Economics and in the digital eText also includes at least one additional graded practice exercise for students.
It's important for managers to forecast the demand for their products accurately because doing so helps them determine how much of a good to produce. Firms typically set manufacturing schedules at least a month ahead of time. Premium bottled water is a rapidly growing market, and firms need to carefully plan increases in productive capacity. Firms that fail to produce a large enough quantity to keep pace with increasing demand can lose out to competitors. But will the demand for premium bottled water continue to grow at such a rapid pace?

Richard Tedlow of the Harvard Business School has developed a theory of the “three phases of marketing” that can provide some insight into how the markets for many consumer products develop over time. The first phase often has a very large number of firms, each producing a relatively small volume of goods and charging high prices. This phase corresponds to the carbonated soft drink industry in the late nineteenth century, the automobile industry in the early twentieth century, and the personal computer industry in the late 1970s. In the second phase, the market consolidates, with one or a few brands attaining high market shares by selling a large number of units at lower prices. This phase corresponds to the soft drink industry during the middle of the twentieth century, the automobile industry during the 1920s, and the personal computer industry during the 1980s.

Managers at beverage firms will have to take into account a number of factors when estimating the future demand for premium bottled water. Factors that will tend to lead to higher demand for premium bottled water include the popularity of the product with millennials, the trend toward healthier eating habits that has led to declining consumption of carbonated beverages, the taxes on soda that cities have been imposing to both fight obesity and raise tax revenue, and the possibility of attracting consumers who now prefer energy drinks such as Red Bull and sports drinks such as Gatorade. But an obstacle to the rapid growth of demand for premium bottled water comes from doubts raised by some analysts about the benefits from the electrolytes and other ingredients it contains that are not in regular bottled water. If consumers come to believe that these ingredients serve no useful purpose, they may prefer to buy regular bottled water, which typically has a lower price.

As we saw in Chapter 1, economists can use formal models to forecast future values of economic variables. In this case, an economist forecasting the demand for premium bottled water would want to include the factors mentioned in the previous paragraphs as well as other data, including changes over time in demographics and projected income growth.


Your Turn: Test your understanding by doing related problem 1.17 on page 102 at the end of this chapter.
Don’t Let This Happen to You

We know from many years of teaching which concepts students find most difficult. We include in each chapter a box feature called Don’t Let This Happen to You that alerts students to the most common pitfalls in that chapter’s material. We follow up with a related question in the end-of-chapter Problems and Applications section. The questions are also available on MyLab Economics, where students can receive instant feedback and tutorial help.

Concept Checks

Each section of each learning objective concludes with a Concept Check on MyLab Economics that contains one or two multiple-choice, true/false, or fill-in questions. These checks act as “speed bumps” that encourage students to stop and check their understanding of fundamental terms and concepts before moving on to the next section. The goal of this digital resource is to help students assess their progress on a section-by-section basis so they can be better prepared for homework, quizzes, and exams.

Graphs and Summary Tables

Graphs are an indispensable part of a principles of economics course but are a major stumbling block for many students. Every chapter except Chapter 1 includes end-of-chapter problems that require students to draw, read, and interpret graphs. Interactive graphing exercises appear on the book’s supporting Web site. We use four devices to help students read and interpret graphs:

1. Detailed captions
2. Boxed notes
3. Color-coded curves
4. Summary tables with graphs (see pages 80, 85, and 444 for examples)
Table 3.1

<table>
<thead>
<tr>
<th>Variables that Shift Market Demand Curves</th>
<th>An increase in...</th>
<th>shifts the demand curve...</th>
<th>because...</th>
</tr>
</thead>
<tbody>
<tr>
<td>income (and the good is normal)</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers spend more of their higher incomes on the good.</td>
</tr>
<tr>
<td>income (and the good is inferior)</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers spend less of their higher incomes on the good.</td>
</tr>
<tr>
<td>the price of a substitute good</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers buy less of the substitute good and more of this good.</td>
</tr>
<tr>
<td>the price of a complementary good</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers buy less of the complementary good and less of this good.</td>
</tr>
<tr>
<td>taste for the good</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers are willing to buy a larger quantity of the good at every price.</td>
</tr>
<tr>
<td>population</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>additional consumers result in a greater quantity demanded at every price.</td>
</tr>
<tr>
<td>the expected price of the good in the future</td>
<td>$D_1$</td>
<td>$D_2$</td>
<td>consumers buy more of the good today to avoid the higher price in the future.</td>
</tr>
</tbody>
</table>

Each of the 156 numbered figures in the text has a supporting animated version on MyLab Economics. The goal of this digital resource is to help students understand shifts in curves, movements along curves, and changes in equilibrium values. Having an animated version of a graph helps students who have difficulty interpreting the static version in the printed text. We include graded practice exercises with the animations. In our experience, many students benefit from this type of online learning.
Approximately 35 graphs are continuously updated online with the latest available data from FRED (Federal Reserve Economic Data), which is a comprehensive, up-to-date data set maintained by the Federal Reserve Bank of St. Louis. Students can display a pop-up graph that shows new data. The goal of this digital feature is to help students understand how to work with data and understand how including new data affects graphs.

**Review Questions and Problems and Applications—Grouped by Learning Objective to Improve Assessment**

We group the main end-of-chapter material—Summary, Review Questions, and Problems and Applications—under learning objectives. The goals of this organization are to make it easier for instructors to assign problems based on learning objectives, both in the book and on MyLab Economics, and to help students efficiently review material that they find difficult. If students have difficulty with a particular learning objective, an instructor can easily identify which end-of-chapter questions and problems support that objective and assign them as homework or discuss them in class. Every exercise in a chapter’s Problems and Applications section is available on MyLab Economics. Using MyLab Economics, students can complete these and many other exercises online, get tutorial help, and receive instant feedback and assistance on exercises they answer incorrectly. Also, student learning will be enhanced by having the summary material and problems grouped together by learning objective, which allows them to focus on the parts of the chapter they find most challenging. Each major section of the chapter, paired with a learning objective, has at least two review questions and three problems.

As in the previous editions, we include one or more end-of-chapter problems that test students’ understanding of the content presented in the Solved Problem, Apply the Concept, and Don’t Let This Happen to You special features in the chapter. Instructors can cover a feature in class and assign the corresponding problem(s) for homework. The Test Bank Files also include test questions that pertain to these special features.
Real-Time Data Exercises

We end select chapters with at least two Real-Time Data Exercises that help students become familiar with a key data source, learn how to locate data, and develop skills in interpreting data. Real-Time Data Analysis (RTDA) Exercises, marked with , allow students and instructors to use the very latest data from FRED, the Federal Reserve Bank of St. Louis.

Developing Career Skills

Learning key economic terms, concepts, and models are all important. For a course to be successful, students need to develop the skills and confidence to apply what they’ve learned outside the classroom. Chapter 1, “Economics: Foundations and Models,” now includes a new section that describes economics as a career and the key skills students of any major can gain from studying economics. As described earlier, features such as chapter-opening business cases, Apply the Concepts, Solved Problems, and end-of-chapter problems provide a real-world context for learning that exposes students to economics as applied in a variety of large and small businesses, government agencies, and nonprofit organizations. Critical Thinking Exercises, a new end-of-chapter category in this edition, help build student skills to analyze and interpret information and apply reasoning and logic to new or unfamiliar ideas and situations.

Economics in Your Life & Career

After the chapter-opening real-world business case, we have a feature titled Economics in Your Life & Career that adds a personal dimension to the chapter opener by asking students to consider how economics affects their lives and careers. The feature piques the interest of students and emphasizes the connection between the material they are learning and their personal and career decisions.

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Economics in Your Life & Career
Can You Forecast the Future Demand for Premium Bottled Water?

Firms face many challenges in responding to changes in consumer demand. Firms selling premium bottled water need to forecast future demand in order to determine how much production capacity they will need. If you were a manager for Coca-Cola, PepsiCo, Nestlé, Bai, or another firm selling premium bottled water, what factors would you take into account in forecasting future demand? As you read this chapter, try to answer this question. You can check your answers against those we provide on page 97 at the end of this chapter.

At the end of the chapter, we use the chapter concepts to answer the questions asked at the beginning of the chapter.

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Economics in Your Life & Career
Can You Forecast the Future Demand for Premium Bottled Water?

At the beginning of this chapter, we asked what variables you would take into account in forecasting future demand if you were a manager for a firm selling premium bottled water. In Section 3.1, we discussed the factors that affect the demand for a product and provided a list of the most important variables. In the Apply the Concept on page 81, we discussed how economists often use formal models to forecast future demand for a product.

In forecasting demand for premium bottled water, you should take into account factors such as changing demographics, as millennials become a larger fraction of prime-age consumers, and the likelihood that the demand for competing goods, such as carbonated sodas, will decline as consumers turn toward buying healthier products and as more cities impose soda taxes. You may also need to consider whether increased advertising of premium bottled water by large firms such as Coca-Cola and PepsiCo will raise consumer awareness of the product and increase demand for the premium bottled water being sold by other firms as well.

The factors discussed in this chapter provide you with the basic information needed to forecast demand for premium bottled water, although arriving at numerical forecasts requires using statistical analysis that you can learn in more advanced courses.
Instructor Teaching Resources

The authors and Pearson Education have worked together to integrate the text, print, and media resources to make teaching and learning easier.

<table>
<thead>
<tr>
<th>Supplements Available to Instructors for Download at <a href="http://www.pearsonhighered.com">www.pearsonhighered.com</a></th>
<th>Features of the Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructor’s Manual</strong>&lt;br&gt;Authored by Edward Scahill of the University of Scranton</td>
<td>• Chapter-by-chapter summaries organized by learning objectives&lt;br&gt;• Extended examples and class exercises&lt;br&gt;• Teaching outlines incorporating key terms and definitions, teaching tips, topics for class discussion&lt;br&gt;• New Solved Problems&lt;br&gt;• New Apply the Concept features&lt;br&gt;• Solutions to all review questions, problems, and real-time data exercises in the book</td>
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<td><strong>Test Bank</strong>&lt;br&gt;Authored by Randy Methenitis of Richland College</td>
<td>• 4,000 multiple-choice, true/false, short-answer, and graphing questions.&lt;br&gt;• Test questions are annotated with the following categories:&lt;br&gt;  - <strong>Difficulty</strong>—1 for straight recall; 2 for some analysis; and 3 for complex analysis&lt;br&gt;  - <strong>Type</strong>—multiple-choice, true/false, short-answer, essay&lt;br&gt;  - <strong>Topic</strong>—the term or concept the question supports&lt;br&gt;  - <strong>Learning outcome</strong>&lt;br&gt;  - <strong>Page number</strong> in the main book&lt;br&gt;  - <strong>Special feature</strong> in the main book&lt;br&gt;  - <strong>The Association to Advance Collegiate Schools of Business (AACSB) Guidelines</strong> (see description on the next page)</td>
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<td><strong>Computerized TestGen</strong></td>
<td>• Allows instructors to customize, save, and generate classroom tests.&lt;br&gt;• Instructors can edit, add, or delete questions from the Test Banks; analyze test results; and organize a database of tests and student results.&lt;br&gt;• Many options are available for organizing and displaying tests, along with search and sort features.&lt;br&gt;• The software and the Test Banks can be downloaded from <a href="http://www.pearsonhighered.com">www.pearsonhighered.com</a>,</td>
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<tr>
<td><strong>Three Sets of PowerPoint Lecture Presentations</strong>&lt;br&gt;Authored by Paul Holmes of Ashland University</td>
<td>• A comprehensive set of PowerPoint slides can be used by instructors for class presentations or by students for lecture preview or review. These slides include all the graphs, tables, and equations in the textbook. Two versions are available—step-by-step mode, in which you can build graphs as you would on a blackboard, and automated mode, in which you use a single click per slide.&lt;br&gt;• A comprehensive set of PowerPoint slides have Classroom Response Systems (CRS) questions built in so that instructors can incorporate CRS “clickers” into their classroom lectures.&lt;br&gt;• Student versions of the PowerPoint slides are available as .pdf files. This version allows students to print the slides and bring them to class for note taking.</td>
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**What Is the AACSB?**

The Association to Advance Collegiate Schools of Business (AACSB) is a not-for-profit corporation of educational institutions, corporations, and other organizations devoted to the promotion and improvement of higher education in business administration and accounting. A collegiate institution offering degrees in business administration and accounting may volunteer for AACSB accreditation review. The AACSB expects a curriculum to include learning experiences in the following categories of Assurance of Learning Standards: Written and Oral Communication; Ethical Understanding and Reasoning; Analytical Thinking; Information Technology; Interpersonal Relations and Teamwork, Diverse and Multicultural Work; Reflective Thinking; and Application of Knowledge. Test Bank questions that test skills relevant to these standards are tagged with the appropriate standard. For example, a question testing the moral questions associated with externalities would receive the Ethical Understanding and Reasoning tag.
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