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O'BRIEN

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ABOUT THE **AUTHORS**

Glenn Hubbard, policymaker, professor, and researcher. Glenn Hubbard is dean emeritus and Russell L. Carson Professor of Finance and Economics in the Graduate School of Business at Columbia University and professor of economics in Columbia's Faculty of Arts and Sciences. He is also a research associate of the National Bureau of Economic Research and a director of Automatic Data Processing, Black Rock Fixed-Income Funds, and MetLife. He received a PhD in economics from Harvard University in 1983. From 2001 to 2003, he served as chair of the White House Council of Economic Advisers and chair of the OECD Economic Policy Committee, and from 1991 to 1993, he was deputy assistant secretary of the U.S. Treasury Department. He currently serves as co-chair of the nonpartisan Committee on Capital Markets Regulation. Hubbard's fields of specialization are public economics, financial markets and institutions, corporate finance, macroeconomics, industrial organization, and public policy. He is the author of more than 100 articles in leading journals, including *American Economic Review, Brookings Papers on Economic Activity, Journal of Finance, Journal of Financial Economics, Journal of Money, Credit, and Banking, Journal of Political Economy, Journal of Public Economics, Quarterly Journal of Economics, RAND Journal of Economics,* and *Review of Economics and Statistics*. His research has been supported by grants from the National Science Foundation, the National Bureau of Economic Research, and numerous private foundations.

Tony O'Brien, award-winning professor and researcher. Anthony Patrick O'Brien is a professor of economics at Lehigh University. He received a PhD from the University of California, Berkeley, in 1987. He has taught principles of economics for more than 20 years, in both large sections and small honors classes. He received the Lehigh University Award for Distinguished Teaching. He was formerly the director of the Diamond Center for Economic Education and was named a Dana Foundation Faculty Fellow and Lehigh Class of 1961 Professor of Economics. He has been a visiting professor at the University of California, Santa Barbara, and the Graduate School of Industrial Administration at Carnegie Mellon University. O'Brien's research has dealt with issues such as the evolution of the U.S. automobile industry, the sources of U.S. economic competitiveness, the development of U.S. trade policy, the causes of the Great Depression, and the causes of black–white income differences. His research has been published in leading journals, including *American Economic Review, Quarterly Journal of Economics, Journal of Money, Credit, and Banking, Industrial Relations, Journal of Economic History*, and *Explorations in Economic History*. His research has been supported by grants from government agencies and private foundations.

BRIEF **CONTENTS**

* Online appendices can be found within **MyLab Economics** or within an associated eText.

CONTENTS

* These end-of-chapter resource materials repeat in all chapters. Select chapters also include Real-Time Data Exercises. Students can complete all questions, problems, and exercises in MyLab Economics.

PREFACE

Our approach in this new edition remains what it was in the first edition: to provide students and instructors with a text that delivers complete coverage of economic topics using many real-world examples. Our goal from the beginning has been to teach economics in a "widget-free" way by using real-world business and policy examples.

Much has happened in the U.S. and world economies since we prepared the previous edition, including the longest economic expansion in the history of the U.S. economy, the first significant international trade war since the 1930s, and record peacetime federal budget deficits. We have incorporated many of these developments in the new real-world examples and policy discussions in this edition and also in the extensive digital resources, which include:

- More than 70 author-created application videos of the chapter openers and *Apply the Concept* features
- More than 160 figure animation videos
- More than 20 *Solved Problem* whiteboard videos

New to This Edition

Here is an overview of the revisions, followed by a more detailed description of the changes in each chapter.

Overview of Changes

- All the chapter openers feature either new companies or have updated information.
- 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.
- There are 14 new *Apply the Concept* features and videos to help students tie economic concepts to current events and policy issues. The *Apply the Concept* features and videos that were retained from the previous edition have been updated.
- There are 4 new *Solved Problems*, and many of those retained from the previous edition have been updated. The *Solved Problem* feature uses real-world products, events, and policies to help students break down and answer economic problems step by step. New to this edition are whiteboard videos of select *Solved Problems* that bring these real-world problems to life with audio, background photos, and step-by-step construction of graphs and tables.
- All the figures and tables and their animations have been updated with the latest data available.
- Many of the end-of-chapter *Problems and Applications* have been updated or replaced. 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 have updated some of those exercises.
- Based on marketing feedback and our analysis of instructor assignments, we have made the following organizational changes to the print version of the book:
    - We cut the income statement and balance sheet material from the appendix to Chapter 6 (the discussion of present value was retained) and the gold standard and Bretton Woods material from the appendix to Chapter 19 (now Chapter 18). All of this material is still available within MyLab Economics for instructors and students who wish to use it.

- We streamlined and merged Chapter 18, "Macroeconomics in an Open Economy," and Chapter 19, "The International Financial System" into one chapter, Chapter 18, "Macroeconomics in an Open Economy"

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 how the Trump administration's tariff policy may affect Apple and other firms. *An Inside Look* at the end of the chapter presents a news article and analysis of whether those tariffs are bringing manufacturing jobs back home or primarily raising prices for U.S. consumers. New *Solved Problem 1.1* analyzes the marginal benefit and marginal cost of the U.S. Postal Service delivering packages for Amazon. A new *Apply the Concept* discusses whether a congressional bill aimed at increasing the pay of low-wage workers could backfire.

Chapter 2, "Trade-offs, Comparative Advantage, and the Market System," opens with an updated discussion of the resource allocation decisions Elon Musk and managers at Tesla Motors face. *An Inside Look* at the end of the chapter discusses the plans of Porsche's parent company, Volkswagen, to create a full line of electric automobiles. A new *Apply the Concept* discusses the recent debates about socialism.

Chapter 3, "Where Prices Come From: The Interaction of Demand and Supply," opens with a new discussion of Nike and the highly competitive market for athletic shoes. We use that market to develop the demand and supply model. *An Inside Look* at the end of the chapter examines plans by BASF and Reebok to release 3D printed shoes. There are three new *Apply the Concepts*: "Forecasting the Demand for Athletic Shoes," "Fracking, the U.S. Oil Boom, and Expected Oil Prices," and "Higher Demand for Cobalt—But Lower Prices?" New *Solved Problem 3.4* examines how we can predict changes in the price and quantity of merino wool.

Chapter 4, "Economic Efficiency, Government Price Setting, and Taxes," opens with an updated 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 why Uber is suing New York City over its limit on the number of cars ride-hailing companies are allowed. New *Solved Problem 4.4* examines who bears the burden of the Seattle beverage tax.

Chapter 5, "The Economics of Health Care," opens with a new discussion of whether private insurance companies such as Blue Cross and Blue Shield should be eliminated in favor of a single-payer government health system. New Table 5.2 summarizes and compares the essential aspects of the health care systems in Canada, Japan, and the United Kingdom. A new *Apply the Concept* discusses the debate over "Medicare for All."

Chapter 6, "Firms, the Stock Market, and Corporate Governance," opens with a new discussion of Lyft's initial public offering. A new *Apply the Concept* explores why someone would want to buy Lyft stock, given the company's financial losses. New Table 6.2 summarizes the historical long-run returns from investing in different assets. Coverage of recent issues in corporate governance policy, formerly in Section 6.4, has been streamlined and merged into Section 6.3. The appendix still covers present value, but the coverage of income statements and balance sheets now appears as an online appendix.

Chapter 7, "Comparative Advantage and the Gains from International Trade," opens with a discussion of how the 2019 Trump Administration tariffs on imports from China affected Whirlpool, a home appliance maker based in Benton Harbor, Michigan. A new *Apply the Concept* analyzes who gains and who loses from tariffs on imports from China.

Chapter 8, "GDP: Measuring Total Production and Income," opens with a new discussion of how General Motors and other car companies deal with the business cycle. A new *Apply the Concept* discusses whether gross domestic income is a more reliable measure of total production than gross domestic product.

Chapter 9, "Unemployment and Inflation," opens with a new discussion of how Wisconsin-based Stoughton Trailers dealt with the challenge of finding workers during a period of very low unemployment. A new *Apply the Concept* discusses whether advances in information technology permanently increase structural unemployment. A new section covers trends in labor force participation rates.

Chapter 10, "Economic Growth, the Financial System, and Business Cycles," begins with a new opener that discusses how millennials (people born between 1981 and 1996) have experienced both technological change and the effects of the business cycle. New Figure 10.9 and surrounding text also cover this topic.

Chapter 11, "Long-Run Economic Growth: Sources and Policies," opens with a new discussion of the role of technological change and creative destruction in lifting living standards. A new *Apply the Concept* explores the economic growth of sub-Saharan Africa and projections of future growth for that region.

Chapter 12, "Aggregate Expenditure and Output in the Short Run," opens with a new opener about how the business cycle affects manufacturers of recreational vehicles (RVs), such as Airstream, many of which are based in Elkhart, Indiana. A new section covers the volatility of consumer spending on durables, and new Table 12.1 summarizes the relationship between actual investment and planned investment.

Chapter 13, "Aggregate Demand and Aggregate Supply Analysis," opens with a new discussion of the effect of the business cycle on General Motors and other auto manufacturers. A new *Apply the Concept* discusses whether there really is a business cycle.

Chapter 14, "Money, Banks, and the Federal Reserve System," opens with a new discussion of the Venmo app, which allows people to send money to friends using their smartphones.

Chapter 15, "Monetary Policy," opens with a new discussion of the organization of the Federal Reserve and Fed Chair Jerome Powell's relationship with President Trump in 2019. Coverage of the financial crisis of 2007–2009 has been streamlined.

Chapter 16, "Fiscal Policy," opens with a new discussion of the effects of fiscal policy on the growth rate of real GDP. A new *Apply the Concept* discusses modern monetary theory (MMT) and whether policymakers should worry about the national debt. New *Solved Problem 16.6* explores how the Italian government confronts its budget deficit.

Chapter 17, "Inflation, Unemployment, and Federal Reserve Policy," opens with a new discussion of the Fed's challenge of meeting its dual mandate of low inflation and unemployment while dealing with political pressure from President Trump. A new *Apply the Concept* considers whether the Phillips curve has disappeared. There are two new sections in the chapter: One covers the recent debates about the future of the Federal Reserve, and another discusses whether the Fed should be independent of Congress and the president.

Chapter 18, "Macroeconomics in an Open Economy," includes streamlined and updated content from two seventh edition chapters: Chapter 18 of the same title and Chapter 19, "The International Financial System." The appendix on the gold standard and Bretton Woods that appeared in the seventh edition Chapter 19 is now an online appendix.

To make room for new content, we cut 14 *Apply the Concept*s and 2 *Solved Problem*s 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. As noted earlier, as a result of market feedback and analysis of instructor assignments we moved two appendices to appear within MyLab Economics and streamlined and merged two chapters.

Solving Teaching and Learning Challenges

Many students who take a principles of economics course have difficulty seeing the relevance of key concepts such as 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, engaging pedagogy, and an extensive selection of digital assets.

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 see 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. 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. We also 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 in Chapter 13, "Aggregate Demand and Aggregate Supply Analysis." 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.
  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. 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 to the topic: Chapter 15, "Monetary Policy," and Chapter 17, "Inflation, Unemployment, and Federal Reserve Policy." 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 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, and recent challenges to the Fed's independence.
- **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°-line 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°-line 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 two chapters devoted to international topics: Chapter 7, "Comparative Advantage and the Gains from International Trade," and Chapter 18, "Macroeconomics in an Open Economy." 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 two 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 both of the international chapters (Chapter 7, "Comparative Advantage and the Gains from International Trade," and Chapter 18, "Macroeconomics in an Open Economy"), cover just Chapter 7 on international trade, or cover just Chapter 18. Please refer to the flexibility chart on pages P14–P15 of this preface to help select the chapters and order best suited to your classroom needs.

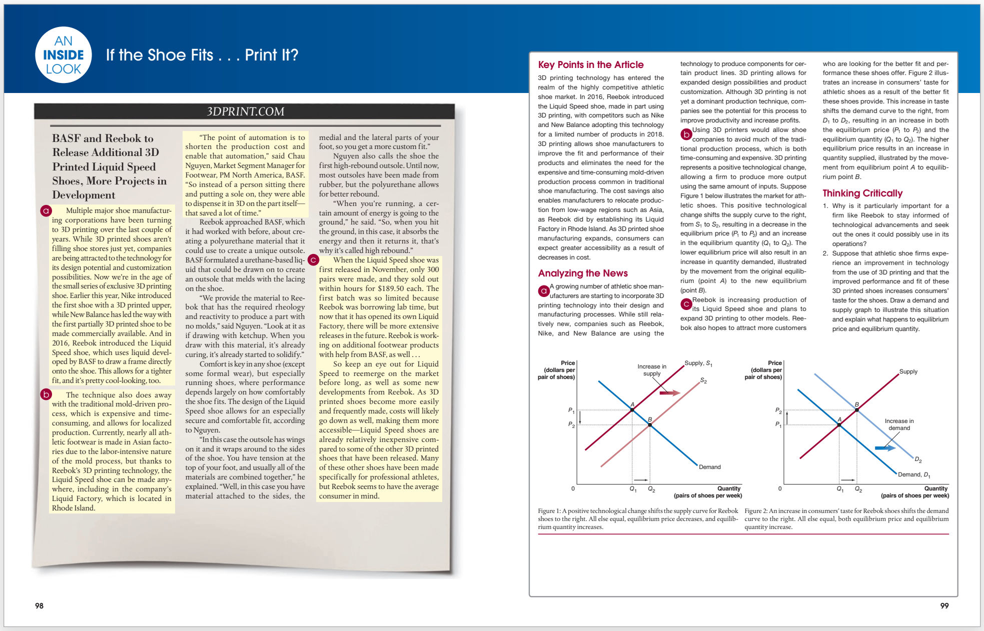
Pedagogy That Emphasizes Real-World Examples, Applications, and Practice

A number of pedagogical features illustrate the relevance of economics to students' everyday lives, help students focus on key concepts, and help them prepare for exams.

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 14 features Venmo app founders Andrew Kortina and Iqram Magdon-Ismail; and Chapter 18 features Jeff Bezos of Amazon.

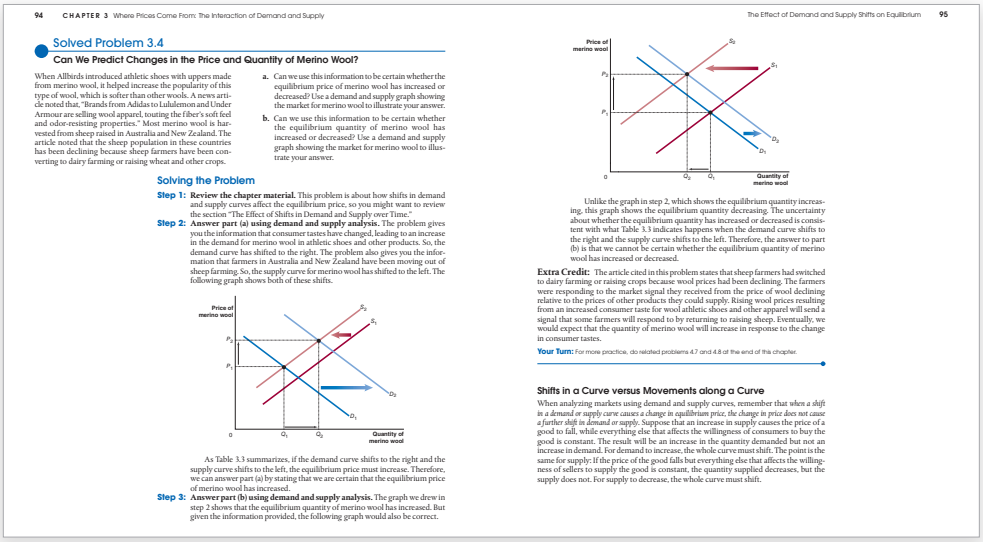
An Inside Look is a two-page feature that shows students how to apply the concepts from the chapter to the analysis of a news article. The feature appears at the end of Chapters 1–4. *An Inside Look* presents an excerpt from an article, analysis of the article, a graph(s), and critical thinking questions.



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 for 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 Manual*. In addition, the Test Banks include problems tied to the *Solved Problems* in the main book.

New to this edition are whiteboard videos of select *Solved Problems* that bring these real-world problems to life with audio, background photos, and step-by-step construction of graphs and tables.



94 CHAPTER 3 Where Prices Come From: The Interaction of Demand and Supply

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Solved Problem 3.4

Can We Predict Changes in the Price and Quantity of Merino Wool?

When Allbirds introduced athletic shoes with uppers made from merino wool, it helped increase the popularity of this type of wool, which is softer than other wools. A news article noted that, "Brands from Adidas to Lululemon and Under Armour are selling wool apparel, touting the fiber's soft feel and odor-resisting properties." Most merino wool is harvested from sheep raised in Australia and New Zealand. The article noted that the sheep population in these countries has been declining because sheep farmers have been converting to dairy farming or raising wheat and other crops.

a. Can we use this information to be certain whether the equilibrium price of merino wool has increased or decreased? Use a demand and supply graph showing the market for merino wool to illustrate your answer.

b. Can we use this information to be certain whether the equilibrium quantity of merino wool has increased or decreased? Use a demand and supply graph showing the market for merino wool to illustrate your answer.

Solving the Problem

Step 1: **Review the chapter material.** This problem is about how shifts in demand and supply curves affect the equilibrium price, so you might want to review the section "The Effect of Shifts in Demand and Supply over Time."

Step 2: **Answer part (a) using demand and supply analysis.** The problem gives you the information that consumer tastes have changed, leading to an increase in the demand for merino wool in athletic shoes and other products. So, the demand curve has shifted to the right. The problem also gives you the information that farmers in Australia and New Zealand have been moving out of sheep farming. So, the supply curve for merino wool has shifted to the left. The following graph shows both of these shifts.

As Table 3.3 summarizes, if the demand curve shifts to the right and the supply curve shifts to the left, the equilibrium price must increase. Therefore, we can answer part (a) by stating that we are certain that the equilibrium price of merino wool has increased.

Step 3: **Answer part (b) using demand and supply analysis.** The graph we drew in step 2 shows that the equilibrium quantity of merino wool has increased. But given the information provided, the following graph would also be correct.

Unlike the graph in step 2, which shows the equilibrium quantity increasing, this graph shows the equilibrium quantity decreasing. The uncertainty about whether the equilibrium quantity has increased or decreased is consistent with what Table 3.3 indicates happens when the demand curve shifts to the right and the supply curve shifts to the left. Therefore, the answer to part (b) is that we cannot be certain whether the equilibrium quantity of merino wool has increased or decreased.

Extra Credit: The article cited in this problem states that sheep farmers had switched to dairy farming or raising crops because wool prices had been declining. The farmers were responding to the market signal they received from the price of wool declining relative to the prices of other products they could supply. Rising wool prices resulting from an increased consumer taste for wool athletic shoes and other apparel will send a signal that some farmers will respond to by returning to raising sheep. Eventually, we would expect that the quantity of merino wool will increase in response to the change in consumer tastes.

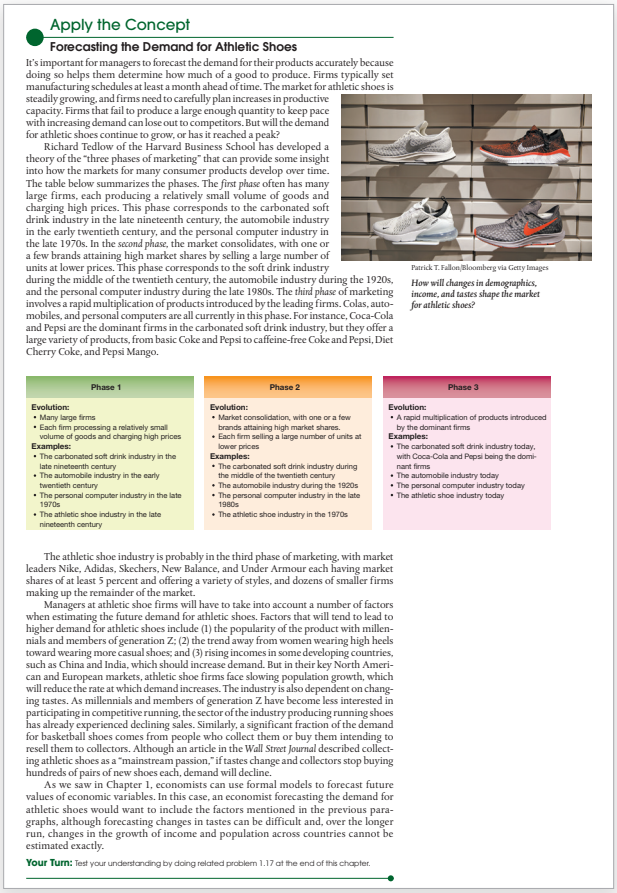
Your Turn: For more practice, do related problems 4.7 and 4.8 at the end of this chapter.

Shifts in a Curve versus Movements along a Curve

When analyzing markets using demand and supply curves, remember that *when a shift in a demand or supply curve causes a change in equilibrium price, the change in price does not cause a further shift in demand or supply.* Suppose that an increase in supply causes the price of a good to fall, while everything else that affects the willingness of consumers to buy the good is constant. The result will be an increase in the quantity demanded but not an increase in demand. For demand to increase, the whole curve must shift. The point is the same for supply: If the price of the good falls but everything else that affects the willingness of sellers to supply the good is constant, the quantity supplied decreases, but the supply does not. For supply to decrease, the whole curve must shift.

Apply the Concept

Each chapter includes two to four *Apply the Concept* features that provide real-world reinforcement of key concepts and help students learn how to interpret what they read on the Web and in newspapers. Most of the 60 *Apply the Concept* features use relevant, stimulating, and provocative news stories focused on businesses and policy issues. One-third of them are new to this edition, and most others have been updated. Several discuss health care and trade, which have been at the forefront of recent policy discussions. Each *Apply the Concept* has at least one supporting end-of-chapter problem to allow students to test their understanding of the topic discussed.



Apply the Concept

Forecasting the Demand for Athletic Shoes

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. The market for athletic shoes is steadily growing, 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 athletic shoes continue to grow, or has it reached a peak?

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 table below summarizes the phases. The *first phase* often has many large 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 late 1980s. The *third phase* of marketing involves a rapid multiplication of products introduced by the leading firms. Colas, automobiles, and personal computers are all currently in this phase. For instance, Coca-Cola and Pepsi are the dominant firms in the carbonated soft drink industry, but they offer a large variety of products, from basic Coke and Pepsi to caffeine-free Coke and Pepsi, Diet Cherry Coke, and Pepsi Mango.

Patrick T. Fallon/Bloomberg via Getty Images

How will changes in demographics, income, and tastes shape the market for athletic shoes?

Phase 1	Phase 2	Phase 3
Evolution: • Many large firms • Each firm processing a relatively small volume of goods and charging high prices **Examples:** • The carbonated soft drink industry in the late nineteenth century • The automobile industry in the early twentieth century • The personal computer industry in the late 1970s • The athletic shoe industry in the late nineteenth century	**Evolution:** • Market consolidation, with one or a few brands attaining high market shares. • Each firm selling a large number of units at lower prices **Examples:** • The carbonated soft drink industry during the middle of the twentieth century • The automobile industry during the 1920s • The personal computer industry in the late 1980s • The athletic shoe industry in the 1970s	**Evolution:** • A rapid multiplication of products introduced by the dominant firms **Examples:** • The carbonated soft drink industry today, with Coca-Cola and Pepsi being the dominant firms • The automobile industry today • The personal computer industry today • The athletic shoe industry today

The athletic shoe industry is probably in the third phase of marketing, with market leaders Nike, Adidas, Skechers, New Balance, and Under Armour each having market shares of at least 5 percent and offering a variety of styles, and dozens of smaller firms making up the remainder of the market.

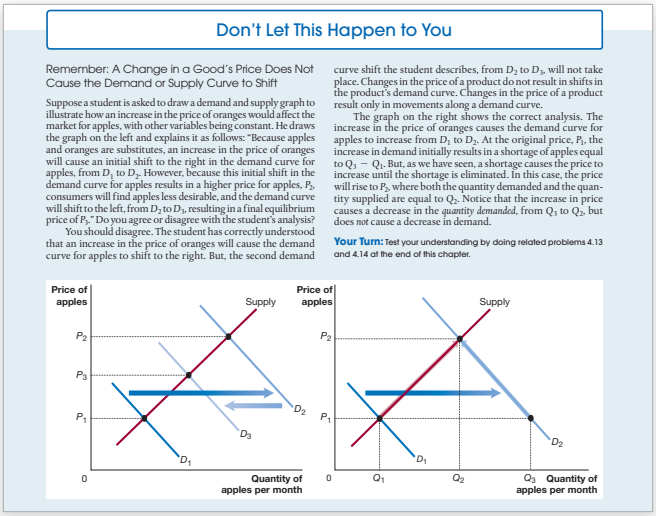
Managers at athletic shoe firms will have to take into account a number of factors when estimating the future demand for athletic shoes. Factors that will tend to lead to higher demand for athletic shoes include (1) the popularity of the product with millennials and members of generation Z; (2) the trend away from women wearing high heels toward wearing more casual shoes; and (3) rising incomes in some developing countries, such as China and India, which should increase demand. But in their key North American and European markets, athletic shoe firms face slowing population growth, which will reduce the rate at which demand increases. The industry is also dependent on changing tastes. As millennials and members of generation Z have become less interested in participating in competitive running, the sector of the industry producing running shoes has already experienced declining sales. Similarly, a significant fraction of the demand for basketball shoes comes from people who collect them or buy them intending to resell them to collectors. Although an article in the *Wall Street Journal* described collecting athletic shoes as a "mainstream passion," if tastes change and collectors stop buying hundreds of pairs of new shoes each, demand will decline.

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 athletic shoes would want to include the factors mentioned in the previous paragraphs, although forecasting changes in tastes can be difficult and, over the longer run, changes in the growth of income and population across countries cannot be estimated exactly.

Your Turn: Test your understanding by doing related problem 1.17 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.



Don't Let This Happen to You

Remember: A Change in a Good's Price Does Not Cause the Demand or Supply Curve to Shift

Suppose a student is asked to draw a demand and supply graph to illustrate how an increase in the price of oranges would affect the market for apples, with other variables being constant. He draws the graph on the left and explains it as follows: "Because apples and oranges are substitutes, an increase in the price of oranges will cause an initial shift to the right in the demand curve for apples, from D_1 to D_2. However, because this initial shift in the demand curve for apples results in a higher price for apples, P_2, consumers will find apples less desirable, and the demand curve will shift to the left, from D_2 to D_3, resulting in a final equilibrium price of P_3." Do you agree or disagree with the student's analysis?

You should disagree. The student has correctly understood that an increase in the price of oranges will cause the demand curve for apples to shift to the right. But, the second demand curve shift the student describes, from D_2 to D_3, will not take place. Changes in the price of a product do not result in shifts in the product's demand curve. Changes in the price of a product result only in movements along a demand curve.

The graph on the right shows the correct analysis. The increase in the price of oranges causes the demand curve for apples to increase from D_1 to D_2. At the original price, P_1, the increase in demand initially results in a shortage of apples equal to $Q_3 - Q_1$. But, as we have seen, a shortage causes the price to increase until the shortage is eliminated. In this case, the price will rise to P_2, where both the quantity demanded and the quantity supplied are equal to Q_2. Notice that the increase in price causes a decrease in the *quantity demanded*, from Q_3 to Q_2, but does *not* cause a decrease in demand.

Your Turn: Test your understanding by doing related problems 4.13 and 4.14 at the end of this chapter.

Concept Checks

For each learning objective section, we provide a Concept Check that is accessible in the corresponding section within the MyLab Economics page. Each Concept Check 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. Video animations of the figures appear within the book's MyLab Economics page. 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

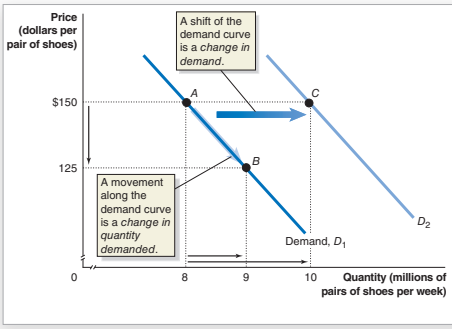


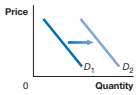
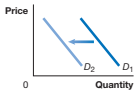
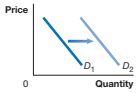
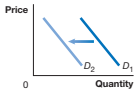
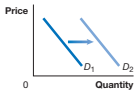
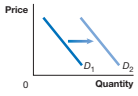
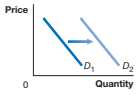
Figure 3.3

A Change in Demand versus a Change in Quantity Demanded

If the price of athletic shoes falls from $150 to $125, the result will be a movement along the demand curve from point *A* to point *B*—an increase in quantity demanded from 8 million pairs of shoes per week to 9 million pairs. If consumers' incomes increase, or if another factor changes that makes consumers want more of the product at every price, the demand curve will shift to the right—an increase in demand. In this case, the increase in demand from D_1 to D_2 causes the quantity of athletic shoes demanded at a price of $150 to increase from 8 million pairs at point *A* to 10 million pairs at point *C*.

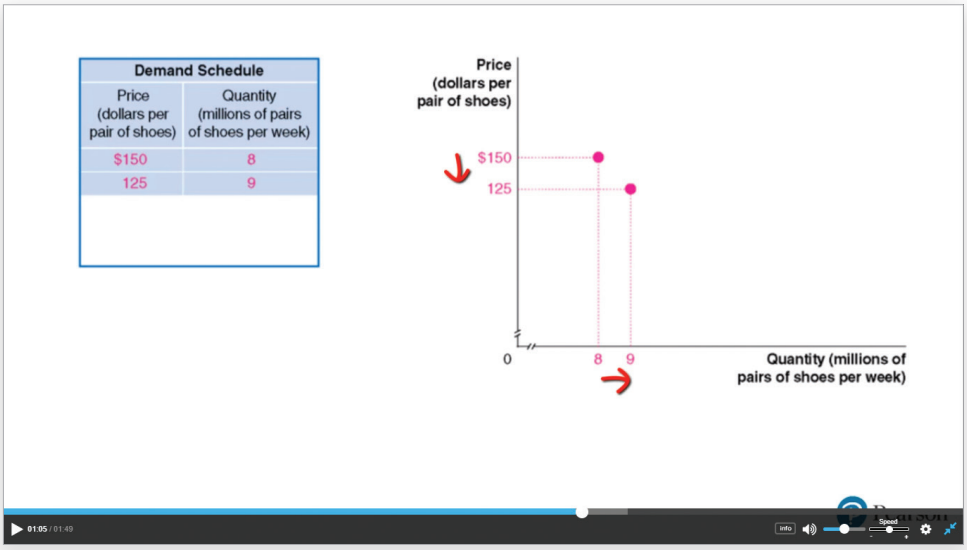
Table 3.1

Variables That Shift Market Demand Curves

An increase in ...	shifts the demand curve ...	because ...
income (and the good is normal)		consumers spend more of their higher incomes on the good.
income (and the good is inferior)		consumers spend less of their higher incomes on the good.
the price of a substitute good		consumers buy less of the substitute good and more of this good.
the price of a complementary good		consumers buy less of the complementary good and less of this good.
taste for the good		consumers are willing to buy a larger quantity of the good at every price.
population		additional consumers result in a greater quantity demanded at every price.
the expected price of the good in the future		consumers buy more of the good today to avoid the higher price in the future.

Here is a screen capture to show one of the many figure animation videos that appear within MyLab Economics and the eText.

Figure Animation 3.1 A Demand Schedule and Demand Curve



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 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. 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 chapter-opening business vignette, *Solved Problem, Apply the Concept, Economics in Your Life & Career,* 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 questions that pertain to these special features.

Critical Thinking Exercises

Each chapter includes two or more *Critical Thinking Exercises* that help students build 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.

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. Select *Real-Time Data Analysis Exercises* allow students and instructors to use the very latest data from the Federal Reserve Economic Data (FRED) website.

Developing Career Skills

It is important for students to learn key economic terms, concepts, and models. But for a course to be successful, students need to develop the skills and confidence to apply what they've learned outside the classroom.

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.

Economics in Your Life & Career

Can You Forecast the Future Demand for Athletic Shoes?

Firms face many challenges in responding to changes in consumer demand. For example, firms selling athletic shoes need to forecast future demand in order to determine how much production capacity they will need. If you were a manager for a firm that sells athletic shoes, such as Nike, Adidas, or Allbirds, 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 answer against the one we provide 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.

Economics in Your Life & Career

Can You Forecast the Future Demand for Athletic Shoes?

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 athletic shoes. 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* in the same section, we discussed the future demand for athletic shoes.

In forecasting demand for athletic shoes, you should take into account factors such as changing demographics, as millennials and members of generation Z become larger fractions of prime-age consumers, and the extent to which changing consumer tastes may help or hurt demand. You may also need to consider whether increased advertising of athletic shoes by large firms such as Adidas and Nike in developing countries with rising incomes will raise consumer awareness of the product in those countries and increase demand for athletic shoes being sold by other firms as well.

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

Chapter 1, "Economics: Foundations and Models," includes a 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 Concept*s, *Solved Problems*, and end-of-chapter problems provide 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*, located at the end of each chapter, help build student skills to analyze and interpret information and apply reasoning and logic to new or unfamiliar ideas and situations.

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.

Supplements Available to Instructors for Download at www.pearsonhighered.com	Features of the Supplement
Instructor's Manual Authored by Eva Dziadula of the University of Notre Dame	• Chapter-by-chapter summaries organized by learning objectives • Extended examples and class exercises • Teaching outlines incorporating key terms and definitions, teaching tips, and topics for class discussion • New *Solved Problem*s • New *Apply the Concept* features • Solutions to all review questions, problems, and *Real-Time Data Exercises* in the book
Test Bank Authored by Randy Methenitis of Richland College	• Each volume includes 4,000 multiple-choice, true/false, short-answer, and graphing questions. • Test questions are annotated with the following categories: **Difficulty**—1 for straight recall, 2 for some analysis, and 3 for complex analysis **Type**—multiple-choice, true/false, short-answer, essay **Topic**—the term or concept the question supports **Learning outcome** **Page number** in the main book **Special feature** in the main book **The Association to Advance Collegiate Schools of Business** (AACSB) **Guidelines,** which propose 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
Computerized TestGen	• Allows instructors to customize, save, and generate classroom tests. • Instructors can edit, add, or delete questions from the Test Banks; analyze test results; and organize a database of tests and student results. • Many options are available for organizing and displaying tests, along with search and sort features. • The software and the Test Banks can be downloaded from www.pearsonhighered.com.
Three Sets of PowerPoint Lecture Presentations Authored by Paul Holmes of Ashland University	• 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. • 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. • 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.

FLEXIBILITY **CHART**

The following chart helps you organize your syllabus based on your teaching preferences and objectives:

Core	Optional	Policy
Chapter 1: Economics: Foundations and Models	**Chapter 1 Appendix:** Using Graphs and Formulas	
Chapter 2: Trade-offs, Comparative Advantage, and the Market System		
Chapter 3: Where Prices Come From: The Interaction of Demand and Supply		
	Chapter 4 Appendix: Quantitative Demand and Supply Analysis	**Chapter 4:** Economic Efficiency, Government Price Setting, and Taxes
		Chapter 5: The Economics of Health Care
	Chapter 6: Firms, the Stock Market, and Corporate Governance	
	Chapter 6 Appendix: Using Present Value	
	Chapter 6 *Online Appendix:* Income Statements and Balance Sheets	
Chapter 7: Comparative Advantage and the Gains from International Trade		
Chapter 8: GDP: Measuring Total Production and Income		
Chapter 9: Unemployment and Inflation		
Chapter 10: Economic Growth, the Financial System, and Business Cycles		
Chapter 11: Long-Run Economic Growth: Sources and Policies		
	Chapter 12: Aggregate Expenditure and Output in the Short Run	
	Chapter 12 Appendix: The Algebra of Macroeconomic Equilibrium	
Chapter 13: Aggregate Demand and Aggregate Supply Analysis		
	Chapter 13 Appendix: Macroeconomic Schools of Thought	

Core	Optional	Policy
Chapter 14: Money, Banks, and the Federal Reserve System		
		Chapter 15: Monetary Policy
	Chapter 16 Appendix: A Closer Look at the Multiplier	**Chapter 16:** Fiscal Policy
		Chapter 17: Inflation, Unemployment, and Federal Reserve Policy
	Chapter 18: Macroeconomics in an Open Economy	
	Chapter 18 *Online Appendix:* The Gold Standard and the Bretton Woods System	

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