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*To beginning students everywhere,
which we all were at one time.*

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“Stories are good for us, whether we hear them, read them, write them, or simply imagine them. But stories that we read are particularly good for us. In fact I believe they are essential.”

Frank Smith, *Reading: FAQ*

The Importance of a Narrative Approach

More than a decade ago, when Robin and I began writing the first edition of this textbook, we had many small ideas: particular aspects of economics that we believed weren't covered the right way in existing textbooks. But we also had one big idea: the belief that an economics textbook could and should be built around narratives, that it should never lose sight of the fact that economics is, in the end, a set of stories about what people do.

Many of the stories economists tell take the form of models—for whatever else they are, economic models are stories about how the world works. But we believed that students' understanding of and appreciation for models would be greatly enhanced if they were presented, as much as possible, in the context of stories about the real world, stories that both illustrate economic concepts and touch on the concerns we all face as individuals living in a world shaped by economic forces.

Those stories have been integrated into every edition, including this one. Once again, you'll find them in the openers, in special features like Economics in Action, For Inquiring Minds, Global Comparison, and in our business cases. We have been gratified by the reception this storytelling approach has received and in this edition of *Microeconomics* we continue to expand the book's appeal by including many new stories on a broad range of topics, many reflecting current events, and by updating and revising others. Specifically, there are six new opening stories, 15 new Economics in Actions, and seven new business cases. As always, a significant number of the features that aren't completely new have been updated.

We remain extremely fortunate in our reviewers, who have put in an immense amount of work helping us to make this book even better. And we are also deeply thankful to the users who have given us feed-

back, telling us what works and, even more important, what doesn't.

Despite the many changes in this new edition, we've tried to keep the spirit the same. This is a book about economics as the study of what people do and how they interact, a study very much informed by real-world experience.

The Fourth Edition: What's New

We have been extremely gratified by the success of the first three editions of *Economics*, which has made it one of the best-selling economics textbooks. Yet we are aware that success can have its dangers. Given the book's wide acceptance, it might be tempting for an author to do less in the next revision. In fact, it might be downright rational. However, we believe we have resisted that temptation in this latest edition.

Because Robin and I both feel that the teaching of economics is at its best when it engages students with real life issues and problems, we have done a major updating of examples, stories, and cases to incorporate many of the most current economics topics. In fact, no other economics textbook updates examples as extensively with each new edition as ours does. This thorough refreshing of examples was one major focus of the revision.

Next was the introduction of significant content changes aimed at improving the chapters on externalities and the welfare state. In both we rethought some content and pedagogy and updated so that the chapters examine post-recession realities and devote even more attention to policy matters. Data has been thoroughly updated in these and all chapters (Chapters like 19, on factor markets, have also undergone an overhaul to include, for example, the latest data on the U.S. labor market). And, all the while, we never ignored the importance of

maintaining pedagogical continuity with past editions. Lastly, we have added a new online feature called Work It Out. We hope that these revisions serve to spark a deep appreciation for the power of economics in your students and lead to a more stimulating and rewarding teaching experience for you.

Many New Examples and Stories with an Emphasis on Currency

After touring college campuses and observing anti-fracking signs everywhere, we were impressed by how much students really do want to participate in the big economic issues of the day. However, we can also note how much today's students are attached to their energy-hungry devices, from smartphones to tablets to computers to personal dorm fridges. Hence one of the aims of this edition is to both acknowledge students' idealism as well as to help inform them about the realities of resource scarcity and the need to make choices.

To that end we have made fracking and its effects on the market for natural gas the subject of the opening story for Chapter 3, on supply and demand. However, we have been careful not to take sides in the debate over fracking—while highlighting how it has dramatically lowered the price of energy, like natural gas, we alert students to the environmental concerns it raises in Chapter 16 on externalities. There students will find a second opening story about fracking and the specter of groundwater contamination.

These are just two of the many new examples and stories we have introduced in the fourth edition with the aim of thoroughly freshening up the new edition and keeping it extremely current and relevant. We have paid particular attention to how changes in technology are transforming the economic landscape. For example, we discuss the rise of Uber to illustrate market equilibrium, the use of Smart Grid technology to show the importance of measuring cost, and how the advent of “showrooming” and shopping Apps moves the market for consumer goods closer to one of perfect competition. We have also chosen stories and examples on topics that are close to the lives of today's students, like the Economics in Action. “The Rise and Fall of the Unpaid Intern,” in Chapter 5 on price controls and quotas. There is also the opening story in Chapter 8 on international trade that illustrates how international supply chains produce the latest iPhone.

We have also chosen topics that illustrate important policy debates, such as the introduction of the Affordable Care Act, the regulatory questions raised by the fight between Amazon and Hachette Books, and the environmental trade-offs of coal-fired versus natural-gas-fired power plants. And as always, we pay great

attention to integrating an international perspective, in our Global Comparison feature, but also in the many globally oriented openers, Economics in Actions, For Inquiring Minds, and Business Cases found throughout. All global examples are highlighted with the following icon:



A complete listing of the opening stories, Economics in Actions, For Inquiring Minds, Global Comparisons, and business cases in every chapter can be found on the inside of the front cover and facing page.

A New Focus in Chapter 16, Externalities

We believe environmental concerns are one of the most pressing issues today and are a good means of sparking students' interests in economics. As already explained, the chapters on supply and demand and externalities, have been changed to focus on the economic and environmental effects of fracking. In the Supply and Demand chapter we trace the supply shocks and demand changes that gave rise to investment in the technology of fracking. Being careful not to take sides, we trace how the supply changes from fracking have significantly altered the equilibrium of the natural gas market.

We take this new approach even further in the Externalities chapter where we've added a new opening story to illustrate the concept of a negative externality, using the environmental debate over contaminated groundwater from fracking. Following in that same vein, and in order to sharpen students' appreciation of environmental trade-offs, we include a new Economics in Action, “How Much Does Your Electricity Really Cost?” that compares the social cost of different types of power generation.

Pedagogical changes to the chapter on externalities include an improved discussion of the costs and benefits of pollution and a much simplified analysis of the Coase theorem. There is also a completely revised and updated section on network externalities, along with a new business case tracing the rise of Facebook and the fall of MySpace to show network externalities in action. Coverage of emissions taxes and tradeable emissions permits has been revised, as well, to allow more teaching flexibility—it is now easy to omit the accompanying graphs if time is short or a less in-depth presentation is preferred. And the accompanying Economics in Action on cap and trade uses the very current example of China's emergence as the largest source of greenhouse gases today to highlight the global implications of greenhouse gas emissions.

New Coverage of the Affordable Care Act and Other Updates and Improvements in Chapter 18, The Economics of the Welfare State

This chapter is a unique feature of our book that has become even more relevant since first introduced in the second edition. For one thing, the major provisions of the Affordable Care Act, aka Obamacare, went into effect at the beginning of 2014; this is the biggest expansion of the U.S. welfare state since the creation of Medicare in the 1960s. We examine the economics behind the act, and discuss the early, relatively favorable returns of its performance.

Meanwhile, the Great Recession and its aftermath have been a major test of the ability of welfare-state programs to cushion Americans from hardship; we discuss new research showing a dramatic effect from food stamps and other programs in limiting the rise in poverty.

Both of these additions are new to this edition. At the same time, though, the chapter continues to offer a comprehensive look at the U.S. welfare state and its philosophical origins, along with a close look at how programs in the United States compare to those in other countries.

As in Paul's *New York Times* columns, this chapter takes a complex topic and reduces it to its essential elements, illuminating the intellectual foundations of our policy choices. It also provides a timely and engaging examination of the challenges that economists and policy makers face when applying economic concepts to daily realities. And despite the many changes and updates, our goal for the chapter is the same: to motivate students to think more deeply about economic trade-offs, social welfare, and the political process.

New Online Feature: Work It Out Tutorials

This new feature ties together our textbook and the accompanying online course materials to offer students online, interactive assistance with solving one key problem in every chapter. Available in **LaunchPad**, the new Work It Out feature includes an online tutorial

that guides students through each step of the problem-solving process. There are also choice-specific feedback and video explanations, providing interactive assistance tailored to each student's needs. Students can use the Work It Outs, along with the other offerings in **LaunchPad**, to independently test their comprehension of concepts, build their math and graphing skills, and prepare for class and exams.



Scan here for a sample Work It Out problem.

<http://qrs.ly/px49xiv>

Advantages of This Book

Our basic approach to textbook writing is the same as it was in the first edition:

- **Chapters build intuition through realistic examples.** In every chapter, we use real-world examples, stories, applications, and case studies to teach the core concepts and motivate student learning. The best way to introduce concepts and reinforce them is through real-world examples; students simply relate more easily to them.
- **Pedagogical features reinforce learning.** We've crafted a genuinely helpful set of features that are described in the following Walkthrough, "Tools for Learning."
- **Chapters are accessible and entertaining.** We use a fluid and friendly writing style to make concepts accessible and, whenever possible, we use examples that are familiar to students.
- **Although easy to understand, the book also prepares students for further coursework.** There's no need to choose between two unappealing alternatives: a textbook that is "easy to teach" but leaves major gaps in students' understanding, or a textbook that is "hard to teach" but adequately prepares students for future coursework. We offer the best of both worlds.

Every chapter is structured around a common set of features that help students learn while keeping them engaged

Supply and Demand

CHAPTER

3

What You Will Learn in This Chapter

- What a **competitive market** is and how it is described by the **supply and demand model**
- What the **demand curve** and the **supply curve** are
- The difference between **movements along a curve** and **shifts of a curve**
- How the **supply and demand curves** determine a market's **equilibrium price and equilibrium quantity**
- In the case of a **shortage or surplus**, how **price** moves the market back to **equilibrium**

A NATURAL GAS BOOM



AP Photo/Andrew Rush



Spencer Platt/Getty Images

The adoption of new drilling technologies lead to cheaper natural gas and vigorous protests.

Chapter Overviews offer students a helpful preview of the key concepts they will learn about in the chapter.

VIVID speech in New York was greeted by more than 500 chanting and sign-toting supporters and opponents. Why the ruckus? Because upstate New York is a key battleground over the adoption of a relatively new method of producing energy supplies. *Hydraulic fracturing*, or *fracking*, is a method of extracting natural gas (and to a lesser extent, oil) from deposits trapped between layers of shale rock thousands of feet underground using—using powerful jets of chemical-laden water to release the gas. While it has been known for almost a century that the United States contains vast deposits of natural gas within these shale formations, they lay untapped because drilling for them was considered too difficult.

Until recently, that is. A few decades ago, new drilling technologies were developed that made it possible to reach these deeply embedded deposits. But what finally pushed energy companies to invest in and adopt these new extraction technologies was the high price of natural gas over the last decade. What accounted for these high natural gas prices? A quadrupling

from 2002 to 2006? There were two principal factors—one reflecting the demand for natural gas, the other the supply of natural gas.

First, the demand side. In 2002, the U.S. economy was mired in recession; with economic activity low and job losses high, people and businesses cut back their energy consumption. For example, to save money, homeowners turned down their thermostats in winter and turned them up in the summer. But by 2006, the U.S. economy came roaring back, and natural gas consumption rose. Second, the supply side. In 2005, Hurricane Katrina devastated the American Gulf Coast, site of most of the country's natural gas production at the time. So by 2006 the demand for natural gas had surged while the supply of natural gas had been severely curtailed. As a result, in 2006 natural gas prices peaked at around \$14 per thousand cubic feet, up from around \$2 in 2002.

Fast-forward to 2013: natural gas prices once again fell to \$2 per thousand cubic feet. But this time it wasn't a slow economy that was the principal explanation, it was the use of the new technologies. "Boom," "supply shock," and

"game changer" was how energy experts described the impact of these technologies on oil and natural gas production and prices. To illustrate, the United States produced 8.13 trillion cubic feet of natural gas from shale deposits in 2012, nearly doubling the total from 2010. That total increased again in 2013, to 9.35 trillion cubic feet of natural gas, making the U.S. the world's largest producer of both oil and natural gas—overtaking both Russia and Saudia Arabia.

The benefits of much lower natural gas prices have not only led to lower heating costs for American consumers, they have also cascaded through American industries, particularly power generation and transportation. Electricity-generating power plants are switching from coal to natural gas, and mass-transit vehicles are switching from gasoline to natural gas. (You can even buy an inexpensive kit to convert your car from gasoline to natural gas.) The effect has been so significant that many European manufacturers, paying four times more for gas than their U.S. rivals, have been forced to relocate plants to American soil to survive. In addition, the revived U.S. natural gas industry has directly created tens of thousands of new jobs.

Opening Stories Each chapter begins with a compelling story that is often integrated throughout the rest of the chapter. Many of the stories in this edition are new, including the one shown here.

Economics in Action

cases conclude every major text section. This much-lauded feature lets students immediately apply concepts they've read about to real phenomena.



Cities can reduce traffic congestion by raising the price of driving.

Quick Review

- The **supply and demand model** is a model of a **competitive market**—one in which there are many buyers and sellers of the same good or service.
- The **demand schedule** shows how the **quantity demanded** changes as the price changes. A **demand curve** illustrates this relationship.
- The **law of demand** asserts that a higher price reduces the quantity demanded. Thus, demand curves normally slope downward.
- An increase in demand leads to a rightward **shift of the demand curve**; the quantity demanded rises for any given price. A decrease in demand leads to a leftward shift: the quantity demanded falls for any given price. A change in price results in a change in the quantity demanded and a **movement along the demand curve**.
- The five main factors that can shift the demand curve are changes in (1) the price of a related good, such as a **substitute** or a **complement**, (2) income, (3) tastes, (4) expectations, and (5) the number of consumers.
- The market demand curve is the horizontal sum of the **individual demand curves** of all consumers in the market.

Quick Reviews offer students a short, bulleted summary of key concepts in the section to aid understanding.

ECONOMICS ▶ *in Action*

Beating the Traffic

All big cities have traffic problems, and many local authorities encourage driving in the crowded city center. If we think of the city center as a good that people consume, we can use the law of demand to analyze anti-traffic policies.

One common strategy is to reduce the demand for auto trips by raising the prices of substitutes. Many metropolitan areas subsidize bus and train fares, hoping to lure commuters out of their cars. An alternative is to raise the price of driving: several major U.S. cities impose high taxes on commercial parking garages and impose short time limits on parking meters, both to reduce demand and to discourage people from driving into the city.

A few major cities—including Singapore, London, Oslo, Stockholm, and Milan—have been willing to adopt a direct and politically controversial approach: reducing congestion by raising the price of driving. Under “congestion pricing” (or “congestion charging” in the United Kingdom), a charge is imposed on cars entering the city center during business hours. Drivers buy passes, which are then debited electronically as they drive by monitoring stations. Compliance is monitored with automatic cameras that photograph license plates.

In 2012, Moscow adopted a modest charge for parking in certain areas in an attempt to reduce its traffic jams, considered the worst of all major cities. After the approximately \$1.60 charge was applied, city officials estimated that Moscow traffic decreased by 4%.

The current daily cost of driving in London ranges from £9 to £12 (about \$14 to \$19). And drivers who don't pay and are caught pay a fine of £120 (about \$192) for each transgression.

Not surprisingly, studies have shown that after the implementation of congestion pricing, traffic does indeed decrease. In the 1990s, London had some of the worst traffic in Europe. The introduction of its congestion charge in 2003 immediately reduced traffic in the city center by about 15%, with overall traffic falling by 21% between 2002 and 2006. And there has been increased use of substitutes, such as public transportation, bicycles, motorbikes, and ride-sharing. From 2001 to 2011, bike trips in London increased by 79%, and bus usage was up by 30%.

In the United States, the U.S. Department of Transportation has implemented pilot programs to study congestion pricing. For example, in 2012 Los Angeles County imposed a congestion charge on an 11-mile stretch of highway in central Los Angeles. Drivers pay up to \$1.40 per mile, the amount depending upon traffic congestion, with a money-back guarantee that their average speed will be below 45 miles per hour. While some drivers were understandably angry about the charge, others were more philosophical. One driver felt that the toll was worth it to escape what often turned into a crawling 45-minute drive, saying, “I'm in a hurry to get home. You got to pay the price. If not, get stuck in traffic.”

Check Your Understanding 3-1

1. Explain whether each of the following events represents (i) a *shift of the demand curve* or (ii) a *movement along the demand curve*.
 - a. A store owner finds that customers are willing to pay more for umbrellas on rainy days.
 - b. When Circus Cruise Lines offered reduced prices for summer cruises to the Caribbean, their number of bookings increased sharply.
 - c. People buy more long-stem roses the week of Valentine's Day, even though prices are higher than at other times during the year.
 - d. A sharp rise in the price of gasoline leads many commuters to join carpools in order to reduce their gasoline purchases.

Solutions appear at back of book.



Global Stamps

identify which boxes, cases, and applications are global in focus.

Check Your Understanding

questions allow students to immediately test their understanding of a section. Solutions appear at the back of the book.

TOOLS FOR LEARNING WALKTHROUGH

FOR INQUIRING MINDS

Tribulations on the Runway



You probably don't spend much time worrying about the trials and tribulations of fashion models. Most of them don't lead glamorous lives; in fact, except for a lucky few, life as a fashion model today can be very trying and not very lucrative. And it's all because of supply and demand.

Consider the case of Bianca Gomez, a willowy 18-year-old from Los Angeles, with green eyes, honey-colored hair, and flawless skin, whose experience was detailed in a *Wall Street Journal* article. Bianca began modeling while still in high school, earning about \$30,000 in modeling fees during her senior year. Having attracted the interest of some top designers in New York, she moved there after graduation, hoping to land jobs in leading fashion houses and photo-shoots for leading fashion magazines.

But once in New York, Bianca entered the global market for fashion models. And it wasn't very pretty. Due



John Scull/Stimager/Getty Images

by a rightward shift of the supply curve in the market for fashion models, which would by itself tend to lower the price paid to models.

And that wasn't the only change in the market. Unfortunately for Bianca and others like her, the tastes of many of those who hire models have changed as well. Fashion magazines have come to prefer using celebrities such as Beyoncé on their pages rather than anonymous models, believing that their readers connect better with a familiar face. This amounts to a leftward shift of the demand curve for models—again reducing the equilibrium price paid to them.

This was borne out in Bianca's experiences. After paying her rent, her transportation, all her modeling expenses, and 20% of her earnings to her modeling agency (which markets her to prospective clients and books her

For Inquiring Minds

boxes apply economic concepts to real-world events in unexpected and sometimes surprising ways, generating a sense of the power and breadth of economics. The feature furthers the book's goal of helping students build intuition with real-world examples.

Global Comparison

boxes use real data from several countries and colorful graphs to illustrate how and why countries reach different economic outcomes. The boxes give students an international perspective that will expand their understanding of economics.

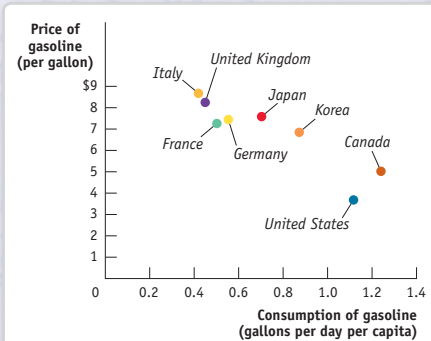


GLOBAL COMPARISON

Pay More, Pump Less

For a real-world illustration of the law of demand, consider how gasoline consumption varies according to the prices consumers pay at the pump. Because of high taxes, gasoline and diesel fuel are more than twice as expensive in most European countries and in many East Asian countries than in the United States. According to the law of demand, this should lead Europeans to buy less gasoline than Americans—and they do. As you can see from the figure, per person, Europeans consume less than half as much fuel as Americans, mainly because they drive smaller cars with better mileage.

Prices aren't the only factor affecting fuel consumption, but they're probably the main cause of the difference between European and American fuel consumption per person.



Source: World Development Indicators and U.S. Energy Information Administration, 2013.

PITFALLS

WHICH CURVE IS IT, ANYWAY?

When the price of some good or service changes, in general, we can say that this reflects a change in either supply or demand. But it is easy to get confused about which one. A helpful clue is the direction of change in the quantity. If the quantity sold changes in the same direction as the price—for example, if both the price and the quantity rise—this suggests that the demand curve has shifted. If the price and the quantity move in opposite directions, the likely cause is a shift of the supply curve.

Pitfalls boxes clarify concepts that are easily misunderstood by students new to economics.

Summary Tables serve as a helpful study aid for readers. Many incorporate visuals to help students grasp important economic concepts.

TABLE 3-2 Factors That Shift Supply


When this happens supply increases	But when this happens supply decreases
When the price of an input falls . . .		When the price of an input rises . . .	
When the price of an input falls supply of the good increases.	When the price of an input rises supply of the good decreases.
When the price of a substitute in production rises . . .		When the price of a substitute in production rises . . .	
When the price of a substitute in production rises supply of the original good increases.	When the price of a substitute in production rises supply of the original good decreases.

TOOLS FOR LEARNING WALKTHROUGH

Business Cases close each chapter, applying key economic principles to real-life business situations in both American and international companies. Each case concludes with critical thinking questions.

BUSINESS CASE

An Uber Way to Get a Ride



Mark Avery/Zuma Wire/Alamy

An Uber Way to Get a Ride

In a densely populated city like New York City, finding a taxi is a relatively easy task on most days—stand on a corner, put out your arm and, usually, before long an available cab stops to pick you up. And even before you step into the car you will know approximately how much it will cost to get to your destination, because taxi meter rates are set by city regulators and posted for riders.

But at times it is not so easy to find a taxi—on rainy days, during rush hour, and at crowded locations where many people are looking for a taxi at the same time. At such times, you could wait a very long while before finding an available cab. As you wait, you will probably notice empty taxis passing you by—drivers who have quit working for the day and are headed home or back to the garage. There will be drivers who might stop, but then won't pick you up because they find your destination inconvenient. Moreover, there are times when it is simply impossible to hail a taxi—for example, during a snowstorm or on New Year's Eve when the demand for taxis far exceeds the supply.


In 2009 two young entrepreneurs, Garrett Camp and Travis Kalanick, founded Uber, a company that they believe offers a better way to get a ride. Using a smartphone app, Uber serves as a clearinghouse connecting people who want a ride to drivers with cars who are registered with Uber. Confirm your location using the Uber app and you'll be shown the available cars in your vicinity. Tap "book" and you receive a text saying your car—typically a spotless Lincoln Town Car—is on its way. At the end of your trip, fare plus tip are automatically deducted from your credit card. As of 2014 Uber operates in 70 cities around the world and booked more than \$1 billion in rides in 2013.

Given that Uber provides personalized service and better quality cars, their fares are somewhat higher than regular taxi fares *during normal driving days*—a situation that customers seem happy with. However, the qualification *during normal driving hours* is an important one because at other times Uber's rates fluctuate. When a lot of people are looking for a car—such as during a snowstorm or on New Year's Eve—Uber uses what it calls *surge pricing*, setting the rate higher until everyone who wants a car at the going price can get one. So during a recent New York snowstorm, rides cost up to 8.25 times the standard price. Enraged, some of Uber's customers have accused them of price gouging.

But according to Kalanick, the algorithm that Uber uses to determine the surge price is set to leave as few people as possible without a ride, and he's just doing what is necessary to keep customers happy. As he explains, "We do not own cars nor do we employ drivers. Higher prices are required in order to get cars on the road and keep them on the road during the busiest times." This explanation was confirmed by one Uber driver who said, "If I don't have anything to do and see a surge price, I get out there."

QUESTIONS FOR THOUGHT

1. Before Uber, how were prices set in the market for rides in New York City? Was it a competitive market?
2. What accounts for the fact that during good weather there are typically

WORK IT OUT 

For interactive, step-by-step help in solving the following problem, visit **LaunchPad** by using the URL on the back cover of this book.

19. The accompanying table gives the annual U.S. demand and supply schedules for pickup trucks.

Price of truck	Quantity of trucks demanded (millions)	Quantity of trucks supplied (millions)
\$20,000	20	14
25,000	18	15
30,000	16	16
35,000	14	17
40,000	12	18

- a. Plot the demand and supply curves using these schedules. Indicate the equilibrium price and quantity on your diagram.
- b. Suppose the tires used on pickup trucks are found to be defective. What would you expect to happen in the market for pickup trucks? Show this on your diagram.
- c. Suppose that the U.S. Department of Transportation imposes costly regulations on manufacturers that cause them to reduce supply by one-third at any given price. Calculate and plot the new supply schedule and indicate the new equilibrium price and quantity on your diagram.

PROBLEMS

- a. A survey indicated that chocolate is the most popular flavor of ice cream in America. For each of the following, indicate the possible effects on demand, supply, or both as well as equilibrium price and quantity of chocolate ice cream.
 - i. The market for St. Louis Rams cotton T-shirts
Case 1: The Rams win the Super Bowl.
Case 2: The price of cotton increases.
 - ii. The market for bagels

NEW! Work It Out appears in all end-of-chapter problem sets, offering students online tutorials that guide them step-by-step through solving key problems. Available in LaunchPad.

End-of-Chapter Reviews include a brief but complete summary of key concepts, a list of key terms, and a comprehensive, high-quality set of end-of-chapter Problems.

SUMMARY

1. The **supply and demand model** illustrates how a **competitive market**, one with many buyers and sellers, none of whom can influence the market price, works.
2. The **supply curve** shows the relationship between the quantity of a good or service that producers are willing to supply and the price they receive for it. Changes in supply, they mean **shifts of the supply curve**—a change in the quantity supplied at any given price. An increase in supply causes a rightward shift of the supply curve.

KEY TERMS

Competitive market, p. 68	Substitutes, p. 74	Movement along the supply curve, p. 80
Supply and demand model, p. 68	Complements, p. 74	Input, p. 82
Demand schedule, p. 69	Normal good, p. 74	Individual supply curve, p. 83
Quantity demanded, p. 69	Inferior good, p. 74	Equilibrium price, p. 86
Demand curve, p. 69	Individual demand curve, p. 76	

Organization of This Book: What's Core, What's Optional

To help with planning your course, following is a list of what we view as core chapters and those that could be

considered optional. A brief description of coverage in each chapter is included as well.

Core	Optional
<ol style="list-style-type: none"> <li data-bbox="110 457 776 569"> <p>1. First Principles Outlines 12 principles underlying the study of economics: principles of individual choice, interaction between individuals, and economy-wide interaction.</p> <li data-bbox="110 583 776 695"> <p>2. Economic Models: Trade-offs and Trade Employs two economic models—the production possibilities frontier and comparative advantage—as an introduction to gains from trade and international comparisons.</p> <li data-bbox="110 835 776 919"> <p>3. Supply and Demand Covers the essentials of supply, demand, market equilibrium, surplus, and shortage.</p> <li data-bbox="110 934 776 1018"> <p>4. Consumer and Producer Surplus Introduces students to market efficiency, the ways markets fail, the role of prices as signals, and property rights.</p> <li data-bbox="110 1033 776 1117"> <p>5. Price Controls and Quotas: Meddling with Markets Covers market interventions and their consequences: price and quantity controls, inefficiency, and deadweight loss.</p> <li data-bbox="110 1131 776 1243"> <p>6. Elasticity Introduces the various elasticity measures and explains how to calculate and interpret them, including price, cross-price and income elasticity of demand, and price elasticity of supply.</p> <li data-bbox="110 1257 776 1369"> <p>7. Taxes Covers basic tax analysis along with a review of the burden of taxation and considerations of equity versus efficiency. The structure of taxation, tax policy, and public spending are also introduced.</p> <li data-bbox="110 1543 776 1682"> <p>9. Decision Making by Individuals and Firms Microeconomics is a science of how to make decisions. The chapter focuses on marginal analysis (“either–or” and “how much” decisions) and the concept of sunk cost; it also includes a section on behavioral economics, showing the limitations of rational thought.</p> <li data-bbox="110 1696 776 1835"> <p>10. The Rational Consumer Provides a complete treatment of consumer behavior for instructors who don't cover indifference curves, including the budget line, optimal consumption choice, diminishing marginal utility, and substitution effects.</p> 	<p data-bbox="789 333 1349 363">Introduction: The Ordinary Business of Life</p> <p data-bbox="833 365 1414 441">Initiates students into the study of economics with basic terms and explains the difference between microeconomics and macroeconomics.</p> <p data-bbox="789 709 1336 739">Chapter 2 Appendix: Graphs in Economics</p> <p data-bbox="833 741 1430 819">Offers a comprehensive review of graphing and math skills for students who would find a refresher helpful and to prepare them for better economic literacy.</p> <p data-bbox="789 1392 1062 1421">8. International Trade</p> <p data-bbox="833 1423 1451 1528">Here we trace the sources of comparative advantage, consider tariffs and quotas, and explore the politics of trade protection. The chapter includes coverage on the controversy over imports from low-wage countries.</p> <p data-bbox="789 1850 1425 1908">Chapter 10 Appendix: Consumer Preferences and Consumer Choice</p> <p data-bbox="833 1911 1385 1963">Offers more detailed treatment for those who wish to cover indifference curves.</p>

Core	Optional
<p>11. Behind the Supply Curve: Inputs and Costs Develops the production function and the various cost measures of the firm, including discussion of the difference between average cost and marginal cost.</p> <p>12. Perfect Competition and the Supply Curve Explains the output decision of the perfectly competitive firm, its entry/exit decision, the industry supply curve, and the equilibrium of a perfectly competitive market.</p> <p>13. Monopoly A complete treatment of monopoly, including topics such as price discrimination and the welfare effects of monopoly.</p> <p>14. Oligopoly This chapter focuses on defining the concept of oligopoly along with basic game theory in both a one-shot and repeated game context. Coverage of the kinked demand curve now appears online.</p> <p>15. Monopolistic Competition and Product Differentiation The chapter emphasizes instances in which students encounter monopolistic competition, covering the entry/exit decision, efficiency considerations, and advertising.</p> <p>16. Externalities Significantly revised and updated in the new edition, the chapter covers negative externalities and solutions to them, such as Coasian private trades, emissions taxes, and a system of tradable permits. Also examined are positive externalities, technological spillovers, and network externalities.</p> <p>17. Public Goods and Common Resources Explains how to classify goods into four categories (private goods, common resources, public goods, and artificially scarce goods) based on excludability and rivalry in consumption, in the process clarifying why some goods but not others can be efficiently managed by markets.</p>	<p>18. The Economics of the Welfare State Significantly revised and updated, this chapter provides a comprehensive overview of the welfare state as well as its philosophical foundations. Examined in the chapter are health care economics (including new coverage of the Affordable Care Act), the problem of poverty, and the issue of income inequality.</p> <p>19. Factor Markets and the Distribution of Income and Appendix: Indifference Curve Analysis of Labor Supply Covers the efficiency-wage model of the labor market as well as influence of education, discrimination, and market power. The appendix examines the labor-leisure trade-off and the backward bending labor supply curve.</p> <p>20. Uncertainty, Risk, and Private Information This unique, applied chapter explains attitudes toward risk, examines the benefits and limits of diversification, and considers private information, adverse selection, and moral hazard.</p>



Resources for Students and Instructors

www.macmillanhighered.com/launchpad/krugmanwellsmicro4

Our new course space, **LaunchPad** combines an interactive e-Book with high-quality multimedia content and ready-made assessment options, including LearningCurve adaptive quizzing. Pre-built, curated units are easy to assign or adapt with your own material, such as read-

ings, videos, quizzes, discussion groups, and more. LaunchPad also provides access to a gradebook that provides a clear window on performance for your whole class, for individual students, and for individual assignments.

For Students

LearningCurve is an adaptive quizzing engine that automatically adjusts questions to the student's mastery level. With LearningCurve activities, each student follows a unique path to understanding the material. The more questions a student answers correctly, the more difficult the questions become. Each question is written specifically for the text and is linked to the relevant e-Book section. LearningCurve also provides a personal study plan for students as well as complete metrics for instructors. Proven to raise student performance, LearningCurve serves as an ideal formative assessment and learning tool. For detailed information, visit <http://learningcurveworks.com>.

LEARNINGCurve 3.2.2 Understanding Shifts of the Demand Curve

Suppose that clothes from the thrift store are inferior goods. If incomes decrease

- demand will decrease.
- demand will increase.
- demand will decrease and then shift back to its original level.
- demand will remain the same.

Whoops. The correct answer is not demand will remain the same.
→ If incomes decrease, demand for inferior goods will increase.
Try again, check the e-book, GET A HINT, or click SHOW ME to see the answer and try another question.

Get a Hint Show Me

NEW Work It Out Tutorials New to this edition, these tutorials guide students through the process of applying economic analysis and math skills to solve the final problem in each chapter. Choice-specific feedback and video explanations provide students with interactive assistance for each step of the problem.

Economics in Action Based on the feature from the text, these real-life applications are accompanied by assessment and links to additional data.

Living Graphs Based on figures from the text, Living Graphs are animated and interactive graphs that first demonstrate a concept to students and then ask them to manipulate the graph or answer questions to check understanding.

Interactive Tutorials These interactive modules are designed to teach students key principles and concepts through example problems, animated graphs, and interactive activities.

For Instructors

Graphing Questions As a further question bank for instructors building assignments and tests, the electronically gradable graphing problems utilize our own robust graphing engine. In these problems, students will be asked to draw their response to a question, and the software will automatically grade that response. Graphing questions are tagged to appropriate textbook sections and range in difficulty level and skill.

Part 1: Select the Line tool and draw a downward-sloping line. Label it "Demand 1". Next, using the same tool, draw an upward-sloping line that intersects "Demand 1" and label it "Supply 1".

Part 2: Use the Double Drop Line tool to identify the price and quantity where the two lines intersect. Label it "Equilibrium 1".

Part 3: With the Line tool, draw a new downward-sloping line that is to the LEFT of "Demand 1". Label it "Demand 2". Use the Double Drop Line tool to show the new equilibrium price and quantity in the global market for the Allen Bigfoot Journalism. Label this point "Equilibrium 2." Feel momentarily happy that demand for sensational stories has fallen, then remember that it's only because of the rise in demand for substitute goods like reality TV.

Continue to play with the graph if you like. We know you are an economist, after all.

Graph 1: Shows Demand 1 (blue), Supply 1 (red), and Equilibrium 1 (yellow dashed lines).
Graph 2: Shows Demand 2 (green), Supply 1 (red), and Equilibrium 2 (yellow dashed lines).
Legend: Demand 1 (blue), Supply 1 (red), Equilibrium 1 (yellow), Demand 2 (green), Equilibrium 2 (yellow), Unselected (black).

Buttons: Done All, Correct, Submit Answer, Try Again

Feedback: Feel sorry: With news of the Linnvase having seen its last publishing days, both the price and equilibrium quantity of Tabloid Newspapers will drop. How will there be more line for the more serious content of PAPERBOOK.

Next Question

Test Bank The Test Bank, coordinated by Doris Bennett, Jacksonville State University, provides a wide range of questions appropriate for assessing your students' comprehension, interpretation, analysis, and synthesis skills. The Test Bank offers multiple-choice, true/false, and short-answer questions designed for comprehensive coverage of the text concepts. Questions are categorized according to difficulty level (easy, moderate, and difficult) and skill descriptor (definitional, concept-based, critical thinking, and analytical thinking) and are tagged to their appropriate textbook section.

End-of-Chapter Problems The end-of-chapter problems from the text have been converted to a multiple-choice format with answer-specific feedback. These problems can be assigned in homework assignments or quizzes.

Practice and Graded Homework Assignments Each LaunchPad unit contains pre-built assignments, providing instructors with a curated set of multiple-choice and graphing questions that can be easily assigned for practice or graded assessment.

Instructor's Resource Manual The Instructor's Resource Manual, revised by Nora Underwood, University of Central Florida, is a resource meant to provide materials and tips to enhance the classroom experience as it provides chapter objectives, chapter outlines, and teaching tips and ideas.

Solutions Manual Prepared by the authors of the text, the Solutions Manual contains detailed solutions to all of the end-of-chapter problems from the textbook. Solutions to business case study Questions for Thought are also provided.

Interactive Presentation Slides This set of Interactive Presentation slides is available as an alternative to traditional lecture outline slides. The slides are brief, interactive, and visually interesting to keep students' attention in class. They offer instructors the following:

- Additional graphics and animations to demonstrate key concepts
- Many additional (and interesting) real-world examples
- Hyperlinks to other relevant outside sources, including links to videos, that provide even more helpful real-world examples to illustrate key concepts
- Opportunities to incorporate active learning in your classroom

Additional Online Offerings



Aplia Worth/Aplia courses are all available with digital textbooks, interactive assignments, and detailed feedback. For a preview of Aplia materials and to learn more, visit www.aplia.com/worth.

www.saplinglearning.com



Sapling Learning provides the most effective interactive homework and instruction that improves student-learning outcomes for the problem-solving disciplines.

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