Essentials of Economics
To beginning students everywhere, which we all were at one time.
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Vision and Story of Essentials of Economics

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.

Dear Students and Instructors,

These words, this spirit, have served as a guiding principle for us in every edition. While we were driven to write this book by many small ideas about particular aspects of economics, we also had one big idea: an economics textbook should be built around narratives, many of them pulled from real life, and 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 believe that student understanding of and appreciation for models are greatly enhanced if they are presented, as much as possible, in the context of stories about the real world that both illustrate economic concepts and touch on the concerns we all face living in a world shaped by economic forces.

You’ll find a rich array of stories in every chapter, in the chapter openers, Economics in Actions, For Inquiring Minds, Global Comparisons, and the end-of-part Business Cases. As always, we include many new stories and update others. We also integrate an international perspective throughout, and most visibly, in our Global Comparison feature. An overview of the narrative-based features in the text is on p. viii.

We also include pedagogical features that reinforce learning. For example, each major section ends with three related elements devised with the student in mind: (1) the Economics in Action: a real-world application to help students achieve a fuller understanding of concepts they just read about; (2) a Quick Review of key ideas in list form; and (3) Check Your Understanding self-test questions with answers at back of book. Our thought-provoking end-of-chapter problems are another strong feature. And we are pleased to introduce the new Work It Out feature: one end-of-chapter problem in each chapter that students solve with the help of an interactive tutorial. An overview of the text’s tools for learning are on p. ix.

Students also benefit from the impressive set of online resources in LaunchPad that are linked to specific chapter content. These include adaptive quizzing, tutorials, interactive activities, and much more. All have been devised with the goal of supporting instructor teaching and student learning in the one-semester introductory course.

We hope that your experience with this text is a good one. Thank you for introducing Essentials of Economics into your classroom.

Paul Krugman  Robin Wells
Engaging Students in the Study of Economics

We are committed to the belief that students learn best from a textbook built around narratives, steeped in real life and current events, with a strong emphasis on global matters, and accompanied by proven technology that supports student success.

**Narrative Approach**

This is a book built around narratives and stories, many pulled from real life. In every chapter, stories are used to teach core concepts and motivate learning. We believe that the best way to introduce concepts and reinforce them is through memorable, real-world stories; students simply relate more easily to them.

**Global Focus**

We have thoroughly integrated an international perspective into the text, in the many applications, cases, and stories, and, of course, in the data-based Global Comparison feature. This book is unrivaled in the attention paid to global matters.

**Technology That Builds Success**

Developed alongside chapters and designed for seamless integration with the book, LaunchPad for Essentials of Economics, Fourth Edition, provides students access to an extensive collection of proven learning tools: adaptive quizzing, tutorials, videos, activities, and a comprehensive review of math and graphing. The goals for these resources are the same as the text’s: student engagement, mastery of the material, and success in the course.

To find LaunchPad activities that correspond to the text, look for this icon: LaunchPad interactive activity

**What’s New in the Fourth Edition?**

An important and timely new chapter on poverty and inequality

New Chapter 11 looks at the problem of poverty, the issue of income inequality, and the U.S. welfare state and its philosophical foundations. Health care economics is also covered, along with a detailed examination of the Affordable Care Act.

New coverage of price discrimination and game theory, and a newly separate Chapter 8 on monopoly

In response to feedback from users, we’ve carved out a separate chapter on monopoly and added coverage of price discrimination to it. We also added a full section on game theory to Chapter 9, on oligopoly and monopolistic competition. Our hope is that these additions will resonate with students and make teaching these topics more meaningful and fun.

Many new and updated stories, applications, and cases keep the text fresh and engaging.

The new stories cover a broad range of topics, many reflecting current events—for example, sustainability, the impact of technology, the economic situation in Europe, and today’s policy debates. A listing of new examples appears on p. xiii.

Expanded and updated offerings in LaunchPad

These include a new math and graphing review, an array of new activities designed to motivate learning and encourage success in the course, and enhanced integration between LaunchPad and in-text content.
Supply and Demand

A NATURAL GAS BOOM

What's the Matter with Italy?

Some countries have been much more successful at making use of new technologies than others. In the early stages of the information technology, or IT, revolution, it seemed that the United States was pulling ahead of Europe. That's less clear now: some European countries have moved forward rapidly in broadband, the wireless internet, and more. But one major European nation is clearly lagging on all fronts: Italy.

The accompanying figure shows estimates of total factor productivity growth since 2000 in three countries: the United States, Germany (Europe’s largest economy), and Italy. The United States and Germany have been roughly keeping pace, but Italy seems, remarkably, to have actually been slipping backwards.

This may be, in part, a consequence of the continuing economic slump in Europe. The researchers studying Italian business argue that a variety of institutional factors, ranging from rigid labor markets to poor management, have prevented Italy from taking advantage of the opportunities new technology has to offer.

To be sure, there are patterns and one that surely should be addressed with a variety of economic reforms.

Unfortunately, Italy’s troubles aren’t just economic: it also suffers from chronic political weakness, which has left successive governments with little ability to take strong action on any front.

To provide students with an international perspective, the Global Comparison feature uses data and graphs to illustrate why countries reach different economic outcomes.

ECONOMICS in Action

Smart Grid Economics

If you are on a ride and who likes to listen to music, write terms papers, or do laundry in the middle of the night, your local electric grid would likely to thank you. Why? Because you are using electricity when it is least costly to generate. The problem is that energy cannot be stored efficiently on a large scale. So power plant operators maintain both the main power stations that are designed to run continuously, as well as smaller power plants that operate only during periods of peak demand—each during daytime working hours or periods of extreme outside temperature.

These smaller power plants are more expensive to operate, incurring higher marginal cost per kilowatt hour generated than the average cost of generating a kilowatt that is cost averaged over billions generated by the large and small plants. According to the U.S. Government Accountability Office, it can cost up to 10 times more to generate electricity during a summer afternoon (when air conditioning use is running at maximum capacity) compared to nighttime.

But consumers typically aren’t aware that the marginal cost of energy fluctuates from day to day, or according to the weather. Instead, consumers pay on their electricity bill based on the average cost of electricity generation. As a result, electricity demand is inefficient—too high during high marginal cost periods and too low during low marginal cost periods. In the end, consumers end up paying more than they would for their electricity, as utility companies must eventually raise their prices to cover production costs.

To tackle this inefficiency, utility companies, appliance manufacturers, and the federal government are working together to develop “smart” grid infrastructure—technology that helps consumers adjust their usage according to the true marginal cost of a kilowatt of power.“Smart” meters have been designed for home use, which allows the utility to communicate to the true marginal cost with which the customer can see and understand.

As so students can immediately see economic concepts applied in the real world, Economics in Action applications appear throughout chapters.

To engage students, every chapter begins with a compelling story.

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An Uber Way to Get a Ride

To download an Uber app on the New York City Subways, you simply need a mobile device, an internet connection, and your credit card. As of 2016, Uber operates in 60 countries and more than 300 cities and booked $10 billion in rides in 2015.

Uber’s rates fluctuated from day to day, or according to the weather. Instead, consumers pay on their electricity bill based on the average cost of electricity generation. As a result, electricity demand is inefficient—too high during high marginal cost periods and too low during low marginal cost periods. In the end, consumers end up paying more than they would for their electricity, as utility companies must eventually raise their prices to cover production costs.

To tackle this inefficiency, utility companies, appliance manufacturers, and the federal government are working together to develop “smart” grid infrastructure—technology that helps consumers adjust their usage according to the true marginal cost of a kilowatt of power. “Smart” meters have been designed for home use, which allows the utility to communicate to the true marginal cost with which the customer can see and understand.

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A So students can immediately see economic concepts applied in the real world, Economics in Action applications appear throughout chapters.
Fiscal policy affects aggregate demand and by the size of the existing tax code. Changes in consumer spending caused by changes in expectations and by the size of the existing stock of physical capital also shift the aggregate demand curve.

The interest rate effect of a rise in the aggregate price level leads indirectly through changes in the interest rate. Changes in the aggregate price level causes changes in the interest rate banks charge their best customers, climbed above 20%. High interest rates, in turn, caused both consumer spending and investment spending to fall in 1980. The quantity of consumer goods to buy fell by 5.5%, and real investment spending fell by 4.9%.

In other words, in 1979–1980 the economy responded just as we'd expect if it were moving upward along the aggregate demand curve from left to right, due to the wealth effect and the interest rate effect of a change in the aggregate price level. The equilibrium quantity demanded fell as the aggregate price level fell, and by the size of the existing tax code. The answer to that question lies in the behavior of the short-run aggregate supply curve.

Solved Problem

Sugar

Sugar, Sugar: U.S. Sugar farmers want World Price. In the news headlines the Wall Street Journal in December 1998. Although the price for sugar on the international market was $0.15 per pound at the time, American farmers were paying nearly $0.25 per pound. The impact was felt by candy companies like PEZ Candy, which produces 75,000 pounds of sugar each week. Why didn't sugar farmers complain?

To protect sugar farmers, the U.S. government limits the quantity of sugar that domestic farmers, like PEZ Candy, can supply to international supplies. The U.S. sugar market is a single-price monopoly, with domestic sugar farmers as the single price-taker. Sugar farmers have the right to sell all the sugar they produce at a price of $0.15 per pound, the world price of sugar. The government limits the quantity of sugar supplied by U.S. farmers and buyers purchase sugar at the world price. This is a difference between the domestic price of sugar and the world price of sugar. Sugar farmers are protected from competition from lower-priced sugar from domestic suppliers. The table is a hypothetical supply-demand schedule for the U.S. sugar market.

1. Draw a supply and demand graph to find the equilibrium quantity and price for sugar in the United States. More over a difference would occur if U.S. sugar farmers were forced to sell sugar at the world price to the world market at the price per pound.

Step 1 Draw and label supply and demand curves. Find the equilibrium quantity demanded. Review pages 68–70, 78–79 and 85–88.

The equilibrium quantity demanded is at point F, the point at which quantity supplied equals quantity demanded. As shown both in the supply and demand schedule and in the figure, the equilibrium quantity is 2.0 million pounds and equilibrium price is $0.25.

Step 2 Calculate the shortage of sugar that would occur at a price of $0.15. Review pages 81–86.

As shown in the upcoming graph, a price of $0.15 corresponds to point B on the supply curve. The quantity supplied at $0.15 can be found by starting at point A. Following the dotted line down to the horizontal axis, and observing that the quantity supplied below $0.15 is 1.8 million pounds. Similarly, the price of $0.15 corresponds to point B on the horizontal axis, and observing that quantity demanded at $0.15 is 2.0 million pounds. The difference between 2.0 million pounds and 1.8 million pounds is the 0.2 million pound shortage.

To reinforce learning, sections within chapters conclude with three tools for learning: (1) an application of key concepts in the Economics in Action; (2) a quick review of key concepts; and (3) a comprehension check with Check Your Understanding Questions (solutions are at back of book).
Engaging Students with Technology

This edition is accompanied by technology that, like the textbook, has been developed to spark student engagement and improve outcomes while offering instructors flexible, high-quality, research-based tools for teaching this course.

LaunchPad LAUNCHPADWORKS.COM

Built from the ground up alongside Essentials of Economics, LaunchPad features the most author-driven and text-specific content of any integrated homework system available. In this edition you will find exciting changes to LaunchPad, including a collection of new activities designed to augment in-chapter content and features to support student learning.

LaunchPad for Essentials of Economics Includes

▶ The Complete Essentials of Economics e-Book

▶ Pre-built units offer instructors and students ready-made units for study with LearningCurve quizzes, e-Book pages, tutorials, and graded homework for every chapter. Units are flexible and easy to adapt or expand to suit individual preferences.

▶ LearningCurve Adaptive Quizzing

Embraced by students and instructors alike, this incredibly popular and effective adaptive quizzing engine offers individualized question sets and feedback tailored to each student based on correct and incorrect responses. Questions are hyperlinked to relevant e-Book sections, encouraging students to read and use the resources at hand to enrich their understanding.

NEW! Math and Graphing Review

This is a critically important new LaunchPad resource created by a team of instructors for students who would benefit from a review of basic math and graphing—skills needed to do well in an introductory economics course. It is organized as a series of activities, each with a pre-test question, an animation with patient and clear explanations, and five concluding questions to test comprehension.

NEW! Student-Centered Activities
We have added three new types of activities to LaunchPad that are designed to help students practice and master economic concepts.

NEW! Work It Out
These skill-building activities are tutorials that walk students through each step of solving an end-of-chapter problem using choice-specific feedback and video explanations. They are an extension of the end-of-chapter Solved Problems in the textbook, and they have allowed us to double the number of worked-out problems in this edition.

Work It Out
Chapter 3

Question 1 of 3
The accompanying table gives the annual U.S. demand and supply schedules for pickup trucks.

<table>
<thead>
<tr>
<th>Price of truck</th>
<th>Quantity of trucks demanded (millions)</th>
<th>Quantity of trucks supplied (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20,000</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>25,000</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>30,000</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>35,000</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>40,000</td>
<td>12</td>
<td>18</td>
</tr>
</tbody>
</table>

Using the data from the table, find the equilibrium price and quantity.

- Equilibrium occurs at a price of $20,000 and a quantity of 16 million.
- Equilibrium occurs at a price of $25,000 and a quantity of 20 million.
- Equilibrium occurs at a price of $30,000 and a quantity of 16 million.
- Equilibrium occurs at a price of $40,000 and a quantity of 18 million.

Correct. Equilibrium occurs at the point where quantity demanded equals quantity supplied. In the table the quantity of trucks demanded at a price of $30,000 is 16 million which is also the quantity supplied. For further review, see section "Finding the Equilibrium Price and Quantity."

EIA Activity: The Decline of the Summer Job

1. Use Link 1 to answer the following question. According to this website, which of the following are considered to be among the top-twenty best summer jobs?
   - A. A tour guide
   - B. A post office worker
   - C. A dog walker
   - D. All of the above

2. Use Link 2 to answer the following questions. True or False: In 2011, the median pay for a lifeguard was $8.09 per hour.
   - A. True
   - B. False

3. True or False: In 2010, the median pay for a babysitter was $9.50 per hour.
   - A. False
   - B. True

NEw! Economics in Action Activities
Like the in-text feature of the same name, these activities engage students in learning through real-world applications of key economic concepts. In LaunchPad, the feature is enhanced with assessment and links to outside sources with related data. They also help students apply the concepts they’ve learned and become more comfortable working with data.

NEW! Video Activities
A curated collection of video clips from PBS NewsHour are linked to specific chapters and accompanied by multiple-choice assessment questions.
LaunchPad
Provides Instructors with These Resources

FOR ASSESSMENT

Test Bank  Fully revised for the Fourth Edition, the Test Bank contains multiple-choice and short-answer questions to help instructors assess students’ comprehension, interpretation, and ability to synthesize.

Graphing Questions  Another question bank for instructors building assignments and tests. These are electronically gradable graphing questions that use our own graphing engine. Students are asked to draw graphs in response to a question; their graphs are automatically graded by the software.

End-of-Chapter Problems  The in-text end-of-chapter problems have been converted to a multiple-choice format accompanied by answer-specific feedback.

Graded Homework Assignments  Each LaunchPad unit concludes with a pre-built assignment, providing instructors with a curated set of multiple-choice and graphing questions that are easily assigned for graded assessment.

ADDITIONAL RESOURCES

A Gradebook  This useful resource offers clear feedback to students and instructors on individual assignments and on performance in the course.

LMS integration  Included so that LaunchPad is easily integrated into a school’s learning management system and that an instructor’s Gradebook and roster are always in sync.

Instructor’s Resource Manual  Offers instructors teaching materials and tips to enhance the classroom experience, along with chapter objectives, outlines, and other ideas.

Solutions Manual  Prepared by the authors of the text, this manual offers detailed solutions to all of the text’s end-of-chapter problems and the Business Case questions.

Interactive Presentation Slides  These brief, interactive, and visually interesting slides are designed to hold students’ attention in class. The slides include graphics and animations that demonstrate key concepts, real-world examples, hyperlinks to relevant outside sources (including videos), and many opportunities for active learning.

Also available for instructors and students, to be used with any text or homework system:

FlipItEcon  FlipItEcon.com

FlipIt gets students actively involved in learning economics in a fresh way. This resource was developed by two pioneers in active-learning methods—Eric Chiang, Florida Atlantic University, and José Vazquez, University of Illinois at Urbana-Champaign. Students watch Pre-Lectures and complete Bridge Question assessments before class—helping them prepare so they can be fully engaged in class, and giving instructors data about student comprehension that can inform their lecture preparation.

Sapling Learning  Saplinglearning.com

Sapling Learning is an online homework system that helps students get better grades with targeted instructional feedback tailored to each individual’s responses. It also helps instructors spend less time preparing for and managing a course by providing personalized classroom support from a PhD- or Master’s-level colleague fully trained in Sapling’s system.
To teach students about the realities of resource scarcity and the need to make choices, we use fracking and its effects on the market for natural gas as the subject of the opening story for Chapter 3, on supply and demand.

In other cases we pay particular attention to how changes in technology are transforming the economic landscape—discussing the rise of Uber to illustrate market equilibrium, and the use of Smart Grid technology to show the importance of measuring cost.

Example topics illustrate important policy debates, such as the introduction of the Affordable Care Act and the environmental trade-offs of coal-fired versus natural gas-fired power plants. And as always, we integrate a global perspective.

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*Indicates a global example.
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