

FOUNDATIONS OF  
**ECONOMICS**

8<sup>TH</sup> EDITION

Bade ■ Parkin



 Pearson

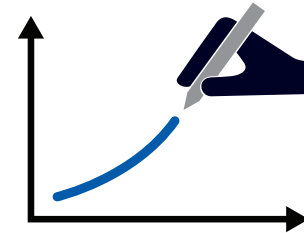


# Practice, Engage, and Assess



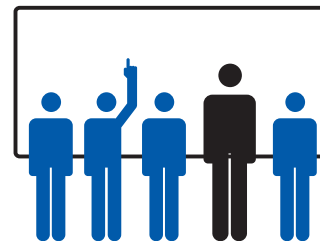
- **Enhanced eText**—The Pearson eText gives students access to their textbook anytime, anywhere. In addition to note-taking, highlighting, and bookmarking, the Pearson eText offers interactive and sharing features. Students actively read and learn through auto-graded practice, real-time data-graphs, figure animations, author videos, and more. Instructors can share comments or highlights, and students can add their own, for a tight community of learners in any class.

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- **Digital Interactives**—Digital Interactives are engaging assessment activities that promote critical thinking and application of key economic principles. Each Digital Interactive has progressive levels where students can explore, apply, compare, and analyze economic principles. Many Digital Interactives include real time data from FRED® that displays, in graph and table form, up-to-the-minute data on key macro variables. Digital Interactives can be assigned and graded within MyEconLab, or used as a lecture tool to encourage engagement, classroom conversation, and group work.



# with MyEconLab<sup>®</sup>

- **NEW: Math Review Exercises in MyEconLab**—MyEconLab now offers an array of assignable and auto-graded exercises that cover fundamental math concepts. Geared specifically toward principles and intermediate economics students, these exercises aim to increase student confidence and success in these courses. Our new Math Review is accessible from the assignment manager and contains over 150 graphing, algebra, and calculus exercises for homework, quiz, and test use.

$$P = c + dQ_s$$



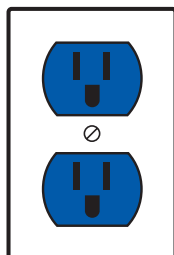
- **Real-Time Data Analysis Exercises**—Using current macro data to help students understand the impact of changes in economic variables, Real-Time Data Analysis Exercises communicate directly with the Federal Reserve Bank of St. Louis's FRED<sup>®</sup> site and update as new data are available.

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- **Experiments**—Flexible, easy-to-assign, auto-graded, and available in Single Player and Multiplayer versions, Experiments in MyEconLab make learning fun and engaging.

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# FOUNDATIONS OF ECONOMICS

delivers a complete, hands-on learning system designed around active learning.

## A Learning-by-Doing Approach

The **Checklist** that begins each chapter highlights the key topics covered and the chapter is divided into sections that directly correlate to the Checklist.

The **Checkpoint** that ends each section provides a full page of practice problems to encourage students to review the material while it is fresh in their minds.

Each chapter opens with a question about a central issue that sets the stage for the material.



Why did the price of coffee rise in 2014?

4

## Demand and Supply

When you have completed your study of this chapter, you will be able to

- 1 Distinguish between quantity demanded and demand, and explain what determines demand.
- 2 Distinguish between quantity supplied and supply, and explain what determines supply.
- 3 Explain how demand and supply determine price and quantity in a market, and explain the effects of changes in demand and supply.

CHAPTER CHECKLIST

MyEconLab Big Picture Video

### CHECKPOINT 4.1

Distinguish between quantity demanded and demand, and explain what determines demand.

#### Practice Problems

The following events occur one at a time in the market for smartphones:

- The price of a smartphone falls.
  - Producers announce that the price of a smartphone will fall next month.
  - The price of a call made from a smartphone falls.
  - The price of a call made from a land-line phone increases.
  - An increase in memory makes smartphones more popular.
1. Explain the effect of each event on the demand for smartphones.
  2. Use a graph to illustrate the effect of each event.
  3. Does any event (or events) illustrate the law of demand?

#### In the News

Airline profits soar yet no relief for passengers

MyEconLab Study Plan 4.1  
Key Terms Quiz  
Solutions Video



### EYE on the PRICE OF COFFEE

MyEconLab Critical Thinking Exercise

#### Why Did the Price of Coffee Rise in 2014?

When a fungus called coffee rust swept through Brazil and other countries of South America in 2014, world coffee production decreased and the price of coffee beans increased.

The table below provides some data on the quantity and price of coffee in 2013 and 2014. What does the data table tell us?  
It tells us that the quantity of coffee

You can answer this question from the information provided. You know that an increase in demand brings a rise in the price and an increase in the quantity bought, while a decrease in supply brings a rise in the price and a decrease in the quantity bought.

Because the quantity of coffee decreased and the price increased, there must have been a decrease in the sup-

The figure illustrates the global market for coffee in 2013 and 2014. The demand curve  $D$  shows the demand for coffee, which we will assume was the same in both years.

In 2013, the supply curve was  $S_{2013}$ , the equilibrium price was \$1.04 per pound and the equilibrium quantity traded was 19.4 billion pounds.

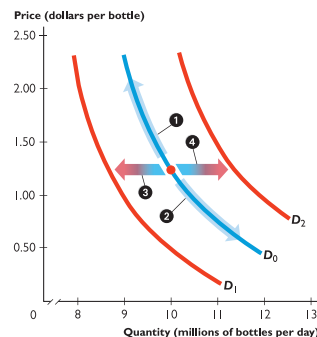
In 2014, decreased coffee produc-

FIGURE 4.4

Change in Quantity Demanded Versus Change in Demand

MyEconLab Animation

- 1 **A decrease in the quantity demanded**  
The quantity demanded decreases and there is a movement up along the demand curve  $D_0$  if the price of the good rises and other things remain the same.
- 2 **An increase in the quantity demanded**  
The quantity demanded increases and there is a movement down along the demand curve  $D_0$  if the price of the good falls and other things remain the same.
- 3 **A decrease in demand**  
Demand decreases and the demand curve shifts leftward (from  $D_0$  to  $D_1$ ) if
  - The price of a substitute falls or the price of a complement rises.
  - Income decreases.\*
  - Expected future income or credit decreases.
  - The number of buyers decreases.
- 4 **An increase in demand**  
Demand increases and the demand curve shifts rightward (from  $D_0$  to  $D_2$ ) if
  - The price of a substitute rises or the price of a complement falls.
  - The price of the good is expected to rise.
  - Income increases.
  - Expected future income or credit increases.
  - The number of buyers increases.



\* Bottled water is a normal good.

**Eye On** boxes apply theory to important issues and problems that shape our global society and individual decisions.

## Confidence-Building Graphs

use color to show the direction of shifts and detailed, numbered captions guide students step-by-step through the action.

100% of the figures are animated in MyEconLab, with step-by-step audio narration.

Foundations of  
**ECONOMICS**

Robin Bade

Michael Parkin

*University of Western Ontario*



**EIGHTH EDITION**



330 Hudson Street, NY NY 10013

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Interior Design: Integra Software Services  
Cover Design: Jon Boylan  
Cover Art: Rosalie Kreulen/www.shutterstock.com  
Technical Illustrator: Richard Parkin  
Printer/Binder: R.R. Donnelley  
Cover Printer: Phoenix Color

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#### Library of Congress Cataloging-in-Publication Data

**Names:** Bade, Robin, author. | Parkin, Michael, 1939– author.

**Title:** Foundations of economics / Robin Bade, Michael Parkin, University of Western Ontario.

**Description:** 8th edition. | Boston : Pearson, [2016] | Revised edition of the authors' Foundations of economics, [2015] | Includes bibliographical references and index.

**Identifiers:** LCCN 201604351 | ISBN 9780134486819 | ISBN 9780134491981 (foundations of microeconomics) | ISBN 9780134492001 (foundations of macroeconomics) | ISBN 9780134491974 (essential foundations of economics)

Subjects: LCSH: Economics.

**Classification:** LCC HB171.5 .B155 2016 | DDC 330—dc23

LC record available at <https://lcn.loc.gov/201604351>



**To Erin, Tessa, Jack, Abby, and Sophie**

## About the Authors



**Robin Bade** was an undergraduate at the University of Queensland, Australia, where she earned degrees in mathematics and economics. After a spell teaching high school math and physics, she enrolled in the Ph.D. program at the Australian National University, from which she graduated in 1970. She has held faculty appointments at the University of Edinburgh in Scotland, at Bond University in Australia, and at the Universities of Manitoba, Toronto, and Western Ontario in Canada. Her research on international capital flows appears in the *International Economic Review* and the *Economic Record*.

Robin first taught the principles of economics course in 1970 and has taught it (alongside intermediate macroeconomics and international trade and finance) most years since then. She developed many of the ideas found in this text while conducting tutorials with her students at the University of Western Ontario.



**Michael Parkin** studied economics in England and began his university teaching career immediately after graduating with a B.A. from the University of Leicester. He learned the subject on the job at the University of Essex, England's most exciting new university of the 1960s, and at the age of 30 became one of the youngest full professors. He is a past president of the Canadian Economics Association and has served on the editorial boards of the *American Economic Review* and the *Journal of Monetary Economics*. His research on macroeconomics, monetary economics, and international economics has resulted in more than 160 publications in journals and edited volumes, including the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economic Studies*, the *Journal of Monetary Economics*, and the *Journal of Money, Credit, and Banking*. He is author of the best-selling textbook, *Economics* (Pearson), now in its Twelfth Edition.

Robin and Michael are a wife-and-husband team. Their most notable joint research created the Bade-Parkin Index of central bank independence and spawned a vast amount of research on that topic. They don't claim credit for the independence of the new European Central Bank, but its constitution and the movement toward greater independence of central banks around the world were aided by their pioneering work. Their joint textbooks include *Macroeconomics* (Prentice-Hall), *Modern Macroeconomics* (Pearson Education Canada), and *Economics: Canada in the Global Environment*, the Canadian adaptation of Parkin, *Economics* (Addison-Wesley). They are dedicated to the challenge of explaining economics ever more clearly to a growing body of students.

Music, the theater, art, walking on the beach, and five grandchildren provides their relaxation and fun.



# ECONOMICS

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# Preface



Students know that throughout their lives they will make economic decisions and be influenced by economic forces. They want to understand the economic principles that can help them navigate these forces and guide their decisions. *Foundations of Economics* is our attempt to satisfy this want.

The response to our earlier editions from hundreds of colleagues across the United States and throughout the world tells us that most of you agree with our view that the principles course must do four things well. It must

- Motivate with compelling issues and questions
- Focus on core ideas
- Steer a path between an overload of detail and too much left unsaid
- Encourage and aid learning by doing

The Foundations icon with its four blocks (on the cover and throughout the book) symbolizes this four-point approach that has guided all our choices in writing this text and creating its comprehensive teaching and learning supplements.

## WHAT'S NEW IN THE EIGHTH EDITION

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New in this Eighth Edition revision are: A further fine-tuning of the content; an enhanced focus on outcome-driven teaching and learning; and a further large investment in enhanced digital features to bring economics to life and provide an exciting interactive experience for the student on all platforms and devices.

### ■ Fine-Tuning the Content

The content of this revision is driven by the drama of the extraordinary period of economic history in which we are living and its rich display of events and forces through which students can be motivated to discover the economic way of thinking. Persistent slow economic growth; increasing concentration of wealth; headwinds from Europe's stagnant economy and the UK decision to leave the economic union (Brexit); ongoing tensions arising from the loss of American jobs to offshore outsourcing and the political popularity of trade protection; a slowing pace of China's expansion; enhanced concern about carbon emission and climate change; relentless pressure on the federal budget from the demands of an aging

population and a sometimes dysfunctional Congress with its associated rising government debt; the dilemma posed by slow, almost decade-long recovery from the global financial crisis and recession and the related question of when and how fast to exit an era of extreme monetary stimulus. These are just a few of these interest-arousing events. All of them feature at the appropriate points in our new edition.

Every chapter contains many small changes, all designed to enhance clarity and currency, and the text and examples are all thoroughly updated to reflect the most recently available data and events.

Because the previous edition's revision was so extensive and well-received, we have limited our interventions and changes in this Eighth Edition to addressing the small number of issues raised by our reviewers and users, ensuring that we are thoroughly up-to-date, and focusing on the new digital tools that we've just described. Nonetheless, some changes that we now summarize are worth noting.

### ■ Notable Content Changes in Micro

In Chapter 1, *Getting Started*, we have added a new section, *Economics as a Life Skill*, which explains how economics is used as a decision tool, the scientific method the subject employs, and economics as an aid to critical thinking. A new *Eye on Your Life* looks at the BLS data on student time allocation (which contains some surprises).

In Chapter 3, *The Economic Problem*, we show explicitly how the outward-bowed production possibilities frontier arises from exploiting comparative advantage.

Chapter 7, *Government Actions in Markets*, has a new section on production quotas, which explains why producers like them and illustrates how a quota expands producer surplus.

Chapter 8, *Taxes*, explains the Flat Tax and Fair Tax proposals and compares their efficiency and equity properties with those of the existing tax code.

In Chapter 10, *Externalities*, we have expanded our discussion of carbon emissions and the global challenge of achieving an efficient use of energy resources.

Chapter 11, *Public Goods and Common Resources*, now uses the efficient provision of transportation infrastructure as its motivating example and discusses the underprovision that results from limited revenue sources.

Chapter 12, retitled *Private Information and Healthcare Markets*, has a new and expanded coverage of the economics of healthcare insurance and services. It identifies the sources of healthcare market failure and describes and compares alternative solutions including Obamacare and the healthcare systems of Canada and Europe.

In Chapter 20, *Economic Inequality*, we have broadened our examination of inequality trends with a focus on the income share of the top one percent—the great compression through the mid-1970s and the great divergence of the past 40 years. We have also expanded our coverage of mobility up and down the income quintiles.

### ■ Notable Content Changes in Macro

Chapter 22, *Jobs and Unemployment*, is motivated by the question of whether we are back at full employment. In seeking an answer, the chapter adds to the standard list of job market indicators the new Z-Pop measure of the percentage of the population that is fully occupied.

Chapter 23, *The CPI and the Cost of Living*, explains and presents data on the new “Sticky Price CPI” and its related “Flexible Price CPI” as an attempt to measure the underlying inflation rate.

In Chapter 25, *Economic Growth*, we have added an account of who gets the benefits of economic growth with a dramatic demonstration of the gains by the top one percent compared with the gains of the other 99 percent.

Chapter 32, *Fiscal Policy*, has a new and expanded explanation of the concepts of fiscal imbalance and generational imbalance and the magnitudes of these imbalances in the United States today.

Chapter 33, *Monetary Policy*, has a new discussion of the rules versus discretion dichotomy and a description of both the Taylor interest rate rule and the McCallum monetary base growth rate rule.

## ■ Outcome-Driven Teaching and Learning

An overarching revision message is that this text, its customized MyEconLab, and classroom resources are built to support an outcome-driven teaching and learning program in which the principles of economics course strengthens

- Problem solving
- Critical thinking
- Decision making
- Citizenship

Problem solving is central to the *Foundations* story. A Checkpoint at the end of each topic, typically three per chapter, provides a pause and opportunity to check understanding with problems, one of which is driven by a recent news clip, and worked solutions. A series of MyEconLab Solutions Videos then give the student an alternative way of reviewing the solutions to these problems.

Critical thinking is encouraged and supported through a series of interactive exercises in MyEconLab. In each chapter, there is one exercise that is based on the question or issue that opens and motivates the chapter, and a second that builds from an *Economics in Your Life* feature.

## ■ Enhanced eText

The new Enhanced Pearson eText gives students access to their textbook anytime, anywhere. In addition to note-taking, highlighting, and bookmarking, the Pearson eText offers interactive and sharing features. Students actively read and learn through embedded and auto-graded practice, real-time data-graphs, animations, author videos, and more. Instructors can share comments or highlights, and students can add their own, for a tight community of learners in any class.

The new eText includes:

- A Big Picture Video that motivates and summarizes each chapter and provides an outline answer to the chapter’s motivating question.
- A series of Concept Videos that illustrate and explain the key ideas in each section of a chapter. These videos also contain animations and explanations of each figure, which can be played separately.
- A series of Solutions Videos that walk the student through the solutions to the Practice Problems and In the News exercises in each Checkpoint.
- Interactive data graphs that display real-time data from the St. Louis Federal Reserve data base, FRED.

- Study Plan links that provide opportunities for more practice with problems similar to those in the text, some with real-time FRED data, that give targeted feedback to guide the student in answering the exercises.
- Key Terms Quiz links that provide opportunities for students to check their knowledge of the definitions and uses of the key terms.

## THE FOUNDATIONS VISION

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### ■ Focus on Core Concepts

Each chapter of *Foundations* concentrates on a manageable number of main ideas (most commonly three or four) and reinforces each idea several times throughout the chapter. This patient, confidence-building approach guides students through unfamiliar terrain and helps them to focus their efforts on the most important tools and concepts of our discipline.

### ■ Many Learning Tools for Many Learning Styles

*Foundations'* integrated print and electronic package builds on the basic fact that students have a variety of learning styles. Students have powerful tools at their fingertips: Within the eText, they can get an immediate sense of the content of a chapter by playing the Big Picture video; learn the key ideas by playing the Concept videos; and get a quick walkthrough of the Checkpoint Practice Problems and In the News exercises with the Solutions videos.

In MyEconLab, students can complete all Checkpoint problems and In the News exercises online and get instant feedback; work with interactive graphs and real-time data graphs; assess their skills by taking Practice Tests; receive a personalized Study Plan; and step-by-step help through the learning aid called “Help Me Solve This.”

### ■ Diagrams That Tell the Whole Story

We developed the style of our diagrams with extensive feedback from faculty focus-group participants and student reviewers. All of our figures make consistent use of color to show the direction of shifts and contain detailed, numbered captions designed to direct students' attention step-by-step through the action.

Because beginning students of economics are often apprehensive about working with graphs, we have made a special effort to present material in as many as three ways—with graphs, words, and tables—in the same figure. In an innovation that seems necessary, but is to our knowledge unmatched, nearly all of the information supporting a figure appears on the same page as the figure itself. No more flipping pages back and forth!

### ■ Real-World Connections That Bring Theory to Life

Students learn best when they can see the purpose of what they are studying, apply it to illuminate the world around them, and use it in their lives.

*Eye On* boxes offer fresh new examples to help students see that economics is everywhere. Current and recent events appear in *Eye on the U.S. Economy* boxes; we place current U.S. economic events in global and historical perspectives in our *Eye on the Global Economy* and *Eye on the Past* boxes; and we show how students can use economics in day-to-day decisions in *Eye on Your Life* boxes.

Each chapter-opening question is answered in an *Eye On* box that helps students see the economics behind a key issue facing the world and highlights a major aspect of the chapter's story.

## ORGANIZATION

We have organized the sequence of material and chapters in what we think is the most natural order in which to cover the material. But we recognize that there are alternative views on the best order. We have kept this fact and the need for flexibility firmly in mind throughout the text. Many alternative sequences work, and the Flexibility Charts on pp. xxxiv–xxxv explain the alternative pathways through the chapters. In using the flexibility information, keep in mind that the best sequence is the one in which we present the material. And even chapters that the flexibility charts identify as strictly optional are better covered than omitted.

## MYECONLAB

MyEconLab

MyEconLab has been designed and refined with a single purpose in mind: to create those moments of understanding that transform the difficult into the clear and obvious. With comprehensive homework, quiz, test, activity, and tutorial options, instructors can manage all their assessment needs in one program.

- All of the Checkpoint and Chapter Checkpoint Problems and Applications can be assigned and automatically graded in MyEconLab.
- Extra problems and applications, including algorithmic, draw-graph, and numerical exercises can be used for student practice or instructor assignment.
- Problems and applications that use real-time data continuously update directly from a feed to the Federal Reserve Bank of St. Louis.
- Test Item File questions can be assigned in quiz, test, or homework.
- The Custom Exercise Builder gives instructors the flexibility to create their own problems for assignment.
- The Gradebook records each student's performance and time spent on the Tests and Study Plan and generates reports by student or by chapter.

New for the Eighth Edition is an Enhanced Pearson eText, which includes embedded and auto-graded practice, real-time data graphs, animations, videos, and more. Instructors can share comments or highlights, and students can add their own, for a tight community of learners in any class.

With the Pearson eText 2.0 mobile app students can access the Enhanced eText and all its functionality from their computer, tablet, or cell phone. Because the student's progress is synced across all of their devices, they can stop what they're doing on one device and pick up again later on another one—without breaking their stride.

### ■ Features of the Enhanced eText

**Big Picture Videos** Big Picture videos, tied to the Chapter Checklist, set the stage for the main concept that will be introduced throughout the chapter. Students can use these videos to prepare for today's lecture or to help them focus on main chapter ideas.

#### DEMAND and SUPPLY: THE BIG PICTURE

Buyers like a low price, and the lower the price, the greater is the quantity they plan to buy—the **law of demand**.

Sellers like a high price, and the higher the price, the greater is the quantity they plan to sell—the **law of supply**.

Too high a price brings a surplus, and too low a price brings a shortage.

When there is a surplus, the price falls; and when there is a shortage, the price rises—the **law of market forces**.

**MyEconLab Concept Video** 4.2 SUPPLY

A market has two sides. On one side are the buyers, or demanders, that we've just studied. On the other side of the market are the sellers, or suppliers. We now study the forces that determine suppliers' plans.

**Quantity supplied**  
The amount of any good, service, or resource that people are willing and able to sell during a specified period at a specified price.

The **quantity supplied** of a good, service, or resource is the amount that people are willing and able to sell during a specified period at a specified price. For example, when the price of spring water is \$1.50 a bottle, a spring owner decides to sell 2,000 bottles a day. The 2,000 bottles a day is the quantity supplied of spring water by this individual producer. (As in the case of demand, the quantity supplied is measured as an amount *per unit of time*.)

Many things influence selling plans, and one of them is the price. We look first at the relationship between quantity supplied of a good and its price. To study this relationship, we keep all other influences on selling plans the same, and we ask: Other things remaining the same, how does the quantity supplied of a good change as its price varies? The law of supply provides the answer.

**The Law of Supply**  
The **law of supply** states:

**Other things remaining the same, if the price of a good rises, the quantity supplied of that good increases; and if the price of a good falls, the quantity supplied of that good decreases.**

So the law of supply states that when all other things remain the same, if the

**Concept Videos** Concept videos accompany every major section of each chapter and are designed to briefly present the major concepts and graphical tools covered within key sections. Using text, audio, and animation, Concept videos enable students with different learning styles to efficiently study and review key concepts of the chapter.

**Animations** Every textbook figure includes a step-by-step animation, with audio, to help students learn the intuition behind reading and interpreting graphs. These animations may be used for review, or as an instructional aid in the classroom. Figures labeled *MyEconLab Real-Time Data* update using the most recent data available from the Federal Reserve Bank of St. Louis's FRED site.

**Embedded MyEconLab Assessment** Every Checkpoint Practice Problem, every In the News problem, and every Study Plan Problem and Application in the enhanced eText can be worked by the student directly from the eText page on which it occurs. These problems are auto-graded and feed into the MyEconLab's Study Plan, where students receive recommendations based upon their performance.

Aqua Springs makes the following four statements about bottled spring water. Which statement best describes the firm's **quantity supplied** in the bottled water market?

A We would sell more water if the demand for it were greater.

B At a price of \$1 gallon, we plan to sell 2,000 gallons per day.

C We'll switch from plain water to flavored water if flavored is more profitable.

D If we could get a higher price, we'd bottle more water.

**Fantastic!**  
The quantity supplied is the amount of any good, service, or resource that people are willing and able to sell during a specified period at a specified price. So when Aqua Springs says "At a price of \$1 gallon, we plan to sell 2,000 gallons per day," the firm is describing a quantity supplied.

Done

**Key Terms Quiz** The Key Terms Quiz, accessible from each Checkpoint, allows students to check their understanding of key chapter concepts before moving onto the next section. The Interactive Glossary that supports the enhanced eText provides the key term definition, an example, and related terms.

**CHECKPOINT 7.1**

MyEconLab Study Plan 7.1  
Key Terms Quiz  
Solutions Video

**Explain how a price ceiling works, and why a rent ceiling creates a housing shortage and is inefficient and unfair.**

**Practice Problems**  
Figure 1 shows the rental market for apartments in Corsicana, Texas.

1. What is the rent and how many apartments are rented? If a rent ceiling of \$900 a month is set, what is the rent and how many apartments are rented?
2. If the city government imposes a rent ceiling of \$600 a month, what is the rent and how many apartments are rented? If a black market develops, explain how high the black market rent could be.
3. If the city government imposes a rent ceiling of \$600 a month and enforces it, is the housing market efficient? What is the deadweight loss? Is the housing market fair? Explain your answer.

**In the News**  
A gas price ceiling  
China has cut the price of natural gas and may install a price ceiling that prohib-

**FIGURE 1**  
Rent (dollars per month)  
Quantity (thousands of apartments)

**Solutions Videos** Every Checkpoint Practice problem and In the News problem is supported by a Solutions video that provides a step-by-step working of the problem, including graphical analysis. Text, audio, and animation ensure that a student understands how to set-up and solve each of the problems.



## ■ MyEconLab also includes:

**Economics in the News** Economics in the News is a turn-key solution to bringing current news into the classroom. Updated daily during the academic year, we upload two relevant articles (one micro, one macro) and provide questions that may be assigned for homework or for classroom discussion.

**Current News** Each week during the academic year, we upload multi-part microeconomic and macroeconomic exercises, with links to relevant articles, into the MyEconLab assignment manager. These enable instructors to bring current issues and events into the course with easy to assign and auto-graded exercises.

**Real-Time Data Analysis Exercises (FRED)** Easy to assign and automatically graded, Real-Time Data Analysis exercises use up-to-the-minute, real-time macroeconomic data. These exercises communicate directly with the Federal Reserve Bank of St. Louis's FRED site, so every time FRED posts new data, students see new data. As a result, Real-Time Data Analysis exercises offer a no-fuss solution for instructors who want to make the most recent data a central part of their macro course. End-of-chapter exercises accompanied by the Real-Time Data Analysis icon (📊) include Real-Time Data versions in MyEconLab. Select in-text figures, labeled Real-time data, update in the eText using FRED data.

**Digital Interactives:** Economic principles are not static ideas, and learning them shouldn't be either! Digital Interactives are dynamic and engaging assessment activities that promote critical thinking and application of key economic principles.

Each Digital Interactive has 3 to 5 progressive levels and requires approximately 20 minutes to explore, apply, compare, and analyze each topic. Many Digital Interactives include real-time data from FRED™ allowing professors and students to display, in graph and table form, up-to-the-minute data on key macro variables.

Digital Interactives can be assigned and graded within MyEconLab, or used as a lecture tool to encourage engagement, classroom conversation, and group work.

Topics include:

- Comparative Advantage
- Opportunity Cost
- Unemployment
- Consumer Price Index/Inflation
- Monetary Policy
- Elasticity
- GDP
- Demand & Supply

**Math Review Exercises in MyEconLab**—MyEconLab now offers an array of assignable and auto-graded exercises that cover fundamental math concepts. Geared specifically toward principles economics students, these exercises aim to increase student confidence and success in these courses. Our new Math Review is accessible from the assignment manager and contains more than 150 exercises for homework, quiz, and test use.

**Learning Catalytics** Learning Catalytics helps you generate class discussion, customize your lecture, and promote peer-to-peer learning with real-time analytics. As a student response tool, Learning Catalytics uses students' smartphones, tablets, or laptops to engage them in more interactive tasks and thinking.

- NEW! Upload a full PowerPoint® deck for easy creation of slide questions.
- Help your students develop critical thinking skills.
- Monitor responses to find out where your students are struggling.
- Rely on real-time data to adjust your teaching strategy.
- Automatically group students for discussion, teamwork, and peer-to-peer learning.

**Experiments in MyEconLab** Experiments are a fun and engaging way to promote active learning and mastery of important economic concepts. Pearson's Experiments program is flexible and easy for instructors to assign and students to use.

- Single-player experiments, available to assign, allow your students to play against virtual players from anywhere at anytime so long as they have an internet connection.
- Multiplayer experiments allow you to assign and manage a real-time experiment with your class.
- Pre and post-questions for each experiment are available for assignment in MyEconLab.
- Experiments are auto-graded using algorithms that objectively evaluate a student's economic gain and performance during the experiment.

**AACSB and Learning Outcomes** All end-of-chapter and Test Item File questions are tagged in two ways: to AACSB standards and to discipline-specific Learning Outcomes. These two separate tagging systems allow professors to build assessments around desired departmental and course outcomes and track results in MyEconLab's gradebook.

**Personalized Study Plan** The Personalized Study Plan provides recommendations for each of your students based on his or her ability to master the learning objectives in your course. This allows students to focus their study time by pinpointing the precise areas they need to review and allowing them to use customized practice and learning aids—such as videos, eText, tutorials, and more—to get them back on track. The Study Plan also ensures that your students are mastering the concepts, not just guessing the answers.

Using the report available in the Gradebook, you can then tailor course lectures to prioritize the content where students need the most support—offering you better insight into classroom and individual performance.

**Dynamic Study Modules** Dynamic Study Modules help students study effectively on their own by continuously assessing their activity and performance in real time. Here's how it works: students complete a set of questions with a unique answer format that also asks them to indicate their confidence level. Questions repeat until the student can answer them all correctly and confidently. Once completed, Dynamic Study Modules explain the concept using materials from the text. These are available as graded assignments prior to class, and accessible on smartphones, tablets, and computers.

NEW! Instructors can now remove questions from Dynamic Study Modules to better fit their course.

## SUPPORT MATERIALS FOR INSTRUCTORS AND STUDENTS

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*Foundations of Economics* is accompanied by the most comprehensive set of teaching and learning tools ever assembled. Each component of our package is organized by Checkpoint topic for a tight, seamless integration with both the textbook and the other components. In addition to authoring the MyEconLab Study Plan and Assignment problems, PowerPoint resources, and Video scripts, we have helped in the reviewing and revising of the Solutions Manual, Instructor's Manual, and Test Item Files to ensure that every element of the package achieves the consistency that students and teachers need.

### ■ PowerPoint Resources

We have created the PowerPoint resources based on our 24 years of experience using this tool in our own classrooms. We have created four sets of PowerPoint presentations for instructors. They are:

- Lecture notes with full-color, animated figures, and tables from the textbook
- Figures and tables from the textbook, animated with step-by-step walk-through for instructors to use in their own personal slides
- *Eye On* features
- Alternative micro lecture notes with full-color, animated figures and tables that use examples different from those in the textbook

A student version of the lecture notes is also available on MyEconLab.

### ■ Instructor's Manual

The Instructor's Manual, written by Luke Armstrong and reviewed by Mark Rush, contains chapter outlines and road maps, additional exercises with solutions, a comprehensive Chapter Lecture resource, and a virtual encyclopedia of suggestions on how to enrich class presentation and use class time efficiently. The Instructor's Manual has been updated to reflect changes in the main text as well as infused with a fresh and intuitive approach to teaching this course. The Instructor's Manual is available for download in Word and PDF formats.

### ■ Solutions Manual

The Solutions Manual, written by Mark Rush and checked for accuracy by Jeannie Gillmore, contains the solutions to all Chapter Checkpoint Study Plan Problems and Applications, Instructor Assignable Problems and Applications, and the Multiple Choice Quiz. The Solutions Manual is available for download in Word and PDF formats.

### ■ Three Test Item Files and TestGen

More than 12,000 multiple-choice, numerical, fill-in-the-blank, short answer, essay, and integrative questions make up the three Test Item Files that support *Foundations of Economics*. Mark Rush reviewed and edited the updated and new questions from three dedicated principles instructors to form one of the most comprehensive testing systems on the market. Our microeconomics questions were written by Carol Dole (Jackson University); and our macroeconomics questions were written by Svitlana. Maksymenko (University of Pittsburgh) and David Black (University of

Toledo). The entire set of questions is available for download in Word, PDF, and TestGen formats.

All three Test Item Files are available in test generator software (TestGen with QuizMaster). TestGen's graphical interface enables instructors to view, edit, and add questions; transfer questions to tests; and print different forms of tests. Instructors also have the option to reformat tests with varying fonts and styles, margins, and headers and footers, as in any word-processing document. Search and sort features let the instructor quickly locate questions and arrange them in a preferred order. QuizMaster, working with your school's computer network, automatically grades the exams, stores the results on disk, and allows the instructor to view and print a variety of reports.

### ■ Instructor's Resource Center

This page on the Pearson Higher Education website ([www.pearsonhighered.com/IRC](http://www.pearsonhighered.com/IRC)) contains the Instructor's Manual, Solutions Manual, and Test Item Files in Word and PDF formats. It also contains the Computerized Test Item Files (with a TestGen program installer) and PowerPoint resources. It is compatible with both Windows and Macintosh operating systems.

For access or more information, contact your local Pearson representative or request access online at the Instructor Resource Center.

## ACKNOWLEDGMENTS

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Working on a project such as this one generates many debts that can never be repaid. But they can be acknowledged, and it is a special pleasure to be able to do so here and to express our heartfelt thanks to each and every one of the following long list, without whose contributions we could not have produced *Foundations*.

Mark Rush again coordinated, managed, and contributed to our Solutions Manual, Instructor's Manual, and Test Item Files. He assembled, polished, wrote, and rewrote these materials to ensure their close consistency with the text. He and we were in constant contact as all the elements of our text and package came together. Mark also made many valuable suggestions for improving the text and the Checkpoint Problems. His contribution went well beyond that of a reviewer, and his effervescent sense of humor kept us all in good spirits along the way.

Working closely with Mark, Luke Armstrong wrote content for the Instructor's Manual. Carol Dole, Svitlana Maksymenko and David Black authored new questions for the Test Item Files.

Luke Armstrong and Carol Dole recorded the narrations that accompany the Big Picture, Concept, and Solutions Videos in the eText. The engaging style and clarity of these outstanding teachers makes these videos a powerful learning tool.

Fred Bounds (Georgia Perimeter College) and Carol Dole provided outstanding reviews of the Study Plan and Assessment problems in MyEconLab that helped to make our exercises as effective as possible.

The ideas from which *Foundations* grew began to form over dinner at the Andover Inn in Andover, Massachusetts, with Denise Clinton and Sylvia Mallory. We gratefully acknowledge Sylvia's role not only at the birth of this project but also in managing its initial development team. Denise was an ongoing inspiration for 15 years, and we are privileged to have had the benefit of her enormous experience.

The success of *Foundations* owes much to its outstanding editors: Director of Portfolio Management, Adrienne D'Ambrosio, and Portfolio Manager, Ashley Bryan. Adrienne's acute intelligence and sensitive understanding of the market have helped sharpen our vision of this text and package over several editions, and Ashley has brought a fresh perspective to this Eight edition revision. The value-added of Adrienne and Ashley is huge. It has been, and we hope it will for many future editions remain, a joy to work with them.

Jonathan Boylan created the new impressive cover design and converted the raw ideas of our brainstorm into an outstandingly designed text.

Melissa Honig, Digital Studio Producer, and Noel Lotz, Digital Content Team Lead have set a new standard for online learning and teaching resources. They have been sources of high energy, good sense, and level-headed advice and quickly found creative solutions to all our technology problems.

Nancy Freihofer, our outstanding, ever calm, Content Producer, worked with a talented team at Integra, Project Editor, Heather Johnson, and designer, art coordinator, and typesetter. Our copy editor, Catherine Baum, gave our work a thorough review and helpful polish, and our proofreader ensured the most error-free text we have yet produced.

Our marketing team, comprised of Ramona Elmer, Tricia Murphy, and Brad Parkins, has been an integral part of this revision process. They have provided great knowledge and strategies to help continuously improve our suite of materials and keep them relevant and valuable in these ever-changing times.

Richard Parkin, our technical illustrator, created the figures in the text, the dynamic figures in the eText, the animated figures in the PowerPoint presentations, created the animations for and assembled the enhanced eText videos, and contributed many ideas to improving the clarity of our illustrations in all media.

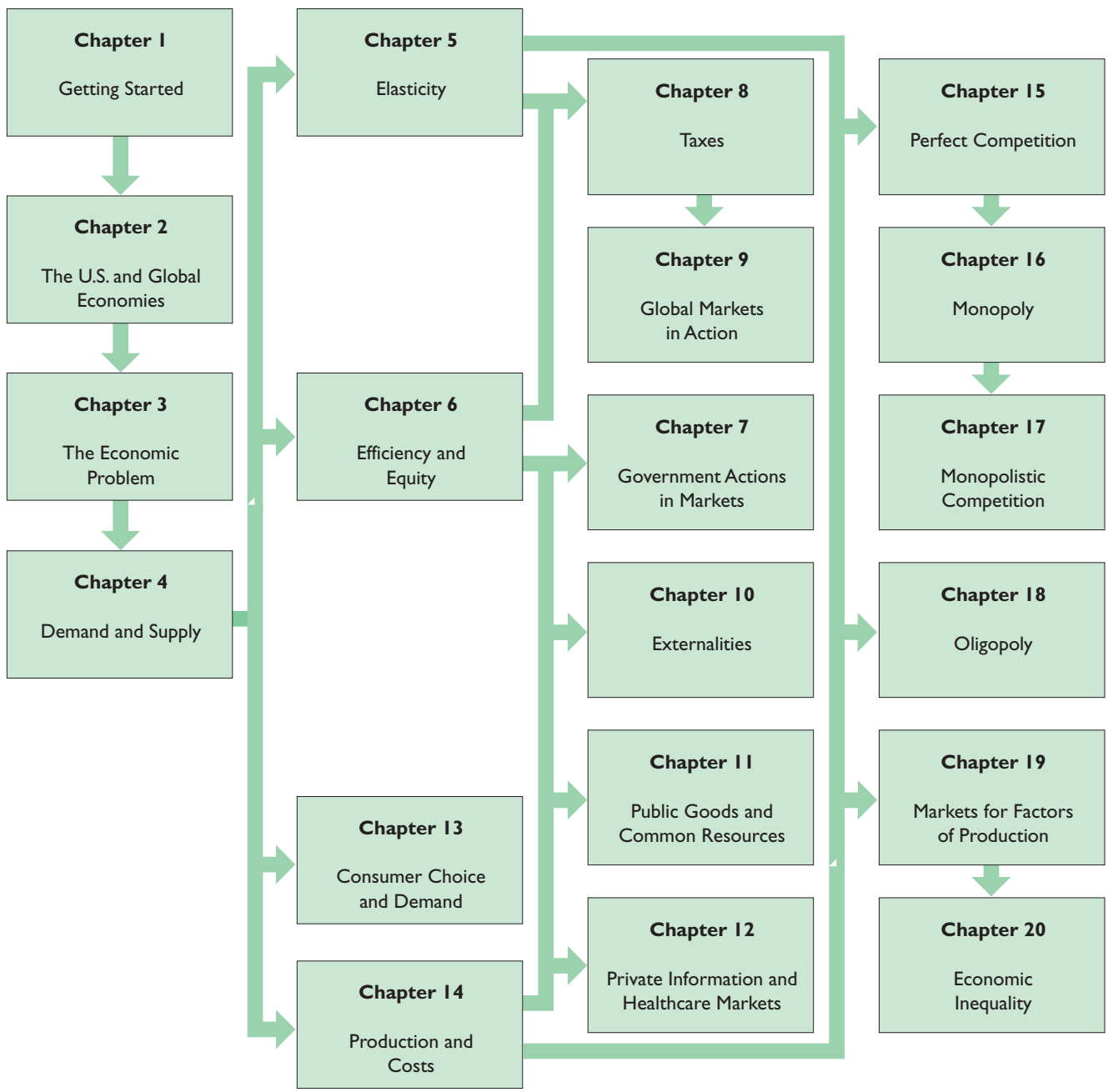
Jeannie Gillmore, our long-standing personal assistant, worked closely with us to create MyEconLab Study Plan and Assignment problems and to ensure the highest standards for our feedbacks and "help me solve this" question help.

Finally, our reviewers, whose names appear on the following pages, have made an enormous contribution to this text and MyEconLab resources. Once again we find ourselves using superlatives, but they are called for. In the many texts that we've written, we've not seen reviewing of the quality that we enjoyed on this revision. It has been a pleasure (if at times a challenge) to respond constructively to their many excellent suggestions.

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## FOUNDATIONS OF ECONOMICS: FLEXIBILITY CHART

### Micro Flexibility

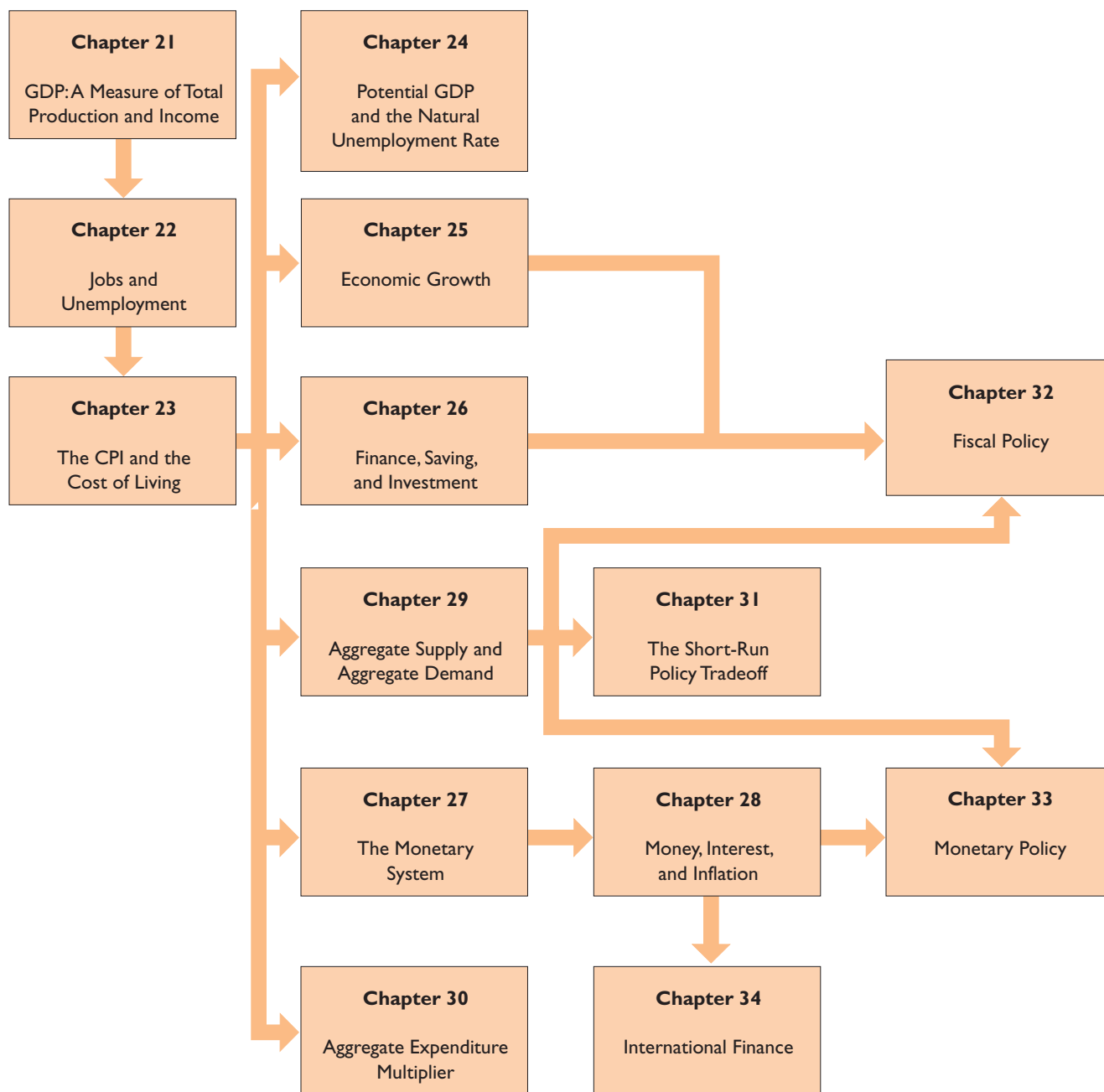


Start here ...

... then jump to any of these ...

... and jump to any of these after doing the prerequisites indicated

## Macro Flexibility



Start here ...

... then jump to  
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You're in school!  
Did you make the right decision?

# Getting Started

When you have completed your study of this chapter, you will be able to

- 1 Define economics and explain the kinds of questions that economists try to answer.
- 2 Explain the ideas that define the economic way of thinking.
- 3 Explain how economics is useful as a life skill.



CHAPTER CHECKLIST

[MyEconLab](#) Big Picture Video