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THE BASICS

Third Editon

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DEDICATION

To Elliot and Laura

ABOUT THE AUTHOR

Michael Mandel

Michael Mandel delights in translating complex economic concepts into understandable, relevant, and exciting examples for a broad audience. He received his PhD in economics from Harvard University, where he studied the intricacies of game theory. He is currently Senior Fellow at the Mack Institute for Innovation Management at The Wharton School of the University of Pennsylvania, as well as Chief Economic Strategist at the Progressive Policy Institute in Washington, DC. He regularly testifies before Congress and writes about the policy implications of innovation, regulation, and growth, both domestically and internationally.

Previously, Mandel was Chief Economist of *BusinessWeek* (now *Bloomberg Businessweek*), where he regularly tackled such hot topics as the economics of immigration, the power of technological innovation to drive growth, the importance of foreign trade, and consequences of tax policy.

Mandel's columns and cover stories have won numerous awards, including the Excellence in Economic Journalism Award from the Institute on Political Journalism, given to the writer "who has done the most to shape public opinion by giving the public a better understanding of economic theory and reality"; the Gerald Loeb Award, the most prestigious prize for economic and financial journalism; and the Economic Journalist of the Year Award from the World Leadership Forum. He was also named one of the top 100 business journalists of the 20th century.

Mandel is the author of several books, including *Rational Exuberance: Silencing the Enemies of Growth and Why the Future Is Better Than You Think* and *The High-Risk Society.* He also helped revise the 1995 edition of Paul Samuelson's classic economics textbook.

His economics news blog, designed especially for intro-level economics students, can be found at economicsthebasics.com. Mandel lives in Washington, DC, not far from the White House and the Capitol.

PREFACE

When I started developing the first edition of this textbook, I had two goals. First, I wanted to clearly explain basic economic principles, using the tools that I learned during my years as an economist and as an economic journalist. Second, I aimed to provide an introduction to the forces of globalization, technology, and financial markets that are driving the vibrant, but increasingly perplexing economy that we all live in.

This edition adds an additional goal—to help provide an economic context for the Great Recession and the recovery that followed. This event, or rather series of events, has had an enormous impact on everyone.

What you see here is the result of my effort to achieve these three goals. The first half of the textbook, which includes the introduction and 11 core chapters, presents the essential economic concepts. I designed this section to be accessible to people with a wide range of economic and mathematical backgrounds. The second half of the textbook covers topics such as financial markets, globalization, technological change, health care, and environmental economics.

In this edition, I consistently use fresh examples from today's global economy. The textbook is intended to provide a window into what is happening in the economy right now, including globalization, innovation, and the aftermath of the financial crisis.

Fundamental Goals

To summarize, I want to accomplish three goals with this textbook:

- To help you acquire the basic tools of economics, enabling you to understand today's world in a new way.
- To give you better insights into the forces of globalization, technology, and financial markets that are so important for today and our future.
- To provide an economic context for the Great Recession, and how it affected the economy for years afterward.

Distinguishing Features and Organization

This textbook emphasizes the main forces shaping today's economy: technological change, globalization, and the evolution of financial markets. The basic tools of economics are presented in the first 12 chapters to lay a foundation for understanding how the economy evolves and changes.

Current and Real Examples Economic concepts and ideas are illustrated in recent newsworthy events to help you see that economics is in action everywhere around you. Each chapter starts with a brief vignette that applies the concept to be learned to real-world events so you can see how the chapter concept relates back to everyday life.

Clear and Simple Graphs This book's simple, easy-to-follow graphs translate complex economic concepts into effective visual tools for the beginning student.

Historical Context *Economic Milestone* boxes sprinkled throughout each chapter provide interesting historical facts and references that relate to the material at hand.

Assurance of Learning Ready Many educational institutions today are focused on the notion of assurance of learning, an important element of many accreditation standards. *Economics: The Basics, 3/e* is designed specifically to support your assurance of learning initiatives with a simple yet powerful solution.

Each chapter in the book begins with a list of numbered learning objectives, which appear throughout the chapter as well as in the end-of-chapter assignments. Every Test Bank question for *Economics: The Basics, 3/e* maps to a specific chapter learning objective in the textbook as well as topic area, Bloom's Taxonomy level, and AACSB skill area. You can use our Test Bank software, *TestGen,* or *Connect Economics* to easily search for learning objectives that directly relate to the learning objectives for your course. You can then use the reporting features of *TestGen* to aggregate student results in similar fashion, making the collection and presentation of assurance of learning data simple and easy.

AACSB Statement McGraw-Hill/Irwin is a proud corporate member of AACSB International. Understanding the importance and value of AACSB accreditation, *Economics: The Basics, 3/e* recognizes the curricula guidelines detailed in the AACSB standards for business accreditation by connecting selected questions in the Test Bank and end-of-chapter material to the general knowledge and skill guidelines in the AACSB standards.

The statements contained in *Economics: The Basics, 3/e* are provided only as a guide for the users of this textbook. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. While *Economics: The Basics, 3/e* and the teaching package make no claim of any specific AACSB qualification or evaluation, we have, within *Economics: The Basics, 3/e,* labeled selected questions according to the six general knowledge and skills areas.

Changes in the Third Edition

M Series Mandel's 3rd edition is now part of the M Series at McGraw-Hill. These products are unified through a magazine-like layout, succinct coverage, student-friendly examples, and innovative digital support. *M: Economics, The Basics* is written specifically for the one semester survey course, designed to convey core concepts and principles at a level that is approachable for the widest possible audience.

The narrative in all chapters has been completely evaluated and reworked where necessary. Content and data updates to the figures, tables, and chapter narrative have been made throughout the book to reflect news events. In addition, select *Spotlight* and *How It Works* boxes have been updated or replaced to provide scenarios from today's economic landscape. Additionally, all of the end-of-chapter problems are assignable through McGraw-Hill *Connect,* and select problems are available as algorithmic variations (for more information on *Connect* please refer to pages xiv–xv. Chapter-by-chapter changes are as follows:

Chapter 1 Introduction was substantially revised to reflect the events of the Great Recession and the recovery that followed. Figure 1.1 was updated, as were all of the figures and tables in the appendix ("The Basics of Graphs"). Problems were updated with new, real-world data.

Chapter 2 Demand and Supply: The Basics of the Market Economy now uses updated examples and boxes, including the *Spotlight* "The Great Ethanol Boom." New examples were added to the section on "New Markets."

Chapter 3 Market Equilibrium and Shifts contains an updated chapter-opening vignette that details several economically significant events of April 2016. A box on highway construction was replaced by one on Atlantic City and excess supply of casinos. More material was added on the recent changes in the housing market. Figure 3.2 was updated, as were several problems.

Chapter 4 How Businesses Work updates all the company examples in the text and in the boxes, such as the *Spotlight* boxes "Cut Your Tree, Mister?" and "Boeing's Long-Term Decision."

Chapter 5 Competition and Market Power features data updates to the *Spotlight* boxes on the furniture and auto industries. Additionally, the *How It Works* boxes on well-known brand names and performers as monopolistic competitors have been updated. Problems were updated to include current data.

Chapter 6 Government and the Economy was systematically updated, including boxes and problems. Figures 6.1 and 6.2 were updated. Coverage of government intervention in response to the Great Recession is now scattered throughout the chapter.

Chapter 7 The First Step into Macroeconomics was revised to reflect the economy since the Great Recession. Table 7.1 and Figures 7.1, 7.2, 7.3, and 7.4 were updated to the most recent data. Boxes such as "Tracking the Global Corporation" were updated. Problems were updated to include the most recent data.

Chapter 8 Inflation has substantially revised data throughout to reflect changes in the economy. Additionally, updates have been made to the *How it Works* boxes to accurately reflect changes in the economy to housing, air travel, and oil. The *Spotlight* box "Which Movie Earned the Most Money" was updated to reflect 2015 hit movies such as *Star Wars: The Force Awakens*. The problems were extensively revised to reflect new data.

Chapter 9 Growth features updated charts and tables, to reflect the Great Recession and its aftermath. Various boxes were updated and revised, including the *Spotlight* "Community Colleges and Economic Growth," *Spotlight* "Capital Investment in the Age of the Internet" and *Spotlight* "The Chinese Government and Growth." The section on productivity, including Figure 9.9, was extensively modified to reflect the recent productivity slowdown.

Chapter 10 Business Cycles, Unemployment, and Inflation has been extensively updated and revised to reflect the post-recession performance of the economy. In particular, Figures 10.3, 10.5, and 10.6 have been updated with the latest data, as has the *How It Works* box on local unemployment.

Chapter 11 Fiscal Policy has been updated to reflect the post-recession fiscal environment. The "How It Works" box on levels of government and the *Spotlight* on the impact of ARRA were both revised, as were Figures 11.3, 11.5, and 11.6.

Chapter 12 Monetary Policy has been substantially revised to feature the changes in monetary policy and the Federal Reserve in the aftermath of the recession, including Janet Yellen installed as the new head of the Fed. The chapter includes a new section on quantitative easing, which now seems to be a permanent part of the Fed toolkit. A new section on the timing of rate increases has been added as well. Table 12.2 has been revised to include quantitative easing, and Figures 12.3 and 12.5 have been updated. The appendix on aggregate supply and aggregate demand has been revised as well to reflect recent events, including the falling price of oil.

Chapter 13 The Financial Markets was revised to reflect the many changes in the financial markets since the Great Recession, focusing in particular on increased regulation and Dodd-Frank. We talked to the family highlighted in the *Spotlight* box "One Family's Loans" and found out how they are doing today. Table 13.3, on how credit scores affect the interest rates borrowers pay, was updated, as were Table 13.4 and Figure 13.6. The text was modified to take account of recent bond defaults by municipalities such as Detroit. Finally, the problems were updated.

Chapter 14 International Trade has been substantially revised to take into account the current policy debates over trade. The section on "Winners and Losers" was greatly expanded, including a new *Spotlight* on states that have been hit hard and a new discussion of how the job market adjusts to trade. Figure 14.1 was completely redone, and Figures 14.2a, 14.2b, 14.4, 14.5, 14.7, and 14.8 were revised with recent data. The *Spotlight* on how a German company creates American jobs was updated, as was the *Spotlight* on offshoring. The *Spotlight* "The China Price" was removed. The text now includes a discussion of how many popular mobile games come from outside the country and a discussion of comparative advantage among China, the United States, and Germany.

Chapter 15 Technological Change now incorporates updated figures and tables. The *How It Works* box on e-commerce was updated.

Chapter 16 Economics of the Labor Market features updated figures and boxes to reflect the recovery of the labor market since the recession. The *Spotlight* on global movie stars has been updated, as has Table 16.2 and Figures 16.5, 16.6, and 16.9.

Chapter 17 The Distribution of Income has substantially updated figures on income and inequality for the post-recession period, and new data in the chapter-opening vignette. The *Spotlight* on CEO pay has been updated, as well as chapter-ending problems and the *How It Works* box on global catchup. Table 17.1 and Figures 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, and 17.9 have been updated as well.

Chapter 18 Economics of Retirement and Health Care was significantly revised to reflect developments since the Affordable Care Act was passed in 2010. A new section on health care reform has been added to the chapter, and the *Spotlight* on health care jobs has been expanded. Tables 18.1 and 18.4 have been updated, as have Figures 18.3 ,18.4, 18.5, 18.6, and 18.8.

Chapter 19 Economics of Energy, the Environment, and Global Climate Change features substantial revisions that take into account developments in oil and gas production and global climate change. The chapter adds a new *How It Works* box on growing reserves of fossil fuel. A new *Spotlight* box on the impact of rising sea levels on small island nations has been added. Figure 19.9 was added to show which countries contribute the most to greenhouse gas emissions. The *Spotlight* on energy-related disasters was updated to include the aftermath of the Fukushima and Deepwater Horizon disasters. The section on “Energy Sustainability” was reworked to feature conservation. The *Spotlight* on wind turbine pollution was revised to cover recent developments. Figures 19.1, 19.3, and 19.8 were updated, as well as Tables 19.1 and 19.2.

SUPPLEMENTS

Economics: The Basics, 3e comes with a complete array of instructor and student tools that make both teaching and learning easier.

Test Bank

Available in Connect, as Microsoft Word files, and via TestGen, the test bank includes a full complement of multiple-choice and short answer/essay questions to choose from. Created by Paul Fisher of Henry Ford Community College, the test bank is composed of more than a thousand unique questions that serve as a barometer of student mastery.

The Test Bank is also now available in TestGen. TestGen is a complete, state-of-the-art test generator and editing application software that allows instructors to quickly and easily select test items from McGraw Hill's test bank content. The instructors can then organize, edit and customize questions and answers to rapidly generate tests for paper or online administration. Questions can include stylized text, symbols, graphics, and equations that are inserted directly into questions using built-in mathematical templates. TestGen's random generator provides the option to display different text or calculated number values each time questions are used. With both quick-and-simple test creation and flexible and robust editing tools, TestGen is a complete test generator system for today's educators.

PowerPoint Presentations

Learn as graphs come alive! Developed by Cynthia Foreman the PowerPoint presentations that accompany Mandel's text incorporate both the fundamental concepts of each chapter and the graphs essential to each topic. Where appropriate, the graphs themselves are animated to demonstrate movement within a coordinate axis—something printed figures simply cannot do. The PowerPoint presentations successfully enhance the lessons in the text *without* providing a substitute for chapter reading or class attendance.

Instructor's Manual

Authored by Paul Fisher of Henry Ford Community College, the Instructor's Manual includes pop quiz resources, common student stumbling blocks, and lecture notes. The manual is an invaluable resource for professors new to the course, as well as for TAs or other graduate instructors.

Solutions Manual

Suggested answers to the end-of-chapter questions are provided in this manual.

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I couldn't have written and revised this textbook without expert support over more than a decade from my editors at McGraw-Hill Education. They've been wonderful.

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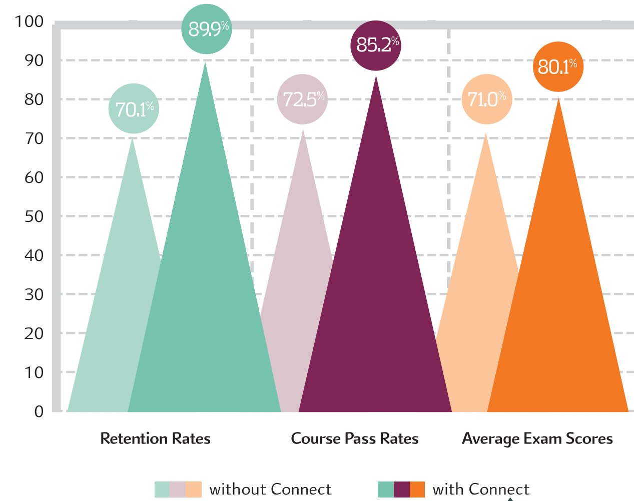

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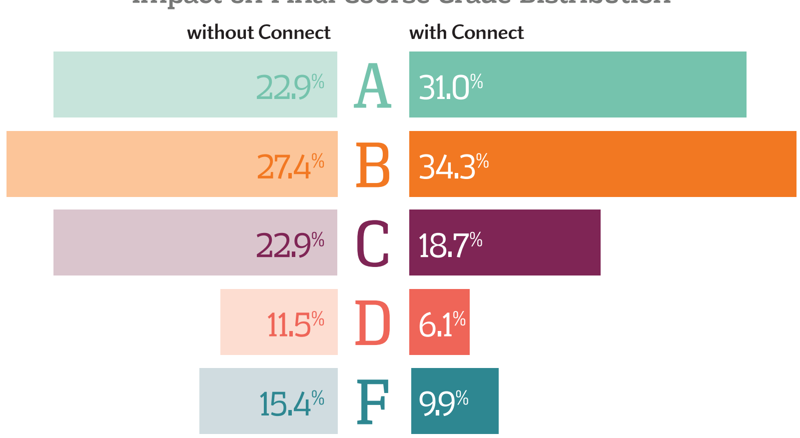

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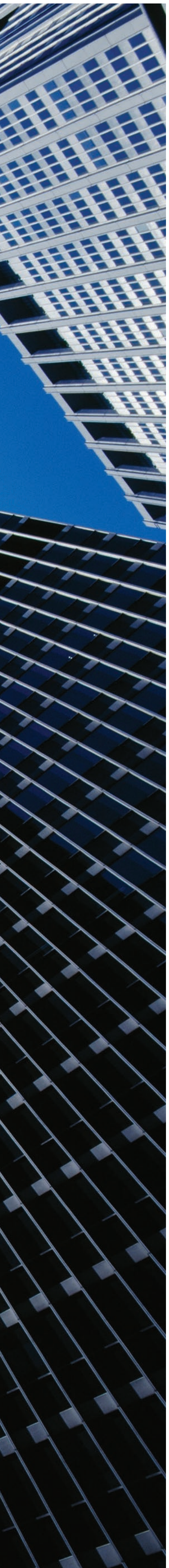
ECONOMICS

THE BASICS



CH 01 INTRODUCTION

Between 2000 and 2015, the U.S. economy added more than 11 million jobs of all types, from well-paid software developers to medical technicians to fast-food workers. In many ways, the economy looked like it was fully healed from the economic downturn now known as the **Great Recession**. As of early 2016, the number of unemployed Americans—people looking for a job but unable to find one—was almost down to pre-recession levels.

Yet the economic recovery still felt uneven. While some parts of the country were thriving, like the area around San Francisco, other regions continued to suffer. Manufacturing jobs were especially tough to find, and wages for many jobs were barely rising.

The economic picture was equally mixed in much of the rest of the world. Countries such as Germany and the United Kingdom were thriving as of early 2016, but Spain and Greece were still struggling. Young people, especially, had a hard time finding work in these countries.

The question now is what the future will bring. Despite the apparent recovery, in early 2016 many Americans were pessimistic. They worried that they would have a lower standard of living than their parents and that their kids would have an even tougher time. These concerns played an important role in the presidential campaign of 2016, which put Donald Trump into the White House.

But here, history offers a reason for optimism. Back in 1929, the United States was hit by the Great Depression, an economic crisis that was far deeper than the recent Great Recession and lasted much longer. At the low point of the Great Depression, roughly one-quarter of the American workforce was unemployed. Construction came to a halt, farmers were desperate, and banks were closing. That terrible period—which seemed like it would never end—lasted a full decade.

GREAT RECESSION
The deep economic downturn that started in December 2007.

But surprise! The Great Depression was followed by 75 years of strong economic growth and rising living standards. Someone who graduated from high school during the Great Depression may have had a miserable time finding a first job but probably ended up enjoying a lifetime of rising wages, improved health, bigger homes, better education, and far more options for travel and entertainment. One example: In 1929, air travel was a rarity, available only to a few people. Today, traveling by air across the

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- **LO1-1** Understand the importance of markets.
- **LO1-2** Identify three of the main forces shaping today's economy.
- **LO1-3** Explain the debate over the role of government in the economy.
- **LO1-4** Define economics and discuss how prosperity is measured.
- **LO1-5** Name some key disagreements in economics.

MARKETS
A way for buyers and sellers to voluntarily exchange goods and services for money.

GLOBAL MARKET ECONOMY
A collection of all the different participating markets in the world interacting simultaneously.

MARKET TRANSACTIONS
The activity of exchanging goods and services that other people are willing to pay for.

United States or to other countries is common. Or consider health: People are far more likely to live 65 years or more today than they were in 1929, when illnesses such as diphtheria and tuberculosis were major causes of death.

What will the next 75 years bring? Change happens so quickly now that even 5 or 10 years can dramatically alter our lives. By some forecasts, China could pass the United States as the world's largest economy within the near future. The Internet brings us more entertainment and information every day, as well as increasing amounts of misinformation and opportunities for fraud. Advances in health technology may significantly advance our life spans, bringing all the societal implications of a large elderly population. The threat of global climate change has increased pressure to move away from fossil fuels such as coal and oil to other energy sources such as solar, wind, and nuclear power. We could see cities built in space, or underwater.

As the global economy speeds into the future, the big question is: Who is steering? Or to put it another way, how much should governments intervene in the economy? Consider, for example, the key question of immigration. How many immigrants should the federal government let into the United States, and what qualifications should they have?

Or take health care—one of the biggest and fastest-growing sectors of the economy. President Barack Obama signed a major health care reform bill in spring 2010 that improved access to health insurance for many Americans. Yet there is still disagreement about whether the right solution is to get the government more involved or to rely more on private businesses. This question will continue to come up in the future—not just in the United States, but in the rest of the world as well.

THE BIG PICTURE LO1-1

LO1-1

Understand the importance of markets.

This textbook will accomplish three goals for you. *First,* you'll get the basic tools of economics, starting in Chapter 2 with supply and demand. When you're finished, you won't be an economist, but you will have learned a new way of thinking about today's world.

Second, using these tools of economics, you can begin to understand **markets** and the 21st-century **global market economy**. In a market, buyers and sellers come together—not necessarily in the same place—to voluntarily exchange goods and services for money. It may be the smallest of transactions, such as downloading an iPhone app for 99 cents, or the $200 million purchase of a passenger jet from Boeing by an airline or a wealthy individual. The market economy consists of all the different markets going on simultaneously.

Today the vast majority of economic activity worldwide is organized by **market transactions:** activities that produce and exchange goods and services that other people are willing to pay for. From poor rice farmers in Cambodia to multimillionaire investment bankers on Wall Street, markets are essential, and this book will show you how they work.

Third, you'll see the ways in which the possibilities of today's economy are expanding. More precisely, at any moment households are limited in what they can purchase by their income and by the range of products and services available (you can't yet buy your own spaceship). Businesses are limited in what they can produce by technology and by their past investments in factories, processes, and materials. Many countries remain poor and thus limited in their economic capabilities.

But these constraints change every day. Some things that were impossible or very expensive a few years ago have now become commonplace. New technologies let us communicate

Economic Milestone

1971 THE FIRST MICROPROCESSOR

The first microprocessor—a "computer on a chip"—was created in 1971 by Intel. At the time, Intel was a small start-up company, and the tiny chip, called the 4004, was designed to run a Japanese calculator. What was new, though, was that the 4004 could be programmed to do a wide variety of tasks. This was the true beginning of the Information Age. Today, Intel is one of the best-known companies in the world, and microprocessors are found in everything from computers and cell phones to televisions and cars.

globally far more cheaply than ever before. Countries that were once poor, such as China and India, have become productive dynamos. The stock market and other financial markets are now far more accessible to ordinary people and small businesses.

For all these reasons, we'll pay special attention to the main forces driving change in today's economy.

AT&T Picturephone

KEY FORCES SHAPING TODAY'S ECONOMY LO1-2

Let's look individually at three of the main forces shaping today's economy: technological change, globalization, and the evolution of financial markets.

Technological Change

LO1-2

Identify three of the main forces shaping today's economy

The forward progress of technology and science is the primary force for economic growth—not just in the United States, but everywhere. From the development of the steam engine, the automobile, and electricity through the creation of computers and the Internet, technological change has been the critical factor in raising living standards.

Technological change, broadly speaking, is any improvement in knowledge that increases the quantity and range of goods and services the economy can deliver. One example of technological change is the introduction of a new electronic product, such as the first microprocessor or the first mobile telephone, that lets people do things they couldn't do before (see the "Economic Milestone" box on page 4). Other examples of technological change include the invention of decaffeinated coffee in 1903 in Germany and the 2013 introduction of a new cure for Hepatitis C, the most common bloodborne infection.

The term "technological change," as economists use it, also applies to new ways of organizing work. For example, in the 1950s, McDonald's became immensely profitable by adapting assembly-line methods to the restaurant industry. The result was "fast food" mass-produced at low prices. Technological change includes creativity in entertainment as well. Walt Disney, who died in 1966, created the animated feature film. Originally hand-drawn by teams of animators, those early films evolved into the computer animation we know today. Early video games, too, represented a form of technological change.

Successful technological change or innovation is much more difficult than it looks. Plenty of ideas look promising at first, but they take years or decades to get turned into successful products or businesses. For example, the first video telephone, which allowed you to see the person on the other end of the call, was demonstrated at the 1964 World's Fair in New York City. This was the AT&T Picturephone, and it was a commercial failure. It wasn't until many years later that videoconferencing became available—first, for businesses, and then for individuals through programs such as Skype and FaceTime.

Most products take multiple attempts to become practical. For example, the Apple iPhone was introduced in 2007. Before that, mobile phones could be used to talk with other people, but they had far less usefulness in terms of downloading information, entertainment, or games.

Technological change is uneven, moving much faster in some industries than others. Although information technology has evolved rapidly in recent decades, the pace of change in energy technologies has been much slower. Despite the rise of electric cars, virtually all cars sold in the United States are still powered by internal combustion engines—a technology first invented in Germany in the 1880s. Nuclear power has turned out to be far more expensive and troublesome than expected, and the 2011 disaster at Japan's Fukushima nuclear power plant has raised more questions about safety. Meanwhile renewable energy sources, such as solar, wind, and hydropower, still provide only 9.4 percent of U.S. energy needs as of 2013.

However, with global climate change on everybody's minds these days, and the price of oil so high, companies and governments have more incentive to invest in developing new energy technologies that either are cheaper or emit fewer greenhouse gases. As a result, the pace of energy-related technological change may accelerate.

TECHNOLOGICAL CHANGE
An improvement in knowledge that increases the quantity and range of goods and services an economy can deliver.

GLOBALIZATION
The increasing exchange of goods, services, ideas, and people among countries.

FINANCIAL MARKETS
The parts of the economy connected with borrowing, investing, or transferring money. Also called the *financial system.*

FINANCIAL SYSTEM
See *financial markets.*

Globalization

Globalization is the increasing exchange of goods, services, ideas, and people among countries. To a greater extent than ever before, we live in a global economy. The United States imports cheese from New Zealand, television sets from Taiwan, fish from Ecuador, tires from Romania, clothing from Turkey . . . the list is almost endless.

But trade in manufactured goods and foodstuffs is only one aspect of globalization. More and more international trade—both exports and imports—consists of intangible services. For example, when you call customer support for your new computer, you may get routed to a call center in India. The services of those Indian customer representatives are being imported into the United States or wherever you might be located.

Global flows of information—ideas, research, entertainment, and other forms of communication—have vastly increased as well. Many more people are also crossing international borders for business, for tourism, or to immigrate permanently. The number of international travelers—not including immigrants—rose by 79 percent from 1998 to 2013.

Why are countries so much more interconnected these days? Technological change is one reason. It is now possible to communicate from virtually any spot on the globe to virtually any other spot at almost no cost. If a retailer like Walmart in the United States is running low on, say, size 12 jeans, it can immediately flash a new order to a clothing factory in China, Thailand, or wherever the production is done.

Technology by itself, however, is not enough to explain the pull of globalization. Most people accept that being open to the global economy brings enormous advantages. Incomes in countries such as Korea, China, and India started rising at a rapid rate only when they focused on becoming exporters—that is, when they produced what the rest of the world wanted.

For a rich country like the United States, a big benefit of foreign trade is access to cheaper goods and services. The price of clothing to American consumers has fallen by 5 percent since 1995, mainly because of soaring imports from low-cost producers overseas. In addition, a global economy greatly expands the size of the potential market for exporters. Companies such as Boeing and Intel, the giant U.S. semiconductor manufacturer, get much of their revenue from outside the United States.

Globalization also acts as a reality check. In an economy walled off from the global economy, it's easy for companies and workers to grow complacent and sluggish. Foreign competition shakes things up, forcing everyone to try harder and to look for better ways of doing things.

Of course, the impact of the global economy is not all positive. Foreign competition can wipe out jobs at home, force down wages and profits, and cause deep-seated insecurity. The flood of cheap imports in recent years, while clearly benefiting American consumers, has ravaged manufacturing industries in the United States, eliminating millions of domestic jobs.

In response to such effects, it's tempting to pull up the drawbridge, close the gates, and pretend the outside world doesn't exist. The United States is a big country; in theory, U.S. factories could produce almost everything we import today, from toys to clothing to computers. Moreover, the stunning rise in domestic oil production in recent years has greatly lessened the U.S. dependence on oil imports.

Yet today, every successful national economy is tied into the broader global economy. Closed economies—that is, ones that are cut off from the rest of the world—may do better in the short run, but history shows they quickly lose their vitality and fall behind. Over time it has become clear that countries that are open to international trade do better than those that are isolated (see "Spotlight: The Chinese Economy").

The Evolution of Financial Markets

The third force driving today's economy forward is the evolution of the financial markets. The **financial markets** (sometimes also called the **financial system**) encompass all parts of the economy that have to do with borrowing, investing, or transferring money. That includes the stock market, where investors can buy and sell shares of companies; the residential mortgage market, where people can borrow money to buy homes; and the venture capital market, where start-up companies can raise funds to finance their early years. The financial markets also include banks, brokerage firms, mutual funds, credit card providers, and financiers. Government regulators, which in the United States include such agencies as the Securities and Exchange Commission and the Federal Reserve Board, are part of the financial markets as well.

Economic Milestone

1983 THE FIRST TOYOTA CAMRY

In 1983, Japan-based carmaker Toyota introduced its Camry model in the United States. The Camry later became the top-selling car in the United States and helped make Japan-based Toyota the top global automaker. Today most Camrys sold in the United States are assembled in Toyota's factory in Georgetown, Kentucky.

SPOTLIGHT: THE CHINESE ECONOMY

If you check the label on your clothing, there's a good chance it will say "Made in China." Your iPhone, if you own one, probably says "Assembled in China" on the back. The same is true for many laptop computers, toys, motorcycles, appliances, and all sorts of other goods.

Thirty years ago, it would have been almost impossible for you to find anything in the United States that was made in China. In 1978, China was the most populous country in the world, with a billion people. But it was also one of the poorest countries, barely able to feed itself and certainly possessing no ability to compete economically with the United States.

Since then, China has undergone one of the great economic transformations in history. Starting in the late 1970s, the government relaxed some aspects of its control over the economy, encouraged markets, and took steps to foster trade with the rest of the world.

The result: China is now the largest global exporter of goods. Perhaps more important, many Chinese are far better off than their parents were 30 years ago. The country still has poor regions and political unrest. The rapid growth has also caused problems like severe air pollution in Beijing and Shanghai. But China, at least, up to this point, is a global economic success story.

Over the long run, the spread of financial markets has helped fuel economic growth. Companies, individuals, and governments can use financial markets to raise money for useful activities. As just one example, Facebook, the social networking company, was able to expand faster because it received venture capital funding.

Most people justifiably have mixed feelings about financial markets, which can experience violent swings. For Americans who have invested their retirement savings in the stock market, these downturns can seem devastating. Over the long run—say, 20 years—the stock market has historically almost always gone up. But in the short run, it is subject to wide swings that can create large fortunes or steal hard-earned investments. Pick the right stock, and you can turn a small stack of money into a much larger pile. But make a bad investment or get caught in a stock market crash, and you can see your life savings disappear.

This popular distrust toward the financial markets was aggravated over the past decade by some particularly violent gyrations in the markets that badly damaged the rest of the economy. We will read much more about this **financial crisis** later in the textbook, but here we will give a quick summary. Between 2000 and 2007, many Americans borrowed more money than their incomes could support. In particular, they borrowed money to buy homes because the prices of homes were rising and seemed like a sure investment.

But when housing prices in much of the country peaked in 2006 and started plunging in 2007, suddenly many Americans found that they owed more money than their homes were worth. The problems hit many financial institutions as well, which had lent large sums of money under the assumption that home prices would keep going up. The result: billions of dollars of losses at big financial institutions. Moreover, there was a danger of a chain reaction, where the losses at one big bank or other financial institution would cause it to fail, and pull down other companies with it. That's why the government had to intervene to keep the financial markets from collapsing in fall 2008.

THE ROLE OF GOVERNMENT LO1-3

In response to the Great Recession and the financial crisis, the U.S. government took aggressive steps to fight unemployment and the economic slowdown. Yet Washington policymakers were criticized both for not doing enough and for interfering too much in the economy.

This debate is an example of a more general concern: Should the economy be guided by politicians and government regulators, or should individuals and private businesses be allowed to make business decisions as they please? This question comes up in all sorts of situations. At one extreme is a **centrally planned economy**, in which most economic activities are controlled by the government. In the past, the Soviet Union—which collapsed in 1991—approached this mode. The government owned all the factories and decided what they would produce, how much, and at what selling price. At the other extreme would be an imaginary economy with few or no government regulations or laws at all—what economists call a **laissez-faire economy**.

LO1-3

Explain the debate over the role of government in the economy.

Obviously, neither of these two extremes is workable. But virtually every debate over economic policy boils down to finding the right balance between government intervention and free competition. Let's get a better idea of what these terms mean.

Economic Competition

The common definition of competition is "a rivalry between contestants to achieve a goal or reward." Workers

FINANCIAL CRISIS
An economic disruption that starts in the financial sector.

CENTRALLY PLANNED ECONOMY
An economy in which most economic activities are controlled by the government.

LAISSEZ-FAIRE ECONOMY
An economy with few government regulations or laws.

compete for jobs and promotions. Universities compete to attract good students. Companies compete for customers or for market dominance. States compete to attract new businesses.

Economic competition is the effort by people and businesses to achieve a desirable outcome, given what everyone else is doing. The most important economic competition happens within the context of a market. Buyers compete to get the best deals at the lowest prices; sellers compete to sell the most products for the highest prices. McDonald's competes with Wendy's to sell hamburgers, while Boeing competes with the European company Airbus to sell passenger airplanes.

History suggests that economic competition—conducted within a fair set of rules—is the most consistent force for growth and progress. A company has a much stronger incentive to innovate and to produce a better and cheaper product if it knows that its rival down the block or across the ocean is trying to take its customers. The influx of inexpensive, reliable cars from Japan in the 1980s forced General Motors, Ford, and Chrysler to improve the reliability of their own cars and to come up with a whole new type of vehicle—the minivan. More recently the success of the hybrid gas–electric cars from Toyota and Honda compelled U.S. auto manufacturers to move more quickly to introduce their own hybrid models.

The most competitive large economy in the world, by most reckonings, is the United States. Developing countries such as China and India have prospered by introducing more elements of a U.S.-style economy, including more competition, start-ups of new companies, and much less top-down management by government.

What is the attraction of the U.S. economic model? The simplest answer is that it has a long track record of success. Despite recent problems, the United States has enjoyed consistently strong economic growth over time. Most people living in the United States enjoy a high living standard, meaning they have ample access to necessities such as food, clothing, and shelter and luxuries such as entertainment and travel. U.S. companies and workers have also shown a remarkable ability to adapt to new technologies and a changing global economy, in part because they have always been used to competing.

Still, the idea of unbridled economic competition with no government intervention troubles many people because it seems to lead to insecurity, waste, and unnecessary hostility. After all, if there is a winner, there must be losers. If companies are competing for the same customers, the one who comes in second may be forced to lay off workers. And economic competition seems to leave behind large pockets of poverty—people who are jobless and homeless.

ECONOMIC COMPETITION
The effort by people and businesses to achieve a desirable outcome, given what everyone else is doing.

GOVERNMENT INTERVENTION
Actions taken by the government to affect the economy.

DEREGULATION
The process of reducing government control over markets.

Government Intervention

Government intervention represents the actions taken by government to affect the economy. Indeed, it would be impossible to do business without basic laws governing fraud and contracts. The government issues money, insures bank deposits so people can trust banks, and regulates the banks and the financial system. Regulations govern the details of daily life. They dictate how our homes are wired and whether our cars have seat belts or airbags, and they ensure that you can use your computer in the same room as your television without the signals creating interference on the screen. The Food and Drug Administration must approve new drugs for safety and usefulness before they can be sold in the United States, and the Federal Aviation Administration certifies new aircraft before they can be flown.

Moreover, the government generally takes responsibility for making sure the economy doesn't fall into deep slumps in which millions of people lose their jobs. This role has been highlighted during the Great Recession. In 2008, the Federal Reserve—the central bank of the United States—lent financial institutions billions of dollars to ensure that they would not fail and drag down the economy when the overheated housing market crashed. Also in 2008, President George W. Bush signed into law the Troubled Asset Relief Program (TARP), which made $700 billion available to help prop up the troubled financial sector. After President Obama took office in 2009, he signed the American Recovery and Reinvestment Act (ARRA), which spent almost $800 billion in an effort to create jobs across the whole economy. After the Great Recession ended, the Federal Reserve kept interest rates low for many years to ensure that the economy did not slip back into a downturn again.

Even during normal times, every country draws a different line between the appropriate role of the government and the appropriate role of private businesses and individuals. In Canada and the United Kingdom, health care is provided by the government. And the Chinese government regularly exercises control over where its citizens live and how many children they can have. For years, families in China were limited to only one child. That "one-child" policy was changed to a "two-child" policy in 2016, but the government control still exists.

In practice, centrally planned economies seem to do poorly over the long run. Top-down management reduces insecurity, but at the cost of reducing incentives to innovate and make improvements. In a competitive economy, businesses react quickly to changing conditions; they don't have any choice if they want to stay in business. And unlike businesses in planned economies, they can use new technology without waiting for permission from a central authority.

Over the past 30 years, most countries have moved in the direction of less intervention by government, a process known as **deregulation**. For example, in the United States, President Jimmy Carter started reducing government control over the airline and trucking industries in the late 1970s. That process was greatly accelerated by President Ronald Reagan when he took office in January 1981.

About the same time on the other side of the globe, Chinese leader Deng Xiaoping began the process of shifting China away from a centrally planned economy. Today, China still has many people working in state-owned factories, but it also has a vibrant private business sector that has made China the largest exporter in the world.

Finding a Balance

In practice, both competition and government are present in every part of the economy. The housing market is a good example. Most homes are built by private developers, not by the government. But developers and builders must work within a framework of zoning rules and construction codes set by the government.

When people want to borrow money to buy a home, they usually go to a private lender (a bank) or a mortgage broker. But the government has arranged the tax code to benefit home buyers who take out mortgages: Mortgage interest payments are typically tax deductible, which helps save households billions in taxes. And in the aftermath of the Great Recession, the government intervened to ensure that mortgage money would keep flowing.

THE DEFINITION OF ECONOMICS LO1-4

Economics is a very broad subject that covers everything from global growth to the price of apples at a local supermarket. That's why we need a broad definition. From a wide perspective, economics is about how we make decisions, given that we can't have everything. To put it more precisely, **economics** is the study of how individuals, businesses, and governments make decisions and trade-offs in the face of scarce resources.

LO1-4

Define economics and discuss how prosperity is measured.

You could be a home owner trying to decide whether to allocate your money to buying a new car or to fixing the roof. Or you could be a business manager trying to decide whether to open a new store or put money into fixing up an existing one. Or you could be a government official choosing whether to create educational scholarships or fund health care for the elderly. In each of these cases, it's necessary to make a trade-off because only a limited amount of money is available.

This way of thinking about economics will be very important in this textbook, especially when we consider the behavior of consumers, workers, and businesses in the early chapters. It reflects the reality of the world.

Indicators of Prosperity

Economics is always concerned with what can be done to improve people's lives, keeping in mind the need to make trade-offs. Ultimately, we judge the success or failure of an economy by the prosperity of its inhabitants. Of course, this leaves open the question of precisely how to measure prosperity. As you will see in this textbook, economists like to quantify (or put numbers on) the things they study, and there are lots of different ways to measure how well an economy and its members are doing.

For example, we can look at the total output of an economy, also called its **gross domestic product** (see "How It Works" on page 10). In an important sense, the more goods and services an economy can produce, the better it is doing. That's why economists want to make sure the total output of the economy keeps growing.

But economists look at other measures as well to gauge economic success. For example, government statisticians produce reams of data on wages and benefits. That's certainly one indicator of how well people are doing. Another important statistic is annual household income, which includes pay for workers plus other sources of money such as Social Security and income from investments. Economists also keep an eye on household consumption, which is the amount of goods and services a typical household consumes in a year.

Depending on which indicator you look at, there can be a big difference in a person's prosperity. For example, a student in college may have no income but may still have a good standard of living, including travel and entertainment. A rich person who is not working won't receive any wage payments but may still have plenty of money from investments.

Then there are non-monetary measures of prosperity. We can survey people and ask them how happy they are. We can look at whether life expectancy—the number of years that people are expected to live—is rising. And we can ask whether the quality of the environment is getting better or worse. Although these indicators are not purely economic, they are still important to an overall feeling of prosperity.

The Safety Net

Any successful modern economy must allow all its members to share in its prosperity. It's not politically or morally acceptable for most of the population to live good lifestyles while a smaller number are much worse off.

That's why the United States and other industrialized countries have a

ECONOMICS
The study of how individuals, businesses, and governments make decisions and trade-offs in the face of scarce resources.

GROSS DOMESTIC PRODUCT (GDP)
The dollar value of the total output of an economy. Based on final goods and services produced in a year.