

essentials of economics

STANLEY L. BRUE

CAMPBELL R. McCONNELL

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The background of the lower half of the cover is composed of numerous overlapping circles in various shades of green, teal, and blue. The circles vary in size and opacity, creating a layered, abstract pattern.

RELEVANT ECONOMIC STATISTICS, UNITED STATES, 1970–1990

	1970	1971	1972	1973	1974	1975	1976	1977
1 Gross domestic product (billions of dollars)	1,038.5	1,127.1	1,238.3	1,382.7	1,500.0	1,638.3	1,825.3	2,030.9
2 Real gross domestic product (billions of 2005 dollars)	4,266.3	4,409.5	4,643.8	4,912.8	4,885.7	4,875.4	5,136.9	5,373.1
3 Economic growth rate (percent change in real GDP)	0.2	3.4	5.3	5.8	-0.5	-0.2	5.3	4.6
4 Consumption expenditures (billions of dollars)	648.5	701.9	770.6	852.4	933.4	1,034.4	1,151.9	1,278.6
5 Gross private domestic investment (billions of dollars)	152.4	178.2	207.6	244.5	249.4	230.2	292.0	361.3
6 Government purchases (billions of dollars)	233.8	246.5	263.5	281.7	317.9	357.7	383.0	414.1
7 Rate of inflation (percent change in CPI)	5.7	4.4	3.2	6.2	11.0	9.1	5.8	6.5
8 Money supply, M1	214.4	228.3	249.1	262.9	274.2	287.1	306.2	330.9
9 Federal funds interest rate (%)	7.17	4.67	4.44	8.74	10.51	5.82	5.05	5.54
10 Prime interest rate (%)	7.91	5.73	5.25	8.03	10.81	7.86	6.84	6.83
11 Population (millions)	205.0	207.7	209.9	211.9	213.8	216.0	218.0	220.2
12 Immigration (thousands)	373.3	370.5	384.7	400.1	394.9	386.2	398.6	462.3
13 Labor force (millions)	82.8	84.4	87.0	89.4	91.9	93.8	96.2	99.0
14 Employment (millions)	78.7	79.4	82.2	85.1	86.8	85.8	88.8	92.0
15 Unemployment rate (%)	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.1
16 Federal budget surplus (+) or deficit (-)	-2.8	-23.0	-23.4	-14.9	-6.1	-53.7	-73.7	-53.7
17 Public debt (billions of dollars)	380.9	406.2	435.9	466.3	483.9	541.9	629.0	706.4
18 Price of crude oil (dollars per barrel)	3.39	3.60	2.85	4.75	9.25	12.21	13.10	14.40
19 Average hourly earnings, private nonagricultural industries (dollars)	3.63	3.90	4.14	4.43	4.73	4.73	5.06	5.44
20 Average weekly hours, private nonagricultural industries	37.0	36.8	36.9	36.9	36.4	36.0	36.1	35.9
21 After-tax manufacturing profits per dollar of sales (cents)*	4.0	4.1	4.3	4.7	5.5	4.6	5.4	5.3
22 Industry research and development expenditures (billions of dollars)	17.6	17.8	19.0	20.7	22.2	23.5	26.1	28.9
23 Net farm income (billions of dollars)	14.4	15.0	19.5	34.4	27.3	25.5	20.2	19.9
24 Federal minimum wage (dollars per hour)	1.60	1.60	1.60	1.60	2.00	2.10	2.30	2.30
25 Poverty rate (% of population)	12.6	12.5	11.9	11.1	11.2	12.3	11.8	11.6
26 Gini ratio for household income distribution**	0.394	0.396	0.401	0.397	0.395	0.397	0.398	0.402
27 Productivity growth, business sector (%)	2.0	4.1	3.2	3.0	-1.6	3.5	3.1	1.7
28 Trade surplus (+) or deficit (-) (billions of dollars)	2.3	-1.3	-5.4	1.9	-4.3	12.4	14.8	-27.2

*Revised definition of this series beginning in 1973.

**Revised definitions have occurred within this series.

Sources: Bureau of Economic Analysis; Bureau of Labor Statistics; *Economic Report of the President, 2012*; U.S. Bureau of the Census; Federal Reserve System; National Science Foundation; U.S. Citizenship and Immigration Services; U.S. Department of Energy.

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
2,294.7	2,563.3	2,789.5	3,128.4	3,255.0	3,536.7	3,933.2	4,220.3	4,462.8	4,739.5	5,103.8	5,484.4	5,803.1
5,672.8	5,850.1	5,834.0	5,982.1	5,865.9	6,130.9	6,571.5	6,843.4	7,080.5	7,307.0	7,607.4	7,879.2	8,027.1
5.6	3.2	-0.2	2.5	-1.9	4.5	7.2	4.1	3.5	3.4	4.1	3.5	1.9
1,428.5	1,592.2	1,757.1	1,941.1	2,077.3	2,290.6	2,503.3	2,720.3	2,899.7	3,100.2	3,353.6	3,598.5	3,839.9
438.0	492.9	479.3	572.4	517.2	564.3	735.6	736.2	746.5	785.0	821.6	874.9	861.0
453.6	500.8	566.2	627.5	680.5	733.5	797.0	879.0	949.3	999.5	1,039.0	1,099.1	1,180.2
7.6	11.3	13.5	10.3	6.2	3.2	4.3	3.6	1.9	3.6	4.1	4.8	5.4
357.3	381.8	408.5	436.7	474.8	521.4	551.6	619.8	724.6	750.2	786.6	792.8	824.8
7.91	11.20	13.35	16.39	12.24	9.09	10.23	8.10	6.80	6.66	7.57	9.21	8.10
9.06	12.67	15.26	18.87	14.85	10.79	12.04	9.93	8.33	8.21	9.32	10.87	10.01
222.6	225.1	227.8	230.0	232.2	234.3	236.3	238.5	240.7	242.8	245.0	247.3	250.1
601.4	460.3	530.6	596.6	594.1	559.8	543.9	570.0	601.7	601.5	643.0	1,091.0	1,536.5
102.3	105.0	106.9	108.7	110.2	111.6	113.5	115.5	117.8	119.9	121.7	123.9	125.8
96.0	98.8	99.3	100.4	99.5	100.8	105.0	107.2	109.6	112.4	115.0	117.3	118.8
6.1	5.8	7.1	7.6	9.7	9.6	7.5	7.2	7.0	6.2	5.5	5.3	5.6
-59.2	-40.7	-73.8	-79.0	-128.0	-207.8	-185.4	-212.3	-221.2	-149.7	-155.2	-152.6	-221.1
776.6	829.5	909.0	994.8	1,137.3	1,371.7	1,564.6	1,817.4	2,120.5	2,346.0	2,601.1	2,867.8	3,206.3
14.95	25.10	37.42	35.75	31.83	29.08	28.75	26.92	14.44	17.75	14.87	18.33	23.19
5.87	6.33	6.84	7.43	7.86	8.19	8.48	8.73	8.92	9.13	9.43	9.80	10.19
35.8	36.6	35.2	35.2	34.7	34.9	35.1	34.9	34.7	34.7	34.6	34.5	34.3
5.4	5.7	4.8	4.7	3.5	4.1	4.6	3.8	3.7	4.9	5.9	4.9	3.9
32.2	37.1	43.2	43.2	57.2	63.7	73.1	82.4	85.9	90.2	94.9	99.9	107.4
25.2	27.4	16.1	26.9	23.8	14.3	26.0	28.5	31.1	38.0	39.6	46.5	46.3
2.65	2.90	3.10	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.80
11.4	11.7	13.0	14.0	15.0	15.2	14.4	14.0	13.6	13.4	13.0	12.8	13.5
0.402	0.404	0.403	0.406	0.412	0.414	0.415	0.419	0.425	0.426	0.427	0.431	0.428
1.1	0.0	-0.2	2.1	-0.8	3.6	2.7	2.3	3.0	0.6	1.5	1.0	2.0
-29.8	-24.6	-19.4	-16.2	-24.2	-57.8	-109.1	-121.9	-138.5	-151.7	-114.6	-93.1	-80.9



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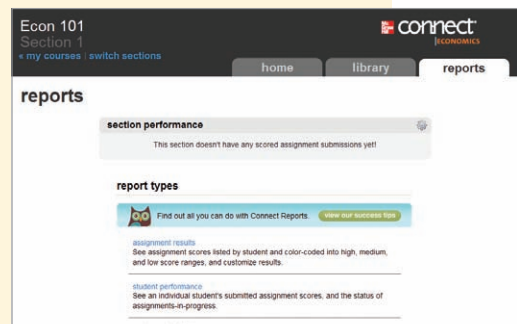
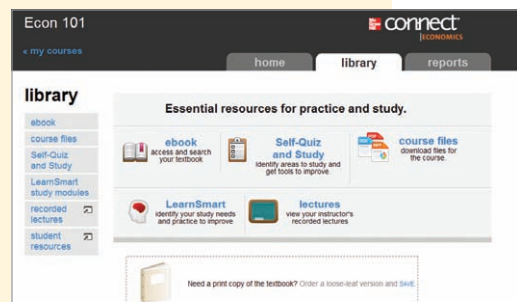
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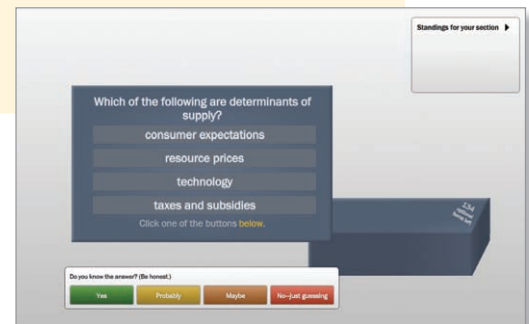
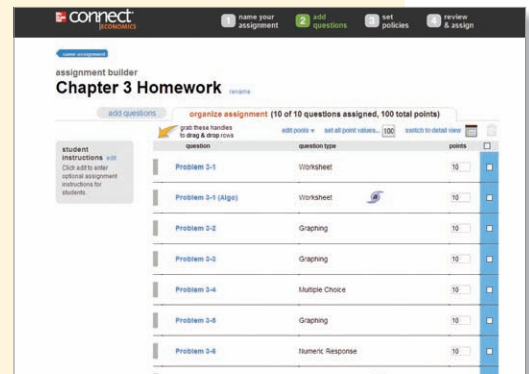
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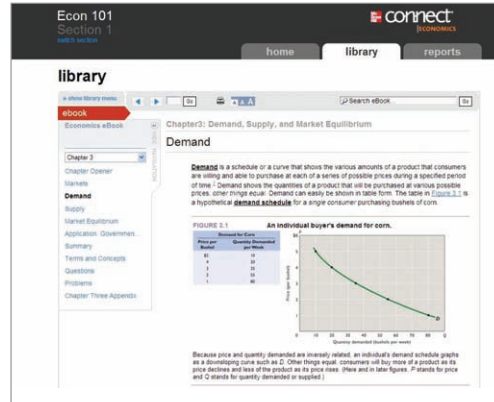


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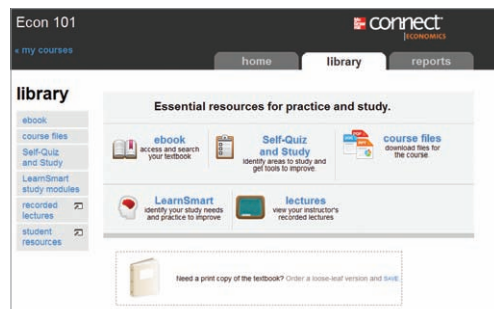
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With the special assistance of

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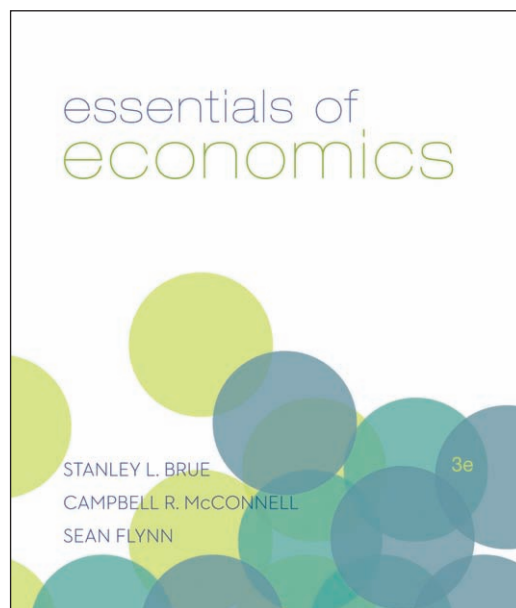
Preface

Welcome to the third edition of *Essentials of Economics*, a one-semester principles of economics text derived from McConnell-Brue-Flynn *Economics*, the best-selling two-semester economics textbook. Over the years numerous instructors have requested a short, one-semester version of *Economics* that would cover both microeconomics and macroeconomics. While some other two-semester books simply eliminate chapters, renumber those that remain, and offer the “cut and splice” version as a customized book, this methodology does not fit with our vision of a tightly focused, highly integrated book. We built this text from scratch, incorporating the core content from *Economics* in a format designed specifically for the one-semester course. This book has the clear and careful language and the balanced approach that has made its two-semester counterpart a best-seller, but the pedagogy and topic discussion are much better suited to the needs of the one-semester course.

We think *Essentials of Economics* will fit nicely in various one-term courses. It is sufficiently lively and focused for use in principles courses populated primarily by nonbusiness majors. Also, it is suitably analytical and comprehensive for use in combined micro and macro principles courses for business and potential economics majors. Finally, we think this book—if supplemented with appropriate lecture and reading assignments—will work well in refresher courses for students returning to MBA programs.

However the book is used, our goals remain the same:

- Help the student master the principles essential for understanding the economic problem, specific economic issues, and policy alternatives.
- Help the student understand and apply the economic perspective and reason accurately and objectively about economic matters.
- Promote a lasting student interest in economics and the economy.



What's New and Improved?

One of the benefits of writing a successful text is the opportunity to revise—to delete the outdated and install the new, to rewrite misleading or ambiguous statements, to introduce more relevant illustrations, to improve the organizational structure, and to enhance the learning aids. We trust that you will agree that we have used this opportunity wisely and fully.

Streamlined Coverage

As part of our ongoing effort to streamline presentation, respond to reviewer input, and keep costs down for students, we have moved some material from the previous edition to our website, www.brue3e.com. The Chapter One appendix on **Graphs and Their Meaning** and the resource market chapters on **Wage Determination** and **Income Inequality and Poverty** (formerly Chapters 10 and 11, respectively) have been moved to the web. Instructors who cover these chapters will find them easily accessible and that updates of the content and supplements have received the same careful attention as the rest of the book.

New Discussions of the Financial Crisis and the Recession

In this edition, we have focused on incorporating an analysis of the financial crisis, the recession, and the hesitant recovery into our discussions of macroeconomics. Although we found many ways to work the recession into our macro chapters, we are confident that our basic macroeconomic models will serve equally well in explaining economic recovery and expansion back to the economy's historical growth path. The new inclusions relating to the recession simply help students see the relevance of the models to what they are seeing in the news and perhaps experiencing in their own lives. The overall tone of the book, including the macro, continues to be optimistic with respect to the long-term growth prospects of market economies.

Reworked End-of-Chapter Questions and Problems

We have extensively reworked the end-of-chapter questions, and we have added new problems to each chapter. The questions are analytic and often ask for free responses, whereas the problems are mainly quantitative. We have aligned the questions and problems with the learning objectives presented at the beginning of the chapters. All of the questions and problems are assignable through McGraw Hill's *Connect Economics*, and many contain additional algorithmic variations and can be automatically graded within the system.

Chapter-by-Chapter Changes

In addition to the changes and new features listed above, chapter-specific revisions include:

Chapter 1: Limits, Alternatives, and Choices features updated discussion of the 2007–2009 recession and streamlined coverage of the main concepts. The **Chapter One Appendix: Graphs and Their Meaning** has been moved to our website, www.brue3e.com.

Chapter 2: The Market System and the Circular Flow includes an improved discussion of the circular flow model, additional coverage of property rights, and updated global data.

Chapter 3: Demand, Supply, and Market Equilibrium begins with a revised introduction to supply and demand and contains additional clarifications of key concepts.

Chapter 4: Elasticity of Demand and Supply provides an updated discussion of elasticity.

Chapter 5: Market Failures: Public Goods and Externalities features improved coverage of market failures, enhanced discussion of public versus private goods, a new

“Illustrating the Idea” piece on the Coase Theorem, and a more complete discussion of correcting for externalities.

Chapter 6: Businesses and Their Costs includes an improved discussion of costs and a new “Applying the Analysis” piece that discusses rising gas prices.

Chapter 7: Pure Competition features revised discussions of pure competition in the long run and efficiency in pure competition, plus an expanded figure illustrating a competitive firm and market in long-run equilibrium.

Chapter 8: Pure Monopoly contains an updated figure showing the inefficiency of pure monopoly relative to a purely competitive industry and a revised discussion of efficiency.

Chapter 9: Monopolistic Competition and Oligopoly includes a revised introduction, an updated figure illustrating the inefficiency of monopolistic competition, and an improved discussion of cartels and collusion.

Chapter 10: GDP and Economic Growth includes a revised discussion of GDP accounting and updated coverage of productivity changes.

Chapter 11: Business Cycles, Unemployment, and Inflation contains a new chapter introduction, an improved discussion of business cycles and their causes, and detailed coverage of current unemployment rates and inflation throughout the world.

Chapter 12: Aggregate Demand and Aggregate Supply features detailed discussion, application, and analysis of the recession of 2007–2009.

Chapter 13: Fiscal Policy, Deficits, and Debt includes important updates related to the recession, the subsequent policy response, and the debt debate.

Chapter 14: Money, Banking, and Financial Institutions provides an extensive discussion of the 2007–2008 financial crisis and the postcrisis financial services industry.

Chapter 15: Interest Rates and Monetary Policy features updated coverage of recent U.S. monetary policy, a new explanation of the liquidity trap, a new discussion of the Fed’s response to the financial crisis, and a new “Applying the Analysis” piece on the Fed’s balance sheet and its extensive growth.

Chapter 16: International Trade and Exchange Rates includes updated material on recent U.S. trade deficits and a revised discussion related to changes in the relative value of the U.S. dollar.

Chapters on Wage Determination and Income Inequality and Poverty have been relocated to our website, www.brue3e.com. Revisions include improved discussion and significant updates to the data on distribution of income, poverty, and income maintenance programs.

Distinguishing Features and Third Edition Changes

Essentials of Economics includes several features that we think add up to a unique whole.

State-of-the-Art Design and Pedagogy

Essentials incorporates a single-column design with a host of pedagogical aids, including a strategically placed “To the Student” statement, chapter opening objectives, definitions in the margins, combined tables and graphs, complete chapter summaries, lists of key terms, carefully constructed study questions, connections to our

To the Student

This book and its ancillaries contain several features designed to help you learn economics.

- **Icons in the margins** A glance through the book reveals many pages with web buttons in the margins. Three differing colored rectangular indicators appear throughout the book, alerting you when complementary content on a subject can be found at our Online Learning Center: www.wwnorton.com. The **Worked Problems** serve as your “cookbook” for problem solving. Numeric problems are presented and then solved, side-by-side, step-by-step. Seeing how the problems are worked will help you solve similar problems on quizzes and exams. Practice hands-on graph work with the **Interactive Graphs** exercises. Manipulate the graphs by clicking on a specific curve and dragging it to a new location. This interaction will enhance your understanding of the underlying concepts. The **Origin of the Idea** pieces trace a particular idea to the person or persons who first developed it.

WORKED PROBLEMS

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Budget lines

INTERACTIVE GRAPHS

G 31

Supply and demand

ORIGIN OF THE IDEA

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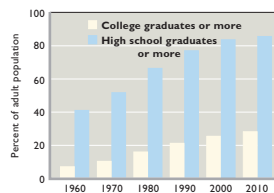
Specialization/division of labor

- **Other Internet aids** Our Internet site contains many other aids. In the student section at the Online Learning Center, you will find self-testing multiple-choice quizzes, PowerPoint slides, and much more.
- **Appendix on graphs** To understand the content in this book, you will need to be comfortable with basic graphical analysis and a few quantitative concepts. The web appendix for Chapter 1 reviews graphing and slopes of curves. Be sure not to skip it.
- **Key terms** Key terms are set in boldface type within the chapters, defined in the margins, listed at the end of each chapter, and again defined in the Glossary toward the end of the book.

FIGURE 10.3

Changes in the educational attainment of the U.S. adult population. The percentage of the U.S. adult population, age 25 or more, completing high school and college (bachelor's degree or higher) has been rising over recent decades.

Source: U.S. Census Bureau, www.census.gov.



Illustrating the Idea

A Bit of a Stretch

The following analogy might help you remember the distinction between “elastic” and “inelastic.” Imagine two objects: (1) an Ace elastic bandage used to wrap injured joints and (2) a relatively firm rubber tie-down used for securing items for transport. The Ace bandage stretches a great deal when pulled with a particular force; the rubber tie-down stretches some, but not a lot.

Similar differences occur for the quantity demanded of various products when their prices change. For some products, a price change causes a substantial “stretch” of quantity demanded. When this stretch in percentage terms exceeds the percentage change in price, demand is elastic. For other products, quantity demanded stretches very little in response to the price change. When this stretch in percentage terms is less than the percentage change in price, demand is inelastic.

website, an appendix on graphs and a web appendix on additional examples of demand and supply, an extensive glossary, and historical statistics on the inside covers.

Focus on Core Models

Essentials of Economics shortens and simplifies explanations where appropriate but stresses the importance of the economic perspective, including explaining and applying core economic models. Our strategy is to develop a limited set of essential models, illustrate them with analogies or anecdotes, explain them thoroughly, and apply them to real-world situations. Eliminating unnecessary graphs and elaborations makes perfect sense in the one-semester course, but cutting explanations of the truly *essential* graphs does not. In dealing with the basics, brevity at the expense of clarity is false economy.

We created a student-oriented one-semester textbook that draws on the methodological strengths of the discipline and helps students improve their analytical reasoning skills. Regardless of students’ eventual majors, they will discover that such skills are highly valuable in their workplaces.

Illustrating the Idea

We include numerous analogies, examples, and anecdotes to help drive home central economic ideas in a lively, colorful, and easy-to-remember way. For instance, elastic versus inelastic demand is illustrated by comparing the stretch of an Ace bandage and that of a tight rubber tie-down. Student exam scores help demonstrate the difference between marginal product and average product. Public goods and the free-rider problem are illustrated by public art, while a pizza analogy walks students through the equity-efficiency trade-off. Inflation as a hidden tax is illustrated by a story of the prince of the realm clipping coins. These brief vignettes flow directly from the preceding content and segue to the content that follows, rather than being “boxed off” away from the flow and therefore easily overlooked.

New to this edition is an *Illustrating the Idea* piece about beekeepers that is used to explain the Coase Theorem.

Applying the Analysis

A glance through this book’s pages will demonstrate that this is an application-oriented textbook. *Applying the Analysis* pieces immediately follow the development of economic analysis and are part of the flow of the chapters, rather than segregated from the main-body discussion in a traditional boxed format. For example, the basics of the economic perspective are applied to why customers tend to try to wait in the shortest checkout lines. The book illustrates inelasticity of demand (with changing supply) with an explanation of fluctuating farm income. Differences in elasticity of

supply are contrasted by the changing prices of antiques versus reproductions. Hidden car-retrieval systems (such as Lojack) explain the concept of positive externalities. The book describes the principal-agent problem via the problems of corporate accounting and financial fraud. The idea of minimum efficient scale is applied to ready-mix concrete plants and assembly plants for large commercial airplanes. The difference in adult and child pricing for tickets to a ballgame compared to the pricing at the concession stands illustrates the concept of price discrimination. The aggregate demand model is applied to specific periods of inflation and recession, while the trade theory discussion touches on the issue of the offshoring of U.S. jobs. These and many other applications clearly demonstrate to beginning students the relevance and usefulness of mastering the basic economic principles and models.

Applications covering rising gasoline prices, the Federal Reserve's balance sheet, and the financial crisis have been added to this edition.

Photo Ops

Photo sets called *Photo Ops* are included throughout the book to add visual interest, break up the density, and highlight important distinctions. Just a few of the many examples are sets of photos on complements versus substitutes in consumption, homogeneous versus differentiated products, economic stocks versus economic flows, substitute resources versus complementary resources, consumer durables versus nondurables versus services, and intermediate versus final goods.

Photo Ops on traffic congestion and holiday lighting contrast negative and positive externalities, large- and small-scale production activities illustrate economies and diseconomies of scale, and Social Security checks and food stamps highlight the differences between social insurance and public assistance.

Web Buttons

We link the book directly to our website, www.brue3e.com, via icons that appear throughout the book to indicate that additional content on a subject can be found online. There are three Button types:

- The teal rectangle to the left directs students to **Interactive Graphs**. Developed under the supervision of Norris Peterson of Pacific Lutheran University, this interactive feature depicts major graphs and instructs students to shift the curves, observe the outcomes, and derive relevant generalizations. This hands-on graph work will greatly reinforce the main graphs and their meaning.
- The green rectangle directs students to **Origins of the Idea**. These brief histories, written by Randy

Price Floors on Wheat

A **price floor** is a minimum price fixed by the government. A price at or above the price floor is legal; a price below it is not. Price floors above equilibrium prices are usually invoked when society feels that the free functioning of the market system has not provided a sufficient income for certain groups of resource suppliers or producers. Supported prices for agricultural products and current minimum wages are two examples of price (or wage) floors. Let's look at the former.

Suppose that many farmers have extremely low incomes when the price of wheat is at its equilibrium value of \$2 per bushel. The government decides to help out by establishing a legal price floor (or "price support") of \$3 per bushel.

What will be the effects? At any price above the equilibrium price, quantity supplied will exceed quantity demanded—that is, there will be a persistent surplus of the product. Farmers will be willing to produce and offer for sale more wheat than private buyers are willing to buy at the \$3 price floor. As we say

Applying the Analysis

price floor
A legally established minimum (above-equilibrium) price for a product.



INTERACTIVE GRAPHS

G 13.1
Crowding out

ORIGIN OF THE IDEA

O 13.1
Crowding out

Crowding-Out Effect

crowding-out effect
A decrease in private investment caused by higher interest rates that result from the federal government's increased borrowing to finance deficits (or debt).

Another potential flaw of fiscal policy is the so-called **crowding-out effect**: An expansionary fiscal policy (deficit spending) may increase the interest rate and reduce investment spending, thereby weakening or canceling the stimulus of the expansionary policy. The rising interest rate might also potentially crowd out interest-sensitive consumption spending (such as purchasing automobiles on credit). But since investment is the most volatile component of GDP, the crowding-out effect focuses its attention on investment and whether the stimulus provided by deficit spending may be partly or even fully neutralized by an offsetting reduction in investment spending.

To see the potential problem, realize that whenever the government borrows money (as it must if it is deficit spending), it increases the overall demand for money. If the monetary authorities are holding the money supply constant, this increase in demand will raise the price paid for borrowing money: the interest rate. Because investment spending varies inversely with the interest rate, some investment will

INTERACTIVE GRAPHS

G 13.1
Crowding out

ORIGIN OF THE IDEA

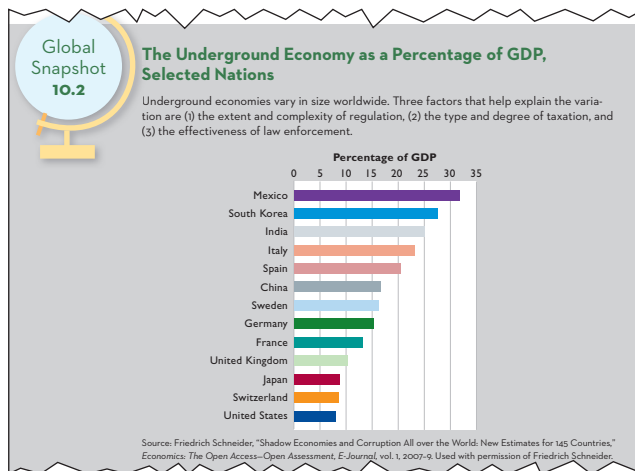
O 13.2
Crowding out

WORKED PROBLEMS

W 1.1
Budget lines

Grant of Linfield College (OR), examine the origins of scores of major ideas identified in the book. Students will find it interesting to learn about the economists who first developed such ideas as opportunity costs, equilibrium price, creative destruction, comparative advantage, and elasticity.

- The blue rectangle to the left is our web button that directs students to **Worked Problems**. Written by Norris Peterson, these pieces consist of side-by-side computational questions and computational procedures used to derive the answers. From a student perspective, they provide “cookbook” help for problem solving.



Global Snapshots

Global Snapshot pieces show bar charts and line graphs that compare data for a particular year or other time period among selected nations. Examples of lists and comparisons include income per capita, the world’s 10 largest corporations, the world’s top brand names, standardized budget deficits or surpluses, the index of economic freedom, sizes of underground economies, rates of economic growth, exports as percentages of GDP, and so forth. These Global Snapshots join other significant international content to help convey that the United States operates in a global economy.

Pedagogical Aids

Supplements for Students

Essentials of Economics, 3e is accompanied by many high-quality supplements that help students master the subject.

- **Study Guide** One of the world’s leading experts on economic education—William Walstad of the University of Nebraska at Lincoln—has prepared the *Study Guide*. Each chapter contains an introductory statement, a checklist of behavioral objectives, an outline, a list of important terms, fill-in questions, problems and projects, objective questions, and discussion questions. The text’s glossary is repeated in the *Study Guide* so that the student does not have to go back and forth between books. Many students will find this printed “portable tutor” indispensable.
- **Online Learning Center** (www.brue3e.com) Along with the *Interactive Graphs*, *Worked Problems*, and *Origin of the Idea* pieces, the student portion of the website includes many learning aids for students. For example, there are web-based study questions, self-grading quizzes updated and revised by Emilio Gomez of Palomar College, learning objectives, and PowerPoint presentations—all specific to *Essentials of Economics*, 3e. Students can also access the Solman videos, a set of more than 250 minutes of video created by Paul Solman of *The News Hour with Jim Lehrer*. These videos cover core economic concepts such as elasticity, deregulation, and perfect competition. Students can watch this material on their computers or download the content to a smartphone or tablet.

Digital Solutions

McGraw-Hill's *Connect™ Economics* 

Less Managing. More Teaching. Greater Learning. McGraw-Hill's *Connect Economics* is a web-based assignment and assessment platform that connects students with the tools and resources they'll need to achieve success. *Connect Economics* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge. *Connect Economics* offers a number of powerful tools and features to make managing assignments easier, so faculty can spend more time teaching. With *Connect Economics*, students can engage with their coursework anytime and anywhere, making the learning process more accessible and efficient. *Connect Economics* offers the features as described here.

Simple Assignment Management With *Connect Economics*, creating assignments is easier than ever, so you can spend more time teaching and less time managing. The assignment management function enables you to

- Create and deliver assignments easily with selectable end-of-chapter questions and test bank items.
- Streamline lesson planning, student progress reporting, and assignment grading to make classroom management more efficient than ever.
- Go paperless with the e-book and online submission and grading of student assignments.

Smart Grading When it comes to studying, time is precious. *Connect Economics* helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. When it comes to teaching, your time also is precious. The grading function enables you to

- Score assignments automatically, giving students immediate feedback on their work and side-by-side comparisons with correct answers.
- Access and review each response; manually change grades or leave comments for students to review.
- Reinforce classroom concepts with practice tests and instant quizzes.

Instructor Library The *Connect Economics* Instructor Library is your repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture.

Student Study Center The *Connect Economics* Student Study Center is the place for students to access additional resources. The Student Study Center

- Offers students quick access to lectures, practice materials, e-book, and more.
- Provides instant practice material and study questions, easily accessible on the go.
- Gives students access to the Self-Quiz and Study described below.

LearnSmart: Diagnostic and Adaptive Learning of Concepts Students want to make the best use of their study time. The LearnSmart adaptive self-study technology within *Connect Economics* provides students with a seamless combination of practice, assessment, and remediation for the most important concepts in the course. LearnSmart's intelligent software adapts to every student response and automatically delivers concepts that advance the student's understanding while reducing time devoted to

 LearnSmart

the concepts already mastered. The result for every student is the fastest path to mastery of core concepts. LearnSmart

- Applies an intelligent concept engine to identify the relationships between concepts and to serve new concepts to each student only when he or she is ready.
- Adapts automatically to each student, so students spend less time on the topics they understand and practice more those they have yet to master.
- Provides continual reinforcement and remediation, but gives only as much guidance as students need.
- Integrates diagnostics as part of the learning experience.
- Enables you to assess which concepts students have efficiently learned on their own, thus freeing class time for more applications and discussion.

Self-Quiz and Study The Self-Quiz and Study (SQS) connects each student to the learning resources needed for success in the course. For each chapter, students

- Take a practice test to initiate the Self-Quiz and Study.
- Immediately upon completing the practice test, see how their performance compares to chapter Learning Objectives to be achieved within each section of the chapter.
- Receive a Study Plan that recommends specific readings from the text, supplemental study material, and practice work that will improve their understanding and mastery of each learning objective.

Student Progress Tracking *Connect Economics* keeps instructors informed about how each student, section, and class are performing, allowing for more productive use of lecture and office hours. The progress-tracking function enables you to

- View scored work immediately and track individual or group performance with assignment and grade reports.
- Access an instant view of student or class performance relative to learning objectives.
- Collect data and generate reports required by many accreditation organizations, such as AACSB.

Lecture Capture Increase the attention paid to lecture discussion by decreasing the attention paid to note taking. For an additional charge, Lecture Capture offers new ways for students to focus on the in-class discussion, knowing they can revisit important topics later. Lecture Capture enables you to

- Record and distribute your lecture with a click of a button.
- Record and index PowerPoint presentations and anything shown on your computer so it is easily searchable, frame by frame.
- Offer access to lectures anytime and anywhere by computer, iPod, or mobile device.
- Increase intent listening and class participation by easing students' concerns about note-taking.

Lecture Capture will make it more likely you will see students' faces, not the tops of their heads.

- To learn more about Tegrity, watch a 2-minute Flash demo at <http://tegritycampus.mhhe.com>.

McGraw-Hill's Connect™ Plus Economics McGraw-Hill reinvents the textbook learning experience for the modern student with *Connect Plus Economics*. A seamless integration of an e-book and *Connect Economics*, *Connect Plus Economics* provides all of the features mentioned above plus the following:

- An integrated e-book, allowing for anytime, anywhere access to the textbook.
- Dynamic links between the problems or questions you assign to your students and the location in the e-book where that problem or question is covered.
- A powerful search function to pinpoint and connect key concepts in a snap.

In short, *Connect Economics* offers you and your students powerful tools and features that optimize your time and energies, enabling you to focus on course content, teaching, and student learning.

For more information about Connect, please visit www.mcgrawhillconnect.com, or contact your local McGraw-Hill sales representative.

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CourseSmart

CourseSmart is a new way for faculty to find and review e-textbooks. It's also a great option for students who are interested in accessing their course materials digitally. CourseSmart offers thousands of the most commonly adopted textbooks across hundreds of courses from a wide variety of higher education publishers. It is the only place for faculty to review and compare the full text of a textbook online. At CourseSmart, students can save up to 50 percent off the cost of a print book, reduce their impact on the environment, and gain access to powerful web tools for learning including full text search, notes and highlighting, and e-mail tools for sharing notes between classmates. Your e-book also includes tech support in case you ever need help. Finding your e-book is easy. Visit www.CourseSmart.com and search by title, author, or ISBN.



Online Learning Center

At www.brue3e.com students have access to several learning aids. Along with the Interactive Graphs, Worked Problems, and Origin of the Idea pieces, the student portion of the website includes web-based study questions, self-grading quizzes, and PowerPoint presentations. For math-minded students, there is a "See the Math" section, written by Norris Peterson, where the mathematical details of the concepts in the text can be explored.

The password-protected instructor's side of the Online Learning Center holds all of the supplementary instructor resource materials.



Premium Content

The Premium Content, available at the Online Learning Center, enables students to study and self-test on their computer or on the go.

- One of the world's leading experts on economic education—William Walstad of the University of Nebraska at Lincoln—has prepared the *Study Guide*. Each chapter contains an introductory statement, a checklist of behavioral objectives, an outline, a list of important terms, fill-in questions, problems and projects, objective questions, and discussion questions. Many students will find this “digital tutor” indispensable.
- The Solman Videos, a set of more than 250 minutes of video created by Paul Solman of *The News Hour with Jim Lehrer*, cover core economic concepts such as elasticity, deregulation, and perfect competition.

Supplements for Instructors

Instructor's Manual

Amy Stapp of Cuesta College prepared the Instructor's Manual. It includes chapter learning objectives, outlines, and summaries; numerous teaching suggestions; discussions of “student stumbling blocks;” listings of data and visual aid sources with suggestions for classroom use; and sample chapter quizzes. Available in MS Word on the instructor's side of the website, the manual enables instructors to print portions of the contents, complete with their own additions and alterations, for use as student handouts or in whatever ways they wish.

Test Bank

The *Essentials of Economics* Test Bank, originally written by William Walstad and newly compiled and updated by Mark Wilson of West Virginia University and Jeffrey Phillips of Colby-Sawyer College, contains multiple choice and true-false questions. Each question is tied to a learning objective, topic, and AACSB Assurance of Learning and Bloom's Taxonomy guidelines. While crafting tests in EZTest Online, instructors can use the whole chapter, scramble questions, and narrow the group by selecting the criteria. The Test Bank is also available in MS Word on the instructor's side of the website.

PowerPoint Presentations

Amy Chatagner of Mississippi Gulf Coast Community College created these in-depth slides to accompany lectures. The slides highlight all the main points of each chapter and include all of the figures and key tables from the text, as well as additional discussion notes. Each slide is tied to a learning objective.

Digital Image Library

Every graph and table in the text is available on the website. These figures allow instructors to create their own PowerPoint presentations and lecture materials.

Computerized Test Bank Online

A comprehensive bank of test questions is provided within McGraw-Hill's flexible electronic testing program EZ Test Online, www.eztestonline.com. EZ Test Online allows instructors to simply and quickly create tests or quizzes for their students. Instructors can select questions from multiple McGraw-Hill test banks or author their own, and then either print the finalized test or quiz for paper distribution or publish it online for access via the Internet.

This user-friendly program allows instructors to sort questions by format; select questions by learning objectives or Bloom's taxonomy tags; edit existing questions or add new ones; and scramble questions for multiple versions of the same test. Instructors can export their tests for use in WebCT, Blackboard, and PageOut, making it easy to share assessment materials with colleagues, adjuncts, and TAs. Instant scoring and feedback are provided, and EZ Test Online's record book is designed to easily export to instructor gradebooks.

Assurance of Learning Ready

Many educational institutions today are focused on the notion of *assurance of learning*, an important element of many accreditation standards. *Essentials of Economics*, 3rd edition 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 content. Every Test Bank question for *Essentials of Economics* maps to a specific chapter learning objective in the textbook. Each Test Bank question also identifies topic area, level of difficulty, Bloom's Taxonomy level, and AACSB skill area. You can use our Test Bank software, *EZ Test* and *EZ Test Online*, 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 *EZ Test* 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, *Essentials of Economics* recognizes the curriculum guidelines detailed in the AACSB standards for business accreditation by connecting selected questions in the text and the Test Bank to the general knowledge and skill guidelines in the AACSB standards.

The statements contained in *Essentials of Economics* 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 *Essentials of Economics* and the teaching package make no claim of any specific AACSB qualification or evaluation, we have, within *Essentials of Economics*, labeled selected questions according to the six general knowledge and skills areas.

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We also want to acknowledge Norris Peterson of Pacific Lutheran University, who created the See the Math pieces and the Worked Problem pieces on our website. Professor Peterson also oversaw the development of the Interactive Graph pieces that are on the site. Finally, we wish to acknowledge William Walstad and Tom Barbiero (the coauthor of the Canadian edition of *Economics*) for their ongoing ideas and insights.

We are greatly indebted to an all-star group of professionals at McGraw-Hill—in particular Douglas Reiner, Christina Kouvelis, Casey Rasch, and Pat Frederickson, Katie White, and Brent Gordon for their publishing and marketing expertise. We thank Keri Johnson and Michelle Buhr for their selection of Photo Op images. Matt Diamond provided the vibrant interior design and cover.

The third edition has benefited from a number of perceptive formal reviews. The reviewers, listed at the end of the preface, were a rich source of suggestions for this revision. To each of you, and others we may have inadvertently overlooked, thank you for your considerable help in improving *Essentials of Economics*.

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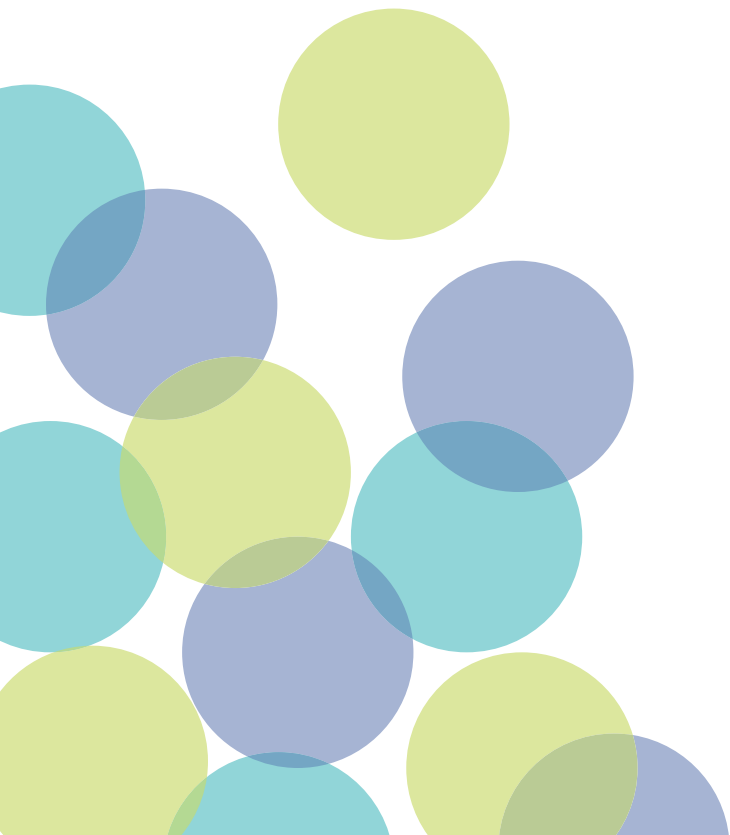
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PART ONE

Introduction

- 1 Limits, Alternatives, and Choices
- 2 The Market System and the Circular Flow



To the Student

This book and its ancillaries contain several features designed to help you learn economics:

- **Icons in the margins** A glance through the book reveals many pages with web buttons in the margins. Three differing colored rectangular indicators appear throughout the book, alerting you when complementary content on a subject can be found at our Online Learning Center, www.brue3e.com. The **Worked Problems** serve as your “cookbook” for problem solving. Numeric problems are presented and then solved, side-by-side, step-by-step. Seeing how the problems are worked will help you solve similar problems on quizzes and exams. Practice hands-on graph work with the **Interactive Graphs** exercises. Manipulate the graphs by clicking on a specific curve and dragging it to a new location. This interaction will enhance your understanding of the underlying concepts. The **Origin of the Idea** pieces trace a particular idea to the person or persons who first developed it.

WORKED PROBLEMS

W 1.1

Budget lines

INTERACTIVE GRAPHS

G 3.1

Supply and demand

ORIGIN OF THE IDEA

O 2.2

Specialization/division of labor

- **Other Internet aids** Our Internet site contains many other aids. In the student section at the Online Learning Center, you will find self-testing multiple-choice quizzes, PowerPoint slides, and much more.
- **Appendix on graphs** To understand the content in this book, you will need to be comfortable with basic graphical analysis and a few quantitative concepts. The web appendix for Chapter 1 reviews graphing and slopes of curves. Be sure not to skip it.
- **Key terms** Key terms are set in boldface type within the chapters, defined in the margins, listed at the end of each chapter, and again defined in the Glossary toward the end of the book.
- **“Illustrating the Idea” and “Applying the Analysis”** These sections flow logically and smoothly from the content that precedes them. They are part and parcel of the development of the ideas and cannot be skipped. Each “Illustrating the Idea” and “Applying the Analysis” section is followed by a question.
- **Questions and Problems** The end of each chapter features separate sections of Questions and Problems. The Questions are analytic and often ask for free responses, while the Problems are more computational. Each is keyed to a particular learning objective (LO) in the list of LOs at the beginning of the chapter. At the Online Learning Center, there are multiple-choice quizzes and one or more web-based questions for each chapter.
- **Study Guide** We enthusiastically recommend the *Study Guide* accompanying this text. This “portable tutor” contains not only a broad sampling of various kinds of questions but a host of useful learning aids.

Our two main goals are to help you understand and apply economics and help you improve your analytical skills. An understanding of economics will enable you to comprehend a whole range of economic, social, and political problems that otherwise would seem puzzling and perplexing. Also, your study will enhance reasoning skills that are highly prized in the workplace.

Good luck with your study. We think it will be well worth your time and effort.

CHAPTER ONE

Limits, Alternatives, and Choices

After reading this chapter, you should be able to:

1. Define economics and the features of the economic perspective.
2. Describe the role of economic theory in economics.
3. Distinguish microeconomics from macroeconomics.
4. List the categories of scarce resources and delineate the nature of the economizing problem.
5. Apply production possibilities analysis, increasing opportunity costs, and economic growth.
6. (Web appendix) Understand graphs, curves, and slopes as they relate to economics.

(An appendix on understanding graphs can be found on the textbook website. If you need a quick review of this mathematical tool, you might benefit by reading the appendix first.)

Economics is about wants and means. Biologically, people need only air, water, food, clothing, and shelter. But in modern society people also desire goods and services that provide a more comfortable or affluent standard of living. We want bottled water, soft drinks, and fruit juices, not just water from the creek. We want salads, burgers, and pizzas, not just berries and nuts. We want jeans, suits, and coats, not just woven reeds. We want apartments, condominiums, or houses, not just mud huts. And, as the saying goes, “That’s not the half of it.” We also want flat-panel TVs, Internet service, education, homeland security, cell phones, and much more.

Fortunately, society possesses productive resources such as labor and managerial talent, tools and machinery, and land and mineral deposits. These resources, employed in the economic system (or simply the economy), help us produce goods and services that satisfy many of our economic wants.

ORIGIN OF THE IDEA

O 1.1

Origin of the term “economics”

But the blunt reality is that our economic wants far exceed the productive capacity of our scarce (limited) resources. We are forced to make choices. This unyielding truth underlies the definition of **economics**, which is the social science concerned with how individuals, institutions, and society make choices under conditions of scarcity.

The Economic Perspective

economics

The study of how people, institutions, and society make economic choices under conditions of scarcity.

economic perspective

A viewpoint that envisions individuals and institutions making rational decisions by comparing the marginal benefits and marginal costs of their actions.

opportunity cost

The value of the good, service, or time forgone to obtain something else.

Economists view things through a particular perspective. This **economic perspective**, or economic way of thinking, has several critical and closely interrelated features.

Scarcity and Choice

From our definition of economics, it is easy to see why economists view the world through the lens of scarcity. Scarce economic resources mean limited goods and services. Scarcity restricts options and demands choices. Because we “can’t have it all,” we must decide what we will have and what we must forgo.

At the core of economics is the idea that “there is no free lunch.” You may be treated to lunch, making it “free” to you, but someone bears a cost. Because all resources are either privately or collectively owned by members of society, ultimately, scarce inputs of land, equipment, farm labor, the labor of cooks and waiters, and managerial talent are required. Because these resources could have been used to produce something else, society sacrifices those other goods and services in making the lunch available. Economists call such sacrifices **opportunity costs**: To obtain more of one thing, society forgoes the opportunity of getting the next best thing. That sacrifice is the opportunity cost of the choice.

Illustrating the Idea

Did Gates, Winfrey, and Rodriguez Make Bad Choices?

The importance of opportunity costs in decision making is illustrated by different choices people make with respect to college. College graduates usually earn about 50 percent more during their lifetimes than persons with just high school diplomas. For most capable students, “Go to college, stay in college, and earn a degree” is very sound advice.

Yet Microsoft cofounder Bill Gates and talk-show host Oprah Winfrey* both dropped out of college, and baseball star Alex Rodriguez (“A-Rod”) never even bothered to enroll. What were they thinking? Unlike most students, Gates faced enormous opportunity costs for staying in college. He had a vision for his company, and his starting work young helped ensure Microsoft’s success. Similarly, Winfrey landed a spot in local television news when she was a teenager, eventually producing and starring in the *Oprah Winfrey Show* when she was 32 years old. Getting a degree in her twenties might have interrupted the string of successes that made her famous talk show possible. And Rodriguez knew that professional athletes have short careers. Therefore, going to college directly after high school would have taken away four years of his peak earning potential.

So Gates, Winfrey, and Rodriguez understood opportunity costs and made their choices accordingly. The size of opportunity costs greatly matters in making individual decisions.

Question:

Professional athletes sometimes return to college after they retire from professional sports. How does that college decision relate to opportunity costs?

* Winfrey eventually went back to school and earned a degree from Tennessee State University when she was in her thirties.

Purposeful Behavior

Economics assumes that human behavior reflects “rational self-interest.” Individuals look for and pursue opportunities to increase their **utility**: pleasure, happiness, or satisfaction. They allocate their time, energy, and money to maximize their satisfaction. Because they weigh costs and benefits, their decisions are “purposeful” or “rational,” not “random” or “chaotic.”

Consumers are purposeful in deciding what goods and services to buy. Business firms are purposeful in deciding what products to produce and how to produce them. Government entities are purposeful in deciding what public services to provide and how to finance them.

“Purposeful behavior” does not assume that people and institutions are immune from faulty logic and therefore are perfect decision makers. They sometimes make mistakes. Nor does it mean that people’s decisions are unaffected by emotion or the decisions of those around them. People sometimes are impulsive or emulative. “Purposeful behavior” simply means that people make decisions with some desired outcome in mind.

Nor is rational self-interest the same as selfishness. We will find that increasing one’s own wage, rent, interest, or profit normally requires identifying and satisfying somebody else’s want. Also, many people make personal sacrifices to others without expecting any monetary reward. They contribute time and money to charities because they derive pleasure from doing so. Parents help pay for their children’s education for the same reason. These self-interested, but unselfish, acts help maximize the givers’ satisfaction as much as any personal purchase of goods or services. Self-interested behavior is simply behavior designed to increase personal satisfaction, however it may be derived.

utility

The satisfaction obtained from consuming a good or service.

ORIGIN OF THE IDEA

○ 1.2
Utility

Marginalism: Comparing Benefits and Costs

The economic perspective focuses largely on **marginal analysis**—comparisons of marginal benefits and marginal costs. To economists, “marginal” means “extra,” “additional,” or “a change in.” Most choices or decisions involve changes in the status quo, meaning the existing state of affairs.

Should you attend school for another year? Should you study an extra hour for an exam? Should you supersize your fries? Similarly, should a business expand or reduce its output? Should government increase or decrease its funding for a missile defense system?

Each option involves marginal benefits and, because of scarce resources, marginal costs. In making choices rationally, the decision maker must compare those two amounts. Example: You and your fiancée are shopping for an engagement ring. Should you buy a $\frac{1}{2}$ -carat diamond, a $\frac{3}{8}$ -carat diamond, a $\frac{1}{4}$ -carat diamond, a 1-carat diamond, or something even larger? The marginal cost of a larger-size diamond is the added expense beyond the cost of the smaller-size diamond. The marginal benefit is the perceived greater lifetime pleasure (utility) from the larger-size stone. If the marginal benefit of the larger diamond exceeds its marginal cost (and you can afford it), buy the larger stone. But if the marginal cost is more than the marginal benefit, you should buy the smaller diamond instead—even if you can afford the larger stone!

marginal analysis

The comparison of marginal (“extra” or “additional”) benefits and marginal costs, usually for decision making.

ORIGIN OF THE IDEA

○ 1.3
Marginal analysis

In a world of scarcity, the decision to obtain the marginal benefit associated with some specific option always includes the marginal cost of forgoing something else. The money spent on the larger-size diamond means forgoing some other product. An opportunity cost, the value of the next best thing forgone, is always present whenever a choice is made.



Applying the Analysis

Fast-Food Lines

The economic perspective is useful in analyzing all sorts of behaviors. Consider an everyday example: the behavior of fast-food customers. When customers enter the restaurant, they go to the shortest line, believing that line will minimize their time cost of obtaining food. They are acting purposefully; time is limited, and people prefer using it in some way other than standing in a long line.

If one fast-food line is temporarily shorter than other lines, some people will move to that line. These movers apparently view the time saving from the shorter line (marginal benefit) as exceeding the cost of moving from their present line (marginal cost). The line switching tends to equalize line lengths. No further movement of customers between lines occurs once all lines are about equal.

Fast-food customers face another cost-benefit decision when a clerk opens a new station at the counter. Should they move to the new station or stay put? Those who shift to the new line decide that the time saving from the move exceeds the extra cost of physically moving. In so deciding, customers must also consider just how quickly they can get to the new station compared with others who may be contemplating the same move. (Those who hesitate in this situation are lost!)

Customers at the fast-food establishment do not have perfect information when they select lines. Thus, not all decisions turn out as expected. For example, you might enter a short line and find someone in front of you is ordering hamburgers and fries for 40 people in the Greyhound bus parked out back (and the employee is a trainee)! Nevertheless, at the time you made your decision, you thought it was optimal.

Finally, customers must decide what food to order when they arrive at the counter. In making their choices, they again compare marginal costs and marginal benefits in attempting to obtain the greatest personal satisfaction for their expenditure.

Economists believe that what is true for the behavior of customers at fast-food restaurants is true for economic behavior in general. Faced with an array of choices, consumers, workers, and businesses rationally compare marginal costs and marginal benefits in making decisions.

Question:

Have you ever gone to a fast-food restaurant only to observe long lines and then leave? Use the economic perspective to explain your behavior.

scientific method

The systematic pursuit of knowledge by observing facts and formulating and testing hypotheses to obtain theories, principles, and laws.



Theories, Principles, and Models

Like the physical and life sciences, as well as other social sciences, economics relies on the **scientific method**. That procedure consists of several elements:

- Observing real-world behavior and outcomes.

- Based on those observations, formulating a possible explanation of cause and effect (hypothesis).
- Testing this explanation by comparing the outcomes of specific events to the outcome predicted by the hypothesis.
- Accepting, rejecting, or modifying the hypothesis, based on these comparisons.
- Continuing to test the hypothesis against the facts. As favorable results accumulate, the hypothesis evolves into a *theory*. A very well-tested and widely accepted theory is referred to as a *law* or *principle*. Combinations of such laws or principles are incorporated into *models*, which are simplified representations of how something works, such as a market or segment of the economy.

Economists develop theories of the behavior of individuals (consumers, workers) and institutions (businesses, governments) engaged in the production, exchange, and consumption of goods and services. Economic theories and **principles** are statements about economic behavior or the economy that enable prediction of the probable effects of certain actions. They are “purposeful simplifications.” The full scope of economic reality itself is too complex and bewildering to be understood as a whole. In developing theories and principles, economists remove the clutter and simplify.

principles

Statements about economic behavior that enable prediction of the probable effects of certain actions.

Economic principles and models are highly useful in analyzing economic behavior and understanding how the economy operates. They are the tools for ascertaining cause and effect (or action and outcome) within the economic system. Good theories do a good job of explaining and predicting. They are supported by facts concerning how individuals and institutions actually behave in producing, exchanging, and consuming goods and services.

There are some other things you should know about economic principles:

- **Generalizations** Economic principles are *generalizations* relating to economic behavior or to the economy itself. Economic principles are expressed as the tendencies of typical or average consumers, workers, or business firms. For example, economists say that consumers buy more of a particular product when its price falls. Economists recognize that some consumers may increase their purchases by a large amount, others by a small amount, and a few not at all. This “price-quantity” principle, however, holds for the typical consumer and for consumers as a group.
- **Other-things-equal assumption** Like other scientists, economists use the *ceteris paribus* or **other-things-equal assumption** to construct their theories. They assume that all variables except those under immediate consideration are held constant for a particular analysis. For example, consider the relationship between the price of Pepsi and the amount of it purchased. It helps to assume that, of all the factors that might influence the amount of Pepsi purchased (for example, the price of Pepsi, the price of Coca-Cola, and consumer incomes and preferences), only the price of Pepsi varies. The economist can then focus on the relationship between the price of Pepsi and purchases of Pepsi in isolation without being confused by changes in other variables.
- **Graphical expression** Many economic models are expressed graphically. Be sure to read the special web appendix for this chapter as a review of graphs.

ORIGIN OF THE IDEA

O 1.4
Ceteris paribus

other-things-equal assumption

The assumption that factors other than those being considered do not change.

Microeconomics and Macroeconomics

Economists develop economic principles and models at two levels.

Microeconomics

microeconomics

The part of economics concerned with individual decision-making units, such as a consumer, a worker, or a business firm.

Microeconomics is the part of economics concerned with decision making by individual consumers, households, and business firms. At this level of analysis, we observe the details of their behavior under a figurative microscope. We measure the price of a specific product, the number of workers employed by a single firm, the revenue or income of a particular firm or household, or the expenditures of a specific firm, government entity, or family.

Macroeconomics

macroeconomics

The part of economics concerned with the economy as a whole or major components of the economy.

Macroeconomics examines either the economy as a whole or its basic subdivisions or aggregates, such as the government, household, and business sectors. An **aggregate** is a collection of specific economic units treated as if they were one unit. Therefore, we might lump together the millions of consumers in the U.S. economy and treat them as if they were one huge unit called “consumers.”

aggregate

A collection of specific economic units treated as if they were one unit.

In using aggregates, macroeconomics seeks to obtain an overview, or general outline, of the structure of the economy and the relationships of its major aggregates. Macroeconomics speaks of such economic measures as total output, total employment, total income, aggregate expenditures, and the general level of prices in analyzing various economic problems. Very little attention is given to specific units making up the various aggregates.



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Photo Op Micro versus Macro

Figuratively, microeconomics examines the sand, rock, and shells, not the beach; in contrast, macroeconomics examines the beach, not the sand, rocks, and shells.

Individual's Economic Problem

It is clear from our previous discussion that both individuals and society face an **economic problem**: They need to make choices because economic wants are unlimited, but the means (income, time, resources) for satisfying those wants are limited. Let's first look at the economic problem faced by individuals. To explain the idea, we will construct a very simple microeconomic model.

economic problem

The need for individuals and society to make choices because wants exceed means.

Limited Income

We all have a finite amount of income, even the wealthiest among us. Sure Bill Gates earns a bit more than the rest of us, but he still has to decide how to spend his money! And the majority of us have much more limited means. Our income comes to us in the form of wages, interest, rent, and profit, although we may also receive money from government programs or family members. As Global Snapshot 1.1 shows, the average income of Americans in 2010 was \$47,390. In the poorest nations, it was less than \$500.

Average Income, Selected Nations

Average income (total income/population) and therefore typical budget constraints vary greatly among nations.

Country	Per Capita Income, 2010*
Switzerland	\$71,530
United States	47,390
France	42,390
Japan	41,850
South Korea	19,890
Mexico	8,890
Brazil	9,390
China	4,270
Nigeria	1,180
Pakistan	1,050
Zimbabwe	460
Liberia	200

*U.S. dollars.

Source: World Bank, www.worldbank.org.

