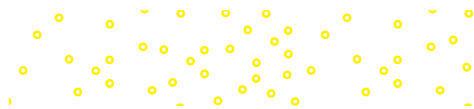


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# microeconomics



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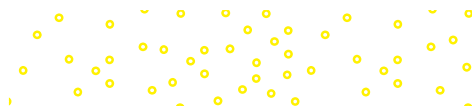
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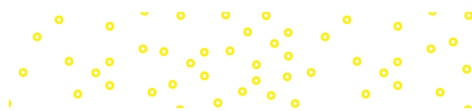
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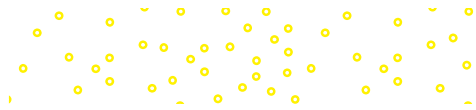
# THE SEVEN VERSIONS OF MCCONNELL, BRUE, FLYNN

<i>Economics 22e</i> Chapter Title	<i>Economics 22e</i>	<i>Microeconomics 22e</i>	<i>Macroeconomics 22e</i>	<i>Economics Brief Edition 3e</i>	<i>Microeconomics Brief Edition 3e</i>	<i>Macroeconomics Brief Edition 3e</i>	<i>Essentials of Economics 4e</i>
Limits, Alternatives, and Choices	x	x	x	x	x		x
The Market System and the Circular Flow	x	x	x	x	x		x
Demand, Supply, and Market Equilibrium	x	x	x	x	x		x
Market Failures Caused by Externalities & Asymmetric Information	x	x	x	x	x		x
Public Goods, Public Choice, and Government Failure	x	x	x	x	x		x
Elasticity	x	x		x	x		x
Utility Maximization	x	x		x	x		x
Behavioral Economics	x	x		x	x		
Businesses and the Costs of Production	x	x		x	x		x
Pure Competition in the Short Run	x	x		x	x		x
Pure Competition in the Long Run	x	x		x	x		x
Pure Monopoly	x	x		x	x		x
Monopolistic Competition	x	x		x	x		x
Oligopoly and Strategic Behavior	x	x		x	x		x
Technology, R&D, and Efficiency	x	x					
The Demand for Resources	x	x					
Wage Determination	x	x		x	x		
Rent, Interest, and Profit	x	x					
Natural Resource and Energy Economics	x	x					
Public Finance: Expenditures and Taxes	x	x		x	x		
Antitrust Policy and Regulation	x	x					
Agriculture: Economics and Policy	x	x		x	x		x
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Health Care	x	x					
Immigration	x	x					
An Introduction to Macroeconomics	x		x	x		x	x
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Economic Growth	x		x	x		x	x
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Basic Macroeconomic Relationships	x		x				x
The Aggregate Expenditures Model	x		x				x
Aggregate Demand and Aggregate Supply	x		x	x		x	x
Fiscal Policy, Deficits, and Debt	x		x	x		x	x
Money, Banking, and Financial Institutions	x		x	x		x	x
Money Creation	x		x				
Interest Rates and Monetary Policy	x		x	x		x	
Financial Economics	x		x				
Extending the Analysis of Aggregate Supply	x		x	x		x	x
Current Issues in Macro Theory and Policy	x		x				
International Trade	x	x	x	x		x	x
The Balance of Payments, Exchange Rates, and Trade Deficits	x	x	x	x		x	x
The Economics of Developing Countries	x	x	x				

A red "X" indicates chapters that combine or consolidate content from two or more *Economics* chapters.







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Twenty-Second Edition

# microeconomics

Campbell R. McConnell

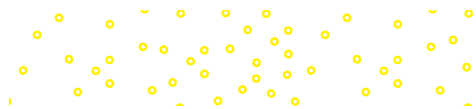
*University of Nebraska*

Stanley L. Brue

*Pacific Lutheran University*

Sean M. Flynn

*Scripps College*





MICROECONOMICS, TWENTY-SECOND EDITION

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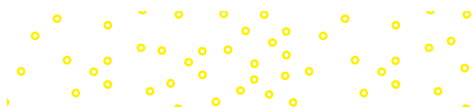
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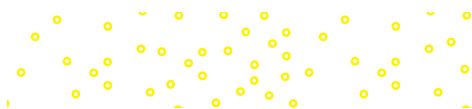
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To Mem, Terri and Craig, and Rupali









## ABOUT THE AUTHORS



**CAMPBELL R. MCCONNELL** earned his Ph.D. at the University of Iowa after receiving degrees from Cornell College and the University of Illinois. He taught at the University of Nebraska–Lincoln from 1953 until his retirement in 1990. He was also coauthor of *Contemporary Labor Economics* and *Essentials of Economics*. He was a recipient of both the University of Nebraska Distinguished Teaching Award and the James A. Lake Academic Freedom Award and served as president of the Midwest Economics Association. Professor McConnell was awarded an honorary Doctor of Laws degree from Cornell College in 1973 and received its Distinguished Achievement Award in 1994. He was also a jazz expert and aficionado until his passing in 2019.



**STANLEY L. BRUE** did his undergraduate work at Augustana College (South Dakota) and received its Distinguished Achievement Award in 1991. He received his Ph.D. from the University of Nebraska–Lincoln. He is retired from a long career at Pacific Lutheran University, where he was honored as a recipient of the Burlington Northern Faculty Achievement Award. Professor Brue has also received the national Levey Award for excellence in economic education. He has served as national president and chair of the Board of Trustees of Omicron Delta Epsilon International Economics Honorary. He is coauthor of *Economic Scenes*, fifth edition (Prentice-Hall); *Contemporary Labor Economics*, eleventh edition; *Essentials of Economics*, third edition; and *The Evolution of Economic Thought*, eighth edition (Cengage Learning). For relaxation, he enjoys international travel, attending sporting events, and going on fishing trips.



**SEAN M. FLYNN** did his undergraduate work at the University of Southern California before completing his Ph.D. at U.C. Berkeley, where he served as the Head Graduate Student Instructor for the Department of Economics after receiving the Outstanding Graduate Student Instructor Award. He teaches at Scripps College (of the Claremont Colleges) and is the author of *Economics for Dummies*, third edition (Wiley); *Essentials of Economics*, third edition; and *The Cure That Works: How to Have the World's Best Healthcare—at a Quarter of the Price* (Regnery). His research interests include behavioral finance, behavioral economics, and health care economics. An accomplished martial artist, Sean has coached five of his students to national championships and is the author of *Understanding Shodokan Aikido*. Other hobbies include running, traveling, and cooking.



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# IN MEMORIAM

## CAMPBELL R. McCONNELL (1928-2019)

We have lost a gracious friend, superb mentor, and legendary coauthor. In 2019 Professor Campbell R. “Mac” McConnell passed away at age 90 in Lincoln, Nebraska. Mac was one of the most significant and influential American economic educators of his generation. Through his best-selling principles textbook, he made introductory economics accessible to millions of students. By way of numerous adaptations and translations of his textbook, he influenced students throughout the world.

Mac was born in Harvey, Illinois, graduated from Cornell College (Iowa) and obtained his Ph.D. from the University of Iowa. He had a long and successful career as a researcher and teacher at the University of Nebraska, publishing peer-reviewed research articles and serving in leadership positions such as President of the Midwest Economic Association. His gift of explaining complex economics simply and thoroughly led him to explore opportunities to extend his educational reach beyond his own classroom. McGraw-Hill understood the great potential in his textbook proposal and the first edition of *Economics: Principles, Problems, and Policies* made its debut in 1960. It was an instant hit and by the late 1970s it became the leading seller in the United States, supplanting Paul Samuelson’s textbook as the market leader. *Economics* remains the top seller today.

In 1986, Mac and his former student, Stanley Brue, coauthored *Contemporary Labor Economics* and two years later Professor Brue joined Mac as a coauthor of *Economics*. Stan, Mac, and McGraw-Hill added Sean Flynn as the third coauthor on the authorship team in 2008. The authorship transitions have been planned in advance, with authors working side-by-side for several editions. These smooth transitions have greatly contributed to the progress of the book and its continuing success.

We (Stan and Sean) are humbled and proud to have worked with Mac and McGraw-Hill over these many years. We pledge to instructors and students that we will continue to stress clarity of presentation—in each new chapter, revised paragraph, rephrased explanation, and edited sentence. We believe that our dedication to preserving and improving the quality of the book is absolutely the best way for us to honor and extend Mac’s amazing legacy. Mac liked to say that, “*Brevity at the expense of clarity is false economy.*” We will honor him, and his legacy, by always putting clarity first.

We greatly miss our coauthor and long-time friend Campbell R. McConnell.

**Stanley L. Brue**  
**Sean M. Flynn**

# PREFACE

Welcome to the 22nd edition of *Economics*, America's most innovative—and popular—economics textbook.

We are pleased to present faculty and students with comprehensive revisions, insightful new content, and significant improvements to both our online learning system and our industry-leading ancillary materials.

## Significant Content Updates

The financial crisis and the subsequent slow recovery increased both student and faculty demand for principles-level content geared toward explaining directly and intuitively why markets and governments fail—sometimes spectacularly—in delivering optimal social outcomes. To satisfy that demand, our presentation of market failures, government failure, and public choice theory has been significantly restructured in Chapters 4 and 5 to allow students to quickly absorb the key lessons regarding externalities, public goods provision, voting paradoxes, the special interest effect, and other problems that hinder either markets or governments from achieving optimal social outcomes.

## Improved Efficiency for Instructors

Faculty time is precious. To preserve as much of it as possible for the faculty adopting *Economics*, we went sentence-by-sentence and section-by-section, pulling out extraneous examples, eliminating unnecessary graphs, and—in some cases—removing entire sections that faculty reported they didn't have time to teach. We have slashed the average chapter's word count by about 15 percent, even after accounting for newly added content.

These changes have been reviewed positively by faculty and we are excited that our streamlined presentation frees up faculty time for more advanced classroom activities, including experiments, debates, simulations, and various forms of peer instruction and team-based learning.

## Improved Readability for Students

Student time is also precious. The current crop of college students are digital natives and social media pioneers. They are used to Googling for answers, reading things that tend to be no longer than a Tweet, and receiving instant feedback. We have revised our presentation to accommodate their fast-paced, nonlinear learning style. You will find a greater economy of language and an increased focus on key examples, including new Key Graphs that have self-contained Quick Quizzes to help students comprehend and apply crucial models.

We have also worked hard to accommodate the large number of students who study by “hunting” through a chapter rather than by reading the content in sequence. They will find dozens of additional in-chapter Quick Review boxes to help

them identify key material, scores of additional headers to help them scan for key concepts, and a much greater use of bullet points to organize related concepts and ideas.

These revisions will also aid traditional students who study the old-fashioned way by providing them with increased structure and organization. Traditional students will additionally appreciate our switch to a single-column design that allows for extensive note taking in the margins.

## Examples and Illustrations that Resonate with Students

Students absorb economic theory most easily when it resonates with their experiences and is explained with current examples.

To that end, the 22nd edition covers many topics that are currently in the news. Topics include green-energy subsidies, universal basic income, the “Fight for \$15,” soaring tuition costs, unfunded liabilities, and congestion pricing.

The new edition also features new “Consider This” and “Last Word” boxed features that drive home key ideas in an accessible, student-oriented manner. Topics include “Bitcoin and Cheap Electronics,” “Hasta La Vista, Venezuela,” and “Voluntary Pollution Control.”

## Accelerating Student Achievement via Adaptive Learning and Innovative Ancillary Materials

Would you as a faculty member enjoy spending less time on definitions and more time on theory, applications, and enrichment material?

Most faculty say YES!—which is why we continue to make large annual improvements to what is already the most effective digital learning platform in higher education: *Connect Economics*.

### Before Class

You can use *Connect Economics* and its built-in adaptive reading technology, *SmartBook*, to ensure that students know all the basics before class starts. Simply assign your selected chapter readings in *SmartBook* and have students complete related problems and questions before lecture. The *Connect Economics* platform will automatically probe for misunderstandings—and then fix them with instant feedback and remediation.

To further enhance the ability of instructors to “get students up to speed” before class, we also offer interactive graphing exercises, math-preparedness tutorials, and a large bank of custom-made videos covering real-world examples. All are assignable within *Connect Economics*, and each includes assignable assessment questions and instant feedback.

## During Class

**You can then proceed, during class, to higher-level learning activities** that build correct intuitions and the ability to apply models, theories, and concepts to new situations that have not already been covered in your class.

Creating higher-level classroom activities is no easy task, and we know from personal experience that faculty often find themselves with too little time left over at the end of a long day of teaching, service, and research to create the high-quality enrichment materials that they would like to use in class.

**To that end, we have gone out of our way to developed two major in-class enrichment tools that you can use to “flip” your classroom and engage students at a higher level.**

**Guided Peer Instruction** With the help of Todd Fitch of U.C. Berkeley, we have authored and field-tested hundreds of in-class questions and answers that can be used to facilitate the peer instruction teaching method pioneered by Eric Mazur of Harvard University. Our version, which we call Guided Peer Instruction (or GPI), is a student-focused, interactive teaching method that has been shown to more than double student understanding relative to “chalk and talk” and other lecture-based presentation formats. **We are proud to be the first textbook to fully support Guided Peer Instruction.**

**Application-Based Activities (ABAs)** These immersive decision-making simulations are delivered digitally within the Connect platform and put students in the role of everyday economists. Students practice their economic thinking and problem-solving skills as they apply course concepts, and see the implications of their decisions as they go. Each activity is designed as a 15-minute experience that can be replayed by eager students to build intuition.

## A 22nd Edition for the 21st Century

*Economics* has maintained its position as the world’s best-selling economics textbook for nearly fifty years by continually updating its coverage and its pedagogy. We weren’t just the first with adaptive learning and instant remediation, but also with everything from student study guides to computerized test banks (in the 1970s!).



## McConnell Is/Was/And Will Remain The Innovation Champion:

- The first textbook with a student study guide.
- The first textbook to place both a meaningful title and a short accompanying explanation next to every graph, figure, and table.
- The first textbook with comprehensive test banks.
- The first textbook with multi-colored graphs.
- The first textbook with overhead projector slides.
- The first televised economics lectures.
- The first overhead projector slides.
- The first instructors’ manual.
- The first computerized test bank.
- The first textbook with PowerPoint slides.
- The first fully integrated adaptive-learning system.

**It is our sincere hope that our 22nd edition will continue to promote rapid learning and deep understanding** as the 21st century passes its 20th birthday. We have worked hard to ensure that *Economics* and all of its ancillary materials are comprehensive, analytical, and challenging—yet fully accessible to a wide range of students. **Where needed, an extra sentence of explanation is provided. Brevity at the expense of clarity is false economy.**

Sean M. Flynn  
Stanley L. Brue

## Chapter-by-Chapter Changes

Each chapter of *Economics*, 22nd edition, contains data updates, revised Learning Objectives, and new examples. Chapter-specific updates include new boxed pieces, additional Quick Reviews, and, where appropriate, substantial revisions to the core content.

**Chapter 1: Limits, Alternatives, and Choices** features a new Last Word about “The Marginal Starbucks,” a new Global Perspective comparing investment levels in selected countries, and a new Consider This titled, “Is Facebook Free?”

**Chapter 2: The Market System and the Circular Flow** contains three new Consider This pieces—on Bitcoin mining, the Korean peninsula at night, and flood insurance subsidies—as well as a new Last Word about the economic collapse of Venezuela.

**Chapter 3: Demand, Supply, and Market Equilibrium** includes a new Consider This on market equilibrium as well as a new Global Perspective on the price of a loaf of bread in various countries.

**Chapter 4: Market Failures Caused by Externalities and Asymmetric Information** is a new chapter that features substantial new content, including a Consider This on congestion pricing, a Global Perspective on pollution abatement, a Key Graph on externalities, and a Last Word on how markets for pollution credits overcome information asymmetries between polluting firms and the government.

**Chapter 5: Public Goods, Public Choice, and Government Failure** is another new chapter that also features substantial new content, including innovative material on quadratic voting and a Last Word discussing the ineffectiveness of corporate relocation subsidies.

**Chapter 6: Elasticity** contains a new Consider This on “The Southwest Effect” as well as revised examples, wording improvements, and two new Global Perspectives, the first giving cross-price elasticities between food prices and education spending in various countries and the second reporting on the income elasticities of the demand for gasoline in selected countries.

**Chapter 7: Utility Maximization** contains several new examples as well as revisions of existing material for clarity and concision.

**Chapter 8: Behavioral Economics** benefits from new applications and a significantly streamlined presentation.

**Chapter 9: Businesses and the Costs of Production** includes a new Global Perspective on international differences in manufacturing costs as well as substantial rewrites for clarity in the opening section on economic costs.

**Chapter 10: Pure Competition in the Short Run** features new examples plus a new Last Word on the damage that results when corrupt politicians divert fixed-cost depreciation funds into their own pockets.

**Chapter 11: Pure Competition in the Long Run** contains updated examples as well as a new Last Word discussing whether entrepreneur Elon Musk’s profits (at SpaceX, Tesla, etc) are defensible in the long run.

**Chapter 12: Pure Monopoly** has a new Consider This about France’s long history of government salt monopolies as well as two new Key Graphs on, respectively, the inefficiency of pure monopoly and the different strategies for rate regulation.

**Chapter 13: Monopolistic Competition** contains new examples, edits for brevity, and a new Global Perspective on restaurants per 100,000 residents in various cities around the world.

**Chapter 14: Oligopoly and Strategic Behavior** has a more intuitive introduction to the Prisoner’s Dilemma as well as a significantly streamlined presentation made possible by, among other things, the removal of the much praised but rarely assigned material on sequential games.

**Chapter 15: Technology, R&D, and Efficiency** contains edits for brevity, revised examples, and a relocated Last Word on why patents may be a net hinderance to innovation in the tech sector.

**Chapter 16: The Demand for Resources** features a new Global Perspective on the Top Ten oil importing nations as well as revised examples and edits for brevity and clarity.

**Chapter 17: Wage Determination** has a new Quick Review as well as student-friendly rewrites utilizing bullet points and additional section headers.

**Chapter 18: Rent, Interest, and Profit** incorporates wording improvements, data updates, and a greater focus on core content,

made possible by consolidating or discarding the previous edition’s coverage of the single tax on land and usury laws.

**Chapter 19: Natural Resource and Energy Economics** contains extensive data updates, substantial new material on energy costs and alternatives, a streamlined discussion of the user cost model, and a new Consider This piece on the famous bet between Julian Simon and Paul Ehrlich over resource prices and resource constraints.

**Chapter 20: Public Finance: Expenditures and Taxes** benefits from consolidations and revisions that enhance brevity and clarity as well as a new Key Graph on the deadweight losses caused by excise taxes.

**Chapter 21: Antitrust Policy and Regulation** features a new Global Perspective on the annual number of corporate mergers taking place in selected countries as well as extensive updates to the chapter’s examples of court cases and regulatory actions.

**Chapter 22: Agriculture: Economics and Policy** delivers numerous data updates, a heavily updated discussion of recent farm bills, including the Agricultural Act of 2018, and a new Last Word on the U.S. Department of Agriculture’s Conservation Reserve Program that created a glut of timber while attempting to prevent a glut of crops.

**Chapter 23: Income Inequality, Poverty, and Discrimination** presents a new Last Word on the debate over Universal Basic Income as well clarifying revisions to our discussion of the Lorenz curve and the Gini ratio, including a new Key Graph and Quick Quiz that tests students on their understanding of those concepts.

**Chapter 24: Health Care** incorporates extensive data updates as well as significant revisions to our discussion of the Affordable Care Act, including references to the court decision that repealed the individual mandate.

**Chapter 25: Immigration** contains several data updates as well as a new Last Word that considers whether the Australian and Canadian immigration systems might be considered as reform models for the U.S. immigration system.

**Chapter 26: International Trade** contains extensive data updates, a streamlined presentation of the arguments in favor of protectionism, a new Key Graph on the economic effects of tariffs and import quotas, and an updated and consolidated discussion of multilateral trade pacts, including the USMCA revisions to NAFTA.

**Chapter 27: The Balance of Payments, Exchange Rates, and Trade Deficits** offers significantly streamlined coverage of fixed exchange rates, extensive data updates, and various edits for concision and clarity.

**Chapter 28: The Economics of Developing Countries** includes new examples, data updates, and a new Consider This about the fraction of the world’s population living in extreme poverty falling from 36 percent in 1990 to just 10 percent in 2015.

## Acknowledgments

We give special thanks to Peggy Dalton, and Peter Staples for their hard work updating the questions and problems in *Connect*, as well as the material they created for the additional Connect Problems.

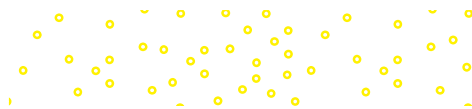
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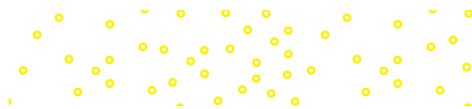


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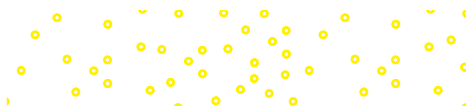
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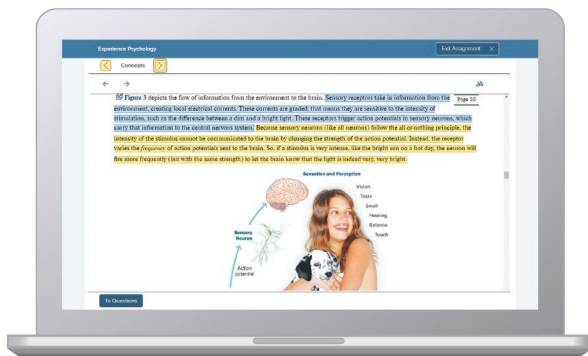
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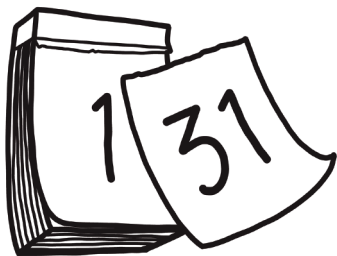
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