



17

Macroeconomics

McConnell
Brue

	1956	1958	1960	1962	1964	1966	1968	1970	1972	1974	1976	1978	1979	1980
	437.5	467.2	526.4	585.6	663.6	787.8	910.0	1,038.5	1,238.3	1,500.0	1,825.3	2,294.7	2,563.3	2,789.5
	271.7	296.2	331.7	363.3	411.4	480.9	558.0	648.5	770.6	933.4	1,151.9	1,428.5	1,592.2	1,757.1
	72.0	64.5	78.9	88.1	102.1	131.3	141.2	152.4	207.6	249.4	292.0	438.0	492.9	479.3
	91.4	106.0	111.6	130.1	143.2	171.8	209.4	233.8	263.5	317.9	383.0	453.6	500.8	566.2
	2.4	0.5	4.2	4.1	6.9	3.9	1.4	4.0	-3.4	-0.8	-1.6	-25.4	-22.5	-13.1
	391.1	415.2	470.8	526.4	598.6	712.2	821.6	931.8	1,111.8	1,137.5	1,620.1	2,032.4	2,263.2	2,446.6
	395.6	416.8	474.9	530.1	602.7	711.0	823.2	930.9	1,111.2	1,342.1	1,611.8	2,027.4	2,249.1	2,439.3
	244.5	259.5	296.4	327.1	370.7	442.7	524.3	617.2	725.1	890.2	1,059.3	1,336.1	1,500.8	1,651.8
	14.2	15.4	17.1	18.8	19.6	20.8	20.9	21.4	23.4	24.3	22.3	22.1	23.8	30.0
	6.9	9.5	10.6	14.2	17.4	22.4	27.1	39.1	47.9	70.8	85.5	115.0	138.9	181.8
	48.5	43.5	53.8	63.3	76.5	93.2	98.8	83.6	112.1	115.8	163.3	216.6	232.2	201.1
	45.8	50.1	50.7	51.2	59.0	63.9	74.3	78.4	95.9	113.1	132.2	166.6	180.1	174.1
	35.6	38.6	46.3	55.8	64.4	71.7	77.8	91.2	106.9	127.8	149.2	171.0	182.3	200.5
	339.6	369.0	411.5	456.7	514.6	603.9	712.0	838.8	992.7	1,222.6	1,474.8	1,837.7	2,062.2	2,307.9
	303.0	350.5	365.4	405.1	462.5	537.5	625	735.7	869.1	1,071.6	1,302.5	1,608.3	1,793.5	2,009.0
	1,801.0	1,898.0	2,022.0	2,171.0	2,410.0	2,734.0	3,114.0	3,587.0	4,140.0	5,010.0	5,972.0	7,224.0	7,967.0	8,822.0
	8.5	8.6	7.3	8.3	8.8	8.3	8.4	9.4	8.9	10.6	9.4	8.9	8.9	10.0
	1956	1958	1960	1962	1964	1966	1968	1970	1972	1974	1976	1978	1979	1980
	2,255.8	2,279.7	2501.8	2,715.2	2,998.6	3,399.1	3,652.7	3,771.9	4,105.0	4,319.6	4,540.9	5,015.0	5,173.4	5,161.7
	1.9	-1.0	2.5	6.1	5.8	6.5	4.8	0.2	5.3	-0.5	5.3	5.6	3.2	-0.2
	27.2	28.9	29.6	30.2	31.0	32.4	34.8	38.8	41.8	49.3	56.9	65.2	72.6	82.4
	1.5	2.8	1.7	1.0	1.3	2.9	4.2	5.7	3.2	11.0	5.8	7.6	11.3	13.5
	136.0	138.4	140.7	145.2	160.3	172.0	197.4	214.4	249.2	274.2	306.2	357.3	381.8	408.5
	2.73	1.57	3.21	2.71	3.5	5.11	5.66	7.17	4.44	10.51	5.05	7.94	11.3	13.35
	3.77	3.83	4.82	4.5	4.5	5.63	5.63	7.91	5.72	8.03	6.84	9.06	12.67	15.27
	168.9	174.9	180.7	186.5	191.9	196.6	200.7	205.1	209.9	213.9	218.0	222.6	225.1	227.7
	66.6	67.6	69.6	70.6	73.1	75.8	78.7	82.8	87.0	91.9	96.2	102.3	105.0	106.9
	63.8	63.0	65.8	66.7	69.3	72.9	75.9	78.7	82.2	86.8	88.8	96.0	98.8	99.3
	2.8	4.6	3.9	3.9	3.8	2.9	2.8	4.1	4.9	5.2	7.4	6.2	6.1	7.6
	4.1	6.8	5.5	5.5	5.2	3.8	3.6	4.9	5.6	5.6	7.7	6.1	5.8	7.1
	0.1	2.8	1.7	4.6	3.4	4.1	3.4	2.0	3.2	-1.6	3.1	1.1	0.0	-0.2
	5.3	4.2	4.4	4.5	5.2	5.6	5.1	4.0	4.3	5.5	5.4	5.4	5.7	4.8
	2.94	3.0	2.91	2.85	3.0	3.1	3.18	3.39	2.85	9.25	13.1	14.95	25.1	37.42
	3.9	-2.8	0.3	-7.1	-5.9	-3.7	-25.2	-2.8	-23.4	-6.1	-73.7	-59.2	-40.7	-73.8
	272.7	279.7	290.5	302.9	316.1	328.5	368.7	380.9	435.9	483.9	629.0	776.6	829.5	909.1
	2.7	0.8	2.8	3.4	6.8	3.0	0.6	2.3	-5.8	2.0	4.3	-15.1	-0.3	2.3

(Continued in back of book)

Seventeenth Edition

Macroeconomics

Principles, Problems, and Policies

Campbell R. McConnell

University of Nebraska

Stanley L. Brue

Pacific Lutheran University



Boston Burr Ridge, IL Dubuque, IA Madison, WI New York San Francisco St. Louis
Bangkok Bogotá Caracas Kuala Lumpur Lisbon London Madrid Mexico City
Milan Montreal New Delhi Santiago Seoul Singapore Sydney Taipei Toronto

To **Mem** and to **Terri** and **Craig**



MACROECONOMICS: PRINCIPLES, PROBLEMS, AND POLICIES

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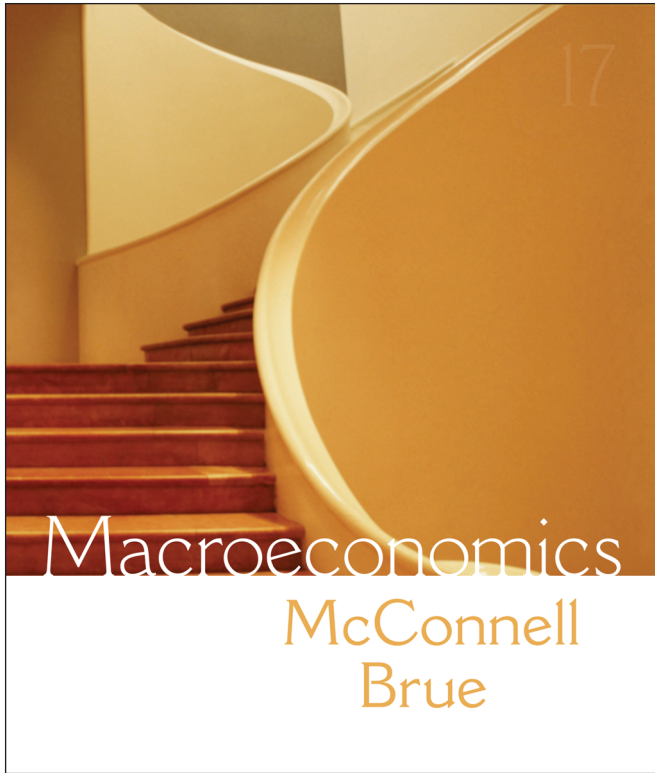
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Welcome to the seventeenth edition of *Macroeconomics*, the macro portion of *Economics*, the nation's best-selling economics textbook. An estimated 13 million students worldwide have now used this book. *Economics* has been adapted into Australian and Canadian editions and translated into Italian, Russian, Chinese, French, Spanish, Portuguese, and other languages. We are pleased that *Economics* continues to meet the market test: nearly one out of four U.S. students in principles courses used the sixteenth edition.

A Note about the Cover

The seventeenth edition cover includes a photograph of a staircase in the Musée des Beaux-Arts in Nancy, France. The photo is a metaphor for the step-by-step approach that we use to present basic economic principles. It also represents the simplicity, beauty, and power of basic economic models. Our goal is to entice the student to walk up the staircase. The floors above contain hundreds of years of accumulated economic knowledge, a portion of which we have captured for you here.

Fundamental Objectives

We have three main goals for *Economics*:

- Help the beginning student master the principles essential for understanding the economizing problem, specific economic issues, and the 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. A chapter-by-chapter list of changes is available at our Web site, www.mcconnell17.com. The more significant changes include the following.

New Analysis of Monetary Policy

We have revised the discussion of monetary policy to help the student understand the Federal Reserve Board's focus on the Federal funds rate and how changes in that rate affect other interest rates and the overall economy. In "Interest Rates and Monetary Policy" (Chapter 14), we demonstrate how the Fed targets a specific Federal funds rate and then uses open-market operations to drive the rate to that level and hold it there (see Figure 14.3). This new analysis will help students interpret the news as it relates to Fed announcements about the Federal funds rates.

Chapter-Level Learning Objectives

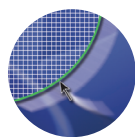
Several learning objectives have been included on the first page of each chapter. After reading a chapter, students should have mastered these core concepts. Questions in Test Banks I and II are organized according to these learning objectives, as are the narrated PowerPoint presentations.

Worked Problems

We continue to integrate the book and our Web site with in-text Web buttons that direct readers to Web site content. Specifically, we have added a third Web button consisting of a set of 50 worked problems. Written by Norris Peterson of Pacific Lutheran University, these pieces



consist of side-by-side computational questions and the computational procedures used to derive the answers. In essence, they extend the textbook's explanations involving computations—for example, of real GDP, real GDP per capita, the unemployment rate, the inflation rate, per-unit production costs, economic profit, and more. From a student perspective, they provide “cookbook” help for problem solving.



This new content joins two carryover Web buttons from the prior edition. “Interactive Graphs” (developed under the supervision of Norris Peterson) depict more than 30 major graphs and instruct students to shift the curves, observe the outcomes, and derive relevant generalizations. “Origins of the Idea” are brief histories (written by Randy Grant of Linfield College) of 70 major ideas identified in the book. Students are interested in learning about the economists who first developed ideas such as opportunity costs, equilibrium price, the multiplier, comparative advantage, and elasticity.



New Internet Chapter

A new Internet chapter, along with an existing Web chapter, is available for free use at our Web site, www.mcconnell17.com. “Financial Economics” (Chapter 14Web), examines ideas such as compound interest, present value, arbitrage, risk, diversification, and the risk-return relationship.

This new Internet chapter was written by Sean Masaki Flynn. Sean is an important new member of the McConnell and Brue author team. He did his undergraduate work at USC, obtained his Ph.D. from the University of California–Berkeley (2002), and teaches at Vassar College. He is the author of the best-selling *Economics for Dummies*. We are very excited to have Sean on the authorship team, since he shares our desire to present economics in a way that is understandable to all.

The second Internet chapter, “The Economics of Developing Countries” (16Web), is updated and available for instructors and students who have a special interest in that topic. Developing economies are often in the news, and many college students have a keen interest in them. (For the chapter outlines for these three chapters, see pages 283, and 319 of this book.)

The two Web chapters have the same design, color, and features as regular book chapters, are readable in Adobe Acrobat format, and can be printed if desired. All are supported by the *Study Guide*, *Test Banks*, and other supplements to the book.

Consolidated Chapters

With overwhelming support of reviewers, we have consolidated the first two chapters of the prior edition into a single chapter, “Limits, Alternatives, and Choices” (Chapter 1). This new chapter quickly and directly moves the student into the subject matter of economics, demonstrating its methodology. This consolidation has the side benefit of reducing Part 1 (the common chapters in *Economics*, *Macroeconomics*, and *Microeconomics*) from six chapters to five.

We also combined the prior edition's separate chapters on fiscal policy and the public debt into a single chapter, “Fiscal Policy, Deficits, and Debt” (Chapter 11). The topics are closely related, and consolidation integrates them logically and smoothly.


New and Relocated “Consider This” and “Last Word” Boxes

Our “Consider This” boxes are used to provide analogies, examples, or stories that help drive home central economic ideas in a student-oriented, real-world manner. For instance, the idea of inflation is described with the story of feudal princes who clipped coins, while McDonald's “McHits” and “McMisses” demonstrate the idea of consumer sovereignty. These brief vignettes, each accompanied by a photo, illustrate key points in a lively, colorful, and easy-to-remember way.

New “Consider This” boxes include such disparate topics as fast-food lines (Chapter 1), the economics of war (Chapter 1), “buying American” (Chapter 2), ticket scalping (Chapter 3), salsa and coffee beans (Chapter 3), unprincipled agents (Chapter 4), a CPA and a house painter (Chapter 5), high European unemployment rates (Chapter 7), the Fed as a sponge (Chapter 14), returns on ethical investing (Chapter 14Web), and women and economic growth (Chapter 16).

Our “Last Word” pieces are lengthier applications and case studies located toward the end of each chapter.

CONSIDER THIS ...



Unprincipled Agents
In the 1990s many corporations addressed the principal-agent problem by providing a substantial part of executive pay either as shares of the firm's stock or as stock options. Stock options are contracts that allow executives or other key employees to buy shares of their employers' stock at fixed, lower prices when the stock prices rise. The intent was to align the interest of the executives and other key employees more closely with those of the broader corporate owners. By pursuing high profits and share prices, the executives would enhance their own wealth as well as that of all the stockholders.

This solution to the principal-agent problem had an unexpected negative side effect. It prompted a few unscrupulous executives to inflate their firms' share prices by hiding costs, overstating revenues, engaging in deceptive transactions, and, in general, exaggerating profits. These executives then sold large quantities of their inflated stock, making quick personal fortunes. In some cases, independent outside auditing firms turned out to be not so independent, because they held valuable consulting contracts with the firms being audited.

When the stock-market bubble of the late 1990s burst, many instances of business manipulations and fraudulent accounting were exposed. Several executives of large U.S. firms were indicted and a few large firms collapsed, among them Enron (energy trading), WorldCom (communications), and Arthur Andersen (accounting and business consulting). General stockholders of those firms were left holding severely depressed or even worthless stock.

In 2002 Congress strengthened the laws and penalties against executive misconduct. Also, corporations have improved their accounting and auditing procedures. But seemingly endless revelations of executive wrongdoings make clear that the principal-agent problem is not an easy problem to solve.

Last Word

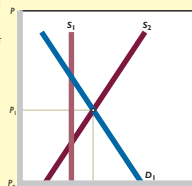
A Legal Market for Human Organs?

A Legal Market Might Eliminate the Present Shortage of Human Organs for Transplant. But There Are Many Serious Objections to Turning Human Body Parts into Commodities for Purchase and Sale.

It has become increasingly commonplace in medicine to transplant kidneys, lungs, livers, eye corneas, pancreases, and hearts from deceased individuals to those whose organs have failed or are failing. But surgeons and many of their patients face a growing problem: There are shortages of donated organs available for transplant.

Not everyone who needs a transplant can get one. In 2005 there were 89,000 Americans on the waiting list for transplants. Indeed, an inadequate supply of donated organs causes an estimated 9000 deaths in the United States each year.

Why Shortages? Seldom do we hear of shortages of desired goods in market economies. What is different about organs for transplant? One difference is that no legal market exists for human organs. To understand this situation, observe the demand curve D_1 and supply curve S_1 in the accompanying figure. The downward slope of the demand curve tells us that if there were a market for human organs, the quantity of organs demanded would be greater at lower prices than at higher prices. Vertical supply curve S_1 represents the fixed quantity of human organs now donated via consent before death. Because the price of these donated organs is in effect zero, quantity demanded Q_1 exceeds quantity supplied Q_2 . The shortage of $Q_1 - Q_2$ is rationed through a waiting list of those in medical need of transplants. Many people die while still on the waiting list.



Use of a Market A market for human organs would increase the incentive to donate organs. Such a market might work like this: An individual might specify in a legal document that he or she is willing to sell one or more usable human organs upon death or near-death. The person could specify where the money from the sale would go, for example, to family, a church, an educational institution, or a charity. Firms would then emerge to purchase organs and sell them to people in need.

In this edition, we included photos to pique student interest. New and relocated Last Words include those on pitfalls to sound economic reasoning (Chapter 1), a market for human organs (Chapter 3), the long-run problem of financing Social Security (Chapter 4), the diminishing impact of oil prices on the overall economy (Chapter 10), the relative performance of index funds versus actively managed funds (Chapter 14Web), a supply-side anecdote on who gets tax cuts (Chapter 15), and economic growth in China (Chapter 16).

Contemporary Discussions and Examples

The seventeenth edition refers to and discusses many current topics. Examples include the economics of the war in Iraq, China's rapid growth rate, large Federal budget deficits, the Doha Round, recent Fed monetary policy, the debate over inflation targeting, the productivity acceleration, the recent profit paths of Wal-Mart and General Motors, rapidly expanding and disappearing U.S. jobs, rising oil prices, immigration impacts, large U.S. trade deficits, offshoring of American jobs, and many more.

Distinguishing Features

Comprehensive Explanations at an Appropriate Level *Macroeconomics* is comprehensive, analytical, and challenging yet fully accessible to a wide range of students. The thoroughness and accessibility enable instructors to select topics for special classroom emphasis with confidence that students can read and comprehend other independently assigned material in the book. Where needed, an extra sentence of explanation is provided. Brevity at the expense of clarity is false economy.

Fundamentals of the Market System Many economies throughout the world are making difficult transitions from planning to markets. Our detailed description of the institutions and operation of the market system in Chapter 2 is even more relevant than before. We pay particular attention to property rights, entrepreneurship, freedom of enterprise and choice, competition, and the role of profits because these concepts are often misunderstood by beginning students.

Early and Full Integration of International Economics We give the principles and institutions of the global economy early treatment. Chapter 5 examines the growth of world trade and its major participants, specialization and comparative advantage, the foreign exchange market, tariffs and subsidies, and various trade agreements. This strong introduction to international economics permits “globalization” of later discussions. Then, we delve into the more difficult, graphical analysis of international trade and finance in Chapters 18 and 19.

Early and Extensive Treatment of Government Government is an integral component of modern capitalism. This book introduces the economic functions of government early and accords them systematic treatment in Chapter 4. Government's role (including the role of the “Fed”) in promoting full employment, price-level stability, and economic growth is central to the macroeconomic policy chapters.

Step-by-Step, Two-Path Macro We systematically present macroeconomics by:

- Examining the national income and product accounts and previewing economic growth, unemployment, and inflation.
- Discussing three key macro relationships.
- Presenting the aggregate expenditures model (AE model) in a single chapter.
- Developing the aggregate demand–aggregate supply model (AD-AS model).
- Using the AD-AS model to discuss fiscal policy.
- Introducing monetary considerations into the AD-AS model.
- Using the AD-AS model to discuss monetary policy.
- Extending the AD-AS model to include both short-run and long-run aggregate supply.
- Applying the “extended AD-AS model” to macroeconomic instability, economic growth, and disagreements on macro theory and policy.

We organized Chapters 8, 9, and 10 to provide two alternative paths through macro. We know that nearly all instructors like to cover somewhere in their macro course the basic relationships between income and consumption, the real interest rate and investment, and changes in spending and changes in output (the multiplier, conceptually presented). All of these topics are found in Chapter 8, “Basic Macroeconomic Relationships.” The instructor can proceed from Chapter 8 directly to either Chapter 9, “The Aggregate Expenditures Model,” or Chapter 10, “Aggregate Demand and Aggregate Supply.” This organization allows those instructors who prefer not to teach the equilibrium AE model to skip it without loss of continuity. As before, the remainder of the macro is AD-AS based.

Emphasis on Technological Change and Economic Growth This edition continues to emphasize economic growth. Chapter 1 uses the production possibilities curve to show the basic ingredients of growth. Chapter 7 explains how growth is measured and presents the facts of growth. Chapter 16 discusses the causes of growth, looks at productivity growth, and addresses some controversies surrounding economic growth. Chapter 7’s Last Word examines the rapid economic growth in China. Chapter 16Web focuses on developing countries and the growth obstacles they confront.

Integrated Text and Web Site *Macroeconomics* and its Web site are highly integrated through in-text Web buttons, Web-based end-of-chapter questions, bonus Web chapters, multiple-choice self-tests at the Web site, online newspaper articles, math notes, and other features. Our Web site is part and parcel of our student learning package, customized to the book.

Organizational Alternatives

Although instructors generally agree on the content of principles of economics courses, they sometimes differ on how to arrange the material. *Macroeconomics* includes 6 parts, and thus provides considerable organizational flexibility. For example, the two-path macro enables covering the full aggregate expenditures model or advancing directly from the basic macro relationships chapter to the AD-AS model. Also, the section of Chapter 15 that discusses the intricacies of the relationship between short-run and long-run aggregate supply can easily be appended to Chapter 10 on AD and AS.

Pedagogical Aids

Macroeconomics is highly student-oriented. The “To the Student” statement at the beginning of Part 1 details the book’s many pedagogical aids. The seventeenth edition is also accompanied by a variety of high-quality supplements that help students master the subject and help instructors implement customized courses.

Supplements for Students and Instructors

Study Guide One of the world’s leading experts on economic education, William Walstad of the University of Nebraska–Lincoln, prepared the seventeenth edition of the *Study Guide*. Many students find the *Study Guide* indispensable. 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 *Guide* comprises a superb “portable tutor” for the principles student. Separate *Study Guides* are available for the macro and micro paperback editions of the text.

McGraw-Hill’s Homework Manager Plus™ Homework Manager is a Web-based supplement that duplicates problem sets directly from the end-of-chapter material in your textbook. Using algorithms to provide a limitless supply of online self-graded assignments and graphing exercises, McGraw-Hill’s Homework Manager™ can be used for practice, homework, and testing.

All assignments can be delivered over the Web and are graded automatically. Instructors can see all of the results stored in a private grade book. Detailed results let you see at a glance how each student does on an assignment or an individual problem. Homework Manager Plus is an extension of McGraw-Hill’s popular Homework Manager System. With McGraw-Hill’s Homework Manager Plus™ you get all of the power of Homework Manager with an integrated online version of the text. Students receive one single access code which provides access to all of the resources available through Homework Manager Plus.

McGraw-Hill’s Homework Manager Plus™ is a complete online homework solution, offering online graphing exercises, practice tests correlated with the key Learning Objectives, and full integration for Blackboard and WebCT courses.

