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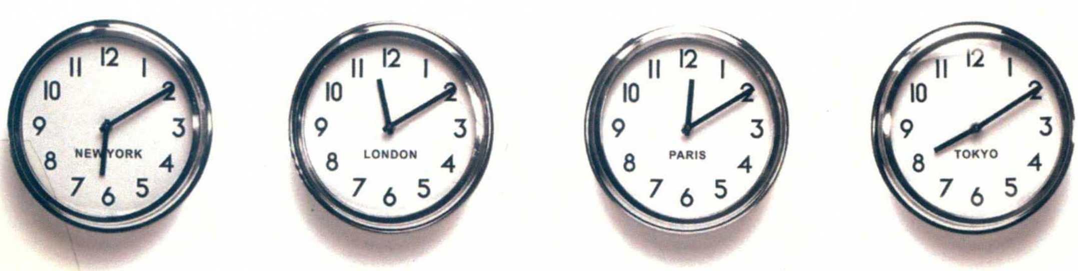

macro economics

13th edition

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To the Instructor

Economics is a living discipline, changing and evolving in response to developments in the world economy and in response to the research of many thousands of economists throughout the world. Through thirteen editions, *Macroeconomics* has evolved with the discipline. Our purpose in this edition, as in the previous twelve, is to provide students with an introduction to the major issues facing the world's economies, to the methods that economists use to study those issues, and to the policy problems that those issues create. Our treatment is everywhere guided by three important principles:

1. Economics is *scientific*, in the sense that it progresses through the systematic confrontation of theory by evidence. Neither theory nor data alone can tell us much about the world, but combined they tell us a great deal.
2. Economics is *useful* and it should be seen by students to be so. An understanding of economic theory combined with knowledge about the economy produces many important insights about economic policy. Although we stress these insights, we are also careful to point out cases where too little is known to support strong statements about public policy. Appreciating what is not known is as important as learning what is known.
3. We strive always to be *honest* with our readers. Although we know that economics is not always easy, we do not approve of glossing over difficult bits of analysis without letting readers see what is happening and what has been assumed. We take whatever space is needed to explain why economists draw their conclusions, rather than just asserting the conclusions. We also take pains to avoid simplifying matters so much that students would have to unlearn what they have been taught if they continue their study beyond the introductory course. In short, we have tried to follow Albert Einstein's advice:

> *Everything should be made as simple as possible, but not simpler.*

Current Economic Issues

In writing the thirteenth edition of *Macroeconomics*, we have tried to reflect the major economic issues that we face in the early twenty-first century.

Living Standards and Economic Growth

One of the most fundamental economic issues is the determination of overall living standards. Adam Smith wondered why some countries become wealthy while others remain poor. Though we have learned much about this topic in the past 230 years since Adam Smith's landmark work, economists recognize that there is still much we do not know.

The importance of technological change in determining increases in overall living standards is a theme that permeates this book. In particular, technological change plays a central role in our discussions of long-run economic growth in Chapters 25 and 26. We explore the traditional channels of saving, investment, and population growth, but also the more recent economic theories that emphasize the importance of increasing returns and endogenous growth.

We are convinced that no other introductory economics textbook places as much emphasis on technological change and economic growth as we do in this book. Given the importance of continuing growth in living standards and understanding where that growth comes from, we believe this emphasis is appropriate. We hope you agree.

Globalization

Enormous changes have occurred throughout the world over the last few decades. Flows of trade and investment between countries have risen so dramatically that it is now common to speak of the "globalization" of the world economy. Today it is no longer possible to study any economy without taking into account developments in the rest of the world.

What is true for most countries is also true for the United States. U.S. international trade is growing more quickly than national income and economic relations between the United States and the rest of the world have a significant impact on most of the major "domestic" issues discussed in the news media. International trade shows up in many parts of this textbook, but it is the focus of two chapters. Chapter 33 discusses the theory of gains from trade while Chapter 34 explores trade policy, with an emphasis on NAFTA and the Doha round of WTO negotiations.

With globalization and the international trade of goods and assets come fluctuations in exchange rates. We describe the appreciation of the U.S. dollar against the euro from 1999 to 2002 and the subsequent substantial depreciation. Such volatility in exchange rates complicates the conduct of economic policy. In Chapters 28 and 29 we explore how the exchange rate fits into the operation of U.S. monetary policy. Chapter 35 we examine the debate over fixed and flexible exchange rates and examine the case of Ecuador, a country that has replaced its own national currency with the U.S. dollar.

The forces of globalization are with us to stay. In this thirteenth edition of *Macroeconomics*, we have done our best to ensure that students are made aware of the world outside the United States and of how events elsewhere in the world affect the U.S. economy.

The Role of Government

The political winds appear to have shifted in the United States and many other countries over the past two decades. Political parties that once advocated a greater role for government in the economy now argue the benefits of limited government. But has the fundamental role of government really changed? In order to understand the role of government in the economy, students must understand the benefits of free markets as well as the situations that cause markets to fail. They must also understand that governments often intervene in the economy for reasons related more to equity than to efficiency.

In this thirteenth edition of *Macroeconomics*, we continue to incorporate the discussion of government policy as often as possible. Here are but a few of the many examples that we explore:

- the effects of payroll taxes (in Chapter 4)
- fiscal policy (in Chapters 22 and 24)
- policies related to the economy's long-run growth rate (in Chapter 26)
- the importance of debt and deficits (in Chapter 32)
- monetary policy (in Chapters 28, 29, and 30)
- policies that affect the economy's long-run unemployment rate (in Chapter 31)
- trade policies (in Chapter 34)
- policies related to the exchange rate (in Chapter 35)

The Book

Economic growth, globalization, and the role of government are pressing issues of the day. Much of our study of economic principles and the U.S. economy has been shaped by these issues. In addition to specific coverage of growth and internationally oriented topics, growth and globalization appear naturally throughout the book in the treatment of many topics once thought to be entirely "domestic."

Most chapters of *Macroeconomics* contain some discussion of economic policy. We have two main goals in mind when we present these discussions:

1. We aim to give students practice in using economic theory, because applying theory is both a wonderfully effective teaching method and a reliable test of students' grasp of theory.
2. We want to introduce students to the major policy issues of the day and to let them discover that few policy debates are as "black and white" as they often appear in the press.

Both goals reflect our view that students should see economics as useful in helping us to understand and deal with the world around us.

Structure and Coverage

Opening the introduction to microeconomics in this book, Chapter 1 presents the market as an instrument of coordination. We introduce the issues of scarcity and choice and then briefly discuss alternative economic systems. The problems of converting command economies to market economies will be with us for some time, and comparisons with command economies help to establish what a market economy is by showing what it is not. Chapter 2 makes the important distinction between positive and normative inquiries and goes on to an introductory discussion of the construction and testing of economic theories. We also discuss graphing in detail. Chapters 3 and 4 then discuss supply and demand analysis and elasticity.

Our treatment of macroeconomics is divided into six parts. In this edition we have made a clear distinction between the economy in the short run and the economy in the long run, and we have brought forward the material on long-run economic growth. The result is that students will now be confronted with issues of long-run economic growth *before* they are introduced to issues of money and banking. Given the importance of economic growth in driving overall living standards, we feel this is an appropriate ordering of the material; but for those who prefer to discuss money before thinking about economic growth, the ordering can be easily switched without any loss of continuity.

The first macro chapter, Chapter 19, introduces readers to the central macro variables, what they mean, and why they are important. The discussion of national income accounting in Chapter 20 provides a thorough treatment of the distinction between real and nominal GDP, the distinction between GDP and GNP, and a discussion of what measures of national income *do not measure*.

Part 8 develops the core short-run model of the macro economy, beginning with the fixed-price (Keynesian Cross) model in Chapters 21 and 22 and then moving on to the *AD/AS* model in Chapter 23. Chapter 21 uses a closed economy model with no government to explain the process of national-income determination and the nature of the multiplier. Chapter 22 extends the setting to include international trade and government spending and taxation. Chapter 23 rounds out our discussion of the short run with the *AD/AS* framework, discussing the importance of both aggregate demand and aggregate supply shocks. We place the Keynesian Cross before the *AD/AS* model to show that there is no mystery as to where the *AD* curve comes from and why it is downward sloping; the *AD* curve is derived directly from the Keynesian Cross model. In contrast, books that begin their analysis with the *AD/AS* model are inevitably less clear about where the model comes from. We lament the growing tendency to omit the Keynesian Cross from introductory macroeconomic textbooks; we believe the model has much to offer students in terms of economic insights.

Part 9 begins in Chapter 24 by showing how the short-run model evolves toward the long run through the adjustment of factor prices—what we often call the Phillips curve. We introduce potential output as an "anchor" to which real GDP returns following *AD* or *AS* shocks. This chapter also addresses issues in fiscal policy, including the important distinction between automatic stabilizers and discretionary fiscal stabilization policy. Chapter 25 is a short chapter that contrasts short-run macroeconomics with long-run macroeconomics, emphasizing the different typical causes of output changes over the two time spans. Using U.S. data, we show that long-run changes in GDP have their root causes in changes in factor supplies and productivity, whereas short-run changes in GDP are more closely associated with changes in the factor utilization rate. With this short-run/long-run distinction firmly in place, we are well positioned for the detailed discussion of long-run economic growth that appears in Chapter 26. Our treatment of long-run growth, which we regard as one of the most important issues facing the United States and the world today, goes well beyond the treatment in most introductory texts.

Part 10 focuses on the role of money and financial systems. Chapter 27 discusses the nature of money, various components of the money supply, the commercial banking system, and the Federal Reserve. In Chapter 28 we review the determinants of the demand for money. We then turn to a detailed discussion of the link between the money supply and other economic variables such as interest rates, the exchange rate, national income, and the price level. This chapter builds directly on the material in Chapters 23 and 24, with an emphasis on the distinction between short-run and long-run effects. In Chapter 29, we discuss the monetary policy of the Federal Reserve, with a focus on the Fed's current operating system. We use a description of the March 2007 Federal Open Market Committee meeting to illustrate the Fed's long-run goals and short-run targets. The links between the Fed's policy tools and goals are described in a section on the market for bank reserves and the federal funds rate. The chapter ends with a discussion of current challenges facing the Fed such as how to respond to developments in the stock market and the advisability of adopting a numerical target for the inflation rate.

Part 11 deals with some of today's most pressing macroeconomic policy issues. It contains separate chapters on inflation, unemployment, and government budget deficits. Chapter 30 on inflation examines the central role of expectations in determining inflation, and the importance of credibility on the part of the central bank. Chapter 31 on unemployment examines the determinants of frictional and structural unemployment and discusses likely reasons for international differences in the NAIRU. Chapter 32, which covers budget deficits, stresses the effect of deficits on long-term economic growth.

Virtually every macroeconomic chapter contains at least some discussion of international issues. However, the final part of *Economics* focuses primarily on international economics. Chapter 33 gives the basic treatment of international trade, developing both the traditional theory of static comparative advantage and newer theories based on imperfect competition and dynamic comparative advantage. Chapter 34 discusses both the positive and normative aspects of trade policy, as well as the WTO and prospects for regional free-trade areas, such as NAFTA. Chapter 35 introduces the balance of payments and examines exchange-rate determination. Here we also discuss three important policy issues: the desirability of current-account deficits or surpluses, whether there is a "right" value for the exchange rate, and the costs and benefits of adopting a fixed exchange rate.

We hope you find this menu both attractive and challenging; we hope students find the material stimulating and enlightening. Many of the messages of economics are complex—if economic understanding were only a matter of common sense and simple observation, there would be no need for professional economists and no need for textbooks like this one. To understand economics, one must work hard. Working at this book should help readers gain a better understanding of the world around them and of the policy problems faced by all levels of government. Furthermore, in today's globalized world, the return to education is large. We like to think that we have contributed in some small part to the understanding that increased investment in human capital by the next generation is necessary to restore incomes to the rapid growth paths that so benefited our parents and our peers. Perhaps we may even contribute to some income-enhancing accumulation of human capital by some of our readers.

Substantive Changes to This Edition

We have done a major revision and update of the entire text with guidance from an extensive series of formal reviews and other feedback from both users and nonusers of this book. As always, we have strived very hard to improve the readability of the book and to enhance its usefulness in the classroom. We have focused the discussions so that the major point is emphasized as clearly as possible, without the reader being distracted by non-essential points.

Overall Format

We have introduced a number of important format changes that will enhance student learning. Brief definitions of important terms introduced in the text are now printed in the margin. Student learning of key concepts is also enhanced through the short paragraphs that summarize the material presented in each section of the book. These sections are now highlighted in yellow for quick access and review.

The readability of our graphs has also been enhanced by the use of a brighter color scheme for the curves and by placing graphs on a plain white background. We have added a limited number of color photographs in cases where these images help to illustrate and reinforce concepts discussed in the book. We have encouraged students to study economics beyond the material in the textbook by providing Web links in the margins to organizations such as OPEC and by adding several Web-related questions at the end of the chapter. Finally, whenever appropriate, we have used charts and graphs rather than tables of numbers to illustrate information such as the relationship between income and education.

Two pedagogical improvements enhance student learning and increase engagement with the material. The end-of-chapter *Discussion Questions* from the twelfth edition of the book have been retained but we have also added a number of *Study Exercises* to each chapter. These exercises provide practice with definitions, numerical calculations and graphical techniques. The *Discussion Questions* have been revised and updated to reflect current events and policy issues. Answers to the all *Study Exercises* and *Discussion Questions* are provided in the Instructor's Manual. We have also added a MyEconLab Web site for the book and selected *Study Exercises* from each chapter are available on the MyEconLab Web site.

As in recent editions, we have kept all core material in the main part of the text. The *Application* and *Extension* boxes from the twelfth edition have been edited and updated and are now reorganized into three types—*Applying Economic Concepts*, *Lessons from History*, and *Extensions in Theory*. As before, the boxes are referenced from the text and are used to show examples or extensions that can be skipped without fear of missing an essential concept. But we think it would be a shame to skip too many of them, as there are many interesting examples and policy discussions in these boxes.

The main change to the basic structure of the book is a reduction in the number of chapters. In the macroeconomics section we have moved the discussion of long-run growth from just before the material on international trade to before the section on money and banking.

What follows is a brief listing of the main changes that we have made to the textbook.

Microeconomic Introduction

Part 1: What Is Economics? The three chapters on the nature of economics from the twelfth edition have been reorganized into two chapters. Chapter 1 introduces the central ideas of scarcity, choice, and opportunity cost. It also examines the idea behind the "invisible hand." We have added a new box on the debate over globalization and have combined the former discussions of central planning and alternative economic systems into a single section.

Chapter 2 explores how economists build and test their theories. It discusses different types of data and the basics of graphing. We have clarified the discussion of correlation and causation, and also clarified the discussion of slopes of lines. Two boxes were eliminated from this chapter and the discussion of why economists disagree was moved to the main text. The discussion of graphs has been updated and streamlined and we use relevant examples such as the return to pollution abatement. We have moved the material on graphing out of the appendix in recognition of the importance of these techniques in economics.

Part 2: An Introduction to Demand and Supply. The basics of demand, supply, and market price are developed in Chapter 3. We have added a box with numerical and algebraic examples of market equilibrium that should make the analysis more concrete for students. In the box examining weather shocks we have replaced the discussion of Hurricane Andrew with a discussion of Hurricane Katrina.

Chapter 4 examines elasticity. We have changed the hypothetical data in Tables 4.1 and 4.2 to simplify the computations of elasticity. In addition to the discussion of the incidence of a gasoline excise tax in the main text, we have added a box on the tax incidence of federal payroll taxes.

Macroeconomics

Part 7: An Introduction to Macroeoconomics. Throughout the macroeconomic portion of the book, we have worked hard in this edition to clarify which of our statements are assumptions, which are predictions, and which are observations about the actual economy. This clarification is crucial in order for students to recognize the difference between what we actually know and what our theory leads us to predict.

Chapter 19 provides an introduction to the main macroeconomic variables, how they are measured, and why they matter. We begin with a description of models based on micro foundations and explicit optimizing behavior and models built explicitly on aggregate relationships. We clearly state that this textbook adopts the second approach and emphasizes the role of wage and price flexibility in several policy debates. We have also added a discussion of productivity, an example for the calculation of the unemployment rate, and a new graph showing the price of a euro in U.S. dollars.

The measurement of national income is the focus of Chapter 20. We have written a new section on GDP and living standards in which we make the distinction between material living standards and a broader concept of well-being. We have also added an example that shows how to calculate a chain-weight real GDP measure in the box on calculating real GDP.

Part 8: The Economy in the Short Run. Chapter 21 presents the simplest possible macroeconomic model in which consumption is the only induced component of aggregate expenditure and investment is the only autonomous component. The price level, interest rate, and exchange rate are fixed and output is demand determined. We now use data to describe the relationship between consumption and disposable income and compare international trends in savings rates. Before introducing the equilibrium concept, we clarify our assumption that output is demand determined.

In Chapter 22 we add international trade and a government sector to the simple macro model. We have rewritten and streamlined our discussion of government purchases and net tax revenues, and have removed the discussion of the saving/investment approach to equilibrium. The result of our changes is a much leaner chapter, one that quickly gets to the central points and has minimal distractions.

The supply side of the economy and a variable price level are introduced in Chapter 23. This is the first chapter with aggregate demand (*AD*) and aggregate supply (*AS*) curves and the chapter name has been changed to reflect the introduction of these two tools. We have clarified the discussion of the *AS* curve and no longer distinguish between the short-run and long-run *AS* curves. This modification sets up our discussion in Chapter 24 of how shifts in the *AS* curve bring real GDP to its potential level in the long run. Our final situation of events and shocks that affect both demand and supply has been reworked and we include an example that examines the effects of Hurricane Katrina on *AS* and *AD*.

Part 9: The Economy in the Long Run. Chapter 24 examines the adjustment process that takes the economy from a short-run equilibrium to a long-run equilibrium with real GDP equal to potential output. We have brought forward the discussion of the Phillips curve which relates the level of the output gap with the rate at which the *AS* curve is shifting (due to wage changes). In our discussion of fiscal stabilization we have an improved discussion of how changes in government spending are likely to affect the composition of GDP, and thus affect long-run growth.

The different causes of short-run and long-run changes in real GDP are highlighted in Chapter 25, a short chapter appearing for the first time in this edition. We use data to establish the point that short-run changes in GDP are mostly caused by changes in the utilization of factors whereas long-run changes are mostly caused by changes in productivity and factor supplies.

Chapter 26 examines the process of long-run economic growth in detail. This chapter now appears earlier in the book than in the twelfth edition. We begin by discussing three different aspects of growth—growth in real GDP, real per capita GDP, and real GDP per hour worked. We have rewritten our discussion of how we modify our short-run macro model to examine the determination of the real interest rate in the long run. We have enriched our discussion of the limits to growth from resource extraction and environmental degradation.

Part 10: Money, Banking, and Monetary Policy. Chapter 27 explores the nature of money, the U.S. banking system, and the process of deposit creation. We have updated the discussion of means of payment to include a discussion of electronic payments. The number of boxes has been reduced from four to two to streamline the discussion of the chapter.

The role of money and interest rates in the *AD*/*AS* model is developed in Chapter 28. In the opening section, we have clarified the relationship between the price of a bond and the bond's present value. In our discussion of long-run money neutrality we have made it clear that our macro model assumes the conditions that give rise to neutrality; this is one place where it is crucial to be clear about what is known fact and what is a prediction from a model.

Chapter 29 describes current monetary policy procedures and issues in the United States. We begin by outlining that central banks have two general approaches for implementing monetary policy: they can set the money supply or they can set the interest rate. We then turn to how the Federal Reserve influences the federal funds rate and uses open market operations to change conditions in the federal funds market. We have added a section on challenges to monetary policy such as lags in the transmission process and how to deal with developments in the stock market. We have added a box that describes the nature of a federal open market committee

(FOMC) meeting because these meetings are the most familiar aspect of U.S. monetary policy. The now-dated material on the Treasury-Federal Reserve Accord has been removed.

Part 11: Macroeconomic Problems and Policies. Chapter 30 discusses sustained inflation in our macroeconomic model, and also provides a detailed analysis of disinflation. We have clarified two distinct pressures operating on wages: excess demand or supply emanating from an output gap, and the expectations of future inflation. In the discussion of disinflation we have clarified the competing forces acting on wages during the "stagflationary" phase.

Short-term fluctuations in unemployment and longer-term changes in the NAIRU are the focus of Chapter 31. We have rewritten the opening section on unemployment fluctuations where we now more clearly outline the competing New Classical and New Keynesian theories. The gross flows data from *Applying Economic Concepts 31.1* have been updated and the analysis now focuses on data for a single year to make the inflow and outflow series easier to read. We have also added a chart comparing standardized unemployment rates in a set of OECD countries and we link the patterns observed to determinants of the NAIRU.

Chapter 32 examines the economic effects of government budget deficits and debt. We have clarified the analysis of the cyclically adjusted deficit and have removed the discussion of Ricardian equivalence. We have improved and clarified the discussion of the long-term burden of the public debt.

Part 12: The United States in the Global Economy. Chapter 33 explores the gains from trade, and emphasizes that the gains arising from trade between individuals are the same as gains that arise from trade between countries. We have sharpened the discussion of the importance of economies of scale and learning by doing, and have also put a little more emphasis on the idea that comparative advantage can be acquired as well as lost. This is the important idea that comparative advantage is a dynamic concept.

Trade policy is the topic of Chapter 34. In restating the case for free trade, we have argued that protection may have the result of reducing the amount of innovation by protected firms, leading to an eventual loss of relative living standards. We have added an updated section on WTO negotiations to the previous section on the GATT. We have also added a discussion of recent trade dispute between the EU and the United States over alleged subsidies to Airbus and Boeing. This chapter also discusses government adjustment programs that are available to workers who are displaced by trade.

Chapter 35 examines exchange rates and the balance of payments. We have entirely rewritten the section explaining why the balance of payments must balance. We now explain at the *aggregate* level why a current account deficit must be matched by a capital outflow—a capital account deficit. We have made our discussion of managing fixed exchange rates more realistic by applying it the exchange rate between the dollar and the Chinese yuan. This chapter also includes material on open economy macroeconomic policy from the previous Chapter 38. For example, we discuss Ecuador's decision to adopt the U.S. dollar within the context of the optimal currency area framework.

We no longer devote a separate chapter to growth in developing countries. Much of this material has been spread throughout the book in the sections on economic systems or growth.

If you are moved to write to us—and we hope that you will be—please do. You can send any comments or questions regarding the text or any of the supplemental material (such as the Instructor's Manual, the *Study Guide*, the Test Bank, or MyEconLab) to:

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To the Student

Welcome to what is most likely your first book about economics! You are about to encounter what is for most people a new way of thinking, which often causes people to see things differently than they did before. But learning a new way of thinking is not always easy, and you should expect some hard work ahead. We do our best to be clear and logical, and to illustrate our arguments whenever possible with current and interesting examples.

You must develop your own technique for studying, but the following suggestions may prove helpful. Begin by carefully considering the *Learning Objectives* at the beginning of a chapter. Read the chapter itself relatively quickly in order to get the general run of the argument. At this first reading, you may want to skip the boxes and any footnotes. Then, after reading the *Chapter Summary* and the *Key Concepts* (at the end of each chapter), reread the chapter more slowly, making sure that you understand each step of the argument.

With respect to the figures and tables, be sure you understand how the conclusions that are stated in boldface at the beginning of each caption have been reached. You should be prepared to spend time on difficult sections; occasionally, you may spend an hour on only a few pages. Paper and pencil are indispensable equipment in your reading. It is best to follow a difficult argument by building your own diagram while the argument unfolds rather than by relying on the finished diagram as it appears in the book.

The end-of-chapter *Study Exercises* require you to practice using some of the concepts that you learned in the chapter. These will be excellent preparation for your exams. To provide you with immediate feedback, we have posted Solutions to Selected Study Exercises on MyEconLab (www.myeconlab.com). The end-of-chapter *Discussion Questions* require you to apply what you have studied. We advise you to outline answers to some of the questions. In short, you should seek to understand economics, not to memorize it.

The bracketed boldface numbers in the text refer to a series of mathematical notes that are found starting on page M-1 at the end of the book. For those of you who like mathematics or prefer mathematical argument to verbal or geometric exposition, these may prove useful. Others may disregard them.

In this edition of the book, we have incorporated many elements to help you review material and prepare for examinations. A brief description of all the features in this book is given in the separate section that follows.

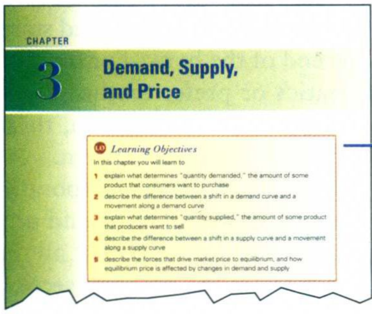
We encourage you to make use of the brand new MyEconLab for the book (www.myeconlab.com) at the outset of your studies. MyEconLab contains a wealth of valuable resources to help you. MyEconLab provides Solutions to Selected Study Exercises. It also includes many additional practice questions, some of which are modeled on *Study Exercises* in the book. A blue circle around the exercise number identifies those *Study Exercises* that are reformulated online for you. For more details about the resources provided in MyEconLab, please see the description in the section on Supplements.

We strongly suggest you make use of the excellent *Study Guide* written expressly for this text. The *Study Guide* is closely integrated with the book. Practice questions and exercises in the *Study Guide* will help you to prepare for exams by evaluating and reinforcing your understanding of the key concepts and analytical techniques from each chapter of the book. Explanations are provided for the answers to some of the Multiple-Choice Questions to facilitate your independent study. The ability to solve problems and to communicate and interpret your results are important goals in an introductory course in economics. The *Study Guide* can play a crucial role in your acquisition of these skills.

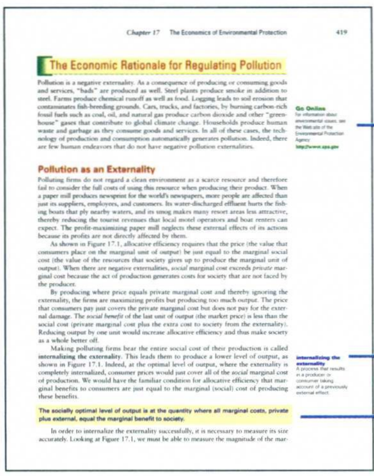
Over the years, the book has benefited greatly from comments and suggestions we have received from students. Please feel free to send your comments to paul.storer@wwu.edu. Good luck, and we hope you enjoy your course in economics!

Features of This Edition

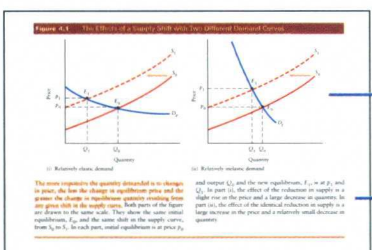
We have made a careful effort with this edition to incorporate features that will facilitate the teaching and learning of economics.



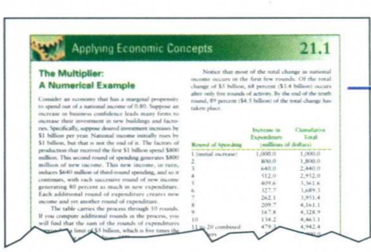
- A set of ***Learning Objectives*** at the beginning of each chapter clarifies the skills and knowledge to be learned in each chapter. These same learning objectives are used in the chapter summaries as well as in the *Study Guide*.



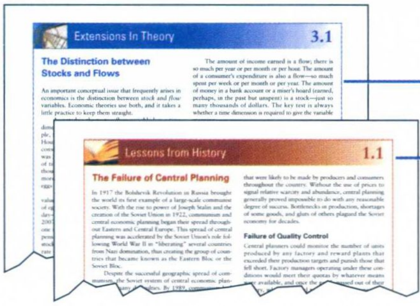
- ***Go Online*** margin notes provide addresses to useful Web sites. Each *Go Online* margin note provides a Web address along with a brief description of the material available there. Some Web addresses are to government Web pages and some are to organizations such as OPEC, the UN, and the WTO.
- **Key terms** are boldfaced where they are defined in the body of the text. Each key term is restated with its definition in the margin. All key terms are also listed in the book's Glossary. In the book's Index, each key term and the page where it is defined is boldfaced.
- **Major ideas** are highlighted in yellow in the text.



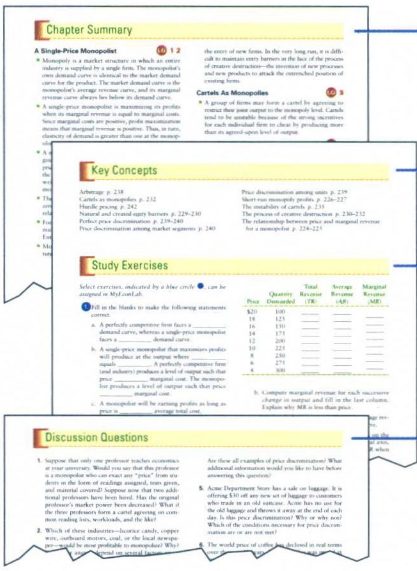
- The **color scheme for figures** consistently uses the same color for each type of curve. For example, all demand curves are blue, whereas all supply curves are red.
- A **caption for each figure and table** summarizes the underlying economic reasoning. Each caption begins with a boldfaced statement of the relevant economic conclusion.



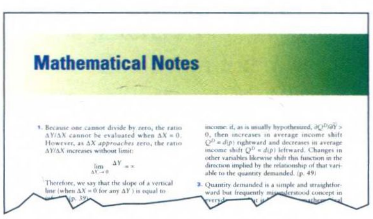
- ***Applying Economic Concepts*** boxes demonstrate economics in action, providing examples of how theoretical material relates to issues of current interest.



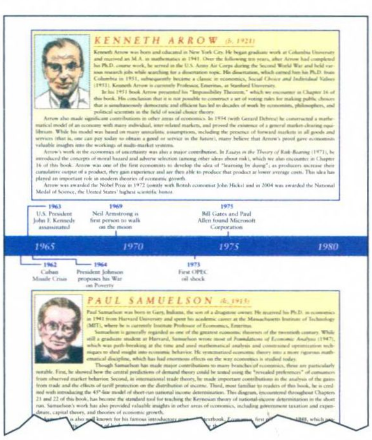
- ***Extensions in Theory*** boxes provide a deeper treatment of a theoretical topic that is discussed in the text.
- ***Lessons from History*** boxes contain discussions of a particular policy debate or empirical finding that takes place in a historical context.



- Each ***Chapter Summary*** is organized using the same numbered headings as found in the body of the chapter. The relevant *Learning Objective* LO numbers are given in brown next to each heading in the summary.
- ***Key Concepts*** are listed near the end of each chapter and include the page number for easy reference.
- A set of ***Study Exercises*** is provided for each chapter. These often quantitative exercises require the student to analyze problems by means of computations, graphs, or explanations. Select *Study Exercises* are assignable in **MyEconLab** (www.myeconlab.com) and are marked by the blue circle.
- A set of ***Discussion Questions*** is also provided for each chapter. These questions require the student to synthesize information and generalize concepts. They are designed especially for discussion in the classroom.



- A set of ***Mathematical Notes*** is presented in a separate section near the end of the book. Because mathematical notation and derivations are not necessary to understand the principles of economics but are more helpful in advanced work, this seems to be a sensible arrangement. References in the text to those mathematical notes are given by means of boldfaced numbers in square brackets.



- A ***Time Line of Great Economists***, running from the mid-17th century to the late-20th century, is presented near the end of the book. Along this time line we have placed brief descriptions of the life and works of some great economists, most of whom the reader will encounter in the textbook. Along this time line we have also listed some major world events in chronological order to give readers an appreciation for when these economists did their work.

Supplements

A comprehensive set of supplements has been carefully prepared to assistant students and instructors in using this new thirteenth edition.

A thoroughly revised and substantially expanded ***Study Guide***, written by Jim Haischer of Polk Community College and S. Brock Blomberg of Claremont McKenna College, is designed for use either in the classroom or by students on their own. The *Study Guide* offers additional study support and reinforcement for each text chapter. For the thirteenth edition, we have reorganized the *Study Guide* to include more in-depth practice and tips for study. For each chapter, the *Study Guide* provides the following helpful material:

- Learning Objectives matching those in the textbook
- Chapter Overview
- Hints and Tips
- Chapter Review, consisting of Multiple-Choice Questions, organized into sections matching the main sections in the textbook
- Short-Answer Questions
- Exercises
- Extension Exercises
- Additional Multiple-Choice Questions
- Solutions to all the Questions and Exercises above
- Explanations for solutions to nearly 50 percent of the Additional Multiple-Choice Questions.

The printed **Test Bank** has been substantially revised and updated by Ingrid Kristjanson and author Christopher Ragan and is available in both Word and PDF format. Now containing over 3,600 multiple-choice questions, approximately 40 percent of the questions test applied skills, 20 percent are quantitative, and 20 percent of questions include a graph or a table. For each question, the authors have provided the correct answer, identified the relevant section number in the textbook chapter, specified the concept being tested, assigned a level of difficulty, identified the skill tested (recall or applied), noted whether the question is qualitative or quantitative, and whether or not it includes a graph or a table.

The **Computerized Test Bank** reproduces the Test Bank material in theTestGen software. Available for Windows and Macintosh, TestGen enables instructors to search for questions according to any of the identified attributes and to sort questions into any order desired. With TestGen, instructors can easily edit existing questions, add questions, generate tests, and print the tests in a variety of formats. TestGen also allows instructors to administer tests on a local area network, have the tests graded electronically, and have the results prepared in electronic or printed reports.

The printed **Instructor's Manual** has been thoroughly revised and updated by author Paul Storer. Available in both Word and PDF format, each chapter contains an introduction to the material, an overview of each section with detailed explanations of the concepts and reasoning behind the presentation, and answers to all *Study Exercises* and *Discussion Questions* from the text.

PowerPoint Lecture Presentations have been meticulously prepared by Jim Lee of Texas A&M University–Corpus Christi. These lecture notes incorporate the art from the text and outline key terms, concepts, and figures.

Transparency Masters reproduce the PowerPoint Lecture Presentations in a convenient PDF format for instructors who wish to use them in the classroom on an overhead projector.

The **Instructor's Resource Disk** offers instructors electronic supplements conveniently packaged on a CD-ROM. It includes the PowerPoint Lecture Presentations, the Instructor's Manual, the Transparency Masters, Test Bank, and the Computerized Test Bank with TestGen software for simple test preparation.

All of these instructor supplements are also available electronically on the Instructor's Resource Center (www.aw-bc.com/irc). The Computerized Test Bank can also be found in the instructor's resource section of MyEconLab.

MyEconLab

MyEconLab is the premier student and instructor tool, integrating lessons from the text into a powerful online learning and teaching resource.

For the Student

MyEconLab gives students the tools needed to learn from their mistakes—whenever they might be struggling.

Sample Tests

Each chapter has two Sample Tests pre-loaded in MyEconLab, enabling students to practice what they have learned, test their understanding, and identify areas that need further work. Students can study on their own or complete assignments from their instructor.

Personal Study Plan

A personalized Study Plan is generated from each student's results on Sample Tests and instructor assignments. Students can clearly see which topics they have mastered and which topics they need to work on. The Study Plan links to additional practice problems and tutorial exercises to help with those topics.

Tutorial Instruction

Launched from the personalized Study Plans, individual tutorial instruction provides additional practice, targeted learning aids, and step-by-step explanations.

Graphing Tool

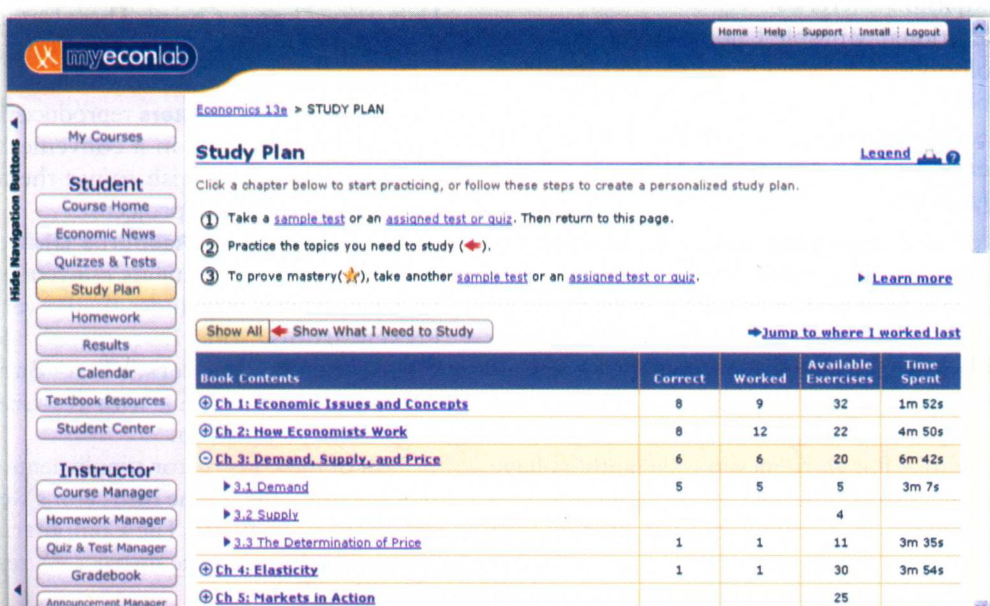
A graphing tool integrated into the Tests and Study Plan exercises enables students to make and manipulate graphs so that they better understand how concepts, numbers, and graphs connect. Exercises that use this graphing tool, like all others in MyEconLab, are graded automatically.

eText

An integrated eText allows students access to their textbook on any computer. The eText includes links to other learning aids.

eThemes of the Times

Articles from *The New York Times* are correlated to each textbook chapter and paired with critical thinking questions. Instructor answer keys are available.



Research Navigator

The Research Navigator (CourseCompass version only) develops students' research skills by offering exclusive access to databases of *The New York Times*, the *Financial Times*, and peer-reviewed journals.

Animated Figures

Animated figures present audio explanations for each step in the graph.

Glossary Flashcards

These useful study aids give every key term as a flashcard, allowing students to quiz themselves on vocabulary from one or more chapters at a time.

Pearson Tutor Services

Designed to meet the students' needs, Pearson Tutor Services assists students one-on-one with economic topics. Tutors can be reached by e-mail or by dropping in to a scheduled live tutoring session online.

For the Instructor

MyEconLab is an online course management, testing, and tutorial resource. Instructors decide the level of their participation, and can choose how much, or how little, time they want to spend setting up and using MyEconlab.

Ready-to-Use Assignments

For each chapter, and requiring no instructor set-up, students get two preloaded Sample Tests, a Study Plan, and tutorial help. Instructors can assign Tests, Quizzes, and Homework in MyEconLab using three resources:

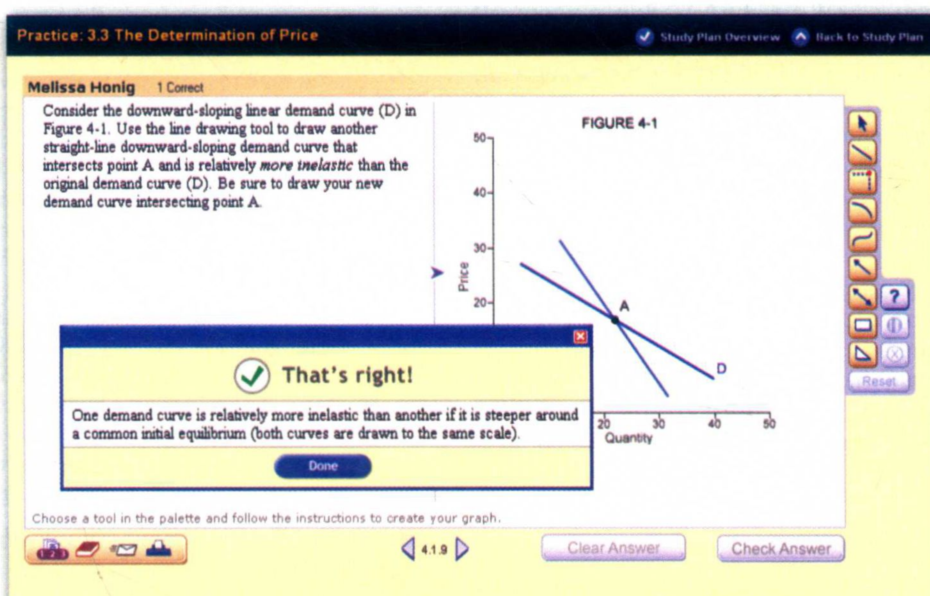
- Study Plan questions
- Test Bank questions
- Self-authored questions using the Econ Exercise Builder

Problems in MyEconLab

The problems assignable in MyEconLab are directly correlated with the Test Bank and end-of-chapter problems. Instructors can design their own quizzes, tests, or homework assignments from the significant bank of questions or assign pre-loaded Sample Tests.

Gradebook

The powerful online Gradebook can grade every homework and quiz question—even those with graphing—and records each student's time spent and performance. When working with a Study Plan, students get immediate feedback with links to additional learning tools. Instructors can check on students' progress at any time in their online Gradebook.



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The Dismal Scientist

The Dismal Scientist Web site provides real-time monitoring of the global economy, allowing students to go beyond theory and into application. For a small additional charge, a 15-week student subscription to the Dismal Scientist Web site can be packaged with *Economics*. Professors will receive a complimentary one-year subscription.