Principles of Economics

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About the Author

N. Gregory Mankiw is Professor of Economics at Harvard University. As a student, he studied economics at Princeton University and MIT. As a teacher, he has taught various courses, including macroeconomics, microeconomics, statistics, and principles of economics. He even spent one summer long ago as a sailing instructor on Long Beach Island.

Professor Mankiw is a prolific writer. His work has been published in academic journals, such as the American Economic Review, Journal of Political Economy, and Quarterly Journal of Economics, and in more popular forums, such as The New York Times, The Financial Times, and The Wall Street Journal. He has been a columnist for Fortune magazine and is author of the bestselling intermediate-level textbook Macroeconomics (Worth Publishers). In addition to his teaching, research, and writing, Mankiw has served as Director of the Monetary Economics Program at the National Bureau of Economic Research, a nonprofit think tank in Cambridge, Massachusetts, and as an adviser to the Federal Reserve Bank of Boston and the Congressional Budget Office.

Professor Mankiw lives in Wellesley, Massachusetts, with his wife, Deborah, and their children, Catherine, Nicholas, and Peter.
To Catherine, Nicholas, and Peter,
my other contributions to the next generation
Preface: To the Instructor

During my twenty-year career as a student, the course that excited me most was the two-semester sequence on the principles of economics I took during my freshman year in college. It is no exaggeration to say that it changed my life.

I had grown up in a family that often discussed politics over the dinner table. The pros and cons of various solutions to society’s problems generated fervent debate. But, in school, I had been drawn to the sciences. Whereas politics seemed vague, rambling, and subjective, science was analytic, systematic, and objective. While political debate continued without end, science made progress.

My freshman course on the principles of economics opened my eyes to a new way of thinking. Economics combines the virtues of politics and science. It is, truly, a social science. Its subject matter is society--how people choose to lead their lives and how they interact with one another. But it approaches its subject with the dispassion of a science. By bringing the methods of science to the questions of politics, economics tries to make progress on the challenges that all societies face.

I was drawn to write this book in the hope that I could convey some of the excitement about economics that I felt as a student in my first economics course. Economics is a subject in which a little knowledge goes a long way. (The same cannot be said, for instance, of the study of physics or the Japanese language.) Economists have a unique way of viewing the world, much of which can be taught in one or two semesters. My goal in this book is to transmit this way of thinking to the widest possible audience and to convince readers that it illuminates much about the world around them.

I firmly believe that everyone should study the fundamental ideas that economics has to offer. One purpose of general education is to make people more informed about the world to make them better citizens. The study of economics, as much as any discipline, serves this goal. Writing an economics textbook is, therefore, a great honor and a great responsibility. It is one way that economists can help promote better government and a more prosperous future. As the great economist Paul Samuelson put it, “I don’t care who writes a nation’s laws, or crafts its advanced treaties, if I can write its economics textbooks.”

For Whom Is This Book Written?

It is tempting for a professional economist writing a textbook to take the economist’s point of view and to emphasize those topics that fascinate him and other economists. I have done my best to avoid that temptation. I have tried to put myself in the position of someone seeing economics for the first time. My goal is to emphasize the material that students should and do find interesting about the study of the economy.

One result is that this book is briefer than many books used to introduce students to economics. As a student, I was (and unfortunately still am) a slow reader. I groaned whenever a professor gave the class a 1000-page tome to read. Of course, my reaction was not unique. The Greek poet Callimachus put it succinctly: “Big book, big bore.” Callimachus made that observation in 250 B.C., so he was probably not referring to an economics textbook, but today his sentiment is echoed around the world every semester when students first see their economics assignments. My goal in
this book is to avoid that reaction by skipping the bells, whistles, and extraneous details that distract students from the key lessons.

Another result of this student orientation is that more of this book is devoted to applications and policy, and less to formal economic theory, than is the case with many other books written for the principles course. Throughout this book I have tried to return to applications and policy questions as often as possible. Most chapters include “Case Studies” illustrating how the principles of economics are applied. In addition, “In the News” boxes (most of which are new to this edition) offer excerpts of newspaper articles showing how economic ideas shed light on the current issues facing society. After students finish their first course in economics, they should think about news stories from a new perspective and with greater insight.

What’s New in the Second Edition?

Much in the world has changed since I wrote the first edition of this book: The internet has become a central part of American life; the U.S. federal government’s budget has gone from deficit to surplus; the Justice Department has brought a landmark antitrust suit against Microsoft; the stock market has experienced an historic boom; Europe has adopted a common currency; and Michael Jordan has retired from basketball. Because the teaching of economics has to stay current with the ever changing world, this new edition includes dozens of new case studies and boxes.

In addition to updating the book, I have also refined the book’s coverage and pedagogy with the input of many users of the first edition. Several topics appear in this edition that were missing from first, including cross-elasticity of demand, the debate over predatory pricing, and the concept of present value. I have also expanded the treatment of some topics, such as the computation of elasticity, the various concepts of firms’ costs, and the model of aggregate supply and aggregate demand. (Of course, all of these topics appear only in the complete 34-chapter version of this book. See below for outlines of each of the five available versions.)

All the changes that I made, and the many others that I considered, were evaluated in light of the benefits of brevity. Like most things we study in economics, student time is a scarce resource. I always keep in mind a dictum from the great novelist Robertson Davies: “One of the most important things about writing is to boil it down and not bore the hell out of everybody.”
How Is This Book Organized?

To write a brief and student-friendly book, I had to consider new ways to organize familiar material. What follows is a whirlwind tour of this text. The tour will, I hope, give instructors some sense of how the pieces fit together.

**Introductory Material**

Chapter 1, “Ten Principles of Economics,” introduces students to the economist’s view of the world. It previews some of big ideas that recur throughout economics, such as opportunity cost, marginal decisionmaking, the role of incentives, the gains from trade, and the efficiency of market allocations. Throughout the book, I refer regularly to the Ten Principles of Economics in Chapter 1 to remind students that these principles are the foundation for most economic analysis. A building-blocks icon in the margin calls attention to these references.

Chapter 2, “Thinking Like an Economist,” examines how economists approach their field of study. It discusses the role of assumptions in developing a theory and introduces the concept of an economic model. It also discusses the role of economists in making policy. The appendix to this chapter offers a brief refresher course on how graphs are used and how they can be abused.

Chapter 3, “Interdependence and the Gains from Trade,” presents the theory of comparative advantage. This theory explains why individuals trade with their neighbors, as well as why nations trade with other nations. Much of economics is about how market forces coordinate many individual production and consumption decisions. As a starting point for this analysis, students see in this chapter why specialization, interdependence, and trade can benefit everyone.

**The Fundamental Tools of Supply and Demand**

The next three chapters introduce the basic tools of supply and demand. Chapter 4, “The Market Forces of Supply and Demand,” develops the supply curve, the demand curve, and the notion of market equilibrium. Chapter 5, “Elasticity and Its Application,” introduces the concept of elasticity and uses it to analyze events in three different markets. Chapter 6, “Supply, Demand, and Government Policies,” uses these tools to examine price controls, such as rent-control and minimum-wage laws, and tax incidence.

Chapter 7, “Consumers, Producers, and the Efficiency of Markets,” extends the analysis of supply and demand using the concepts of consumer surplus and producer surplus. It begins by developing the link between consumers’ willingness to pay and the demand curve and the link between producers’ costs of production and the supply curve. It then shows that the market equilibrium maximizes the sum of the producer and consumer surplus. Thus, students learn early about the efficiency of market allocations.

The next two chapters apply the concepts of producer and consumer surplus to questions of policy. Chapter 8, “Application: The Costs of Taxation,” shows why taxation results in deadweight losses and what determines the size of those losses. Chapter 9, “Application: International Trade,” considers who wins and who loses from international trade and presents the debate over protectionist trade policies.
More Microeconomics
Having examined why market allocations are often desirable, the book then considers how the government can sometimes improve on market allocations. Chapter 10, “Externalities,” explains how external effects such as pollution can render market outcomes inefficient and discusses the possible public and private solutions to those inefficiencies. Chapter 11, “Public Goods and Common Resources,” considers the problems that arise when goods, such as national defense, have no market price. Chapter 12, “The Design of the Tax System,” describes how the government raises the revenue necessary to pay for public goods. It presents some institutional background about the U.S. tax system and then discusses how the goals of efficiency and equity come into play when designing a tax system.

The next five chapters examine firm behavior and industrial organization. Chapter 13, “The Costs of Production,” discusses what to include in a firm’s costs, and it introduces cost curves. Chapter 14, “Firms in Competitive Markets,” analyzes the behavior of price-taking firms and derives the market supply curve. Chapter 15, “Monopoly,” discusses the behavior of a firm that is the sole seller in its market. It discusses the inefficiency of monopoly pricing, the possible policy responses, and the attempts by monopolies to price discriminate. Chapter 16, “Oligopoly,” covers markets in which there only a few sellers, using the prisoners’ dilemma as the model for examining strategic interaction. Chapter 17, “Monopolistic Competition,” looks at behavior in a market in which many sellers offer similar but differentiated products. It also discusses the debate over the effects of advertising.

The next three chapters present issues related to labor markets. Chapter 18, “The Markets for the Factors of Production,” emphasizes the link between factor prices and marginal productivity. Chapter 19, “Earnings and Discrimination,” discusses the determinants of equilibrium wages, including compensating differentials, human capital, and discrimination. Chapter 20, “Income Inequality and Poverty,” examines the degree of inequality in U.S. society, the alternative views about the government’s role in changing the distribution of income, and the various policies aimed at helping society’s poorest members.

Chapter 21, “The Theory of Consumer Choice,” analyzes individual decisionmaking using budget constraints and indifference curves. It covers material that is somewhat more advanced than the rest of the book. Some instructors may want to skip this chapter, depending on the emphases of their courses and the interests of their students. Instructors who do cover this material may want to do so earlier, and I have written this chapter so that it can be covered anytime after the basics of supply and demand have been introduced.

Macroeconomics
My overall approach to teaching macroeconomics is to examine the economy in the long run (when prices are flexible) before examining the economy in the short run (when prices are sticky). I believe this organization simplifies learning macroeconomics for several reasons. First, the classical assumption of price flexibility is more closely linked to the basic lessons of supply and demand,
which students have already mastered. Second, the classical dichotomy allows the study of the long run to be broken up in several, more easily digested pieces. Third, because the business cycle represents a transitory deviation from the economy’s long-run growth path, studying the transitory deviations is more natural after the long-run equilibrium is understood. Fourth, the macroeconomic theory of the short run is more controversial among economists than the macroeconomic theory of the long run. For these reasons, most upper-level courses in macroeconomics now follow this long-run-before-short-run approach; my goal is to offer introductory students the same advantage.

Returning to the detailed organization, I start the coverage of macroeconomics with issues of measurement. Chapter 22, “Measuring a Nation’s Income,” discusses the meaning of gross domestic product and related statistics from the national income accounts. Chapter 23, “Measuring the Cost of Living,” discusses the measurement and use of the consumer price index.

The next three chapters describe the behavior of the real economy in the long run. Chapter 24, “Production and Growth,” examines the determinants of the large variation in living standards over time and across countries. Chapter 25, “Saving, Investment, and the Financial System,” discusses the types of financial institutions in our economy and examines the role of these institutions in allocating resources. Chapter 26, “Unemployment and Its Natural Rate,” considers the long-run determinants of the unemployment rate, including job search, minimum-wage laws, the market power of unions, and efficiency wages.

Having described the long-run behavior of the real economy, the book then turns to the long-run behavior of money and prices. Chapter 27, “The Monetary System,” introduces the economist’s concept of money and the role of the central bank in controlling the quantity of money. Chapter 28, “Money Growth and Inflation,” develops the classical theory of inflation and discusses the costs that inflation imposes on a society.

The next two chapters present the macroeconomics of open economies, maintaining the long-run assumptions of price flexibility and full employment. Chapter 29, “Open-Economy Macroeconomics: Basic Concepts,” explains the relationship among saving, investment, and the trade balance, the distinction between the nominal and real exchange rate, and the theory of purchasing-power parity. Chapter 30, “A Macroeconomic Theory of the Open Economy,” presents a classical model of the international flow of goods and capital. The model sheds light on various issues, including the link between budget deficits and trade deficits and the macroeconomic effects of trade policies. Because instructors differ in how much they emphasize this material, these chapters were written so they could be used in different ways. Some instructors may choose to cover Chapter 29 but not Chapter 30; others may skip both chapters; and others may choose to defer the analysis of open-economy macroeconomics until the end of their courses.

After fully developing the long-run theory of the economy in Chapters 24 through 30, the book turns its attention to explaining short-run fluctuations around the long-run trend. This organization simplifies the teaching of the theory of short-run fluctuations because, at this point in the course, students have a good grounding in many basic macroeconomic concepts. Chapter 31, “Aggregate Demand and Aggregate Supply,” begins with some facts about the business cycle and then introduces the model of aggregate demand and aggregate supply. Chapter 32, “The Influence of
Monetary and Fiscal Policy on Aggregate Demand,” explains how policymakers can use the tools at their disposal to shift the aggregate-demand curve. Chapter 33, “The Short-Run Tradeoff between Inflation and Unemployment,” explains why policymakers who control aggregate demand face a tradeoff between inflation and unemployment. It examines why this tradeoff exists in the short run, why it shifts over time, and why it does not exist in the long run.

The book concludes with Chapter 34, “Five Debates over Macroeconomic Policy.” This capstone chapter considers five controversial issues facing policymakers: the proper degree of policy activism in response to the business cycle, the choice between rules and discretion in the conduct of monetary policy, the desirability of reaching zero inflation, the importance of reducing the government’s debt, and the need for tax reform to encourage saving. For each issue, the chapter presents both sides of the debate and encourages students to make their own judgements.

Learning Tools

The purpose of this book is to help students learn the fundamental lessons of economics and to show students how those lessons can be applied to the world in which they live. Toward that end, I have used various learning tools that recur throughout the book.

Chapter Objectives
Every chapter begins with a list of the chapter’s primary objectives to give students a sense of where the chapter is heading. Each list has been kept brief in order to help students stay focused on the four or five key lessons presented in that chapter.

Case Studies
Economic theory is useful and interesting only if it can be applied to understand actual events and policies. This book, therefore, contains numerous case studies that apply the theory that has just been developed.

In the News Boxes
One benefit from studying economics is that it gives students a new perspective and greater understanding about news from around the world. To highlight this benefit, I have included excerpts from many newspaper articles. These articles, together with my brief introductions, show how basic economic theory can be applied. Some of the articles are opinion columns written by prominent economists. Most of these boxes are new to this edition.

FYI Boxes
These boxes provide additional material “for your information.” Some of them give a glimpse into the history of economic thought. Others clarify technical issues. Still others discuss supplementary topics that instructors might choose either to discuss or skip in their lectures.
Definitions of Key Concepts
When key concepts are introduced in the chapter, they are presented in bold typeface. In addition, their definitions are placed in the margins. This treatment should aid students in learning and reviewing the material.

Quick Quizzes
After each major section, students are offered a “quick quiz” to check their comprehension of what they have just learned. If students cannot readily answer these quizzes, they should stop and reread material before continuing.

Chapter Summaries
Each chapter ends with a brief summary that reminds students of the most important lessons that they have just learned. Later in their studying it offers them an efficient way to review for exams.

List of Key Concepts
A list of key concepts at the end of each chapter allows students to test their understanding of the new terms that have been introduced. Page references are included so students can review the terms they do not understand.

Questions for Review
At the end of each chapter are questions for review that test the chapter’s primary lessons. Students can use these questions to check their comprehension after finishing a chapter and to prepare for exams.

Problems and Applications
Each chapter also contains a variety of problems and applications that ask students to apply the material they have learned. Some professors may use these questions for homework assignments. Others may use them as a starting point for classroom discussions.

Alternative Versions of the Books
The book you are holding in your hand is one of five versions of this book that are available for introducing students to economics. Harcourt College Publishers and I offer so many versions because instructors differ in how much time they have and what topics they choose to cover. Here is a brief description of each version of the book:

- **Principles of Economics**: This complete version of the book contains all 34 chapters. It is designed for a two-semester introductory course that covers both microeconomics and macroeconomics.
- **Principles of Microeconomics**: This “split” contains 21 chapters and is designed for one-semester courses in introductory microeconomics.
- **Principles of Macroeconomics**: This “split” contains 22 chapters and is designed for one-semester courses in introductory macroeconomics. It contains a full development of the theory of supply and demand.
- **Principles of Macroeconomics--Brief Edition**: This shortened macro split of 17 chapters contains only one chapter on the basics of supply and demand. It is designed for those instructors who want to jump to the core topics of macroeconomics more quickly.
- **Essentials of Economics**: This version of the book contains 23 chapters. It is designed for one-semester survey courses that cover the basics of both microeconomics and macroeconomics.

The accompanying table shows precisely which chapters are included in each book. Instructors who wish more information about these alternative versions should contact their local Harcourt representative.
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Supplements

Harcourt College Publishers offers various supplements for instructors and students who use this book. These resources make teaching the principles of economics easy for the professor and learning them easy for the student. David R. Hakes of the University of Northern Iowa, a dedicated teacher and economist, oversaw the development of the supplements for this edition.

Harcourt will provide copies of these supplements free of charge to those instructors qualified under its adoption policy. Please contact your sales representative to learn how you may qualify. Or call Harcourt College Publishers at 1-800-237-2665.

For the Instructor

Teaching the principles of economics can be a demanding job. Often, classes are large and teaching assistants in short supply. The supplements designed for the instructor make that job less difficult and more fun.

- **Test Bank.** Christopher Fawson (Utah State University), L. Dwight Israelsen (Utah State University) and Penny Kugler (Central Missouri State University) have updated the test bank to accompany this text. The test bank contains approximately 200 test questions per chapter consisting of multiple-choice and true-false questions as well as many conceptual questions and problems. For the instructor’s convenience, every question in the test bank is identified according to the chapter “Learning Objective” the question covers, the chapter section in which the material is covered, and the type of question (multiple-choice, true-false, short answer, critical thinking, definition, or graphical). Answers immediately follow each question.

- **Computerized Test Bank.** Harcourt also offers a computerized version of the test bank (EXAMaster+) for IBM and Macintosh users. This software has many features that facilitate test preparation, scoring, and grade recording. It is also flexible: Instructors can alter the order of test questions to create different versions of a test and can easily modify questions to meet their own needs. In addition, Microsoft Word files of the Test Bank are available.

- **Instructor’s Resource Manual.** A team of authors has revised the Instructor’s Resource Manual, which is aimed at helping both experienced and novice instructors prepare for the classroom.

  For Lecture Preparation, Linda Ghent (East Carolina University) has developed a detailed outline for each chapter of the text that identifies stumbling blocks students may face and offers helpful teaching tips. She follows each outline with an expanded revision of the “Adjunct Teaching Tips and Warm-Up Activities,” which provides novice teachers with more helpful examples and classroom activities.
For queries and grading, the Instructor’s Resource Manual now contains solutions to exercises from the textbook. Dean Croushore (Federal Reserve Bank of Philadelphia) has prepared complete solutions for all the “Quick Quizzes,” “Questions for Review” and “Problems and Applications” found in the textbook.

- **Instructor’s Resource Manual CD-ROM.** The entire Instructor’s Resource Manual is also available in an electronic format for Windows users. With these electronic files, instructors can create their own lecture notes or incorporate parts of the Instructor’s Resource Manual into their PowerPoint presentations. The EXAMaster software along with Microsoft Word files of each instructor’s supplement and the Lecture Presentation in PowerPoint are included on the CD-ROM as well.

- **Games, and Classroom Activities Manual.** Charles A. Stull (Kalamazoo College) has revised this manual, which helps instructors incorporate “cooperative learning” and “learning by experiment” exercises into their courses. The supplement contains more than 50 games, classroom experiments, in-class demonstrations, and take-home and in-class assignments. Each activity is linked to a text chapter and lists the type of activity, topics covered, materials needed, time required for completion, and classroom limitations. Thorough directions are provided for the instructor. For the instructor’s convenience, the supplement is three-hole punched and perforated, and all pages are designed for easy overhead use and photocopying.

- **The “Ten Principles” Video Set.** Ken Witty, a talented documentary filmmaker, has produced an entirely new and much improved video series to illustrate the Ten Principles of Economics introduced in Chapter 1. Instructors can show these videos as an interesting and visually appealing introduction to topics found throughout the textbook. Questions for use with the videos will be available on the Web site.

- **Lecture Presentation in PowerPoint.** Mark Karscig (Central Missouri State University) has developed a PowerPoint slide show that can save professors’ time as they prepare for class. This supplement covers all the essential topics presented in each chapter of the book. Graphs, tables, lists, and concepts are developed sequentially, much as one might develop them on a blackboard. Additional examples and applications are used to reinforce major lessons. The slides are crisp, clear, and colorful. Instructors may adapt or add slides to customize their lectures.

- **Overhead Transparencies.** For instructors who do not use PowerPoint, overhead transparency acetates are available. These transparencies consist of figures and tables from the text, allowing instructors to build text images into their lectures.
University Access Distance Learning Courses. To pioneer the advancement of distance and Internet-based education, Harcourt has partnered with University Access (http://www.universityaccess.com) to offer economics courses delivered via television, the Internet, and combined teleweb courses to adopters of this textbook. Telecourses offer twelve hours of video lectures and case study presentations featuring highly respected faculty. The Web courses offer hours of innovative Internet exercises, discussion boards, and collaborative projects in interactive formats for a rich and pedagogically sound educational experience. The teleweb courses combine video lectures and case study presentations with more than thirty hours of interactive Internet content that students can use independently or with an instructor. Courses are designed in collaboration with premiere business schools in the United States and the United Kingdom. Combining advanced multimedia content, superior faculty, and a comprehensive curriculum, University Access’s courses in microeconomics and macroeconomics have won awards for Best Program by the United States Distance Learning Association (USDLA).

WebCT Courseware. Rajshree Agarwal-Tonetti (University of Central Florida) and Edward Day (University of Central Florida) have prepared WebCT-based courseware for both the micro and macro portions of the textbook. Along with valuable tutorial elements, WebCT allows students and instructors to interact outside of the classroom. Instructors have the option of hosting the content on their campus Web server, where they can customize the courseware to their preferences, or accessing the existing content on Harcourt’s server. With a few clicks of the mouse the virtual classroom offers instructors a simple method of assigning and receiving homework, tracking grades, and watching as students progress. Test banks that accompany the textbooks are also available in the courseware, allowing for on-line tests and instant grading. To name a few other features, students will appreciate the notes provided for each chapter, self-quizzes and chat rooms, as well as being able to track their grades and complete class projects in an on-line environment.

www.harcourtcollge.com/econ/mankiw/instructor. Additional solutions, classroom exercises and homework assignments can be found on a Web site designed and frequently updated especially for adopters of Principles of Economics, Second Edition. In addition to extra materials like “In the News” updates and solutions to on-line exercises, instructor’s can download individual portions of most supplementary materials and join a mailing list for sharing classroom ideas with other adopters of the book.
For the Student

Harcourt also offers supplements for students who are studying the principles of economics. These supplements reinforce the basic lessons taught in this book and offer opportunities for additional practice and feedback.

- **Student Study Guide.** David R. Hakes (University of Northern Iowa) has written a study guide that provides students with a summary and review of the important concepts presented in the text. Each study guide chapter includes a chapter overview, a chapter review, helpful hints, and definitions. Students can test their understanding of the material with practice problems and a chapter self-tests. Solutions to all problems follow each chapter.

- **Web Site.** Robert Rycroft (Mary Washington College) and Dean Croushore (Federal Reserve Bank of Philadelphia) have helped Harcourt develop a Web site to accompany this text. To appreciate this rich learning resource, we invite you to visit the site at http://www.harcourtcollege.com/econ/mankiw. This ever-evolving tool for learning and economic research has separate areas for students and instructors. Students visiting this page can learn from tutorials featuring interactive graphs, access economic indicators, follow links relevant to each chapter, find out about career opportunities, and test their knowledge with our on-line quizzes by Kim Andrews (Central Missouri State University). In addition, students can strengthen their Internet skills while they study by participating in “Web Scavenger Hunts” and “Cyberproblems.”

- **Wall Street Journal Edition.** One goal in teaching the principles of economics is to provide students a better understanding of the world around them. Many instructors, therefore, encourage students to read about economic issues in the newspaper as they take the course. Those instructors may want to consider the special Wall Street Journal Edition of this text. This edition is the same as the standard edition but includes a ten-week subscription to *The Wall Street Journal*. Students can activate their subscriptions simply by completing and mailing a business reply card found in the back of the book. Talk to your Harcourt representative or call 1-800-237-2665 for details. *The Wall Street Journal* is a registered trademark of Dow Jones & Company, Inc.

- **Wired Edition.** University Access, producer of the award-winning distance learning economics course, now offers an online tutorial that provides media-rich case studies and interactive exercises. Students who purchase this edition will receive a Web site address and a registration number to access the on-line product. This registration number will be shrink-wrapped with the text. Once the student enters the registration number into the Web site, a limited-time tutorial will be activated to enrich their learning experience. Each major topic covered in the textbook is visually displayed and at the student’s fingertips.
- **EconActive Student CD-ROM.** David L. Carr (American University) has worked with Harcourt to create a software package that integrates each chapter into a multi-level tutorial. The software is housed in an Internet browser, which makes using the software as easy as surfing the Net. Detailed chapter notes with interactive Java graph quizzing give students a helpful grasp of the chapters. Self graded multiple-choice and true-false quizzes give feedback on students’ responses. The CD-ROM also contains CNN Videos accompanied by discussion questions, “Cyberproblems,” and what some instructors may remember as TAG software. Tod S. Porter (Youngstown State University) and Teresa M. Riley (Youngstown State University) have customized the award winning TAG software for use in the modern computer environment. This software contains hands-on graphical problems so students can draw curves and practice what they’ve been taught.

- **First Principles Anthology.** Harcourt has published an anthology of some of my columns that were first published in *Fortune Magazine*. These articles offer additional material for classroom activities and discussion questions and informative data contributed by Ron Cronovich (University of Nevada, Las Vegas) and Bob Gitter (Ohio Wesleyan University). Instructors who want to use this supplement can order copies of this book packaged with the anthology.

- **PowerPoint Lecture Notes.** This booklet contains the Lecture Presentation in PowerPoint (both the notes and the graphics) with space next to each slide for taking notes during class. This supplement allows students to focus on the activity going on in the classroom, while still providing them with the confidence that they have an excellent set of notes for future reference. Instructors who choose to customize their PowerPoint presentations and would like to do the same with their accompanying customized printed lecture notes can do so via Harcourt’s custom publishing program. Visit www.harcourtcourse.com/custom for more information. Once at the Web site, locate your area’s custom publishing representative by clicking the “Find Your Custom Publisher” icon.

**Translations and Adaptations**

I am delighted that versions of this book are (or will soon be) available in many of the world’s languages. Currently scheduled translations include Chinese (both in standard and simple characters), Czech, French, German, Greek, Indonesian, Italian, Japanese, Korean, Portuguese, Romanian, Russian, and Spanish. In addition, adaptations of the book for Canadian and Australian students are also available. Instructors who would like more information about these books should contact Harcourt College Publishers.
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N. Gregory Mankiw
Preface: To the Student

“Economics is a study of mankind in the ordinary business of life.” So wrote Alfred Marshall, the great nineteenth-century economist, in his textbook, *Principles of Economics*. Although we have learned much about the economy since Marshall’s time, this definition of economics is as true today as it was in 1890, when the first edition of his text was published.

Why should you, as a student at the beginning of the twenty-first century, embark on the study of economics? There are three reasons.

The first reason to study economics is that it will help you understand the world in which you live. There are many questions about the economy that might spark your curiosity. Why are apartments so hard to find in New York City? Why do airlines charge less for a round-trip ticket if the traveler stays over a Saturday night? Why is Robin Williams paid so much to star in movies? Why are living standards so meager in many African countries? Why do some countries have high rates of inflation while others have stable prices? Why are jobs easy to find in some years and hard to find in others? These are just a few of the questions that a course in economics will help you answer.

The second reason to study economics is that it will make you a more astute participant in the economy. As you go about your life, you make many economic decisions. While you are a student, you decide how many years to stay in school. Once you take a job, you decide how much of your income to spend, how much to save, and how to invest your savings. Someday you may find yourself running a small business or a large corporation, and you will decide what prices to charge for your products. The insights developed in the coming chapters will give you a new perspective on how best to make these decisions. Studying economics will not by itself make you rich, but it will give you some tools that may help in that endeavor.

The third reason to study economics is that it will give you a better understanding of the potential and limits of economic policy. As a voter, you help choose the policies that guide the allocation of society’s resources. When deciding which policies to support, you may find yourself asking various questions about economics. What are the burdens associated with alternative forms of taxation? What are the effects of free trade with other countries? What is the best way to protect the environment? How does a government budget deficit affect the economy? These and similar questions are always on the minds of policymakers in mayors’ offices, governors’ mansions, and the White House.

Thus, the principles of economics can be applied in many of life’s situations. Whether the future finds you reading the newspaper, running a business, or sitting in the Oval Office, you will be glad that you studied economics.

N. Gregory Mankiw