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Economics

TENTH EDITION

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McGraw Hill Education

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About the Author

David Colander is Distinguished College Professor at Middlebury College. He has authored, coauthored, or edited over 40 books and over 150 articles on a wide range of economic topics.

He earned his B.A. at Columbia College and his M.Phil. and Ph.D. at Columbia University. He also studied at the University of Birmingham in England and at Wilhelmsburg Gymnasium in Germany. Professor Colander has taught at Columbia University, Vassar College, the University of Miami, and Princeton University as the Kelley Professor of Distinguished Teaching. He has also been a consultant to Time-Life Films, a consultant to Congress, a Brookings Policy Fellow, and Visiting Scholar at Nuffield College, Oxford.

He has been president of both the History of Economic Thought Society and the Eastern Economics Association. He has also served on the editorial boards of the *Journal of Economic Perspectives, The Journal of Economic Education, The Journal of Economic Methodology, The Journal of the History of Economic Thought, The Journal of Socio-Economics,* and *The Eastern Economic Journal.* He has been chair of the AEA Committee on Electronic Publishing, a member of the AEA Committee on Economic Education, and is currently the associate editor for content of the *Journal of Economic Education*.

He is married to a pediatrician, Patrice. In their spare time, the Colanders designed and built an oak post-and-beam house on a ridge overlooking the Green Mountains to the east and the Adirondacks to the west. The house is located on the site of a former drive-in movie theater. (They replaced the speaker poles with fruit trees and used the I-beams from the screen as support for the second story of the carriage house and the garage.) They now live in both Florida and Vermont.

Preface

"Imagine . . . a textbook that students enjoy!" That comment, from an instructor who taught at Purdue, was e-mailed to me as I was struggling to write the preface to an earlier edition. That comment still captures what I believe to be the most distinctive feature of this edition. It speaks to students.

An Entire Learning Platform

That comment continues to guide this edition. But because students today learn differently than they did twenty years ago, it does so in new ways. Students today grew up with the Internet and social media that provide them with access to a broad range of digital resources and instant feedback. That changes the way they learn, and if we are to reach them, we have to present material to them in ways that fit their learning style. They want to be able to bring their course with them, to access it anywhere, anytime—at a coffee shop in the afternoon, in their dorm room late at night, or at lunch hour at work. They still want material that speaks to them, but it has to speak to them in their language at the time they want to listen. Modern learning is blended learning in which online presentations, review and testing of material, and feedback are seamlessly blended with the narrative of the text.

The strengths of previous editions translate well in this new environment. Students don't want an automaton. They want a person who speaks to them, even if it is online. They don't differentiate a "virtual" world from a "real" world. Both are real and students seek the same thing in both—a presentation of material that engages them. And that's what I do. I tell stories. I use colloquial language, and I offer material that they read about online, or hear about through other media—today's economic issues. The material speaks to them in ways that they can hear and enjoy.

This edition has built upon the last edition, and is structured so as to reach out to students in the digital language of online communication. To teach modern students effectively, we've got to get their attention and hold it, and digital tools give us that opportunity. That's why I've worked hard in this revision to provide material that students can engage in a single, seamless, and fully digital product.

All of the content, including end-of-chapter questions, lines up directly with learning objectives. These learning objectives serve as the organizational structure for the material. The learning objectives, themselves, are broken down into further learning objectives associated with concepts that are presented in bite-sized portions of the text as part of the LearnSmart offer. This allows students the opportunity to master concepts that support the larger picture. As a result, within McGraw Hill's Connect platform, students can learn the core building blocks online with instant feedback; instructors can assess student learning data and know what their students understand, and what they don't. With that information, they can devote class time to those issues with which students are having problems.

The end-of-chapter material is written for optimal online delivery: All of the standard questions and problems are auto-gradable and integrated with the online experience. Such integration allows students to move seamlessly between homework problems and portions of the narrative to get the information they need, when they need it. This is a significant advance in pedagogy. Now, even professors in large lecture classes can assign questions and exercises at the end of chapters and provide feedback to students at the point of need.

To provide the greatest flexibility for the range of course approaches, in addition to the standard questions and exercises at the end of every chapter, I also provide a set of Issues of Ponder and Alternative Perspective Questions that have no "correct" answer, but instead are designed to get the students to think. In a blended learning environment, these are the questions that can form the basis for rich classroom discussions that engage the students with broad issues as much as the online material engages them with the building blocks. Classes become discussion and thinking time, not regurgitation and repetition time.

I am confident that the combination of the digital tools via LearnSmart and Connect, the modern material presented, and the colloquial style I have worked so hard to perfect will engage students in the tenth edition like never before.

Modern, Not Outdated 1950s Economics

You can have the best online platform and presentation in the world, but if the content isn't relevant or engaging, it serves little purpose. My goal is to present students with the best economics I can. That means that I want to teach *modern economics,* not neoclassical economics (or whatever else the collection of models that developed in the 1950s is called). That doesn't mean that I don't teach the traditional models; it just means that I integrate modern interpretations and insights into those models. That approach makes the tone and format somewhat different from the 1950s' tone and format of many current competitors that make it seem as if economics hasn't changed in over 60 years.

Why haven't competitors changed? Because it is really, really hard to deviate from the standard template developed in the 1950s. I fully recognize the difficulty. I know and accept that if we are going to teach modern economics, it has to involve an evolutionary, not revolutionary, template. But recognizing the importance of the existing template is not a call for laziness and complacency in what we teach; it is a call for creativity. Economics has changed and that means the content of the texts has to change as well.

Over the past decade I have been working on ways to introduce modern economics into the principles course—trying different ideas on my students and colleagues and discovering what works and what doesn't. In earlier editions I started to integrate modern economics into the standard principles template, and I continue that integration in this edition after getting useful comments from many of my users about the best way to do it.

One of the biggest problems that many people pointed out with presenting the subtleties of modern economics to students is that many of their students are, shall we say, less-than-perfect students. I am not unaware of the nature of students—in fact I was one of those far-less-than-perfect students. I am no utopian; I am a realist who recognizes that many, perhaps most, students could care less about how economists think. They are taking the course because it is required, because their parents told them they had to, or because it was what fit in their schedule. That is the reality, and they are the students I'm writing for.

So my target student is a non-economics major who doesn't especially care about the content they are learning; he or she is much more likely to be concerned with what is going to be on the exam. For these non-economics majors it is even more important that we teach them modern economics, not a set of models from an outdated template. I want students to know TANSTAAFL, to know the strengths of markets, the weaknesses of markets, the importance of incentives, and why economic policy is so complicated and messy.

Big Think Economics: Teaching More than Modules

Much of the recent focus in economic pedagogy involves a shift in focus away from seeing textbooks as a whole to seeing them as a compilation of modules. This has been accompanied by a modularization of the teaching of economic principles: economic understanding is divided into learning objectives, sub learning objectives, and sub-sub learning objectives. These learning objectives are presented to students as the building blocks of economic understanding: Know these and you know economics.

This atomization approach makes lots of sense as long as one remembers that to hold the building blocks together one needs both mortar and an architectural blueprint. Unfortunately, mortar and blueprints don't fit nicely into building block modules. Mortar and blueprints require conceptualization that goes beyond the standard models—conceptualization that brings the big picture into focus, not just the individual building blocks. Because there are alternative architectural blueprints, there is not a single big picture, but instead a variety of them. The study of such issues is the grist for "big think" economics.

To present big think economics to students requires nuanced contextual discussion, as well as mathematical models involving analytic understanding. Students have to be presented with questions without definitive answers, but ones upon which, when addressed creatively, economic models can shed light. My book contains lots of such discussions. In the book I continually remind students that the models they are learning are based on assumptions, and that to apply the models the students need to decide whether the assumptions fit. The text presents students with examples of how economists have put the building blocks together in different ways so that they recognize the strength and limitations of the models. The goal is to have the students come away not with a set rules, but a set of tools, which if used with judgment, can help the student arrive at reasonable conclusions.

Modern Critical Thinking Economics

Modern economics can mean different things to different people, and my interpretation of modern economics centers around critical thinking. Modern economics is based on the traditional models, but it subjects those models to critical thinking, and does not apply the models where they don't fit empirically. It focuses on the real world, rather than on abstract models.

To maintain that critical thinking approach, two principles stand out: (1) institutions and history are important in policy discussions and (2) good economics is open to dealing with all ideas. The mantra of modern critical thinking economics is, "Tell me something I don't already know, using whatever method works." Let me discuss each of these principles briefly.

Institutions and History Are Important to Understand Policy

If one opens up Adam Smith's *Wealth of Nations,* John Stuart Mill's *Principles of Political Economy,* or Alfred Marshall's *Principles of Economics,* one will see economic analysis placed in historical and institutional context. The modern textbook template moved away from that, and in previous editions, I tried to return the principles of economics toward that broader template, presenting models in a historical and institutional context. This edition continues that emphasis on institutions and history. Modern work in game theory and strategic decision making is making it clear that the implications of economic reasoning depend on the institutional setting. To understand economics requires an understanding of existing institutions and the historical development of those institutions. In a principles course we don't have time to present much about history and institutions, but that does not preclude us from letting students know that we know that these issues are important. And that's what I try to do.

When I say that institutions and history are important, I am talking especially about economic policy. As I stated above, this text and the accompanying package is *not* designed for future economics majors. Most principles students aren't going to go on in economics. I write for students who will probably take only one or two economics courses in their lifetime. These students are interested in policy, and what I try to present to them is modern economic reasoning relevant to policy questions.

Because I think policy is so important in explaining how to apply economic reasoning, I utilize a distinction made by J.N. Keynes (John Maynard Keynes' father) and Classical economists generally. That distinction is between *theorems*—the deductive conclusions of models—and *precepts*—the considered judgments of economists about the policy implications of the models. I make it clear to students that models do not tell us what to do about policy—they give us theorems. Only when we combine the model's results with our understanding of institutions, our understanding of the social context, and the normative goals we want to achieve, can we arrive at policy conclusions embodied in precepts.

Openness to Various Views

While I present modern economics, I present it in such a way that is open to many different points of view. I don't present the material as "the truth" but simply as the conventional wisdom, the learning of which is a useful hurdle for all students to jump over. To encourage students to question conventional wisdom, at the end of each chapter I include a set of questions—Questions from Alternative Perspectives—written by economists from a variety of different perspectives. These include Post-Keynesian, feminist, Austrian, Radical, Institutionalist, and religious perspectives. Each are described further in the "Distinguishing Features" section that follows the preface. The Radical questions come from the Dollars and Sense Collective, a group with whom I've worked to coordinate their readers (www.dollarsandsense.org/bookstore.html) with this text. I also often integrate Austrian ideas into my class; I find that *The Free Market* (www.mises.org) is a provocative resource.

I often pair an article in *The Free Market* with one in *Dollars and Sense* in my assignments to students for supplementary reading. Having students read both Radical and Austrian views, and then integrate those views into more middle-of-the-road, views is, for me, a perfect way to teach the principles course. (If I have a lot of radicals and libertarians in the class, I assign them articles that advocate more middle-of-the-road views.)

Teaching both Models and Critical Thinking

The goal in most principles courses is to teach students economic insights by presenting them a collection of models. Models are central to modern economics. Robert Solow nicely captured their importance when he said that, for better or worse, economics is a modeling science. This means that an important aspect of teaching students modern economics involves introducing them to the modeling approach to understanding the world. But teaching models, in my view, should be along the lines of Marshall, not Mas-Colell, Whinston, and Green. Marshall emphasized that economics was an approach to problems, not a body of confirmed truths.

In my view, *the modeling method, not the models,* is the most important to an economics class. In my presentation of models, I carefully try to guide students in the modeling method, rather than having them memorize truths from models. I carefully emphasize the limitations of the models and the assumptions that underlie them, and am constantly urging students to think beyond the models. This approach pushes the students a bit harder than the alternative, but it is, in my view, the best pedagogical approach; it is the critical thinking approach.

Changes to This Edition

The principles of economics are unchanging, but the problems to which those principles are applied are in a continual state of flux. The revisions in this edition reflect that state of flux. The largest revisions, by far, are in the macro sections of the book. Micro principles are much more stable, which means that most of the changes made in the micro chapters are on the margin. I modified some key terms here, and added clarifying material there where users told me a discussion was unclear, or where the profession has moved on in its thinking. For example, users told me that the discussion of technical and economic efficiency was subject to misinterpretation, so I reworked it. They also said that formally covering increasing and decreasing cost industries was really tough going for students, so I modified the coverage to focus on constant cost industries. Throughout the micro sections I incorporated more recent real-world examples wherever possible. This led to changes in the discussions of antitrust policy and government redistribution programs. But overall, in this edition the changes in micro have focused on updating and fine tuning, not instituting major changes.

The book was more significantly revised in the macro section, where problems of concern to economists and their policy thinking changes much more quickly than it does in micro. Specifically, the last edition was written in the aftermath of the 2008–2009 recession and financial crisis. At that time, economists were still struggling with developing unconventional monetary policy tools, and trying to focus on how to get the economy out of a recession. Since then, the economy has grown and unemployment has fallen. The current problem is that growth has been nowhere near as fast as desired, and the types of jobs created have been much lower wage jobs than wanted. The 10th edition revisions reflect that change in focus.

Here are some of the specific changes I made. The discussion of unemployment in Chapter 24 was revised to give more emphasis to alternative measures of unemployment since the concern about unemployment now extends beyond the standard rate. I also moved some of the discussion of measuring unemployment to Chapter 24 from Chapter 34, where it was previously covered. I made similar changes with the discussion of inflation indexes. I simplified that discussion and moved it from Chapter 35 to Chapter 25. Both those changes were made to allow early presentation of the basics, with the later chapters focusing more on extensions and deeper discussions.

The changes in policy focus also led to a number of changes. Specifically, the concern that inflation might accelerate was modified and replaced with a discussion reflecting concerns about deflation. More discussion and emphasis has been given to unconventional monetary policy in which negative interest rates, quantitative easing, and zero interest rate lower bounds are the norm rather than the exception. I introduced those ideas in the last edition, and expand that coverage this 10th edition.

Another change in the macro presentation reflects a major change in policy focus in the past few years. Today there is a much stronger belief that slow growth—what in the book I call structural stagnation—has become deeply seated into the world economy, and that the slow growth problem is a different problem than the short-run fluctuation problem that the standard macro models were developed to highlight.

I handled the change in macro policy focus in the 9th edition by creating a chapter on structural stagnation that integrated structural issues into the AS/AD model. In response to user suggestions, I have now moved this chapter to appear later in the book and renamed the chapter "Structural Stagnation and Globalization" to capture the importance of globalization in the structural stagnation hypothesis. This chapter is now part of the international section which forms the last part of the macro book.

There are also a variety of small changes to keep the text up to date; data has all been updated and references to time sensitive issues changed. But, overall, this 10th edition is similar in structure to the 9th edition that reflects the essential character of the text since the beginning. That essential character involves blending the teaching of *big-think* issues with the teaching of building blocks.

People to Thank

Let me conclude this preface by thanking the hundreds of people who have offered suggestions, comments, kudos, and criticism on this project since its inception. This book would not be what it is without their input. So many people have contributed to this text in so many ways that I cannot thank everyone. So, to all the people who helped—many, many thanks. I specifically want to thank the tenth edition reviewers, whose insightful comments kept me on track. Reviewers include:

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Colorado College

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De Anza College

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In addition to the comments of the formal reviewers listed above, I have received helpful suggestions, encouragement, and assistance from innumerable individuals via e-mails, letters, symposia, and focus groups. Their help made this edition even stronger than its predecessor. They include James Wetzel, Virginia Commonwealth University; Dmitry Shishkin, Georgia State University; Amy Cramer, Pima Community College–West; Andrea Terzi, Franklin College; Shelby Frost, Georgia State University; Doris Geide-Stevenson, Weber State University; James Chasey, Advanced Placement Economics Teaching Consultant and Homewood-Flossmoor High School (ret.); David Tufte, Southern Utah University; Eric Sarpong, Georgia State University; Jim Ciecka, DePaul University; Fran Bradley, George School; Ron Olive, University of Massachusetts–Lowell; Rachel Kreier, Hofstra University; Kenneth Elzinga, University of Virginia; Ben Leyden, University of Virginia; Poul Thøis Madse, Danmarks Medie—OG Journalistehojskole; Rich Tarmey, Colorado Mountain College; Michael Mandelberg, Stuart Webber, Trinity Lutheran College; Bob Rogers, Ashland University, Zackery Hansen, Southern Utah University; and Matt Gaffney, Missouri State University.

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I have hired numerous students to check aspects of the book, to read over my questions and answers to questions, and to help proofread. For this edition, these include Jenna Danielle Marotta, Andrew Pester, Christian Alexander Schmitt, Trish Singh, and Santiago Navarro Roby. I thank them all.

A special thank-you for this edition goes to two people. The first is Jenifer Gamber, whose role in the book cannot be overestimated. She helped me clarify its vision by providing research, critiquing expositions and often improving them, and being a good friend. She has an amazing set of skills, and I thank her for using them to improve the book. The second is Christina Kouvelis, who came into this project and with her hard work, dedication, and superb ability made it possible to get the book done on time. She and Jenifer are two amazing women.

Next, I want to thank the entire McGraw-Hill team, including James Heine, managing director; Katie Hoenicke, senior brand manager; Christina Kouvelis, senior product developer; Harvey Yep, project manager (core); Bruce Gin, project manager (assessment); Susan Gottfried, copyeditor; Peter deLissovoy, proofreader. Egzon Shaqiri, designer; Virgil Lloyd, marketing manager, Dave O'Donnell, marketing specialist, and Doug Ruby, director of digital content. All of them have done a superb job, for which I thank them sincerely.

Finally, I want to thank Pat, my wife, and my sons, Kasey and Zach, for helping me keep my work in perspective, and for providing a loving environment in which to work.

Distinguishing Features

Margin Comments

Located throughout the text in the margin, these key takeaways underscore and summarize the importance of the material, at the same time helping students focus on the most relevant topics critical to their understanding.

Margin Questions

These self-test questions are presented in the margin of the chapter to enable students to determine whether the preceding material has been understood and to reinforce understanding before students read further. Answers to Margin Questions are found at the end of each chapter.

Web Notes

This feature extends the text discussion onto the web. Web Notes are housed within Connect and featured in SmartBook.

Podcasts

Written and recorded by Robert Guell of Indiana State University, more than 50 three- to five-minute audio clips delve deeper into the concepts. The audio clips are featured in SmartBook and are also housed within Connect.

Issues to Ponder

Each chapter ends with a set of Issues to Ponder questions that are designed to encourage additional economic thinking and application.

Questions from Alternative Perspectives

The end-of-chapter material includes a number of questions that ask students to assess economics from alternative perspectives. Specifically, six different approaches are highlighted: Austrian, Post-Keynesian, Institutionalist, Radical, feminist, and religious. Below are brief descriptions of each group.

Austrian Economists

Austrian economists believe in methodological individualism, by which they mean that social goals are best met through voluntary, mutually beneficial interactions. Lack of information and unsolvable incentive problems undermine the ability of government to plan, making the market the best method for coordinating economic activity. Austrian economists oppose state intrusion into private property and private activities. They are not economists from Austria; rather, they are economists from anywhere who follow the ideas of Ludwig von Mises and Friedrich Hayek, two economists who were from Austria.

Austrian economists are sometimes classified as conservative, but they are more appropriately classified as libertarians, who believe in liberty of individuals first and in other social goals second. Consistent with their views, they are often willing to support what are sometimes considered radical ideas, such as legalizing addictive drugs or eliminating our current monetary system—ideas that most mainstream economists would oppose. Austrian economists emphasize the uncertainty in the economy and the inability of a government controlled by self-interested politicians to undertake socially beneficial policy.

Institutionalist Economists

Institutionalist economists argue that any economic analysis must involve specific considerations of institutions. The lineage of Institutionalist economics begins with the pioneering work of Thorstein Veblen, John R. Commons, and Wesley C. Mitchell. Veblen employed evolutionary analysis to explore the role of institutions in directing and retarding the economic process. He saw human behavior driven by cultural norms and conveyed the way in which they were with sardonic wit and penetrating insight, leaving us with enduring metaphors such as the leisure class and conspicuous consumption. Commons argued that institutions are social constructs that improve general welfare. Accordingly, he established cooperative investigative programs to support pragmatic changes in the legal structure of government. Mitchell was a leader in developing economics as an empirical study; he was a keen observer of the business cycle and argued that theory must be informed by systematic attention to empirical data, or it was useless.

Contemporary Institutionalists employ the founders' "trilogy"—empirically informed, evolutionary analysis, directed toward pragmatic alteration of institutions shaping economic outcomes—in their policy approach.

Radical Economists

Radical economists believe substantial equality-preferring institutional changes should be implemented in our economic system. Radical economists evolved out of Marxian economics. In their analysis, they focus on the lack of equity in our current economic system and on institutional changes that might bring about a more equitable system. Specifically, they see the current economic system as one in which a few people—capitalists and high-level managers—benefit enormously at the expense of many people who struggle to make ends meet in jobs that are unfulfilling or who even go without work at times. They see the fundamental instability and irrationality of the capitalist system at the root of a wide array of social ills that range from pervasive inequality to alienation, racism, sexism, and imperialism. Radical economists often use a class-oriented analysis to address these issues and are much more willing to talk about social conflict and tensions in our society than are mainstream economists.

A policy favored by many Radicals is the establishment of worker cooperatives to replace the corporation. Radicals argue that such worker cooperatives would see that the income of the firm is more equitably allocated. Likewise, Radical economists endorse policies, such as universal health care insurance, that conform to the ethic of "putting people before profits."

Feminist Economists

Feminist economics offers a substantive challenge to the content, scope, and methodology of mainstream economics. Feminist economists question the boundaries of what we consider economics to be and examine social arrangements surrounding provisioning. Feminist economists have many different views, but all believe that in some way traditional economic analysis misses many important issues pertaining to women.

Feminist economists study issues such as how the institutional structure tends to direct women into certain types of jobs (generally low-paying jobs) and away from other types of jobs (generally high-paying jobs). They draw our attention to the unpaid labor performed by women throughout the world and ask, "What would GDP look like if women's work were given a value and included?" They argue for an expansion in the content of economics to include women as practitioners and as worthy of study and for the elimination of the masculine bias in mainstream economics. Is there such a bias? To see it, simply compare the relative number of women in your economics class to the relative number of women at your school. It is highly likely that your class has relatively more men. Feminist economists want you to ask why that is, and whether anything should be done about it.

Religious Economists

Religion is the oldest and, arguably, the most influential institution in the world—be it Christianity, Islam, Judaism, Buddhism, Hinduism, or any of the many other religions in the world. Modern science, of which economics is a part, emphasizes the rational elements of thought. It attempts to separate faith and normative issues from rational analysis in ways that some religiously oriented economists find questionable. The line between a religious and non-religious economist is not hard and fast; all economists bring elements of their ethical considerations into their analysis. But those we call "religious economists" integrate the ethical and normative issues into economic analysis in more complex ways than the ways presented in the text.

Religiously oriented economists have a diversity of views; some believe that their views can be integrated reasonably well into standard economics, while others see the need for the development of a distinctive faith-based methodology that focuses on a particular group of normative concerns centered on issues such as human dignity and caring for the poor.

Post-Keynesian Economists

Post-Keynesian economists believe that uncertainty is a central issue in economics. They follow J. M. Keynes' approach more so than do mainstream economists in emphasizing institutional imperfections in the economy and the importance of fundamental uncertainty that rationality cannot deal with. They agree with Institutionalists that the study of economics must emphasize and incorporate the importance of social and political structure in determining market outcomes.

While their view about the importance of uncertainty is similar to the Austrian view, their policy response to that uncertainty is quite different. They do not see uncertainty as eliminating much of government's role in the economy; instead, they see it leading to policies in which government takes a larger role in guiding the economy.

Supplements

McGraw-Hill has established a strong history of top-rate supplements to accompany this text, and this tenth edition strives to carry on the tradition of excellence. The following ancillaries are available for quick download and convenient access via the Instructor Resource material available through McGraw-Hill Connect®.

Solutions Manual

Prepared by Jenifer Gamber and me, this manual provides answers to all end-of-chapter questions—the Questions and Exercises, Questions from Alternative Perspectives, and Issues to Ponder.

Test Banks

The test bank contains more than 5,600 unique quality multiple choice and true-false questions for instructors to draw from in their classrooms. Jenifer Gamber and I have worked diligently to make sure that the questions are clear and useful. Each question is categorized by learning objective, level of difficulty, economic concept, AACSB learning categories, and Bloom's Taxonomy objectives. Questions were reviewed by professors and students alike to ensure that each one was effective for classroom use. All of the test bank content is available for assigning within Connect. An essay only test bank, organized by chapter, will be available via the Instructor Resource material available within Connect.

PowerPoint Presentations

Shannon Aucoin of the University of Louisiana at Lafayette and Edward Gullason of Dowling College worked tirelessly to revise the PowerPoint slide program, animating graphs and emphasizing important concepts. Each chapter has been scrutinized to ensure an accurate, direct connection to the text.

Problem Sets

Additional problems sets accompany each chapter, which can be assigned to students either for practice or assessment. They are also included as extra assessment content available within Connect.

Study Guide

A traditional printed study guide—written by Jenifer Gamber and me—provides a wide range of activities and questions (with answers and explanations) that review the central concepts of each chapter. Split versions of the study guide are available and can be packaged with this text. You can also customize the study guide to suit your course needs on Create, McGraw-Hill's custom publishing platform.

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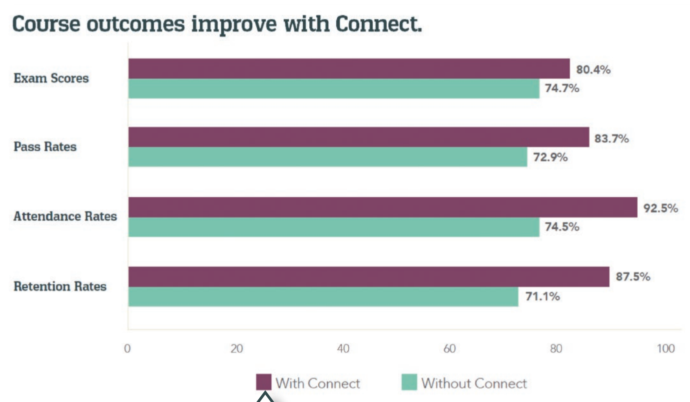

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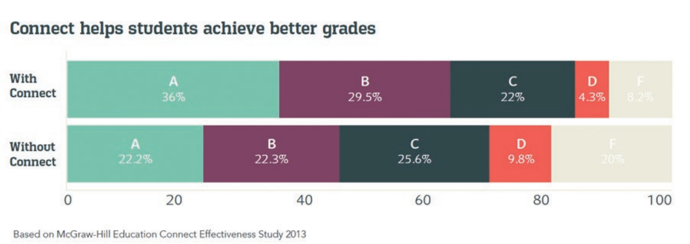

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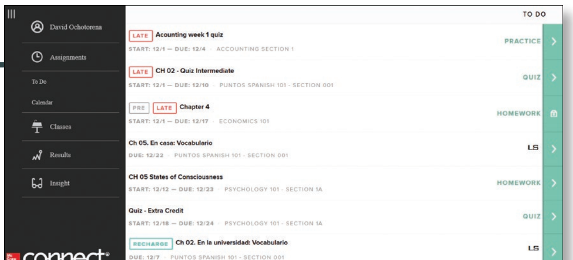

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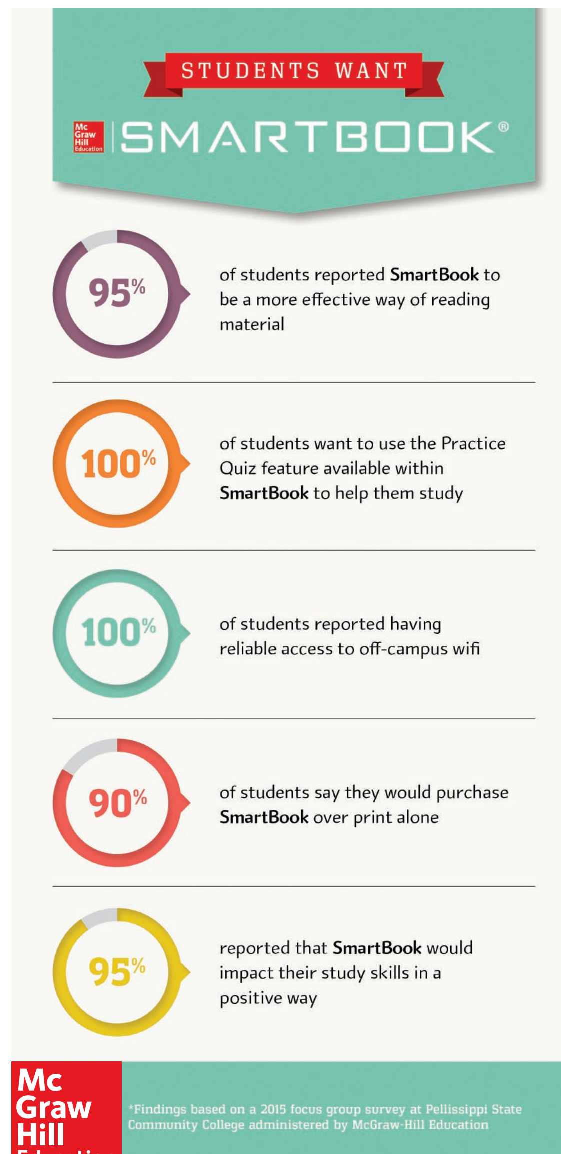

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PART I

Introduction: Thinking Like an Economist

Part I is an introduction, and an introduction to an introduction seems a little funny. But other sections have introductions, so it seemed a little funny not to have an introduction to Part I; and besides, as you will see, I'm a little funny myself (which, in turn, has two interpretations; I'm sure you will decide which of the two is appropriate). It will, however, be a very brief introduction, consisting of questions you may have had and some answers to those questions.

Some Questions and Answers

Why study economics?

Because it's neat and interesting and helps provide insight into events that are constantly going on around you.

Why is this book so big?

Because there's a lot of important information in it and because the book is designed so your teacher can pick and choose. You'll likely not be required to read all of it, especially if you're on the quarter system. But once you start it, you'll probably read it all anyhow. (Would you believe?)

Why does this book cost so much?

To answer this question, you'll have to read the book.

Will this book make me rich?

No.

Will this book make me happy?

It depends.

This book doesn't seem to be written in a normal textbook style. Is this book really written by a professor?

Yes, but he is different. He misspent his youth working on cars; he married his high school sweetheart after they met again at their 20th high school reunion, and they remain happily married today, still totally in love. Twenty-five years after graduating from high school, his wife went back to medical school and got her MD because she was tired of being treated poorly by doctors. Their five kids make sure he doesn't get carried away in the professorial cloud.

Will the entire book be like this?

No, the introduction is just trying to rope you in. Much of the book will be hard going. Learning happens to be a difficult process: no pain, no gain. But the author isn't a sadist; he tries to make learning as pleasantly painful as possible.

What do the author's students think of him?

Weird, definitely weird—and hard. But fair, interesting, and sincerely interested in getting us to learn. (Answer written by his students.)

So there you have it. Answers to the questions that you might never have thought of if they hadn't been put in front of you. I hope they give you a sense of me and the approach I'll use in the book. There are some neat ideas in it. Let's now briefly consider what's in the first five chapters.

A Survey of the First Five Chapters

This first section is really an introduction to the rest of the book. It gives you the background necessary so that the later chapters make sense. Chapter 1 gives you an overview of the entire field of economics as well as an introduction to my style. Chapter 2 focuses on the production possibility curve, comparative advantage, and trade. It explains how trade increases production possibilities but also why, in the real world, free trade and no government regulation may not be the best policy. Chapter 3 gives you some history of economic systems and introduces you to the institutions of the U.S. economy. Chapters 4 and 5 introduce you to supply and demand, and show you not only the power of those two concepts but also the limitations.

Now let's get on with the show.

chapter 1

Economics and Economic Reasoning

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"In my vacations, I visited the poorest quarters of several cities and walked through one street after another, looking at the faces of the poorest people. Next I resolved to make as thorough a study as I could of Political Economy."

—Alfred Marshall

When an artist looks at the world, he sees color. When a musician looks at the world, she hears music. When an economist looks at the world, she sees a symphony of costs and benefits. The economist's world might not be as colorful or as melodic as the others' worlds, but it's more practical. If you want to understand what's going on in the world that's really out there, you need to know economics.

I hardly have to convince you of this fact if you keep up with the news. You will be bombarded with stories of unemployment, interest rates, how commodity prices are changing, and how businesses are doing. The list is endless. So let's say you grant me that economics is important. That still doesn't mean that it's worth studying. The real question then is: How much will you learn? Most of what you learn depends on you, but part depends on the teacher and another part depends on the textbook. On both these counts, you're in luck; since your teacher chose this book for your course, you must have a super teacher.[1]

After reading this chapter, you should be able to:

- **LO1-1** Define economics and identify its components.
- **LO1-2** Discuss various ways in which economists use economic reasoning.
- **LO1-3** Explain real-world events in terms of economic forces, social forces, and political forces.
- **LO1-4** Explain how economic insights are developed and used.
- **LO1-5** Distinguish among positive economics, normative economics, and the art of economics.

What Economics Is

Economics is *the study of how human beings coordinate their wants and desires, given the decision-making mechanisms, social customs, and political realities of the society*. One of the key words in the definition of the term "economics" is *coordination*. Coordination can mean many things. In the study of economics,

[1]This book is written by a person, not a machine. That means that I have my quirks, my odd sense of humor, and my biases. All textbook writers do. Most textbooks have the quirks and eccentricities edited out so that all the books read and sound alike—professional but dull. I choose to sound like me—sometimes professional, sometimes playful, and sometimes stubborn. In my view, that makes the book more human and less dull. So forgive me my quirks—don't always take me too seriously—and I'll try to keep you awake when you're reading this book at 3 a.m. the day of the exam. If you think it's a killer to read a book this long, you ought to try writing one.

coordination refers to how the three central problems facing any economy are solved. These central problems are:

1. What, and how much, to produce.
2. How to produce it.
3. For whom to produce it.

Three central coordination problems any economy must solve are what to produce, how to produce it, and for whom to produce it.

How hard is it to make the three decisions? Imagine for a moment the problem of living in a family: the fights, arguments, and questions that come up. "Do I have to do the dishes?" "Why can't I have piano lessons?" "Bobby got a new sweater. How come I didn't?" "Mom likes you best." Now multiply the size of the family by millions. The same fights, the same arguments, the same questions—only for society the questions are millions of times more complicated. In answering these questions, economies find that inevitably individuals want more than is available, given how much they're willing to work. That means that in our economy there is a problem of **scarcity**—*the goods available are too few to satisfy individuals' desires*.

The coordination questions faced by society are complicated.

Scarcity

Scarcity has two elements: our wants and our means of fulfilling those wants. These can be interrelated since wants are changeable and partially determined by society. The way we fulfill wants can affect those wants. For example, if you work on Wall Street, you will probably want upscale and trendy clothes. In Vermont, I am quite happy wearing Levi's and flannel; in Florida I am quite happy in shorts.

The degree of scarcity is constantly changing. The quantity of goods, services, and usable resources depends on technology and human action, which underlie production. Individuals' imagination, innovativeness, and willingness to do what needs to be done can greatly increase available goods and resources. Who knows what technologies are in our future—nanites or micromachines that change atoms into whatever we want could conceivably eliminate scarcity of goods we currently consume. But they would not eliminate scarcity entirely since new wants are constantly developing.

The quantity of goods, services, and usable resources depends on technology and human action.

So, how does an economy deal with scarcity? The answer is coercion. In all known economies, coordination has involved some type of coercion—limiting people's wants and increasing the amount of work individuals are willing to do to fulfill those wants. The reality is that many people would rather play than help solve society's problems. So the basic economic problem involves inspiring people to do things that other people want them to do, and not to do things that other people don't want them to do. Thus, an alternative definition of economics is: the study of how to get people to do things they're not wild about doing (such as studying) and not to do things they are wild about doing (such as eating all the lobster they like), so that the things some people want to do are consistent with the things other people want to do.

Microeconomics and Macroeconomics

Economic theory is divided into two parts: microeconomic theory and macroeconomic theory. Microeconomic theory considers economic reasoning from the viewpoint of individuals and firms and builds up to an analysis of the whole economy. **Microeconomics** is *the study of individual choice, and how that choice is influenced by economic forces*. Microeconomics studies such things as the pricing policies of firms, households' decisions on what to buy, and how markets allocate resources among alternative ends.

Microeconomics is the study of how individual choice is influenced by economic forces.

As we build up from microeconomic analysis to an analysis of the entire economy, everything gets rather complicated. Many economists try to uncomplicate matters by taking a different approach—a macroeconomic approach—first looking at the aggregate, or whole, and then breaking it down into components. **Macroeconomics** is *the study of the*

Macroeconomics is the study of the economy as a whole. It considers the problems of inflation, unemployment, business cycles, and growth.

economy as a whole. It considers the problems of inflation, unemployment, business cycles, and growth. Macroeconomics focuses on aggregate relationships such as how household consumption is related to income and how government policies can affect growth.

Consider an analogy to the human body. A micro approach analyzes a person by looking first at each individual cell and then builds up. A macro approach starts with the person and then goes on to his or her components—arms, legs, fingernails, feelings, and so on. Put simply, microeconomics analyzes from the parts to the whole; macroeconomics analyzes from the whole to the parts.

Q-1 Classify the following topics as primarily macroeconomic or microeconomic:

1. The impact of a tax increase on aggregate output.
2. The relationship between two competing firms' pricing behavior.
3. A farmer's decision to plant soy or wheat.
4. The effect of trade on economic growth.

Microeconomics and macroeconomics are very much interrelated. What happens in the economy as a whole is based on individual decisions, but individual decisions are made within an economy and can be understood only within its macro context. For example, whether a firm decides to expand production capacity will depend on what the owners expect will happen to the demand for their products. Those expectations are determined by macroeconomic conditions. Because microeconomics focuses on individuals and macroeconomics focuses on the whole economy, traditionally microeconomics and macroeconomics are taught separately, even though they are interrelated.

A Guide to Economic Reasoning

People trained in economics think in a certain way. They analyze everything critically; they compare the costs and the benefits of every issue and make decisions based on those costs and benefits. For example, say you're trying to decide whether a policy to eliminate terrorist attacks on airlines is a good idea. Economists are trained to put their emotions aside and ask: What are the costs of the policy, and what are the benefits? Thus, they are open to the argument that security measures, such as conducting body searches of every passenger or scanning all baggage with bomb-detecting machinery, might not be the appropriate policy because the costs might exceed the benefits. To think like an economist involves addressing almost all issues using a cost/benefit approach. Economic reasoning also involves abstracting from the "unimportant" elements of a question and focusing on the "important" ones by creating a simple model that captures the essence of the issue or problem. How do you know whether the model has captured the important elements? By collecting empirical evidence and "testing" the model—matching the predictions of the model with the empirical evidence—to see if it fits. Economic reasoning—how to think like a modern economist, making decisions on the basis of costs and benefits—is the most important lesson you'll learn from this book.

Economic reasoning is making decisions on the basis of costs and benefits.

The book *Freakonomics* gives examples of the economist's approach. It describes a number of studies by University of Chicago economist Steve Levitt that unlock seemingly mysterious observations with basic economic reasoning. For example, Levitt asks the question: Why do drug dealers on the street tend to live with their mothers? The answer he arrives at is that it is because they can't afford to live on their own; most earn less than $5 an hour. Why, then, are they dealing drugs and not working a legal job that, even for a minimum wage job, pays over $7.00 an hour? The answer to that is determined through cost/benefit analysis. While their current income is low, their potential income as a drug dealer is much higher since, given their background and current U.S. institutions, they are more likely to move up to a high position in the local drug business (and *Freakonomics* describes how it is a business) and earn a six-figure income than they are to move up from working as a Taco Bell technician to an executive earning a six-figure income in corporate America. Levitt's model is a very simple one—people do what is in their best interest financially—and it assumes that people rely on a cost/benefit analysis to make decisions. Finally, he supports his argument through careful empirical work, collecting and organizing the data to see if they fit the model. His work is a good example of "thinking like a modern economist" in action.

ADDED DIMENSION

Economic Knowledge in One Sentence: TANSTAAFL

Once upon a time, Tanstaafl was made king of all the lands. His first act was to call his economic advisers and tell them to write up all the economic knowledge the society possessed. After years of work, they presented their monumental effort: 25 volumes, each about 400 pages long. But in the interim, King Tanstaafl had become a very busy man, what with running a kingdom of all the lands and all. Looking at the lengthy volumes, he told his advisers to summarize their findings in one volume.

Despondently, the economists returned to their desks, wondering how they could summarize what they'd been so careful to spell out. After many more years of rewriting, they were finally satisfied with their one-volume effort, and tried to make an appointment to see the king. Unfortunately, affairs of state had become even more pressing than before, and the king couldn't take the time to see them. Instead he sent word to them that he couldn't be bothered with a whole volume, and ordered them, under threat of death (for he had become a tyrant), to reduce the work to one sentence.

The economists returned to their desks, shivering in their sandals and pondering their impossible task. Thinking about their fate if they were not successful, they decided to send out for one last meal. Unfortunately, when they were collecting money to pay for the meal, they discovered they were broke. The disgusted delivery man took the last meal back to the restaurant, and the economists started down the path to the beheading station. On the way, the delivery man's parting words echoed in their ears. They looked at each other and suddenly they realized the truth. "We're saved!" they screamed. "That's it! That's economic knowledge in one sentence!" They wrote the sentence down and presented it to the king, who thereafter fully understood all economic problems. (He also gave them a good meal.) The sentence?

There **A**in't **N**o **S**uch **T**hing **A**s **A** **F**ree **L**unch—
TANSTAAFL

Economic reasoning, once learned, is infectious. If you're susceptible, being exposed to it will change your life. It will influence your analysis of everything, including issues normally considered outside the scope of economics. For example, you will likely use economic reasoning to decide the possibility of getting a date for Saturday night, and who will pay for dinner. You will likely use it to decide whether to read this book, whether to attend class, whom to marry, and what kind of work to go into after you graduate. This is not to say that economic reasoning will provide all the answers. As you will see throughout this book, real-world questions are inevitably complicated, and economic reasoning simply provides a framework within which to approach a question. In the economic way of thinking, every choice has costs and benefits, and decisions are made by comparing them.

Marginal Costs and Marginal Benefits

The relevant costs and relevant benefits to economic reasoning are the expected *incremental,* or additional, costs incurred and the expected *incremental* benefits that result from a decision. Economists use the term *marginal* when referring to additional or incremental. Marginal costs and marginal benefits are key concepts.

A **marginal cost** is *the additional cost to you over and above the costs you have already incurred*. That means not counting **sunk costs**—*costs that have already been incurred and cannot be recovered*—in the relevant costs when making a decision. Consider, for example, attending class. You've already paid your tuition; it is a sunk cost. So the marginal (or additional) cost of going to class does not include tuition.

Similarly with marginal benefit. A **marginal benefit** is *the additional benefit above what you've already derived*. The marginal benefit of reading this chapter is the *additional* knowledge you get from reading it. If you already knew everything in this chapter before you picked up the book, the marginal benefit of reading it now is zero.

The Economic Decision Rule

Comparing marginal (additional) costs with marginal (additional) benefits will often tell you how you should adjust your activities to be as well off as possible. Just follow the **economic decision rule:**

If the marginal benefits of doing something exceed the marginal costs, do it. If the marginal costs of doing something exceed the marginal benefits, don't do it.

If the marginal benefits of doing something exceed the marginal costs, do it.

If the marginal costs of doing something exceed the marginal benefits, don't do it.

As an example, let's consider a discussion I might have with a student who tells me that she is too busy to attend my classes. I respond, "Think about the tuition you've spent for this class—it works out to about $60 a lecture." She answers that the book she reads for class is a book that I wrote, and that I wrote it so clearly she fully understands everything. She goes on:

Q-2 Say you bought a share of Oracle for $100 and a share of Cisco for $10. The price of each is currently $15. Assuming taxes are not an issue, which would you sell if you need $15?

> I've already paid the tuition and whether I go to class or not, I can't get any of the tuition back, so the tuition is a sunk cost and doesn't enter into my decision. The marginal cost to me is what I could be doing with the hour instead of spending it in class. I value my time at $75 an hour [people who understand everything value their time highly], and even though I've heard that your lectures are super, I estimate that the marginal benefit of attending your class is only $50. The marginal cost, $75, exceeds the marginal benefit, $50, so I don't attend class.

I congratulate her on her diplomacy and her economic reasoning, but tell her that I give a quiz every week, that students who miss a quiz fail the quiz, that those who fail all the quizzes fail the course, and that those who fail the course do not graduate. In short, she is underestimating the marginal benefits of attending my classes. Correctly estimated, the marginal benefits of attending my class exceed the marginal costs. So she should attend my class.

Economics and Passion

Recognizing that everything has a cost is reasonable, but it's a reasonableness that many people don't like. It takes some of the passion out of life. It leads you to consider possibilities like these:

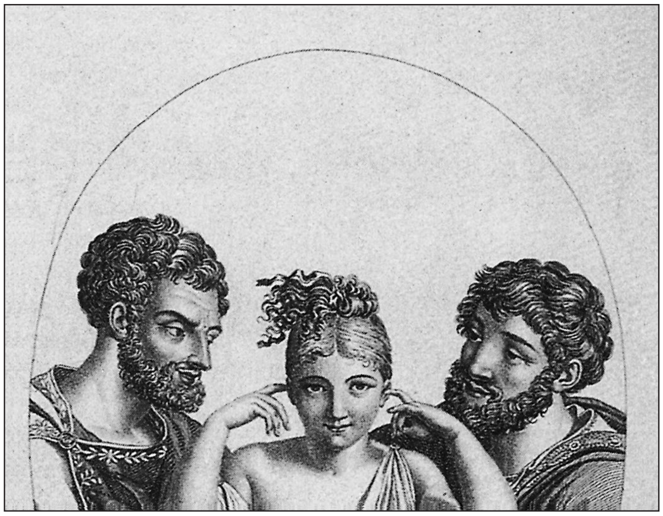
- Saving some people's lives with liver transplants might not be worth the additional cost. The money might be better spent on nutritional programs that would save 20 lives for every 2 lives you might save with transplants.
- Maybe we shouldn't try to eliminate all pollution because the additional cost of doing so may be too high. To eliminate all pollution might be to forgo too much of some other worthwhile activity.
- Providing a guaranteed job for every person who wants one might not be a worthwhile policy goal if it means that doing so will reduce the ability of an economy to adapt to new technologies.
- It might make sense for the automobile industry to save $12 per car by not installing a safety device, even though without the safety device some people will be killed.

Economic reasoning is based on the premise that everything has a cost.

You get the idea. This kind of reasonableness is often criticized for being cold-hearted. But, not surprisingly, economists disagree; they argue that their reasoning leads to a better society for the majority of people.

Q-3 Can you think of a reason why a cost/benefit approach to a problem might be inappropriate? Can you give an example?

Economists' reasonableness isn't universally appreciated. Businesses love the result; others aren't so sure, as I discovered some years back when my then-girlfriend told me she was leaving me. "Why?" I asked. "Because," she responded, "you're so, so . . . reasonable." It took me many years after she left to learn what she already knew: There are many types of reasonableness, and not everyone thinks an economist's reasonableness is a virtue. I'll discuss such issues later; for now, let me simply warn you that, for better or worse, studying economics will lead you to view questions in a cost/benefit framework.



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Opportunity costs have always made choice difficult, as we see in the early-19th-century engraving *One or the Other.*

Opportunity Cost

Putting economists' cost/benefit rules into practice isn't easy. To do so, you have to be able to choose and measure the costs and benefits correctly. Economists have devised the concept of opportunity cost to help you do that. **Opportunity cost** is *the benefit that you might have gained from choosing the next-best alternative*. To obtain the benefit of something, you must give up (forgo) something else—namely, the next-best alternative. The opportunity cost is the market value of that next-best alternative; it is a cost because in choosing one thing, you are precluding an alternative choice. The TANSTAAFL story in the earlier Added Dimensions box embodies the opportunity cost concept because it tells us that there is a cost to everything; that cost is the next-best forgone alternative.

Opportunity cost is the basis of cost/benefit economic reasoning; it is the benefit that you might have gained from choosing the next-best alternative.

Let's consider some examples. The opportunity cost of going out once with Natalie (or Nathaniel), the most beautiful woman (attractive man) in the world, is the benefit you'd get from going out with your solid steady, Margo (Mike). The opportunity cost of cleaning up the environment might be a reduction in the money available to assist low-income individuals. The opportunity cost of having a child might be two boats, three cars, and a two-week vacation each year for five years, which are what you could have had if you hadn't had the child. (Kids really are this expensive.)

Examples are endless, but let's consider two that are particularly relevant to you: what courses to take and how much to study. Let's say you're a full-time student and at the beginning of the term you had to choose five courses. Taking one precludes taking some other, and the opportunity cost of taking an economics course may well be not taking a course on theater. Similarly with studying: You have a limited amount of time to spend studying economics, studying some other subject, sleeping, or partying. The more time you spend on one activity, the less time you have for another. That's opportunity cost.

Notice how neatly the opportunity cost concept takes into account costs and benefits of all other options and converts these alternative benefits into costs of the decision you're now making. One of the most useful aspects of the opportunity cost concept is that it focuses on two aspects of costs of a choice that often might be forgotten—implicit costs and illusionary sunk costs. **Implicit costs** *are costs associated with a decision that often aren't included in normal accounting costs.*

For example, in thinking about whether it makes sense to read this book, the *next-best value* of the time you spend reading it should be one of the costs that you consider. Often, it isn't, because it is an implicit, not normally measured cost. Similarly with firms—owners often think that they are making a profit from a business, but if they add the value of their time to their cost, which economists argue they should, then their profit often becomes a loss. They might have earned more simply by taking a job somewhere else. Implicit costs should be included in opportunity costs. Sunk costs, however, are often included in making decisions, but should not be. These costs are called illusionary sunk costs—costs that show up in financial accounts but that economists argue should not