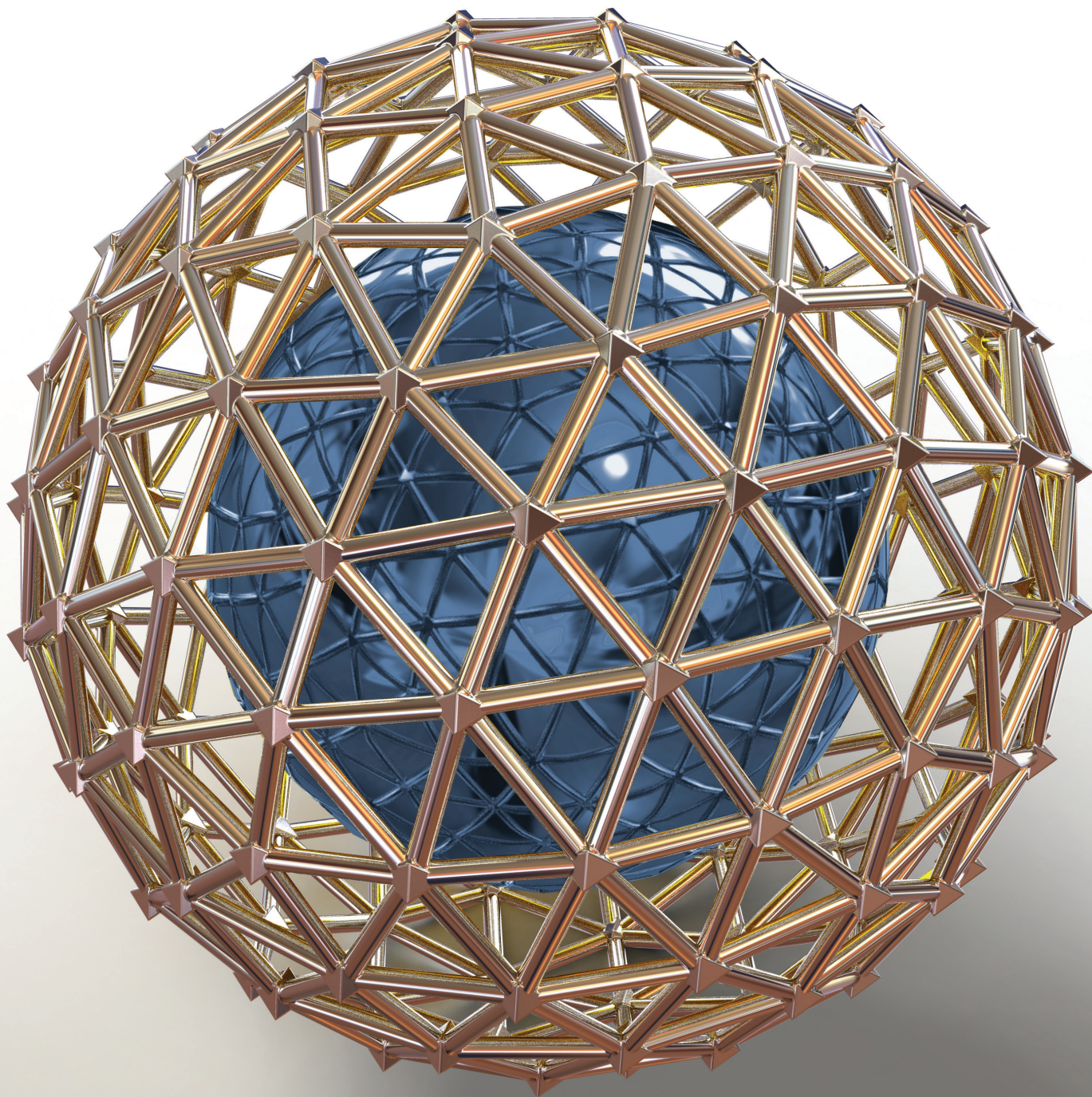


CoreMacroeconomics

Third Edition

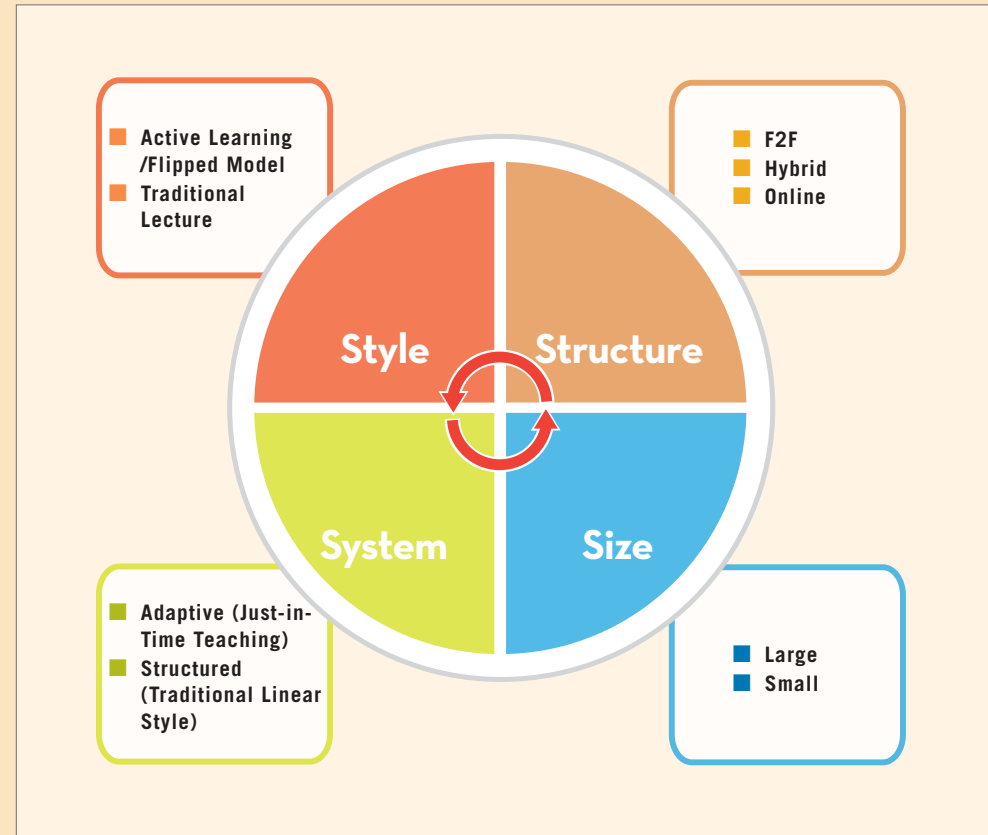


Eric P. Chiang

Style	Structure	System	Description	CoreEconomics Resources	Open Educational Resources (OER)	Notes
Traditional	Face-to-Face/ Hybrid	Structured	A standard lecture-style classroom (both small and large) in which the instructor teaches course topics and students reinforce knowledge through post-lecture assignments and assessment. The outline of course topics (e.g., one chapter per week) is pre-determined.	<ul style="list-style-type: none"> PowerPoint Presentations LaunchPad Pre-Built Assignments Student Tutorials Video Tutorials and Assessment 	<ul style="list-style-type: none"> Present Data and Images Additional Examples for Lecture More OER examples at: worthpublishers.com/activeecon 	This category represents a wide variance in teaching techniques depending on the experience and creativity of instructors. It is a common format in schools with a committee-designed curriculum.
Traditional	Online	Structured	Online courses can be distance-education (in which students read books and view slides without formal lectures) or lecture capture (in which students view pre-recorded lectures). The course outline is pre-determined and students are given assignments to reinforce lecture content.	<ul style="list-style-type: none"> F2F/Hybrid Structured plus... Video Lectures by Eric Chiang Video Tutorials 	<ul style="list-style-type: none"> Experiments from vEconLab Blogs and Podcasts More OER examples at: worthpublishers.com/activeecon 	Many schools offer economic principles courses online, with lecture capture technologies growing in popularity. Online courses require greater emphasis on self-reinforcement tools that facilitate learning when classroom interaction is not available.
Traditional	Face-to-Face/ Hybrid	Adaptive	This category can be considered the purest form of teaching, in which instructors lecture in a classroom but do not follow a pre-determined course outline. The level and breadth of instruction is determined as the term progresses based on student performance.	<ul style="list-style-type: none"> F2F/Hybrid Structured plus... i>clicker: Student Response Questions LearningCurve adaptive quizzing (including Instructor Feedback for choosing Lecture Topics) LaunchPad Practice Homework RSS Feed from The Economist 	<ul style="list-style-type: none"> ii>clicker questions in class adapt the lecture to student needs. Data from pre-lecture assessments can influence lecture discussions More OER examples at: worthpublishers.com/activeecon 	This format is common in honors courses, which would cover the core content and then cover additional topics based on the abilities and interests of students.
Traditional	Online	Adaptive	A form of online teaching in which instructors tailor the course based on the experiences of students and their performance on each assessment. Instructors then increase or decrease the level and coverage of topics to meet student needs.	<ul style="list-style-type: none"> Online Structured plus... Video Lectures by Eric Chiang (with student response questions) Video Tutorials and Assessment 	<ul style="list-style-type: none"> Prezi and other presentation software can present many topics at varying depth for students More OER examples at: worthpublishers.com/activeecon 	This type of course is popular in vocational institutions, in which courses are offered online to the non-traditional student, such as working adults. Instructors must therefore adapt to the experiences and abilities of students as the course progresses.
Active	Face-to-Face/ Hybrid	Structured	Active classrooms encourage students to read and prepare topics before class (often aided by online tutorials), thereby utilizing class time for activities such as peer-based learning, classroom experiments, and topical debates and discussions. The outline of topics in the course is pre-determined.	<ul style="list-style-type: none"> Traditional F2F/Hybrid plus... Dynamic PowerPoint Presentations with embedded i>clicker Questions and short quizzes Standard i>clicker PowerPoints Classroom Activities and Handouts Video Lectures by Eric Chiang 	<ul style="list-style-type: none"> Add experiments from vEconLab or other sources Use up-to-date FRED data from the St. Louis FED More OER examples at: worthpublishers.com/activeecon 	This is an increasingly popular method of teaching, especially in small classrooms, but can also be accomplished in large classes with preparation. Instructors must incentivize students to study course content before attending class.
Active	Online	Structured	Active online classrooms encourage students to read and prepare topics independently, and then engage in online discussion boards or chat sessions. Students share their knowledge and perspectives to the benefit of others in the class. The outline of topics in the course is pre-determined.	<ul style="list-style-type: none"> Video Lectures by Eric Chiang Student Tutorials and Assessment Issues debates using Discussion Boards Video Tutorials and Assessment 	<ul style="list-style-type: none"> Prezi and other presentation software can present many topics at varying depth for students Use up-to-date FRED data from the St. Louis FED More OER examples at: worthpublishers.com/activeecon 	Instructors pursuing this type of active learning online course would require various levels of student interaction. In some cases, students are asked to conduct presentations by uploading a recording of their presentation to YouTube or similar website.
Active	Face-to-Face/ Hybrid	Adaptive	This category represents a very open-ended form of class. Students are expected to read and prepare material before class, and engage in various activities such as peer-learning, classroom experiments, and debates. Instructors allow students to influence the time spent on each topic.	<ul style="list-style-type: none"> Dynamic PowerPoint Presentations with embedded i>clicker Questions and short quizzes Standard i>clicker PowerPoints Classroom Activities LearningCurve adaptive quizzing (including instructor feedback for choosing lecture topics) Video Lectures by Eric Chiang Student Tutorials and Assessment 	<ul style="list-style-type: none"> Use polling software to determine comprehension Prezi and other presentation software can present many topics at varying depth for students Add experiments from vEconLab or other sources More OER examples at: worthpublishers.com/activeecon 	This method of instruction has gained acclaim for its demonstrated effectiveness, especially in physics. In-class activities like problems, policy debates and current events become the centerpiece of student learning.
Active	Online	Adaptive	Flexible active online classrooms encourage students to read and prepare materials, and then participate in online discussion boards and chat rooms. Instructors would monitor the progress of the class based on active learning activities, and then tailor the course to fit student needs.	<ul style="list-style-type: none"> LearningCurve adaptive quizzing (including instructor feedback for choosing lecture topics) Video Lectures by Eric Chiang (with student response questions) Dynamic PowerPoint Presentations with embedded i>clicker Questions Student Tutorials and Assessment 	<ul style="list-style-type: none"> Use discussion boards to drive questioning and comprehension More OER examples at: worthpublishers.com/activeecon 	Online classes with non-traditional students would benefit most from this instructional method, because it gives instructors the freedom to target the interests and abilities of their students.

CoreEconomics: Resources for the Contemporary Classroom

By Eric P. Chiang, Florida Atlantic University



We have taken the best from the **CoreMedia** suite of resources and identified highly-regarded materials from contributors to **Open Educational Resources** to provide a guide for instructors looking to re-shape or re-vitalize their classroom. This includes face-to-face, hybrid, and online courses, matching the best resources with each approach. Resources include:

- **LaunchPad for Eric Chiang, CoreEconomics, 3e** including book-specific assignment and question banks, LearningCurve adaptive quizzing, e-book resources, dynamic and traditional PowerPoint slides, and student tutorials. Website: worthpublishers.com/LaunchPad
- **Resources for Instructors Looking to Develop an Active Learning Classroom** including sites run by pioneers in active learning (Eric Mazur), studies on “flipping the classroom,” and blog-sites devoted to effective teaching practices (Agile Learning and the Eberly Center). Website: worthpublishers.com/activeecon
- **Resources to Add Content to Active Learning Classrooms** including in-class and online experiments from vEconLab, polling and clicker software and strategies, problem-solving and problem-based learning exercises. Website: worthpublishers.com/activeecon
- **Resources for Teaching with iPad and Tablet Computers** including apps and programs like iAnnotate, Notability, Haiku Deck, OmniGraphSketcher as well as content from EconWise, The World in Figures, FRED and the IMF Library. Website: worthpublishers.com/activeecon

Website: worthpublishers.com/activeecon

Dear Colleague:

I am pleased that you are considering CoreEconomics, 3rd edition for your principles of economics course. Like many instructors, I share a common teaching philosophy that courses must adapt to the changing needs of students, particularly in today’s technology-driven world. Textbooks also need to adapt to the new ways in which students learn and instructors teach.

Many college students today are part of the post-millennial generation. They have been “connected” their entire lives. As more courses implement online learning components such as homework management software, and as more institutions offer hybrid or fully-online courses, teaching methods must adapt as well. Therefore, the accompanying resource list provides a guide to using resources effectively in various types of learning environments, including face-to-face versus online, traditional lectures versus active learning, and structured versus adaptive instruction. The changing learning environment means more than just updating course content; it means updating its delivery as well.

However, one must be careful that teaching methods are revised to adapt to a new generation of students without sacrificing the integrity and quality of the principles of economics course. We cannot just fill our courses with flashy images and pop culture multimedia. Once the core fundamentals and pedagogy are in place, then the subsequent goal is to convey these concepts in the most interesting way so that students can learn, retain, and apply knowledge.

My coauthor, Gerald Stone, considered himself—first and foremost—a teacher. So am I. Jerry taught principles of economics for over 30 years. In my 13 year teaching career to date, I have taught every term and in nearly every type of classroom setting (traditional small class, large auditorium, distance education, lecture capture, and honors classes). Further, I have used most resources available today, from course and homework management software, i>clickers, text-based polling, to social media tools. Like Jerry, I believe that the best textbooks are written by authors who are invested in their students’ learning experience.

Lastly, a growing concern is how the changes in teaching methods affect accreditation. In addition to being an instructor, I am also an administrator, serving as the Director of Instructional Technology which oversees our college’s online course offerings that serve nearly 5,000 students per term. One of my roles is to work with faculty to ensure that course content, resources, and assessment are designed to meet common objectives in accreditation reviews, including those of AACSB (for business schools) and regional accreditation standards. I kept accreditation standards in mind as I developed *CoreEconomics*, ensuring that every chapter contains strong learning objectives, applied examples, reinforcement mechanisms, and assessment activities.

The goal of *CoreEconomics* is to create a better learning experience for students and a broader teaching experience for instructors. Please contact me to share your own ideas or to let me know how I can continue to improve what is offered here.

Eric P. Chiang



CoreMacroeconomics

Third Edition

Eric P. Chiang

Florida Atlantic University

Gerald W. Stone

Metropolitan State University of Denver

Worth Publishers
A Macmillan Higher Education Company

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Cover Photo: Tatiana Nikolaevna Kalashnikova/Getty Images

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ISBN-13: 978-1-4292-7849-2

ISBN-10: 1-4292-7849-8


Library of Congress Control Number: 2013951181

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Printed in the United States of America

First printing

Worth Publishers
41 Madison Avenue
New York, NY 10010
www.worthpublishers.com



To John and Tina Chiang, my parents,
who instilled in me a work ethic
that allowed me to pursue endless
opportunities



Memorial to Jerry Stone

Worth Publishers regrets to inform you that Jerry Stone passed away after a difficult battle with cancer at the end of August 2010. Jerry Stone had a remarkable career as a longtime teacher at Metropolitan State University of Denver and as an author of two successful principles of economics textbooks. Those who knew Jerry miss his steadfast commitment to the teaching of economics, a legacy that lives on in each new edition of *CoreMacroeconomics*. Jerry Stone long-believed that the best principles of economics textbooks are authored by people invested in their students' classroom experience. The decisions made in the shaping of the second edition were educated by Jerry's thirty-plus years in the classroom and by the team of instructors that contributed to every aspect of the media and supplements package. The second edition was Jerry's accomplishment: a book envisioned, designed, and executed to be the principles of economics book that teaches better than any other textbook on the market.

About the Author



Eric P. Chiang received his bachelor's degree in economics from the University of Nevada Las Vegas, and his master's and doctorate in economics from the University of Florida. His first academic position was at New Mexico State University. Currently, Eric is an associate professor and graduate director of the Department of Economics at Florida Atlantic University. Eric also serves as the director of instructional technology for the College of Business.

In 2009, Eric was recipient of Florida Atlantic University's highest teaching award, the Distinguished Teacher of the Year. He also received the Stewart Distinguished Professorship awarded by the College of Business among numerous other teaching awards. He has published twenty-five articles in peer-reviewed journals on a range of subjects including technology spillovers, intellectual property rights, telecommunications, and health care. His research has appeared in leading journals, including the *Review of Economics and Statistics*, the *Journal of Technology Transfer*, and the *Southern Economic Journal*. He has presented papers at all major economics conferences and at universities across the country and around the world.

As an instructor who teaches both face-to-face and online courses, Eric uses a variety of technological tools including clickers, text-response systems, and homework management systems to complement his active learning style lectures. As an administrator in the College of Business, Eric's role as director of instructional technology involves assisting instructors with effectively implementing classroom technologies. In this position, Eric also ensures that the quality of online courses meets accreditation standards including those set by AACSB.

In addition to his dedication to teaching economic principles and his administrative duties, Eric devotes time to new research in economic education. His current research agenda focuses on the effects of online versus face-to-face courses and the power of visual learning. The third edition of *Core Macroeconomics* embodies Eric's devotion to economic education and the benefits of adapting to the new, often creative ways in which students learn and instructors teach.

In his spare time, Eric enjoys studying cultures and languages, and travels frequently. He has visited all fifty U.S. states, many of them to run half-marathons, and over seventy countries, and enjoys long jogs and walks when he travels in order to experience local life to the fullest.

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Preface

Every instructor faces the same problem, every day, with every class: How many students can we reach today? Can we reach each one?

Every time I teach principles of macroeconomics, I keep in mind that many of my students are learning about economics for the first time, and how they perceive *my* course may influence their perceptions of economics for a long time. I take this challenge seriously each time I enter a classroom.

I have taught over 10,000 students since 2001—in small classrooms, large auditoriums, online classes, day classes, and evening classes. The diversity of my students has provided abundant examples of learning by experience. Each setting provides a laboratory for using innovative teaching techniques to motivate students to appreciate the endless possibilities that thinking like an economist can provide.

The challenge, of course, is reaching each and every student. This challenge has been compounded by the increasing number of ways in which students learn.

A critical component of a positive first experience in economics is a good textbook. The best textbooks fascinate students by conveying interesting and intuitive examples while providing a guide to understanding difficult and often frustrating concepts in a principles of macroeconomics course. Therefore, in my search for a textbook, I desired a book that was written by an author who shared a similar teaching philosophy, one who loves teaching and has spent her or his career in the classroom. I believe that the best principles of macroeconomics textbooks are authored by people invested in their students' classroom experience.

I found that author in Gerald Stone, a lifelong teacher, and his text *CoreMacroeconomics*. The concept was novel: Based on a comprehensive survey of what instructors actually had time to cover in their classes, the text covered the core chapters that all instructors taught. Additional material was kept to a minimum. This had several benefits. First, no longer would students be overwhelmed by a huge tome that gave the impression that macroeconomics was all about topic after topic—after topic after topic. Second, because *CoreMacroeconomics* was shorter than the standard text, it offered a corresponding price break. My students were grateful that they paid only for chapters taught in the course. Third, once relieved of the pressure to cover most of a text, I could devote more time to enriching the learning experience of my students. Since I began using *CoreMacroeconomics*, I have been afforded the time to discuss more current events, to engage my students with more applications of key concepts, and to devote classroom time to active learning exercises.

The Story of *CoreMacroeconomics* Transformed

Intrigued by the promise of *CoreMacroeconomics*, I became involved in the development of the text as an accuracy checker for the first edition, then on the technology side with the development of *EconPortal*, an online homework and course management system that became a standard offering with the second edition. Hired as a faculty editor in 2009, I saw firsthand how the many parts of the textbook were all linked, from the

author-written *CourseTutor*, Test Bank, and PowerPoint slides, to the multimedia and graphing tools created for *EconPortal*.

In early 2010, Gerald Stone was diagnosed with cancer, and could not continue authorship of *CoreMacroeconomics*. In May 2010, he invited me to Littleton, Colorado, where we shared a long discussion about our teaching experiences. Like a teacher bestowing wisdom to a pupil but with the relaxed nature of lifelong friends, he shared words of advice and encouragement. I was pleased to discover that Jerry looked beyond the textbook to the entire learning experience of students and to the teaching experience of fellow instructors, as demonstrated by his close involvement with the supplements. After all, Jerry was one of the creators of the first computerized test bank. His holistic approach to learning and teaching, which I will explain in more detail later in this preface, mirrored my own. As a result of this meeting and further discussions, he asked me to take over the authorship of *CoreMacroeconomics* with the third edition, with the expectation that I would carry *CoreMacroeconomics* forward to a new generation of students and instructors with new needs. Sadly, Jerry passed away a few months after our meeting in Littleton.

My expectations were rather modest at that time. I had inherited a fantastic legacy. I knew that I could bring some innovations to the textbook on the pedagogical side based on what I had discovered teaching large numbers of students every semester. I assumed that my contributions on the content side of the textbook would be greater than the often cursory revisions of other texts that I examined (revisions often limited to changing some boxes and updating data), but I thought that my additions would be minimal. As for the broader learning experience, I assumed that I would continue enhancing the content in *EconPortal* (now renamed *LaunchPad*) as the importance of technology resources increase in higher education. Was I surprised!

Looking back at that time and evaluating what I have done, I am astounded at the amount of effort I chose to devote to the third edition to reach this generation of students and to assist this generation of teachers. The textbook and its learning and teaching package have been more than just revised. It is more appropriate to think of this as a transformation, from a high-quality textbook by a great educator to a textbook and its related course materials that engage and accommodate the changing nature of the classroom for today's instructors and students alike. Here's why this new edition is a transformation.

The Textbook: Innovations in Pedagogy

I knew I could use my classroom experience to bring pedagogical innovations to the text to reach students better. I developed three key pedagogical innovations.

Visual Chapter Summaries

Chapter summaries in nearly all principles of macroeconomics textbooks are text-based. Some use bullet points to highlight key points, while others summarize each section of the chapter into a paragraph or two. Surveys of students have found that many students tend to skip the chapter summaries, or at best skim through them. Although chapter summaries contain the main points from each chapter, they often do little to help students *retain and understand* information other than reiterating the content in an abridged manner.

I took a different approach in creating each chapter summary. People are naturally visual learners. Numerous studies have shown that adding a picture to a concept's description significantly improves the retention of that concept. Therefore, the chapter summaries contain multiple visual elements, such as pictures, graphs, and other contextually rich features to help aid in the review and retention of chapter content. The chapter summaries also are inspired by the use of concept maps common in textbooks in other disciplines, such as psychology, in which concepts are linked to one another in a logical manner. In this book, each chapter summary appears as a colorful two-page spread, with concepts and features flowing naturally from one section to another.

Each visual chapter summary complements the traditional text-based section reviews called Checkpoints, which appear at the end of each major section of a chapter. Each Checkpoint contains bullet points of the main concepts discussed within each section followed by a critical thinking question. In sum, the combination of text- and visual-based summaries provides students with more than one approach to reviewing and retaining concepts from each chapter.

A Greater Visual Dimension

As with the chapter summaries, so with the chapter text preceding it. I brought in more photos, again to help students retain key concepts. I tried to make these photos directly recognizable to students and their way of life. Other texts have photos: I would like to think that the ones used here are more interesting and better utilized to portray concepts.

The Data Dimension

Students today are bombarded with data and data graphs in the popular press and online. Students need to become good consumers of data to make sound decisions. Students who are equipped with skills to analyze the abundance of data that accompany their lives tend to make better decisions when it comes to seeking a career, deciding where to live, or even whom to marry. The presence of data has become a common component of the choices we make, and this textbook reinforces this skill with the By the Numbers feature.

The previous edition introduced the By the Numbers feature in a limited number of chapters. By the Numbers aims to provide students with a practical connection between economic concepts and empirical data. Now, By the Numbers appears in every chapter, always on the third page, presenting data, data graphs, and pictures focused around a theme based on the content contained in the chapter. Students are not expected to have read the chapter prior to examining the feature, although doing so may provide a deeper understanding of what the data convey.

Our goal is for students to become more comfortable examining and evaluating data. Viewing data in By the Numbers is not effective if comprehension is not achieved. To assess a student's understanding of the data, each chapter now contains two Using the Numbers questions based on data appearing in By the Numbers. Each question requires students to read data from various data graphs, compare trends, and to make conclusions about what the data convey. The questions can be assigned, used for in-class discussion, or used as a starting point for students to explore a topic in further depth. The data sources have been gathered at the back of the book in Sources for By the Numbers. This way they can be used if desired without getting in the way.

All of these pedagogical innovations should help students understand and retain information, whether they are comfortable with old text-heavy ways or the more visual and data-driven ways we see more frequently today.

➔ The Textbook: Innovations in Content

In taking over the authorship of *CoreMacroeconomics*, I had assumed I would improve the text but thought this would be a straightforward task. I was surprised by the extent of the content changes I made to transform this text into something compelling to my students. These changes came about mainly due to three factors: changes in approach and emphasis in economic theory because of the need to explain pressing problems such as the recent financial crisis and its jobless recovery, the natural progression of economics research, and changes in the student body.

It may be useful to present key changes in macroeconomics in three ways.

1. *Chapters already a standard in the market.* I found that there was a group of chapters that provided a strong foundation and that were superior to those in other books. Chapter 8, Aggregate Expenditures, was to me the best and clearest account of the Keynesian model that I have ever seen in a textbook. Also, it fit nicely with

the ensuing chapter, Aggregate Demand and Supply. I emphasized how spending by one creates income for others and trimmed a bit, while leaving the basic presentation intact.

2. *Chapters that changed because of the aftermath of the financial crisis.* I discovered that the aftermath of the financial crisis and its jobless recovery affected macro to a great extent.
 - a. *Unemployment measurement.* The aftermath of the financial crisis affected a seemingly straightforward chapter (Chapter 6, Measuring Inflation and Unemployment). How do unemployment statistics account for discouraged workers who have dropped out of the labor force? What do we mean by jobless recoveries? These topics needed more attention.
 - b. *Fiscal policy.* The financial crisis put the spotlight on fiscal policy. I took the second edition chapter on debt and deficits and combined it with fiscal policy. How successful was fiscal policy in dealing with the crisis? What are the ramifications of fiscal policy measures (e.g., stimulus spending and tax cuts) on the national debt? The combined chapter (Chapter 10, Fiscal Policy and Debt), provides a more direct link to the role that fiscal policy plays in the economy and how it affects the federal budget.
 - c. *Three-chapter reorganization of money, banking, and monetary policy.* A big benefit of presenting deficits with fiscal policy and the ensuing elimination of one chapter is that it freed up an additional chapter for the coverage of money and monetary policy. Now, the coverage of money is presented in three chapters, not two chapters as formerly. This let me add coverage on money leakages and on a comparison of how the Federal Reserve and the European Central Bank responded to the financial crisis. It also let me add an introductory section on what we really mean when we say that the Fed is following an expansionary or a contractionary monetary policy, terms students are often presented with in news and online media outlets. My students, like many others, needed some foundation material before studying the theory in the monetary policy chapter.
3. *Chapters that changed because of changes in the student body.* I realized that for my students, macroeconomic events and theory needed firm grounding from a broader perspective. I completely rewrote Chapter 7, Economic Growth, with this in mind. The chapter now starts with a focus on the BRIC (Brazil, Russia, India, and China) countries and includes a section on government's role in fostering growth. There is a discussion of the more than 1 billion people in the world still living in poverty, and the prospects of economic growth lifting them out. Economic growth is a crucial idea; it takes center stage in macroeconomics. Finally, more and more instructors want their students to benefit from a higher degree of financial literacy. A new section in Chapter 11 focuses on financial tools for a better future, giving students some practical guidance to finance and their own lives.

This is just a brief summary of the key changes in the textbook. Every chapter was changed to some degree, some to a great extent, others to a lesser extent. See the chapter-by-chapter explanations later in this preface to see the wide range of changes to the content of the text.

The Text: Vivid Examples for Students

Another way I have transformed this textbook has been to replace just about all of the Issues. Each chapter now has two Issues that appeal to the diverse body of students studying economics. Here are some of my favorites:

- Chapter 1: Have Smartphones and Social Media Made Life Easier?
- Chapter 2: Will Renewable Energy Be the Next Innovative Breakthrough?
- Chapter 4: Are Price-Gouging Laws Good for Consumers?
- Chapter 5: The End of the Recession . . . It Does Not Feel Like It

- Chapter 6: Why Do Unemployment Rates Differ So Much Within the United States?
 Chapter 7: Can Economic Growth Bring a Billion People Out of Poverty?"
 Chapter 11: Did the 2007–2009 Stock Market Crash Affect Long-Term Savings?
 Chapter 12: What Can the Fed Do When Interest Rates Reach 0%?
 Chapter 14: The Bernanke Inflation Jump—When?

➔ A Holistic Approach to Learning and Teaching

Earlier I mentioned that Jerry Stone and I shared a holistic approach to teaching principles of macroeconomics. By holistic, I refer to how all elements of a course, including lectures, discussions, online assignments and resources, and assessment tools, are connected to one another in a logical and cohesive manner that facilitates both the learning process by students and the teaching process by instructors. Unlike other books on the market, I did not want to create a bunch of supplements merely to accompany the text. Instead, the resources produced for this third edition of *CoreMacroeconomics* were created to complement a suite of learning and teaching approaches used in higher education today, including the increased presence of online, hybrid, and active learning classrooms in addition to the traditional lecture- and discussion-based classes.

A Suite of Learning and Teaching Approaches

I was pleased to discover that transforming the text with my current students in mind actually freed up time to consider active learning methodologies for them. Instructors often encourage or even require students to read their textbook prior to the related lecture. When students do, class time can be used more effectively to refine the knowledge learned through independent study and to engage in activities that apply that knowledge. In order to facilitate the active learning approach to the classroom, a textbook must be approachable to a student seeing a concept for the first time.

This edition was written with this active learning objective in mind. Each chapter contains a wealth of vivid examples, intuitive explanations that build on one's natural instincts and innate knowledge. Further, the expanded use of photos and other visuals where appropriate helps to convey a concept or aid in the retention of an important lesson or key point.

Like a majority of instructors who utilize technological resources, I use a homework management system. I find that providing a seamless connection between technology resources and the textbook is a vital element for learning. Many publishers provide homework management systems that are generic in the sense that they are used in conjunction with *any* textbook. The disadvantage of this approach is that the content may not always reflect the style and content presented in the textbook. Therefore, it is important to me that I use a homework management system for which all content was created for *CoreMacroeconomics*; *LaunchPad* is the answer. Because *LaunchPad* corresponds directly with the textbook, I was able to contribute to its content and oversee all of the elements to ensure that the user experience of students and teachers is a positive one. Further, *LaunchPad* is compatible with most LMS systems (such as Blackboard) used by colleges and universities, allowing students to complete assignments and view grades without having to log into a separate system.

Outline of the Book and Changes in the Third Edition

Chapter 1: Exploring Economics

- Chapter opener changed from focus on growth to economics as a decision-making discipline.
- The ten Key Ideas of Section 2 have been trimmed to seven Key Principles. (Several of the more obscure ones have been dropped so that students will not have to struggle with things such as the money supply in the first chapter, something they will have little to no understanding of at the start of the course.)
- New Issue: Have Smartphones and Social Media Made Life Easier?
- New Issue: Do Economists Ever Agree on Anything?

A Unified Pedagogical Approach

Every chapter is structured around a common set of features including visual elements, applications, and end of chapter material unique to *CoreMacroeconomics*.

After studying this chapter you should be able to:

- Describe the nature and purposes of markets.
- Describe the nature of demand, demand curves, and the law of demand.
- Describe the determinants of demand and be able to forecast how a change in one or more of these determinants will change demand.
- Explain the difference between a change in demand and a change in quantity demanded.

LEARNING OBJECTIVES

Each chapter begins with a set of learning objectives which instructors can use for assessment and students can rely on to determine their depth of knowledge of economic concepts in the chapter.

- Determine market equilibrium price and output.
- Determine and predict how price and output will change given changes to supply and demand in the market.

markets Institutions that bring buyers and sellers together so they can interact and transact with each other.

What \$60 billion global industry sells a product that many people typically can obtain easily from another source free of charge? The bottled water industry! This industry began its meteoric rise in the early 1990s, and today, the ubiquitous bottle of water has changed the way we live. It also has created new concerns regarding the environmental impact of the billions of plastic bottles used and discarded.

The bottled water industry took off as consumers changed their hydration habits, spurred by greater awareness of the health benefits of drinking water, including weight loss, illness prevention, and overall health maintenance. As water consumption increased, people started wanting something more than just ordinary water from the tap. They desired water that was purer, more consistent in taste, or infused with flavor or minerals. Plus, consumers wanted water that was easy to carry. Bottled water was what consumers wanted, and the market was willing to provide it.

Bottled water comes from many sources, both domestic and foreign. Some is made of either spring water (from natural springs underneath the ground) or purified (ordinary tap water that undergoes a complex purification process). As the industry grew, new varieties of water were made available. Water from natural springs, vitamin-infused water, flavored water, and carbonated water were choices consumers were given. The total amount of water bottled and sold in the industry continued to increase as long as there were consumers willing to pay for the product.

In the late 2000s, falling incomes from a deteriorating global economy and the harmful effects of discarded plastic bottles on the environment led to water purification devices, and even some laws against bottled water, which eventually halted the market's growth. The economy has since improved, and the industry responded to the environmental concerns by using recycled plastic or by using new technologies to reduce the plastic used in bottles. Responding to the desires of consumers. As a result, sales in the bottled water market are up.

Consumers have many choices of what water to buy and how much to buy. The bottled water market is one in which prices vary considerably. A single bottle of water of 16.9 ounces costs \$0.99 at a convenience store, \$1.25 from a vending machine, and \$3.00 or more at a theme park, so the same product can be sold in different places at different prices.

This chapter analyzes the various factors that influence prices in different settings and circumstances. We will take into account in determining what prices to charge. The interaction of supply and demand determines the prices we pay.

In any given market, prices are determined by the forces of supply and demand. Factors determine what the market will do. The forces of supply and demand in the marketplace cause prices to change. This chapter will let you determine why prices change, how many goods will be offered in the marketplace. Later chapters use this same framework to determine how wages are set and how personal income is determined.

This chapter introduces some of the key concepts that will help you understand how the forces of supply and demand determine the law of demand, demand curves, the law of supply, supply curves, the determinants of supply, and the interaction of supply and demand.

➔ Markets

A **market** is an institution that enables buyers and sellers to interact and transact with one another. A lemonade stand is a market because it allows people to exchange money for a product, in this case lemonade. Ticket scalping, which remains illegal or



THE INTERACTION OF TEXT AND VISUALS THROUGHOUT

Research into how the mind processes information emphasizes the importance of pairing different mediums together to increase comprehension. Throughout the chapter, images and text are paired together: in the chapter opening story and chapter opening image; the By The Numbers visual display of data; the use of photographs and text to illustrate economic concepts; the pairing of figures and tables with relevant description; and the Visual Summaries that conclude each chapter.

BY THE NUMBERS

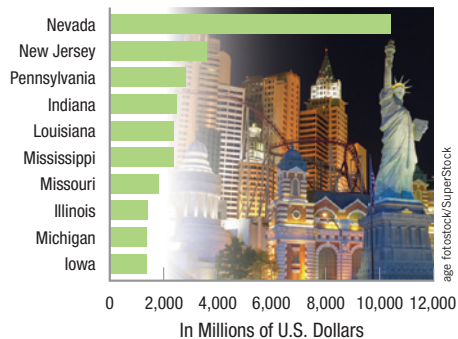
BY THE NUMBERS

The outset of each chapter includes a By The Numbers—a visual display of data. By The Numbers emphasize the importance of data, helping students to become better consumers of data in their daily lives.

The World of Markets

Markets form the foundation of all economic transactions. As various factors affect the supply and demand for goods and services, prices adjust upward or downward correspondingly to reach equilibrium.

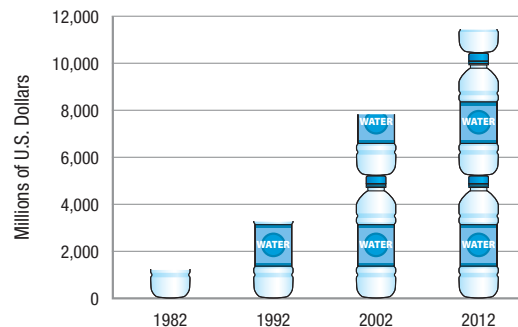
The legalization of casinos in many states has resulted in dramatic growth in the industry. Top gaming revenues by state in 2011:



Prices for precious metals vary widely due to their relative demand and supply.

7,300,000,000
Total value (in U.S. dollars) of the worldwide virtual goods market associated with online gaming in 2012.

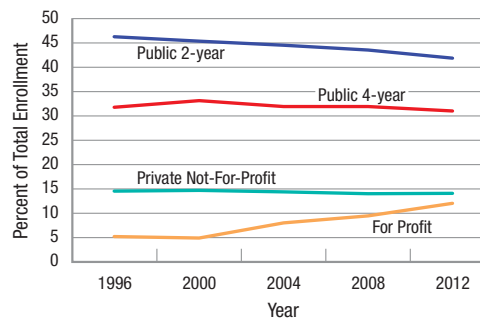
72,800,000,000
Total number of half-liter water bottles consumed in the United States in 2012 (over 220 bottles per person).



Total sales of bottled water in the United States took off in the 1990s and continued to grow steadily since.



University of Phoenix is the largest for-profit university with nearly 500,000 students.



Enrollment at for-profit universities grew significantly over the past 16 years compared to not-for-profit institutions.

ISSUE

Features items from our economic world written for the third edition students in mind. Each Issue is kept to less than half a page to incentivize students to explore the world of economics around us.

**ISSUE****Two-Buck Chuck: Will People Drink \$2-a-Bottle Wine?**

The great California wines of the 1990s put California vineyards on the map. Demand, prices, and exports grew rapidly. Overplanting of new grapevines was a result. When driving along Interstate 5 or Highway 101 north of Los Angeles, one can see vineyards extending for miles, and most were planted in the mid- to late 1990s. The 2001 recession reduced the demand for California wine, and a rising dollar made imported wine relatively cheaper. The result was a sharp drop in demand for California wine and a huge surplus of grapes.

Bronco Wine Company president Fred Franzia made an exclusive deal with Trader Joe's, an unusual supermarket that features exotic food and wine products. He bought the excess grapes at distressed prices, and in his company's modern plant produced inex-

pensive wines—chardonnay, merlot, cabernet sauvignon, shiraz, and sauvignon blanc—under the Charles Shaw label. Consumers flocked to Trader Joe's for wine costing \$1.99 a bottle and literally hauled cases of wine out by the carload. In less than a decade, 400 million bottles of Two-Buck Chuck, as it is known, have been sold. This is not rotgut: The 2002 shiraz beat out 2,300 other wines to win a double gold medal at the 28th Annual International Eastern Wine Competition in 2004. Still, to many Napa Valley vintners it is known as Two-Buck Upchuck.

Two-Buck Chuck was such a hit that other supermarkets were forced to offer their own discount wines. This good, low-priced wine has had the effect of opening up markets. People who previously avoided wine because of the cost have begun



joel zatz/Alamy

drinking more. However, the influence of Two-Buck Chuck, which sold 60 million bottles in 2012, may be waning. In January 2013, Trader Joe's announced an increase in the price of the Two-Buck Chuck from \$1.99 to \$2.49 due to a poor grape harvest that raised the cost of producing the wine. Although the new price is still a bargain, the product that changed the wine industry may soon need another name.

Predicting the New Equilibrium When Both Curves Shift When both supply and demand change, things get tricky. We can predict what will happen with price in some cases and output in other cases, but not what will happen with both.

Figure 12 portrays an increase in both demand and supply. Consider the market for corn. Suppose that a drought in the Midwest causes demand for corn

CHECKPOINT

MARKETS

- Markets are institutions that enable buyers and sellers to interact and transact business.
- Markets differ in geographical location, products offered, and size.
- Prices contain a wealth of information for both buyers and sellers.
- Through their purchases, consumers signal their willingness to exchange money for particular products at particular prices. These signals help businesses decide what to produce, and how much of it to produce.
- The market economy is also called the price system.

QUESTION: What are the important differences between the markets for financial securities such as the New York Stock Exchange and your local farmer's market?

Answers to the Checkpoint question can be found at the end of this chapter.

CHECKPOINT

Every section concludes with a set of review bullets that identify the key takeaways from that section of the chapter. Each CHECKPOINT also includes an open-ended critical thinking question. The answer can be found at the end of the chapter.

Demand

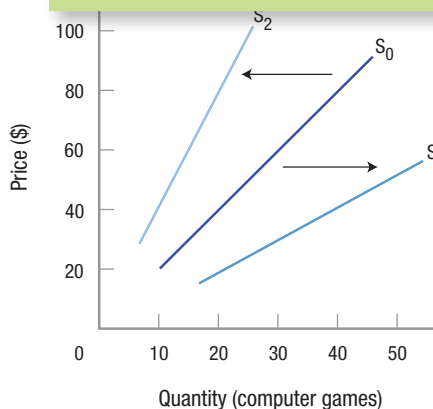
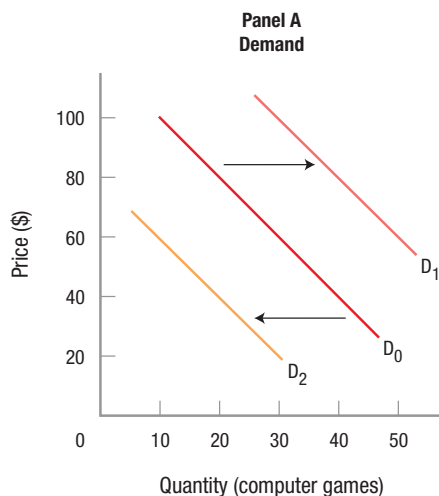
Every time you purchase a product, you are voting with your money. You are selecting one product out of many and supporting one firm out of many, both of which signal to the rest of the community what sorts of products satisfy your wants as a consumer.

Economists typically focus on wants rather than needs because it is so difficult to determine what we truly need. Theoretically, you could survive on tofu and vitamin pills, living in a house made of cardboard boxes, and driving a bicycle.

GRAPHS

Use Numbers not Symbols

Graphs use numbers on the horizontal and vertical axes whenever possible. This minimizes the level of abstraction that a student needs to understand economic models.



Determinants of Demand

Decrease in Demand

Tastes and preferences fall
Income falls (for normal goods)
Price of substitutes falls

Increase in Demand

Tastes and preferences rise
Income rises (for normal goods)
Price of substitutes rises

Determinants of Supply

Decrease in Supply

Technology falls
Resource costs rise
Price of production substitute rises

Increase in Supply

Technology rises
Resource costs fall
Price of production substitute falls

VISUAL SUMMARY

Each chapter concludes with a two-page visual flow-chart of key concepts in the chapter. Instead of the traditional method of brief paragraphs of text (which are often read instead of the chapter text), the visual summaries pair images from the chapter with text to provide students with a deeper understanding of the relationship between terms and concepts in the chapter.

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chapter summary

Section 1: Markets

A **market** is an institution that enables buyers and sellers to interact and transact with one another.



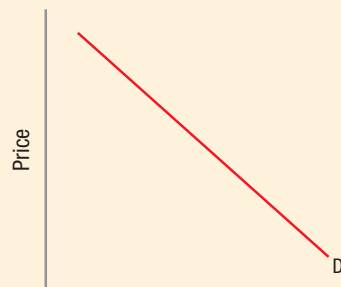
Markets can be as simple as a lemonade stand, as large as an automobile lot, as valuable as the stock market, as virtual as an Internet shopping site, or as illegal as a ticket scalping operation.

Buyers and sellers communicate their desires in a market through the prices at which goods and services are bought and sold. Hence, a market economy is called a **price system**.



Section 2: Demand

Demand refers to the goods and services people are willing and able to buy during a period of time. It is a horizontal summation of individual demand curves in a defined market.

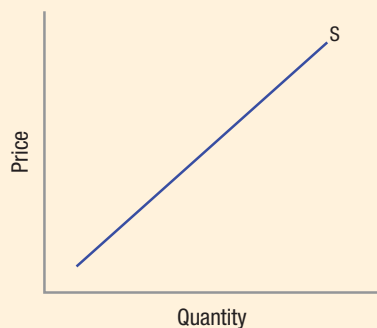


Roller coasters are a lot of fun, but riding the same one over and over gives less satisfaction with each ride; therefore, willingness-to-pay falls with each ride.

Events that Shift Demand Curves Shift

Section 3: Supply

Supply analysis works the same way as demand, but looking at the market from the firm's point of view.



The **law of supply** states that as prices increase, firms want to supply more, and vice versa. It leads to an upward-sloping supply curve.



Determinants of Supply: How Supply Curves Shift

- ↑ Production technology: Supply shifts right.
- ↑ Cost of resources: Supply shifts left.
- ↑ Price of other commodities: Supply shifts left.
- ↑ Price expectations: Supply shifts left.
- ↑ Number of sellers: Supply shifts right.
- ↑ Taxes: Supply shifts left.
- ↑ Subsidies: Supply shifts right.

Section 4: Market Equilibrium

Market equilibrium occurs at the price at which the quantity supplied is equal to quantity demanded; in other words, where demand intersects supply.



How does equilibrium change?

A shift in demand or supply will change equilibrium price and quantity.

Which curve slopes up and which slopes down? Two tricks to aid in memory:

- S“up”ply contains the word “up” for upward-sloping.
- Only the fingers on your right hand can make a “d” for demand. Hold that hand up in front of you!



Chapter 2: Production, Economic Growth, and Trade

- New Figure 1: From Factors of Production to Output.
- New steps added on calculating opportunity costs in the comparative advantage section, with a new Table 1 summarizing the opportunity costs.
- New Issue: Will Renewable Energy Be the Next Innovative Breakthrough?
- New Issue: Do We Really Specialize in That? Comparative Advantage in the United States and China.

Chapter 3: Supply and Demand

- To explain where demand curves come from, a new section (and Figure 1) has been added on willingness-to-pay.
- The section on price ceilings and floors has been moved to Chapter 4.
- New Issue: Do Markets Exist for Everyone, Including Dogs and Cats?
- Figure 8, a summary figure, has been simplified.

Chapter 4: Markets and Government [title change]

- Second edition chapter had a long, tough section on market failure, and a history of the U.S. economy over the past 150 years. New third edition chapter prunes down the market failure material to approximately 1 page. The history section has been moved to the Web site.
- The chapter introduces consumer and producer surplus as tools to measure economic efficiency, then applies these concepts to show what happens when price is greater than or less than equilibrium, then covers price ceilings and floors. This is much more mainstream than the second edition.
- The consumer/producer surplus material starts by using willingness-to-pay (introduced in Chapter 3) and willingness-to-sell.
- New Issue: Can Markets Accurately Predict the Future?
- New Issue: Are Price Gouging Laws Good for Consumers?

Chapter 5: Introduction to Macroeconomics

- New chapter opener on the jobless recovery.
- New By the Numbers: The Slow Macroeconomic Recovery.
- New Figure 1, Markets and Institutions in the Macroeconomy.
- First section changed from The Scope of Macroeconomics to Business Cycles. Leading Economic Index added.
- GDP and Our Standard of Living, a secondary-level head in the second edition within the GDP Measurement section, becomes a primary-level head. Additional material on GDP and environmental quality.
- New Issue: The End of the Recession . . . It Does Not Feel Like It.
- New Issue: How Should Environmental Quality Be Incorporated into GDP Measures?

Chapter 6: Measuring Inflation and Unemployment

- New equation showing how to calculate price changes from two CPI numbers.
- Personal consumption expenditures index no longer covered, in line with other texts.
- New subsection on employment trends. Coverage of the Weekly Jobs Report added.
- Enhanced coverage of underemployment and discouraged workers.
- New figure on the unemployment rate versus the NAIRU from 1960 to 2012 to illustrate cyclical unemployment and the duration of jobless recoveries (how they flatten the downward sloping portions of the curve).
- New Issue: The Consequences of Counterfeit Money on Inflation.
- New Issue: Why Do Unemployment Rates Differ So Much Within the United States?

Chapter 7: Economic Growth [heavily revised]

- New chapter opener on China (comparing the 1980s with today) and the BRIC (Brazil, Russia, India, China) countries, discussing their relatively high growth rates.

- New Section 1. This section in the second edition focused on the classical model. In the third edition, this material has been shortened and moved to the introduction to Chapter 5. The new section in this chapter concentrates on why economic growth is important, highlights the significance of compounding growth (using the Rule of 70 as an estimation tool), and brings in measurement issues.
- Section 2 in the second edition covered long-run growth: productivity. In the third edition, this section has been split into two. New Section 2 covers the basics of the production function and adds material comparing short-run with long-run growth (using PPF diagrams). New Section 3 applies the production function by looking at sources of growth.
- Section 3 in the second edition covered infrastructure and economic growth. In the third edition, this section is refocused on government's role in promoting growth.
- New Issue: Can Economic Growth Bring a Billion People Out of Poverty?
- New Issue: The Role of Social Media in Promoting Economic Growth.

Chapter 8: Aggregate Expenditures [new title]

- Aggregate expenditures model still linked to the Keynesian model.
- New chapter opener on the recent recession and government expenditures in Maine.
- Stronger emphasis on the importance of how spending by one creates income to others.
- Discussion of the contrast between classical and Keynesian policies.
- New Issue: Do High Savings Rates Increase the Risk of a Long Recession?

Chapter 9: Aggregate Demand and Supply

- New chapter opener explains aggregates in the face of varying levels of performance by different industries and different areas of the country.
- New Issue: Did the Collapse of the Housing Market Affect Aggregate Demand?
- New Issue: Why Didn't Recent Stimulus Measures Lead to Inflation?

Chapter 10: Fiscal Policy and Debt [significantly revised]

- Two chapters from the second edition—Chapter 10 on fiscal policy and Chapter 11 on debt—are combined into one.
- Added new subsection on the bias toward borrowing rather than taxing.
- New subsection on the future: the effect of Social Security and Medicare on fiscal sustainability.
- New Issue: How Big Was the Stimulus Multiplier, Really?
- New Issue: How Big Is the Economic Burden of Interest Rates on the National Debt?

Chapter 11: Saving, Investment, and the Financial System [new three-chapter organization]

- Major change: Three chapters now cover money, banking, and monetary policy.
- This chapter has four sections: (1) What Is Money? (2) The Market for Loanable Funds, (3) The Financial System, and (4) Financial Tools for a Better Future.
- The Financial System section covers intermediaries and types of financial assets.
- The fourth section, on financial tools, is new. It focuses on some personal finance decisions and emphasizes compounding, risk assessment, and incentives for saving.
- New Issue: Did the 2007–2009 Stock Market Crash Affect Long-Term Savings?

Chapter 12: Money Creation and the Federal Reserve [new three-chapter organization]

- The second of the three money chapters has four sections: (1) How Banks Create Money, (2) The Money Multiplier and Its Leakages, (3) The Federal Reserve System, and (4) Federal Reserve: Tools, Targets, and Policy Lags.



- More on money leakages.
- New Issue: Did Tighter Lending Practices Reduce the Money Multiplier?
- New Issue: What Can the Fed Do When Interest Rates Reach 0%?

Chapter 13: Monetary Policy [new three-chapter organization]

- New opening section—What Is Monetary Policy?—introduces policy by looking at the importance of interest rates and comparing expansionary with contractionary policy.
- Section 2, which includes monetary theories, simplified by focusing more on the effectiveness of policy. Note that some of the figures have been combined, which shortens what was a tough section in the second edition.
- The second edition ending section on the financial crisis of 2008–2009 has been replaced with a new Section 4 on monetary policy challenges facing the Fed and the European Central Bank now. The Fed part focuses on extraordinary actions by the Fed to deal with the financial crisis. The ECB part focuses on member-country problems and the threat to the euro. This is very timely euro coverage.
- New Issue: The Challenges of Monetary Policy with Regional Differences in Economic Performance.

Chapter 14: Macroeconomic Policy: Challenges in a Global Economy [new title]

- Section 1 is new to this chapter. It is a combination of the last sections of second edition Chapters 13 and 14. Covers the Great Recession and the factors leading up to it (such as the housing bubble), with a policy aspect at the end.
- The second edition sections on the Phillips curve and rational expectations have been combined. Both are trimmed, especially coverage of the Phillips curve, to cut out some of the historical material. All equations have been removed.
- New third section on current problems and the future. Three problems identified: jobless recoveries, debt and long-run inflation, and globalization and economic growth.
- New Issue: The Bernanke Inflation Jump—When?
- New Issue: Inflating Our Way Out of Debt: Is This an Effective Approach?

Chapter 15: International Trade

- Added discussion of three main reasons why nations trade: (1) Countries cannot produce everything they want (interindustry trade), (2) consumers desire variety (intraindustry trade), and (3) specialization increases total production and consumption (gains from trade).
- New Issue: The Challenge of Measuring Imports and Exports in a Global Economy.
- New Issue: Do Foreign Trade Zones Help or Hurt American Consumers and Workers?

Chapter 16: Open Economy Macroeconomics


- New subsection, Pegging Exchange Rates Under a Flexible Exchange Rate System, focuses on countries that peg their currency to the dollar or the euro.
- New Issue: Would a Stronger Chinese Yuan Be Good for Americans?
- New Issue: Would Flexible Exchange Rates in OPEC Nations Affect Oil Markets?

CoreMedia Learning Suite: Transformed to Support Today's Students and Instructors

The CoreMedia Learning Suite establishes a new methodology behind creating great support materials for instructors and students. CoreMedia includes new and adapted resources engineered to match new approaches to classroom teaching and learning. Education research guides our decisions from the value of active learning classrooms to supporting hybrid and online education; each resource was crafted to support instructors and students understanding that no two classrooms are exactly the same. For more information on how each of the following resources supports different teaching and learning approaches, from traditional lectures to “flipped classrooms” or lecture capture to online or hybrid courses, please visit: www.coreecon.com.

For Instructors

Teaching Manual and Suggested Answers to Problems

 **Best Classroom Use:** Traditional/Face-to-Face or Active-Learning/Face-to-Face

The Teaching Manual (TM) prepared by Mary H. Lesser (Lenoir-Rhyne University) is an ideal resource for many classroom teaching styles. The Teaching Manual focuses on expanding and enlivening classroom lectures by highlighting varied ways to bring real-world examples into the classroom. Portions of the Teaching Manual have been designed for use as student handouts. Every chapter of the Teaching Manual includes:

- *Chapter Overview:* A brief summary of the main topics in each chapter.
- *Ideas for Capturing Your Classroom Audience:* Written with experienced and novice instructors in mind, suggestions can be used for in-class demonstrations or enrichment assignments in on-site, hybrid, and online course formats.
- *Debate the Issues in the Chapter:* The TM reproduces the issues used in the chapter to spur student debate.
- *Examples Used in the End-of-Chapter Questions:* The TM provides the instructor with a succinct overview of those questions that refer to specific articles from major news sources that can be used to develop more in-depth analysis of current events.
- *For Further Analysis:* Each TM contains an additional extended example that can be used as a formatted, one-page handout, or posted online. It is designed for in-class group work or individual assignment. Learning objectives are specified and a one-page answer key is also available for reference or distribution.
- *Web-Based Exercises:* Each TM chapter includes a web-based example that requires students to obtain information from a Web site and use it to answer a set of questions. As an in-class group exercise or an individual assignment, it can help students become better consumers of information and stronger evaluators of online data and research.
- *Tips from a Colleague:* Each chapter of the TM concludes with “tips,” which share ideas about classroom presentation, use of other resources, and insights about topics that students typically find difficult to master.

Test Bank

 **Best Classroom Use:** All Approaches

Coordinators: Jane Himarios (University of Texas at Arlington) and Eric Chiang (Florida Atlantic University)

Contributors and Accuracy Checkers: Dixie Button (Embry-Riddle Aeronautical University), Michael Fenick (Broward College), Scott Hegerty (Northeastern Illinois University), Fred May (Trident Technical College), Janet Wolcott (Wichita State University), Sarah Jenyk (Youngstown State University), and Michael Dale (Trident Technical College).

The test bank contains nearly 4,000 carefully constructed, thoroughly edited and revised, and comprehensively accuracy checked questions. Each question was thoroughly reviewed by Jane Himarios and Eric Chiang; in fact, no component of the learning suite received as much scrutiny as the revision of the test bank.

- *New to this edition:* Each chapter features a set of *anchor questions* carefully selected by Eric Chiang as foundation questions around which a quiz, homework assignment, or test can be built.
- Each question has *skill descriptors* based on Bloom’s Taxonomy and a *degree of difficulty* (easy, moderate, or difficult). *Easy* questions require students to recognize concepts and definitions; *moderate* questions require some analysis, including distinguishing between related concepts; and *difficult* questions usually require more detailed analysis.



Because technology should never get in the way

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LaunchPad Units

Curated LaunchPad Units make class prep a whole lot easier. Combining a curated collection of video, simulations, animations, multimedia assignments, and e-book content, LaunchPad's interactive units give you a building block to use as-is, or as a starting point for your own learning units. An entire unit's worth of work can be assigned in seconds, drastically saving the amount of time it takes for you to have your course up and running.

- **Give students LearningCurve**—and get them more engaged with what they're learning. Powerful adaptive quizzing, a game-like format, direct links to the e-Book, instant feedback, and the promise of better grades make using LearningCurve a no-brainer. Customized quizzing tailored to each text adapts to student responses and provides material at different difficulty levels and topics based on student performance. Students love the simple yet powerful system and instructors can access class reports to help refine lecture content.

LEARNINGCurve
 3.2.2 Understanding Shifts of the Demand Curve

Suppose that clothes from the thrift store are inferior goods. If incomes decrease

- demand will decrease.
- demand will increase.
- demand will decrease and then shift back to its original level.
- ~~demand will remain the same.~~

Whoops. The correct answer is not:
demand will remain the same.
 → *If incomes decrease, demand for inferior goods will increase.*

Try again, **check the e-book**, **GET A HINT**, or click **SHOW ME** to see the answer and try another question.

- Index: 1/1
- Topic: Test Questions
- Level: 2
- Answer: demand will increase.
- [edit item](#)

? Get a Hint

👁️ Show Me

- **Everything is Assignable.** You can customize the LaunchPad Units by adding quizzes and other activities from our vast wealth of resources. You can also add a discussion board, a dropbox, and RSS feed, with a few clicks. LaunchPad allows you to customize your students' experience as much or as little as you'd like.
- **Useful Analytics.** The gradebook quickly and easily allows you to look up performance metrics for your whole class, for individual students and for individual assignments. Having ready access to this information can help in both lecture prep and in making office hours more productive and efficient.
- **An e-Book that delivers more than content.** Every LaunchPad e-Book comes with powerful study tools for students, video and multimedia content, and easy customization for instructors. Students can search, highlight, and bookmark, making it easier to study and access key content. And teachers can make sure their class gets just the book they want to deliver: customize and rearrange chapters, add and share notes and discussions, and link to quizzes, activities, and other resources.
- **Intuitive interface and design.** Students can be in only two places – either viewing the home page with their assigned content, or working to complete their assignments. Students' navigation options and expectations are clearly laid out in front of them at all times ensuring they can never get lost in the system.
- **Electronically graded graphing problems** replicate the paper and pencil experience better than any program on the market. Students are asked to draw their response and label each curve. The software automatically grades each response, providing feedback options at the instructor's discretion, including partial credit for incomplete, but not entirely incorrect, responses. Graphing questions are tagged to appropriate textbook sections and range in difficulty level and skill.

Get your feet wet with our graphing tools: Let's imagine a market for Tabloid Newspapers.

Part 1: Select the Line tool and draw a downward-sloping line. Label it "Demand 1". Next, using the same tool, draw an upward-sloping line that intersects "Demand 1" and label it "Supply 1".

Part 2: Use the Double Drop Line tool to identify the price and quantity where the two lines intersect. Label it "Equilibrium 1".

Part 3: With the Line tool, draw a new downward-sloping line that is to the LEFT of "Demand 1". Label it "Demand 2". Use the Double Drop Line tool to show the new equilibrium price and quantity in the global market for this Alien Bigfoot journalism. Label this point "Equilibrium 2."

Feel momentarily happy that demand for sensational stories has fallen, then remember that it's only because of the rise in demand for substitute goods like reality TV.

Continue to play with the graph if you like. We know you are an economist, after all.

Coordinates: (100.00, 0.00)

Price of Tabloid Newspapers

Quantity of Tabloid Newspapers

Price of Tabloid Newspapers

Quantity of Tabloid Newspapers

■ Snapping

— Demand 1
— Supply 1
— Equilibrium 1
— Demand 2
— Equilibrium 2
— Unselected


Erase All Correct Submit Answer Try Again

Feedback: Well done! With News of the Universe having seen its last publishing days, both the price and equilibrium quantity of Tabloid Newspapers will drop. Now we'll have more time for the more serious content of Facebook.

Next Question

- To further aid instructors in building tests, each question is referenced by the specific heading in the textbook. Questions are presented in the order in which concepts are presented in the book.
- The test bank includes questions with tables that students must analyze to solve for numerical answers. It contains questions based on graphs that appear in the book and require students to interpret information presented in the graph.


Computerized Test Bank

 **Best Classroom Use:** Online and Hybrid Course Formats | Building Tests for Face-to-Face Instruction

Diploma was the first software for PCs that integrated a test-generation program with grade-book software and online testing system. Diploma is now in its fifth generation. The Test Banks are available for both Windows and Macintosh users.

With Diploma, you can easily create and print test banks and write and edit questions. You can add an unlimited number of questions, scramble questions and distractors, and include figures. Tests can be printed in a wide range of formats. The software's unique synthesis of flexible word-processing and database features creates a program that is extremely intuitive and capable.

Two Sets of PowerPoint Slides

 **Best Classroom Use:** Traditional/Face-to-Face or Active Learning/Face-to-Face

Dynamic PowerPoint Presentation by Eric Levy (Florida Atlantic University): PowerPoint slides designed with front-of-the-classroom presentation and visual learning in mind. This set of PowerPoint slides contains fully animated graphs, visual learning images, additional examples, links, and embedded questions. These slides may be customized by instructors and accessed via the catalog page at www.wortheconomics.com or within *LaunchPad* for *CoreMacroeconomics*.

Lecture PowerPoint Presentation consists of PowerPoint slides designed by Debbie Evercloud (University of Colorado, Denver) that provide graphs from the textbook, data, tables, and bulleted lists of key concepts suitable for lecture presentation. Key figures from the text are replicated and animated to demonstrate how they develop. These slides may be customized by instructors to suit individual needs. These files may be accessed on the catalog page at www.wortheconomics.com or within *LaunchPad* for *CoreMacroeconomics*.

Additional Online Offerings



www.saplinglearning.com

Sapling Learning provides interactive learning experiences for economics that significantly improve student comprehension, retention, and problem-solving skills.

Sapling Learning's system delivers unmatched benefits and capabilities including:

- **Proven Results.** Independent university studies have shown Sapling Learning improves student performance by 0.75 to a full letter grade.
- **Industry-Leading Support.** We match instructors with a Technology TA—PhD and master's-level subject experts—to provide software and course support throughout the semester.
- **Instant Student Feedback.** Our easy-to-use online homework assignments provide instant feedback and tutorials tailored to students' responses.
- **Performance Tracking.** Sapling Learning grades assignments, tracks student participation and progress, and compiles performance analytics—helping instructors save time and tailor assignments to address student needs.



www.aplia.com/worth

Worth/Aplia courses are all available with digital textbooks, interactive assignments, and detailed feedback. With Aplia, you retain complete control of and flexibility for your course. You choose the content you want students to cover, and you decide how to organize it. You decide whether online activities are practice (ungraded or graded).

- **Extra problem sets** (derived from in-chapter questions in the book) suitable for homework and keyed to specific topics from each chapter
- **Regularly updated news analyses**
- **Interactive tutorials** to assist with math and graphing
- **Instant online reports** that allow instructors to target student trouble areas more efficiently

Further Resources Offered

CourseTutor

CourseTutor, revised by Albert J. Sumell (Youngstown State University) and Gregory Rose (Sacramento City College) is more than a traditional study guide. It originated as a study aid crafted by Gerald Stone to help students in his Saturday sections at Metropolitan State University of Denver.

Each chapter of the *CourseTutor* is divided into two basic sections: a six-step detailed walk-through of the material to help each student check his or her individual progress, followed by a section with standard study material such as fill-in, true/false, multiple-choice, and short essay questions. Both sections are designed for interactivity and many of these features can be found in a digital format within *LaunchPad* for *CoreMacroeconomics* including:

- *Solved Problems*: developed by Irina Pritchett (North Carolina State University), the solved problems are designed for the online environment using a graphing and assessment engine. Students receive detailed feedback and guidance on where to go for further review.

Students learn by many different methods and *CourseTutor* provides a buffet of learning choices. Students select those methods that best help them learn. In this way, the *CourseTutor* was a precursor to the many adaptive methodologies at work in online learning software, including those found in *LaunchPad* for *CoreMacroeconomics*.

CourseSmart e-Books

www.coursesmart.com

CourseSmart e-books offer the complete book in PDF format. Students can save money—up to 60% off the price of the printed textbook. In CourseSmart, students have the ability to take notes, highlight, print pages, and more. It is great alternative to renting a textbook and it is compatible with most mobile platforms.

i>clicker

Developed by a team of University of Illinois physicists, i>clicker is the most flexible and reliable classroom response system available. It is the only solution created for educators, by educators—with continuous product improvements made through direct classroom testing and faculty feedback. You'll love i>clicker, no matter your level of technical expertise, because the focus is on your teaching, not the technology. To learn more about packaging i>clicker with this textbook, please contact your local sales representative or visit www.iclicker.com.

LMS Integration

LaunchPad for *CoreMacroeconomics* can be fully integrated with any campus LMS including such features as single sign-on for students revisiting the site, gradebook integration for all activities completed in *LaunchPad*, as well as integration of assignments within the campus LMS for certain products. For more information on LMS integration, please contact your local publisher's representative.

➔ Acknowledgments

No project of this scope is accomplished alone. *CoreMacroeconomics* and its suite of learning resources came together as a result of the dedication of many individuals who devoted incredible amounts of time to the project. These include reviewers of manuscript chapters, focus group participants, accuracy reviewers, supplements contributors, project specialists, and the production and editorial staff at Worth Publishers.

I want to thank those reviewers of the third edition who read through chapters in manuscript and offered many important suggestions that have been incorporated into this project. They include:

Bill Adamson, University of South Dakota	Barry Kotlove, Edmonds Community College
Stephen Bannister, University of Utah	Larry Landrum, Virginia Western Community College
Robert Burrus, University of North Carolina-Wilmington	Jim Lee, Texas A&M University Corpus Christi
Suparna Chakraborty, University of San Francisco	Sang H. Lee, Southeastern Louisiana University
AnaMaria Conley, Regis University	Fred May, Trident Technical College
Dale DeBoer, University of Colorado, Colorado Springs	Robert McKizzie, Tarrant County College Southeast
Erwin Erhardt III, University of Cincinnati	Randy Methenitis, Richland College
Scott Gilbert, Southern Illinois University	Stan Mitchell, McLennan Community College
Ross J. Hallren, University of Oklahoma	Douglas Orr, City College of San Francisco
Moon Moon Haque, University of Memphis	Tomy Ovaska, Youngstown State University
Michael G. Heslop, Northern Virginia Community College	Ravi Samitamana, Daytona State College
Ryan Herzog, Gonzaga University	Albert J. Sumell, Youngstown State University
Scott Hunt, Columbus State Community College	Deborah Thorsen, Palm Beach State College
Sarah Jenyk, Youngstown State University	Jane A. Treptow, Broward College
Janis Y. F. Kea, West Valley College	Christine Walthen, Middlesex County College
	Wendy Wysocki, Monroe County Community College

I would like to thank those focus group participants who devoted a lot of time and effort to discussing the proposed revisions to the third edition and how this edition of *CoreMacroeconomics* can facilitate a broad range of learning and teaching approaches. Their suggestions (and criticisms) contributed immensely to the development of this project. They include:

Nelson Altamirano, National University	Steven Levkoff, University of California San Diego
Dennis Avola, Framingham State University	Eric Levy, Florida Atlantic University
Kristie Briggs, Creighton University	Rotua Lumbantobing, Westminster College
Bruce Brown, California Polytechnic University, Pomona	Shakun Mago, University of Richmond
Parama Chaudhury, University College London	Diego Mendez-Carbajo, Illinois Wesleyan University
Salvador Contreras, University of Texas Pan American	Evelina Mengova, California State University Fullerton
Brent Evans, Mississippi State University	Rebecca Moryl, Emmanuel College
Virginia Fierro-Renoy, Keiser University	James Murray, University of Wisconsin, La Crosse
Melanie Fox, Austin College	Robert Pennington, University of Central Florida
Lisa Gloege, Grand Rapids Community College	Robert Rebelein, Vassar College
Oskar Harmon, University of Connecticut	Matthew Rousu, Susquehanna University
Ryan Herzog, Gonzaga University	Rochelle Ruffer, Nazareth College
Jennifer Imazeki, San Diego State University	Scott Simkins, North Carolina A&T University
Ahmed Kader, University of Nevada Las Vegas	Jim Wollscheid, University of Arkansas, Fort Smith
Hossein Kazemi, Stonehill College	Madelyn Young, Converse College

I would like to thank my current and former student assistants who helped with data collection and shared ideas for examples that would click with college students today. These students include Alan Jagessar, Eileen Schneider, Phil Esterman, Enrique Valdes, Kevin Brady, Thomas Thornton, Brett Block, and Craig Haberstumpf. I also thank all of the students who have taken my principles courses. Their comments, body language, and facial expressions provided cues to whether my concept explanations and applications were clear and provided guidance on how to approach these topics in the book.

I would like to thank Jose Vazquez of the University of Illinois at Urbana-Champaign and Rochelle Ruffer of Nazareth College for their willingness to use the preliminary version of the third edition in their classes. The feedback I received from their experience as well as from their students allowed me to improve the textbook prior to its publication.

I am extremely grateful to Jane Himarios of the University of Texas at Arlington who not only oversaw the complete revision of the Test Bank but also took on the role of an expert accuracy checker. Further, Jane provided constant moral support throughout the project.

I want to thank James Watson for his tireless examination of the page proofs to ensure accuracy. Despite dozens of eyes that have read through manuscript and proofs, James still managed to catch errors that none of us want to see in the final product.

A huge debt of gratitude is owed to Lindsay Neff and the supplements authors. Lindsay did a remarkable job to get the best people to author the supplements. They include Jane Himarios of the University of Texas at Arlington who managed the revision of the Test Bank, Albert J. Sumell of Youngstown State University and Gregory Rose of Sacramento City College who revised the *CourseTutor*, Eric Levy of Florida Atlantic University who created the dynamic PowerPoint slides, and Solina Lindahl of California Polytechnic University–San Luis Obispo for coordinating the pedagogical resources available to instructors. I would also like to thank Ting Levy of Florida Atlantic University, Tamika Steward, James Watson and Brett Block for the development of materials for *LaunchPad* for *CoreMacroeconomics*. *CoreMacroeconomics* and the *CoreMedia* came together into a cohesive set of instructor and student resources because of their efforts.

I owe a significant debt to the team of technology specialists who created many fascinating digital resources for *CoreMacroeconomics*. I thank Tom Acox for his instrumental role in the development and management of the online resources, especially *LaunchPad*. There has been more than one occasion when a crisis situation with my class required immediate attention, and Tom was always available, day and night, to resolve the problem. He truly exemplifies his title as digital solutions manager.

I am truly indebted to Jeremy Brown, who over the years has taught me the tools and tricks of digital technology that have become indispensable in today's media-driven world. These tools include video editing, animation, and other visual effects, creating a professional Web site, and maximizing the effectiveness of social media. Whenever I have a technology-related question, I can count on Jeremy for an answer. His influence has given me the confidence to use cutting-edge technology to its maximum potential to the benefit of the *CoreMacroeconomics* suite of resources.

Several persons have provided inspiration for various teaching pedagogies as well as a willingness to lend an ear. These individuals include Gregory Rose of Sacramento City College, Djeto Assane of the University of Nevada Las Vegas, Yoram Bauman (Stand-up Economist), Janice Hauge of the University of North Texas, Marc Cannon, and William Bosshardt of Florida Atlantic University.

The production team at Worth is truly the best in the industry. My heartfelt thanks go to the entire team, including Kevin Kall, senior designer, for creating a fantastic set of interior and cover designs; Georgia Lee Hadler, senior project editor, for skillfully managing the copyediting and proofing of the book; Martha Solonche for her superb copyediting; Christine Buese and Julie Tesser for their immense efforts at finding and obtaining rights to the hundreds of photos used in the book; Mary Walsh for her meticulous work in preparing manuscripts for production; Tracey Kuehn, Barbara Seixas,

and production specialists Susie Bothwell, Lisa Hankins, and Christina Welker. Each of these individuals made sure each part of the production process went smoothly. Thank you very much for a job well done.

I want to thank Charles Linsmeier, publisher of economics, for recruiting me for this project and making this collaboration with Jerry Stone a reality. Not only did Chuck sign me to Worth, he also has provided dedicated support throughout the entire process. I also thank Paul Shensa for this support from the beginning of the project to its completion. From his ideas on editorial changes to marketing, Paul is an indispensable resource for any author.

There is no one person I can thank more than Bruce Kaplan, senior development editor, who has guided me on the revision of *CoreMacroeconomics* from start to finish. Bruce had a long working relationship with Jerry Stone on his first two editions and was able to provide the continuity into the third edition without Jerry's presence. In fact, in my last conversation with Jerry Stone, he told me to "stick with Bruce; he's the best and will take you far." Jerry's words ring true each time I work with Bruce, who is the best editor and mentor an author can have.

You couldn't ask for a better marketing team than that at Worth. In the early stages of this edition, I had the pleasure of working with Scott Guile, whose enthusiasm is infectious and his efforts tireless. Scott's promotion left big shoes to fill, but the arrival of Tom Digiano as marketing manager provided a flawless transition. Tom's expertise in online homework systems and social media marketing is inspiring, and has encouraged me to push the boundaries to create wonderful marketing pieces that I am proud to put my name on. I thank Tom Kling for his role in motivating the sales reps to the benefits of this project, and for always making me feel at home during sales meetings. I thank the entire sales force, which devotes its time, effort, and passion to showcasing *CoreMacroeconomics* in a way that truly exemplifies its value to economics education.

I wish to thank Sarah Dorger, for without her efforts, my authoring role would not have happened. I thank Sharon Balbos, whose abundance of experience with textbook-related projects prior to *CoreMacroeconomics* helped me to develop a keen eye for detail that is vital to an author. I thank Craig Bleyer, who for many years encouraged me to become an author before I finally did. And I thank Catherine Woods and Elizabeth Widdicombe for supporting me as an author.

Finally, I thank Jerry Stone, a true friend and colleague who put his full trust in me when he offered me the opportunity to take over authorship of *CoreMacroeconomics* in 2010 and carry the book forward to a new generation of students and instructors with new needs. I wish Jerry were still here to collaborate on the textbook he created so successfully in the first two editions. I will never cease my efforts to make *CoreMacroeconomics* a long-lasting legacy of Jerry's brilliance and dedication to students and instructors.

Eric P. Chiang

Eric P. Chiang



Exploring Economics

1

After studying this chapter you should be able to:

- Explain how economic analysis can be used in decision making.
- Differentiate between microeconomics and macroeconomics.
- Describe how economists use models.
- Describe the *ceteris paribus* assumption.
- Discuss the difference between efficiency and equity.
- Describe the key principles in economics.
- Apply the key principles to situations faced in your daily routine.

Perched high atop the 3,000-foot vertical monolith known as El Capitan, a climber gazes out upon a perfect view of Yosemite National Park. Holding onto the wall *with no rope*, one tiny slip of the foot will lead to certain death. Welcome to the sport of free soloing, an extreme form of rock climbing done *without* ropes or harnesses. Does this sound thrilling? Or perhaps crazy? Or even irrational? These are common thoughts that come to mind when people talk about the new wave of risky adventure sports. Would you think that whether or not to participate in such an activity is an economic question?

Most people probably wouldn't. But this example resembles an economic problem in many ways. Free soloing involves a challenge, one with a *benefit* (a sense of accomplishment) and a *cost* (both monetary and physical risks). It involves *tradeoffs*—the thousands of hours spent practicing and perfecting the climbing techniques needed to be successful. And it involves societal beliefs about whether such activities should be *regulated* or even banned. Benefits, costs, tradeoffs, regulation: These are the foundations for making a decision using the tools of economic thinking, as we will see. Nearly all decisions made by individuals, firms, and governments in pursuit of an objective or goal can be understood using these economic concepts.

By the end of this course, you will come to understand that economics involves all types of decisions, from small everyday decisions on how to manage one's time to world-changing decisions made by the president of the United States. Consumers make decisions about what clothes to buy and what foods to eat. Businesses must decide what products to make and how much of each product to stock on store shelves. Indeed, one cannot escape making decisions, and the outcomes of these decisions affect not only our own lives but those of entire societies and countries.

You still might be asking yourself: Why should I study economics? First, you will spend roughly the next 40 years working in an economic environment: paying taxes, experiencing ups and downs in the overall economy, investing money, and voting on various economic issues. It will benefit you to know how the economy works. More important, economic analysis gives you a structure from which you can make decisions in a more rational manner. Economics teaches you how to make better and wiser decisions given your limited resources. This course may well change the way you look at the world. It can open your eyes to how you make everyday decisions from what to buy to where you choose to live.

Like our opening example, economic analysis involves decisions that are not just "economic" in the general sense of the term. Certainly economic thinking may change your views on spending and saving, on how you feel about government debt, and on your opinion of environmental policies or globalization. But you also may develop a different perspective on how much time to study for each of your courses this term, or where you might go for Spring Break this year. Such is the wide scope of economic analysis.

In this introductory chapter, we take a broad look at economics. We take a brief look at a key method of economic analysis: model building. Economists use stylized facts and the technique of holding some variables constant to develop testable theories about how consumers, businesses, and governments make decisions. Then we turn to a short discussion of some key principles of economics to give you a sense of the guiding concepts you will come across in this book.

This introductory chapter will give you a sense of what economics is, what concepts it uses, and what it finds to be important. Do not go into this chapter thinking you have to memorize these concepts. Rather, use this chapter to get a sense of the broad scope of economics. You will be given many opportunities to understand and use these concepts throughout this course. Return to this chapter at the end of the course and see if everything has now become crystal clear.

What Is Economics About?

Economics is a very broad subject. It often seems that economics has something important to say about almost everything.

To boil it down to a simple definition, **economics** is about making choices. Economics studies how individuals, firms, and societies make decisions to maximize

economics The study of how individuals, firms, and society make decisions to allocate limited resources to many competing wants.

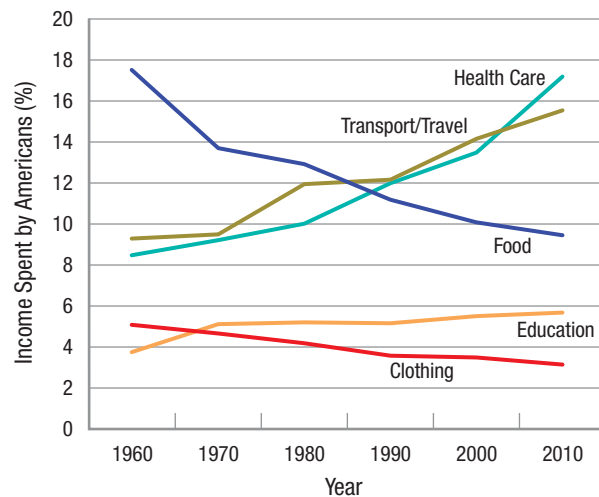
Economic Issues Are All Around Us

Economics is one of the most popular college majors in the country. This is because so much of what we do, the decisions we face, and the issues we confront involve economics.

Each chapter in this book includes a By the Numbers box. It has two purposes. First, items in the feature preview some of the topics covered in the chapter. We hope these topics motivate you to read on. Second, the data explosion affecting our understanding of the world will only continue to accelerate. Numerical literacy will grow in importance. This By the Numbers box seeks to encourage a nonthreatening familiarity with data and numbers. At the end of each chapter, there are two Using the Numbers questions to test how well you understood the numbers.



Business majors represented the largest number of college graduates in terms of the total number of bachelor's degrees granted in 2011. Economics majors represented the sixth most popular degree granted.



The average percentage of income Americans spent on food and clothing has fallen since 1960, but the percentage of income spent on travel, education, and health care has increased.

Technology Company CEO Majors:

1. Economics (22%)
2. Computer Science (20%)
3. Engineering (17%)

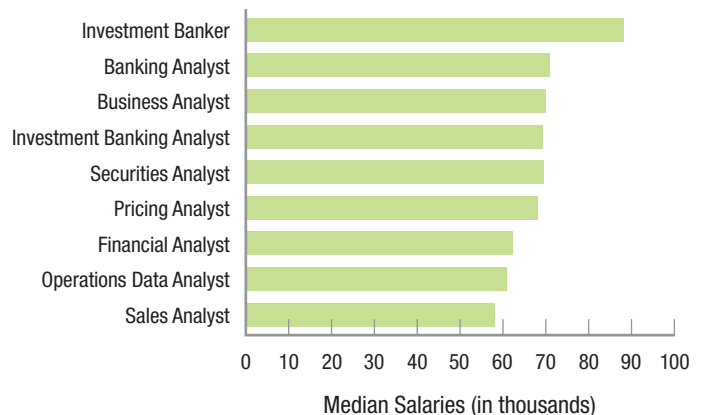
Fortune 100 Company CEO Majors:

1. Engineering (17%)
2. Economics (12%)
3. Business Administration (12%)



41%
Percent of Fortune 500 Companies (America's largest companies by revenue) founded by immigrants or their children.

\$94,700
The median salary of workers with economics degrees after 15 years of work experience.



What do economists do? Common jobs held by economists with bachelor's degrees and their median salaries.

scarcity Our unlimited wants clash with limited resources, leading to scarcity. Everyone (rich and poor) faces scarcity because, at a minimum, our time on earth is limited. Economics focuses on the allocation of scarce resources to satisfy unlimited wants.

their well-being given limitations. In other words, economics attempts to address the problem of having too many wants but too few resources to achieve them all, an important concept called **scarcity**. Note that scarcity is not the same thing as something being *scarce*. Although all resources are scarce, certain goods are less scarce than others. For example, cars are not very scarce—there are car dealerships around the country chock-full of cars ready to be sold, but that doesn't mean you can go out tonight and buy three. Scarcity refers to the fact that one must make choices given the resource limitations she or he faces.

What kind of limitations are we referring to here? It could be money, but money is not the only resource that allows us to achieve the life we want. It's also our time, our knowledge, our work ethic, and anything else that can be used to achieve our goals. It is this broad notion of economics being the study of how people make decisions to allocate scarce resources to competing wants that allows the subject to be applied to so many topics and applications.

Why Should One Study Economics?

The first answer that might come to mind as to why you are taking this course is “because you have to.” Although economics is a required course for many college students, economics should be thought of as something much, much more. For example, studying economics can prepare you for many types of careers in major industries and government. Studying economics also is a great launching pad for pursuing a graduate degree in law, business, or other fields. More practically speaking, economics helps you to think more clearly about the decisions you make every day and to understand better how the economy functions and why certain things happen the way they do.

For example, economics has some important things to say about the environment. Most people care about the environment to some degree, and do their part by recycling, not littering, and turning off the lights when leaving a room. But not all people make decisions in the same way: Some might do much more to conserve resources, such as driving less or driving a more fuel efficient car, joining a local organization to plant trees, or even writing to policymakers to support sustainability legislation. The extent to which people participate in environmental activities depends on the benefit they perceive when pursuing such actions compared to the costs, which can include monetary costs, time and effort, and forgone opportunities such as driving a larger, more comfortable car. Economics looks at all of these factors to determine how people make decisions that affect the environment, which affects us all. Economics is a way of thinking about an issue, not just a discipline that has money as its chief focus.

Economists tend to have a rational take on nearly everything. Now all of this “analysis/speculation” may bring only limited insight in some cases, but it gives you some idea of how economists think. We look for rational responses to **incentives**. Incentives are the factors, both good and bad, that influence how people make decisions. For example, tough admissions requirements for graduate school provide an incentive for students to study harder in college, while lucrative commissions push car salespeople to sell even the ugliest or most unreliable car. Economics is all about how people respond to incentives. We begin most questions by considering how rational people would respond to the incentives that specific situations provide. Sometimes (maybe even often) this analysis leads us down an unexpected path.

Microeconomics Versus Macroeconomics

Economics is split into two broad categories: microeconomics and macroeconomics. **Microeconomics** deals with decision making by individuals, businesses, industries, and governments. It is concerned with issues such as which orange juice to buy, which job to take, and where to go on vacation, as well as which items a business should produce and what price it should charge, and whether a market should be left on its own or be regulated.

Microeconomics looks at how markets are structured. Some markets are very competitive, where many firms offer similar products; while other markets have only one or two

incentives The factors that motivate individuals and firms to make decisions in their best interest.

microeconomics The decision making by individuals, businesses, industries, and governments.

large firms, offering little choice. What decisions do businesses make under different market structures? Microeconomics also extends to such topics as labor laws, environmental policy, and health care policy. How can we use the tools of microeconomics to analyze the costs and benefits of differing policies?

Macroeconomics, on the other hand, focuses on the broader issues we face as a nation. Most of us don't care whether an individual buys Nike or Merrell shoes. We *do* care whether prices of *all* goods and services rise. Inflation—a general increase in prices economy-wide—affects all of us. So does unemployment (virtually every person will at some point in their life be unemployed, even if it's just for a short time when switching from one job to another) and economic growth. What decisions do governments make to deal with macroeconomic problems such as inflation and recessions?

Macroeconomics uses microeconomic tools to answer some questions, but its main focus is on the broad aggregate variables of the economy. Macroeconomics has its own terms and topics, such as business cycles, recession, and unemployment. Macroeconomics looks at policies that increase economic growth, the impact of government spending and taxation, the effect of monetary policy on the economy, and inflation. It also looks closely at theories of international trade and international finance. All of these topics have broad impacts on our economy and our standard of living.

Still not clear? Here's an easy way to remember the difference between microeconomics and macroeconomics. Only one letter separates the two terms, so just remember that the “i” in microeconomics refers to “individual” entities (such as a person or a firm), while the “a” in macroeconomics refers to “aggregate” entities (such as cities or a nation as a whole).

Economics is a social science that uses many facts and figures to develop and express ideas. This inevitably involves numbers. For macroeconomics, this means getting used to talking and thinking in huge numbers: billions (nine zeros) and trillions (twelve zeros). Today we are talking about a federal government budget approaching \$4 trillion. To wrap your mind around such a huge number, consider how long it would take to spend a trillion dollars if you spent a dollar every second, or \$86,400 per day. To spend \$1 trillion would require over 31,000 years. And the federal government now spends nearly 4 times this much in one year.

Although we break economics into microeconomics and macroeconomics, there is considerable overlap in the analysis. Both involve the analysis of how individuals, firms, and governments make decisions that affect the lives of people. We use simple supply and demand analysis to understand *both* individual markets and the general economy as a whole. You will find yourself using concepts from microeconomics to understand fluctuations in the macroeconomy.

Economic Theories and Reality

If you flip through any economics text, you'll likely see a multitude of graphs, charts, and equations. This book is no exception. The good news is that all of the graphs and charts become relatively easy to understand since they all basically read the same way. The few equations in this book stem from elementary algebra. Once you get through one equation, the rest are similar.

Graphs, charts, and equations are often the simplest and most efficient ways to express data and ideas. Equations are used to express relationships between two variables. Complex and wordy discussions can often be reduced to a simple graph or figure. These are efficient techniques for expressing economic ideas.

Model Building As you study economics this term, you will encounter stylized approaches to a number of issues. By *stylized*, we mean that economists boil down facts to their basic relevant elements and use assumptions to develop a stylized (simple) model to analyze the issue. There are always situations that lie outside these models, but they are the exception. Economists generalize about economic behavior and reach broadly applicable results.

We begin with relatively simple models, then gradually build to more difficult ones. For example, in the next chapter we introduce one of the simplest models in economics,

macroeconomics The broader issues in the economy such as inflation, unemployment, and national output of goods and services.

ceteris paribus Assumption used in economics (and other disciplines as well), where other relevant factors or variables are held constant.

efficiency How well resources are used and allocated. Do people get the goods and services they want at the lowest possible resource cost? This is the chief focus of efficiency.

equity The fairness of various issues and policies.

the production possibilities frontier that illustrates the limits of economic activity. This model has profound implications for the issue of economic growth. We can add in more dimensions and make the model more complex, but often this complexity does not provide any greater insight than the simple model.

Ceteris Paribus: All Else Held Constant To aid in our model building, economists use the *ceteris paribus* assumption: “Holding all other things equal.” That means we will hold some important variables constant. For example, to determine how many songs you might be willing to download from iTunes in any given month, we would hold your monthly income constant. We then would change song prices to see the impact on the number purchased (again holding your monthly income constant).

Though model building can lead to surprising insights into how economic actors and economies behave, it is not the end of the story. Economic insights lead to economic theories, but these theories must then be tested. In some cases, such as the extent to which a housing bubble could lead to a financial crisis, economic predictions turned out to be false. Thus, model building is a *process*—models are created and then tested. If models fail to explain reality, new models are constructed.

ISSUE

Have Smartphones and Social Media Made Life Easier?

Two decades ago, if your professor wanted to convey an important announcement about an upcoming class, she or he would have to wait until the next class period, or if more urgent, make a phone call to each student. Similarly, if you worked for a company, communications with your boss generally ended when you left the office for the day.

Today, we live in a society in which nearly everybody uses online technologies, whether it be for keeping up with friends on Facebook, writing a recommendation for a friend on LinkedIn, or completing homework using classroom management software. Further, we live in a world in which computers and phones are no longer fixed; instead, we carry miniature versions of them with us at all times. According to a Nielsen survey, over 55% of all American adults own a smartphone, and over 75% of those between the ages of 18 and 24 do. So how do these technologies affect our lives?

We can analyze this question using the standard economic benefit versus cost approach. On the benefit side, Internet and mobile technologies have clearly improved the speed and ease of communications, whether staying in touch with family and friends, or trying to locate a loved one



at the mall (no more preplanned meeting locations required).

In addition to benefits, there are also costs. For example, greater ease of communications often comes with greater expectations. Several survey studies found that over 95% of Americans answer at least one work-related email or business phone call while on vacation. Students are expected to respond quickly to emails from professors. And even your friends might expect you to respond instantly to text messages and to “like” their latest posts on a social media site. Indeed, sometimes being too connected adds new pressures in life.

Each individual is unique and weighs the benefits and costs of technology differently. How you value these benefits and costs will ultimately determine how you choose to adapt to new and existing technologies. Economics involves all sorts of decisions, including how well connected we choose to be in life.

Efficiency Versus Equity

Efficiency deals with how well resources are used and allocated. No one likes waste. Much of economic analysis is directed toward ensuring that the most efficient outcomes result from public policy. *Production efficiency* occurs when goods are produced at the lowest possible cost, and *allocative efficiency* occurs when individuals who desire a product the most get those goods and services. As an example, it would not make sense for society to allocate to me a large amount of cranberry sauce—I would not eat it. Efficient policies are generally good policies.

The other side of the coin is **equity**, or fairness. Is it fair that the CEOs of large companies make hundreds of times more money than rank-and-file workers? Many think not. Is it fair that some have so much and others have so little? Again, many think not. There are many divergent views about fairness until we get to extreme cases. When just a few people earn nearly all of the income and control nearly all of a society’s wealth, most people agree that this is unfair.

Throughout this course you will see instances where efficiency and equity collide. You may agree that a specific policy is efficient, but think it is unfair to some

group of people. This will be especially evident when you consider tax policy and its impact on income distribution. Fairness, or equity, is a subjective concept, and each of us has different ideas about what is just and fair. When it comes to public policy issues, economics will help you see the tradeoffs between equity and efficiency, but you will ultimately have to make up your own mind about the wisdom of the policy given these tradeoffs.

Positive Versus Normative Questions

Returning to the example in the chapter opener, we ask ourselves many questions whenever a decision needs to be made or an issue is debated. Some questions involve the understanding of basic facts, such as how risky a particular sport is, or how much enjoyment one gets from participating in the sport. Economists call these types of questions **positive questions**. Positive questions (which need not be positive or upbeat in the literal sense) are questions that can be answered one way or another as long as the information is available. This does not mean that people will always agree on an answer, because facts and information can differ.

Another type of question that arises is how something ought to be, such as whether extreme sports should be banned or whether additional safety measures should be required. Economists call these types of questions **normative questions**. Normative questions involve societal beliefs on what should or should not be done; differing opinions on an issue can sometimes make normative questions difficult to resolve.

Throughout this book, positive and normative questions will arise, which will play an important role in how individuals and firms make decisions, and how governments form policy proposals that may or may not become law. Indeed, economics encompasses many ideas and questions that affect everyone.

positive question A question that can be answered using available information or facts.

normative question A question that is based on societal beliefs on what should or should not take place.

CHECKPOINT

WHAT IS ECONOMICS ABOUT?

- Economics is about making decisions under scarcity, in which wants are unlimited but resources are limited.
- Economics is separated into two broad categories: microeconomics and macroeconomics.
- *Microeconomics* deals with individuals, firms, and industries and how they make decisions.
- *Macroeconomics* focuses on broader economic issues such as inflation, employment and unemployment, and economic growth.
- Economics uses a stylized approach, creating simple models that hold all other relevant factors constant (*ceteris paribus*).
- Economists and policymakers often face a tradeoff between efficiency and equity.
- Positive questions can be answered with facts and information, while normative questions ask how something should or ought to be.

QUESTION: In each of the following situations, determine whether it is a microeconomic or macroeconomic issue.

1. Hewlett-Packard announces that it is lowering the price of its printers by 15%.
2. The president proposes a tax cut.
3. You decide to look for a new job.
4. The economy is in a recession, and the job market is bad.
5. The Federal Reserve announces that it is raising interest rates because it fears inflation.
6. You get a nice raise.
7. Average wages grew by 2% last year.

Answers to the Checkpoint questions can be found at the end of this chapter.

➔ Key Principles of Economics

Economics has a set of key principles that show up continually in economic analysis. Some are more restricted to specific issues, but most apply universally. These principles should give you a sense of what you will learn in this course. In the following, we summarize seven key principles that will be applied throughout the entire book. By the end of this course, these principles should be crystal clear and you will likely find yourself using these principles throughout your life, even if you never take another economics course.

Principle 1: Economics Is Concerned with Making Choices with Limited Resources

Economics deals with nearly every type of decision we face every day. But when a typical person is asked what economics is about, the most common answer is “money.” Why is economics commonly misconceived as dealing only with money? This may be due in part to how economics is portrayed in the news—dealing with financial issues, jobs and wages, and the cost of living, among other money matters. While money matters are indeed an important issue studied in economics, you now know that economics involves much, much more.

Economics is about making decisions on allocating limited resources to maximize an individual or society’s well-being. Money is just one source of well-being, assuming that more money makes a person happier, all else equal. But other factors also improve a person’s well-being, such as receiving a day off from work with pay. Even if one does not have a lot of money or free time, satisfaction can come from other activities or events, such as participating in a fun activity with friends or family, or watching one’s favorite team win.

In sum, many aspects of life contribute to the well-being of individuals and of society. Unfortunately, often these are limited by various resource constraints. Therefore, one must think of economics in a broad sense of determining how best to manage all of society’s resources (not just money) in order to maximize well-being. This involves tradeoffs and opportunity costs, which we consider next.

Principle 2: When Making Decisions, One Must Take Into Account Tradeoffs and Opportunity Costs

Wouldn’t it be great if we all had the resources of Mark Zuckerberg (the founder of Facebook) and could buy just about any material possession one could possibly want? Most likely we won’t, so back to reality.

We all have limited resources. Some of us are more limited than others, but each of us, even Mark Zuckerberg, faces limitations (and not because Mark chooses to wear a \$30 shirt instead of a \$3,000 Brioni suit). For example, we all face time limitations: There are only 24 hours in a day, and some of that must be spent sleeping. The fact that we have many wants but limited resources (scarcity) means that we must make tradeoffs in nearly everything we do. In other words, we have to decide between alternatives, which always exist whenever we make a decision.

How is this accomplished? What factors determine whether you buy a nicer car or use the extra money to pay down debt? Or whether you should spend the weekend at a local music festival or use the time to study for an exam? Economists use an important term to help weigh the benefits and costs of every decision we make, and that term is **opportunity cost**. In fact, economics is often categorized as the discipline that always weighs benefits against costs.

At its very core, opportunity cost is determined by asking yourself, in any situation, “What could I be doing right now if I wasn’t _____ (fill in the activity)?” or “What could I have bought if I didn’t buy this _____ (fill in the last good or service you bought)?” In other words, opportunity cost measures the value of the next best alternative use of your time or money, or what you *give up* when you make an economic decision. And since there are always alternatives, one cannot avoid opportunity costs.

A common mistake that people make is that they sometimes do not fully take their opportunity costs into account. Have you ever camped out overnight in order to get tickets for a concert? Was it even worth going to the concert? Opportunity cost includes the value



Tony Avelar/Bloomberg via Getty Images

opportunity cost The value of the next best alternative; what you give up to do something or purchase something.

of everything you give up in order to attend the concert, including the cost of the tickets and transportation, and the time spent buying tickets, traveling to and from the venue, and of course attending the concert. The sum of all opportunity costs can sometimes outweigh the benefits.

Another example of miscalculating opportunity costs occurs when a student spends a copious amount of time to dispute a \$15 parking ticket. Like the previous example, the opportunity cost (time and effort disputing the ticket which can be used for some other activity) may exceed the \$15 savings if successful and certainly if the attempt to dispute the ticket fails.

In other cases, individuals do respond to opportunity costs. Why do many people choose a paper towel over a hand dryer in a public restroom when given the choice? It's because the opportunity cost of using the hand dryer is higher than using a paper towel.

Every activity involves opportunity costs. Sleeping, eating, studying, partying, running, hiking, and so on, all require that we spend resources that could be used on another activity. Opportunity cost varies from person to person. A company president rushing from meeting to meeting has a higher opportunity cost than a retired senior citizen, and therefore is more likely to choose the quickest option to accomplish day-to-day activities.

Opportunity costs apply to us as individuals and to societies as a whole. For example, if a country chooses to spend more on environmental conservation, it must use resources that could be used to promote other objectives, such as education and health care.

Principle 3: Specialization Leads to Gains for All Involved

Whenever we pursue an activity or a task, we use time that could be used for other activities or tasks. However, sometimes these other tasks are best left to others to perform. Life would be much more difficult if we all had to grow our own food. This highlights the idea that tradeoffs (especially with one's time) can lead to better outcomes if one is able to specialize in activities in which she or he is more proficient.

Suppose you and your roommate can each cook your own dinner and clean your own rooms. Alternatively, you might have your roommate clean both rooms (he's better at it than you) in exchange for you preparing dinner for two (you're a better cook). Using this arrangement, both tasks are completed in less time since each of you are specializing in the activity you're better at, plus both of you will benefit from a cleaner apartment and a tastier dinner.

Therefore, specialization in tasks in which one is more proficient can lead to gains for all parties as long as exchange is possible and those involved trade in a mutually beneficial manner. Each person is acting on the opportunity to improve his or her well-being, an example of how incentives affect people's lives.

Principle 4: People Respond to Incentives, Both Good and Bad

Each time an individual or a firm makes a decision, that person or firm is acting on an incentive that drives the individual or firm to choose an action. These incentives often occur naturally. For example, we choose to eat every day because we face an incentive to survive, and we study and work hard because we face an incentive to be successful in our careers. However, incentives also can be formed by policies set by government to encourage individuals and firms to act in certain ways, and by businesses to encourage consumers to change their consumption habits.

For example, tax policy rests on the idea that people follow their incentives. Do we want to encourage people to save for their retirement? Then let them deduct a certain amount that they can put into a tax-deferred retirement account. Do we want businesses to spend more to stimulate the economy? Then give them tax credits for new investment. Do we want people to go to college? Then give them tax advantages for setting up education savings accounts.

Tax policy is an obvious example in which people follow incentives. But this principle can be seen in action wherever you look. Want to encourage people to fly during the slow travel season? Offer price discounts or bonus frequent flyer miles for flying during that