



Preface

By:
OpenStaxCollege

Welcome to *Principles of Microeconomics*, an OpenStax College resource. This textbook has been created with several goals in mind: accessibility, customization, and student engagement—all while encouraging students toward high levels of academic scholarship. Instructors and students alike will find that this textbook offers a strong foundation in microeconomics in an accessible format.

About OpenStax College

OpenStax College is a non-profit organization committed to improving student access to quality learning materials. Our free textbooks go through a rigorous editorial publishing process. Our texts are developed and peer-reviewed by educators to ensure they are readable, accurate, and meet the scope and sequence requirements of today's college courses. Unlike traditional textbooks, OpenStax College resources live online and are owned by the community of educators using them. Through our partnerships with companies and foundations committed to reducing costs for students, OpenStax College is working to improve access to higher education for all. OpenStax College is an initiative of Rice University and is made possible through the generous support of several philanthropic foundations.

About OpenStax College's Resources

OpenStax College resources provide quality academic instruction. Three key features set our materials apart from others: they can be customized by instructors for each class, they are a "living" resource that grows online through contributions from science educators, and they are available free or for minimal cost.

Customization

OpenStax College learning resources are designed to be customized for each course. Our textbooks provide a solid foundation on which instructors can build, and our resources are conceived and written with flexibility in mind. Instructors can select the sections most relevant to their curricula and create a textbook that speaks directly to the needs of their classes and student body. Teachers are encouraged to expand on existing

examples by adding unique context via geographically localized applications and topical connections.

Principles of Microeconomics can be easily customized using our online platform (<http://cnx.org/content/col11627/>). Simply select the content most relevant to your current semester and create a textbook that speaks directly to the needs of your class. *Principles of Microeconomics* is organized as a collection of sections that can be rearranged, modified, and enhanced through localized examples or to incorporate a specific theme of your course. This customization feature will ensure that your textbook truly reflects the goals of your course.

Curation

To broaden access and encourage community curation, *Principles of Microeconomics* is “open source” licensed under a Creative Commons Attribution (CC-BY) license. The economics community is invited to submit examples, emerging research, and other feedback to enhance and strengthen the material and keep it current and relevant for today’s students. Submit your suggestions to info@openstaxcollege.org, and check in on edition status, alternate versions, errata, and news on the StaxDash at <http://openstaxcollege.org>.

Cost

Our textbooks are available for free online, and in low-cost print and e-book editions.

About *Principles of Microeconomics*

Principles of Microeconomics has been developed to meet the scope and sequence of most introductory microeconomics courses. At the same time, the book includes a number of innovative features designed to enhance student learning. Instructors can also customize the book, adapting it to the approach that works best in their classroom.

Coverage and Scope

To develop *Principles of Microeconomics*, we acquired the rights to Timothy Taylor’s second edition of *Principles of Economics* and solicited ideas from economics instructors at all levels of higher education, from community colleges to Ph.D.-granting universities. They told us about their courses, students, challenges, resources, and how a textbook can best meet the needs of both instructors and students.

The result is a book that covers the breadth of economics topics and also provides the necessary depth to ensure the course is manageable for instructors and students alike. And to make it more applied, we have incorporated many current topics. We hope

students will be interested to know just how far-reaching the recent recession was (and still is), for example, and why there is so much controversy even among economists over the Affordable Care Act (Obamacare). The Keystone Pipeline, Occupy Wall Street, and minimum wage debates are just a few of the other important topics covered.

The pedagogical choices, chapter arrangements, and learning objective fulfillment were developed and vetted with feedback from educators dedicated to the project. They thoroughly read the material and offered critical and detailed commentary. The outcome is a balanced approach to microeconomics, particularly to the theory and application of economics concepts. Current events are treated in a politically-balanced way as well.

The book is organized into five main parts:

- **What is Economics?** The first two chapters introduce students to the study of economics with a focus on making choices in a world of scarce resources.
- **Supply and Demand**, Chapters 3 and 4, introduces and explains the first analytical model in economics: supply, demand, and equilibrium, before showing applications in the markets for labor and finance.
- **The Fundamentals of Microeconomic Theory**, Chapters 5 through 10, begins the microeconomics portion of the text, presenting the theories of consumer behavior, production and costs, and the different models of market structure, including some simple game theory.
- **Microeconomic Policy Issues**, Chapters 11 through 18, covers the range of topics in applied micro, framed around the concepts of public goods and positive and negative externalities. Students explore competition and antitrust policies, environmental problems, poverty, income inequality, and other labor market issues. The text also covers information, risk and financial markets, as well as public economy.
- **International Economics**, Chapters 19 and 20, the final part of the text, introduces the international dimensions of economics, including international trade and protectionism.

Chapter 1 Welcome to Economics!

Chapter 2 Choice in a World of Scarcity

Chapter 3 Demand and Supply

Chapter 4 Labor and Financial Markets

Chapter 5 Elasticity

Chapter 6 Consumer Choices

Chapter 7 Cost and Industry Structure

Chapter 8 Perfect Competition

Chapter 9 Monopoly

Chapter 10 Monopolistic Competition and Oligopoly

Chapter 11 Monopoly and Antitrust Policy

Preface

Chapter 12 Environmental Protection and Negative Externalities
Chapter 13 Positive Externalities and Public Goods
Chapter 14 Poverty and Economic Inequality
Chapter 15 Issues in Labor Markets: Unions, Discrimination, Immigration
Chapter 16 Information, Risk, and Insurance
Chapter 17 Financial Markets
Chapter 18 Public Economy
Chapter 19 International Trade
Chapter 20 Globalization and Protectionism

Appendix A The Use of Mathematics in Principles of Economics
Appendix B Indifference Curves
Appendix C Present Discounted Value

Alternate Sequencing *Principles of Economics* was conceived and written to fit a particular topical sequence, but it can be used flexibly to accommodate other course structures. One such potential structure, which will fit reasonably well with the textbook content, is provided. Please consider, however, that the chapters were not written to be completely independent, and that the proposed alternate sequence should be carefully considered for student preparation and textual consistency.

Chapter 1 Welcome to Economics!
Chapter 2 Choice in a World of Scarcity
Chapter 3 Demand and Supply
Chapter 4 Labor and Financial Markets
Chapter 5 Elasticity
Chapter 6 Consumer Choices
Chapter 19 International Trade
Chapter 7 Cost and Industry Structure
Chapter 12 Environmental Protection and Negative Externalities
Chapter 13 Positive Externalities and Public Goods
Chapter 8 Perfect Competition
Chapter 9 Monopoly
Chapter 10 Monopolistic Competition and Oligopoly
Chapter 11 Monopoly and Antitrust Policy
Chapter 14 Poverty and Economic Inequality
Chapter 15 Issues in Labor Markets: Unions, Discrimination, Immigration
Chapter 16 Information, Risk, and Insurance
Chapter 17 Financial Markets
Chapter 18 Public Economy
Chapter 20 Globalization and Protectionism

Appendix A The Use of Mathematics in Principles of Economics

Pedagogical Foundation

Throughout the OpenStax version of *Principles of Microeconomics*, you will find new features that engage the students in economic inquiry by taking selected topics a step further. Our features include:

- **Bring It Home:** This added feature is a brief case study, specific to each chapter, which connects the chapter's main topic to the real world. It is broken up into two parts: the first at the beginning of the chapter (in the Intro module) and the second at chapter's end, when students have learned what's necessary to understand the case and "bring home" the chapter's core concepts.
- **Work It Out:** This added feature asks students to work through a generally analytical or computational problem, and guides them step-by-step to find out how its solution is derived.
- **Clear It Up:** This boxed feature, which includes pre-existing features from Taylor's text, addresses common student misconceptions about the content. Clear It Ups are usually deeper explanations of something in the main body of the text. Each CIU starts with a question. The rest of the feature explains the answer.
- **Link It Up:** This added feature is a very brief introduction to a website that is pertinent to students' understanding and enjoyment of the topic at hand.

Questions for Each Level of Learning

The OpenStax version of *Principles of Microeconomics* further expands on Taylor's original end of chapter materials by offering four types of end-of-module questions for students.

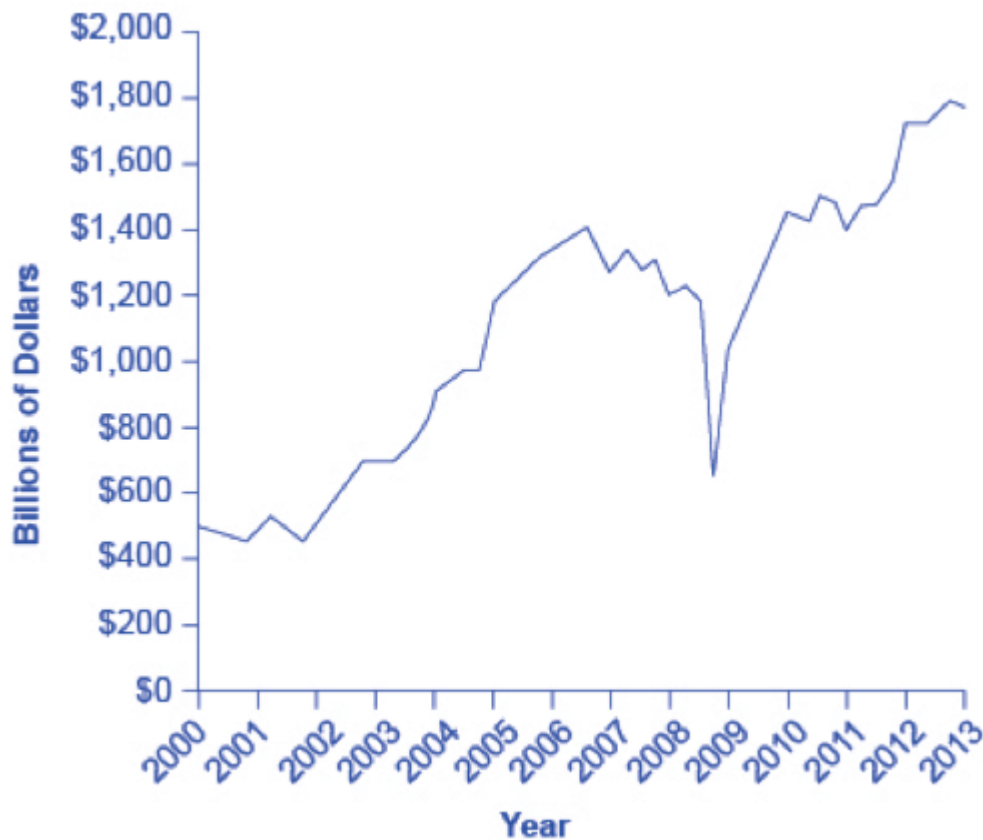
- **Self-Checks:** Are analytical self-assessment questions that appear at the end of each module. They "click-to-reveal" an answer in the web view so students can check their understanding before moving on to the next module. Self-Check questions are not simple look-up questions. They push the student to think a bit beyond what is said in the text. Self-Check questions are designed for formative (rather than summative) assessment. The questions and answers are explained so that students feel like they are being walked through the problem.
- **Review Questions:** Have been retained from Taylor's version, and are simple recall questions from the chapter and are in open-response format (not multiple choice or true/false). The answers can be looked up in the text.
- **Critical Thinking Questions:** Are new higher-level, conceptual questions that ask students to *demonstrate their understanding by applying* what they have

learned in different contexts. They ask for outside-the-box thinking, for *reasoning* about the concepts. They push the student to places they wouldn't have thought of going themselves.

- **Problems:** Are exercises that give students additional practice working with the analytic and computational concepts in the module.

Updated Art

Principles of Microeconomics includes an updated art program to better inform today's student, providing the latest data on covered topics.



Corporate Profits After Tax (Adjusted for Inventory and Capital Consumption)
Since 2000, corporate profits after tax have mostly continued to increase each year, save for a substantial decrease between 2008 and 2009 as a result of the Great Recession. (Source: <http://research.stlouisfed.org/fred2>)

About Our Team

Senior Contributing Author

Timothy Taylor, Macalester College

Timothy Taylor has been writing and teaching about economics for 30 years, and is the Managing Editor of the *Journal of Economic Perspectives*, a post he's held since

1986. He has been a lecturer for The Teaching Company, the University of Minnesota, and the Hubert H. Humphrey Institute of Public Affairs, where students voted him Teacher of the Year in 1997. His writings include numerous pieces for journals such as the *Milken Institute Review* and *The Public Interest*, and he has been an editor on many projects, most notably for the Brookings Institution and the World Bank, where he was Chief Outside Editor for the *World Development Report 1999/2000, Entering the 21st Century: The Changing Development Landscape*. He also blogs four to five times per week at <http://conversableeconomist.blogspot.com>. Timothy Taylor lives near Minneapolis with his wife Kimberley and their three children.

Senior Content Expert

Steven A. Greenlaw, University of Mary Washington

Steven Greenlaw has been teaching principles of economics for more than 30 years. In 1999, he received the Grellet C. Simpson Award for Excellence in Undergraduate Teaching at the University of Mary Washington. He is the author of *Doing Economics: A Guide to Doing and Understanding Economic Research*, as well as a variety of articles on economics pedagogy and instructional technology, published in the *Journal of Economic Education*, the *International Review of Economic Education*, and other outlets. He wrote the module on Quantitative Writing for *Starting Point: Teaching and Learning Economics*, the web portal on best practices in teaching economics. Steven Greenlaw lives in Alexandria, Virginia with his wife Kathy and their three children.

Senior Contributors

Eric Dodge	Hanover College
Cynthia Gamez	University of Texas at El Paso
Andres Jauregui	Columbus State University
Diane Keenan	Cerritos College
Dan MacDonald	California State University San Bernardino
Amyaz Moledina	The College of Wooster
Craig Richardson	Winston-Salem State University
David Shapiro	Pennsylvania State University
Ralph Sonenshine	American University

Reviewers

Bryan Aguiar	Northwest Arkansas Community College
--------------	--------------------------------------

Preface

Basil Al Hashimi	Mesa Community College
Emil Berendt	Mount St. Mary's University
Zena Buser	Adams State University
Douglas Campbell	The University of Memphis
Sanjukta Chaudhuri	University of Wisconsin - Eau Claire
Xueyu Cheng	Alabama State University
Robert Cunningham	Alma College
Rosa Lea Danielson	College of DuPage
Steven Deloach	Elon University
Debbie Evercloud	University of Colorado Denver
Sal Figueras	Hudson County Community College
Reza Ghorashi	Richard Stockton College of New Jersey
Robert Gillette	University of Kentucky
George Jones	University of Wisconsin-Rock County
Charles Kroncke	College of Mount St. Joseph
Teresa Laughlin	Palomar Community College
Carlos Liard-Muriente	Central Connecticut State University
Heather Luea	Kansas State University
William Mosher	Nashua Community College
Michael Netta	Hudson County Community College
Nick Noble	Miami University
Joe Nowakowski	Muskingum University
Shawn Osell	University of Wisconsin, Superior
Mark Owens	Middle Tennessee State University
Sonia Pereira	Barnard College
Brian Peterson	Central College
Jennifer Platania	Elon University
Robert Rycroft	University of Mary Washington

Adrienne Sachse	Florida State College at Jacksonville
Hans Schumann	Texas AM
Gina Shamshak	Goucher College
Chris Warburton	John Jay College of Criminal Justice, CUNY
Mark Witte	Northwestern
Chiou-nan Yeh	Alabama State University

Ancillaries

OpenStax projects offer an array of ancillaries for students and instructors. Please visit <http://openstaxcollege.org> and view the learning resources for this title.