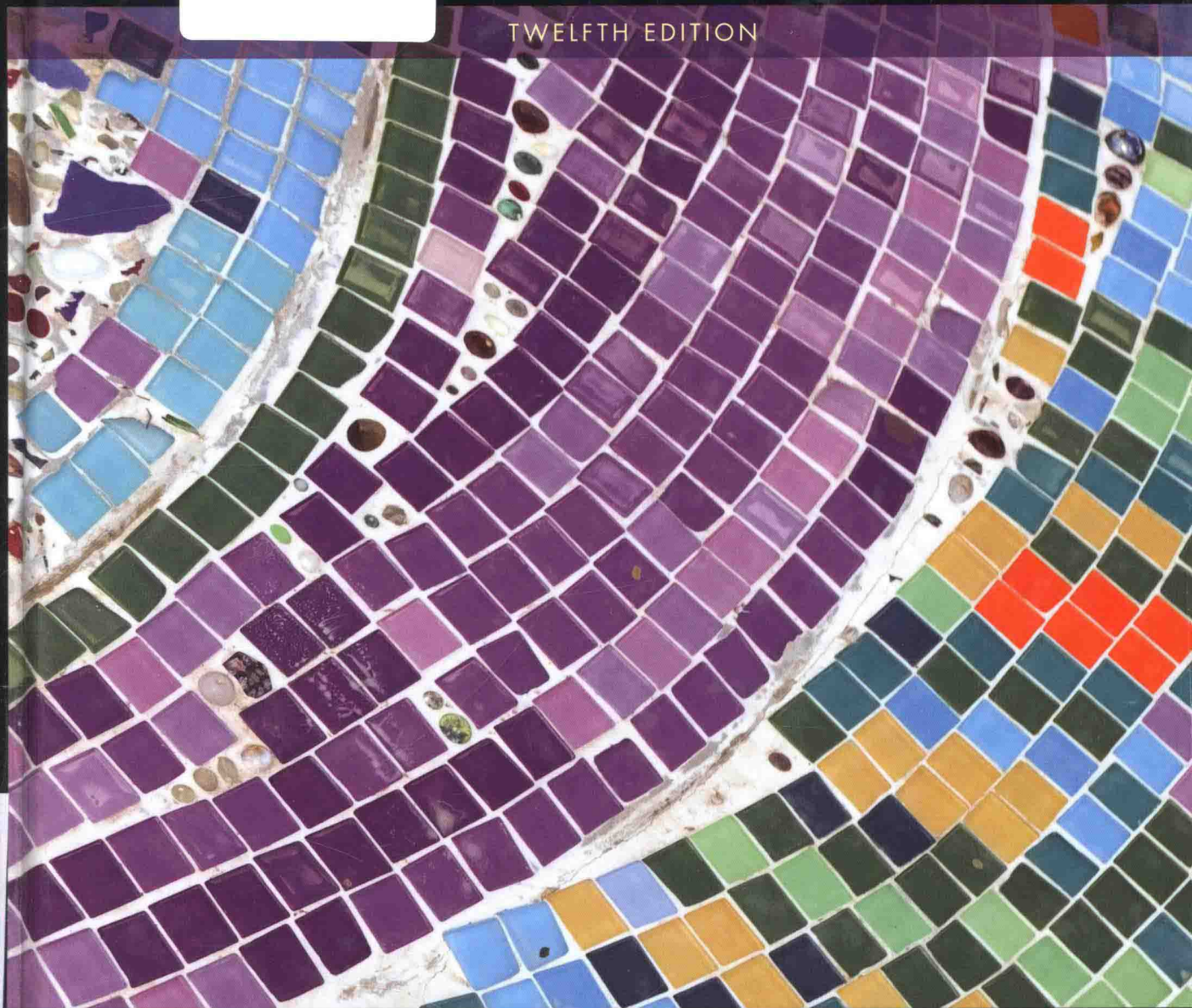


MODERN LABOR ECONOMICS

THEORY AND
PUBLIC POLICY

TWELFTH EDITION



RONALD G. EHRENBERG | ROBERT S. SMITH

Modern Labor Economics

Theory and Public Policy

Twelfth Edition

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Printer/Binder: Courier Westford
Cover Printer: Lehigh Phoenix
Typeface: Palatino 10/12

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Library of Congress Cataloging-in-Publication Data

Ehrenberg, Ronald G.

Modern labor economics : theory and public policy / Ronald G. Ehrenberg,
School of Industrial and Labor Relations, Cornell University, Robert S. Smith,
School of Industrial and Labor Relations, Cornell University. — Twelfth edition.

pages cm

Includes index.

ISBN-13: 978-0-13-346278-4

ISBN-10: 0-13-346278-1

1. Labor economics. 2. Labor policy. 3. Personnel management. I. Smith,
Robert Stewart. II. Title. 20

HD4901.E34 2015

331—dc23

2013043421

10 9 8 7 6 5 4 3 2 1

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ISBN-13: 978-0-13-346278-4
ISBN-10: 0-13-346278-1

Unemployment Rates for the Civilian Labor Force over Age 16, 1947–2012 (data displayed graphically in Figure 2.2 on p. 29)

Year	Rate	Year	Rate
1947	3.9	1981	7.6
1948	3.8	1982	9.7
1949	5.9	1983	9.6
1950	5.3	1984	7.5
1951	3.3	1985	7.2
1952	3.0	1986	7.0
1953	2.9	1987	6.2
1954	5.5	1988	5.5
1955	4.4	1989	5.3
1956	4.1	1990	5.6
1957	4.3	1991	6.8
1958	6.8	1992	7.5
1959	5.5	1993	6.9
1960	5.5	1994 [†]	6.1
1961	6.7	1995 [†]	5.6
1962	5.5	1996 [†]	5.4
1963	5.7	1997 [†]	4.9
1964	5.2	1998 [†]	4.5
1965	4.5	1999 [†]	4.2
1966	3.8	2000 [†]	4.0
1967	3.8	2001 [†]	4.7
1968	3.6	2002 [†]	5.8
1969	3.5	2003 [†]	6.0
1970	4.9	2004 [†]	5.5
1971	5.9	2005 [†]	5.1
1972	5.6	2006 [†]	4.6
1973	4.9	2007	4.6
1974	5.6	2008	5.8
1975	8.5	2009	9.3
1976	7.7	2010	9.6
1977	7.1	2011	8.9
1978	6.1	2012	8.1
1979	5.8		

[†]In 1994, changes were made in the Current Population Survey, upon which estimates of unemployment are based, that increased the reported unemployment rate by 0.5 percentage points. Increases were especially noticeable among women, teenagers, and the elderly. Definitions did not change, but the new questionnaire apparently led more respondents to report that they were actively engaged in search of a job or were on layoff status. Thus, data for 1994 and beyond are not directly comparable to those for earlier years.

Source: 1947–1966: U.S. Bureau of Labor Statistics, *Employment and Earnings* 13 (January 1967), Table A-1. 1967–2012: U.S. President, *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, March 2013), Table B-42.

Employment Distribution by Major Nonfarm Sector, 1954–2013
(data displayed graphically in Figure 2.3 on p. 30)

Year	Goods-Producing Industries* (%)	Nongovernment Services (%)	Government Services (%)
1954	37.7	48.3	14.0
1964	33.8	49.6	16.6
1974	29.8	52.0	18.2
1984	24.9	58.1	17.0
1994	19.9	63.2	16.9
2004	16.6	67.0	16.4
2013	14.0	70.8	15.2

*Manufacturing, construction, and mining

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employment Situation Summary," Table B-1, at <http://www.bls.gov>.

Table 2.1

Labor Force Participation Rates by Gender, 1950–2013

Year	Total (%)	Men (%)	Women (%)
1950	59.9	86.8	33.9
1960	60.2	84.0	37.8
1970	61.3	80.6	43.4
1980	64.2	77.9	51.6
1990	66.5	76.4	57.5
2000	67.2	74.7	60.2
2010 (April)	65.2	71.8	59.0
2013 (April)	63.3	69.8	57.2

Sources: 1950–1980: U.S. President, *Employment and Training Report of the President* (Washington, D.C.: U.S. Government Printing Office), transmitted to the Congress 1981, Table A-1.

1990: U.S. Bureau of Labor Statistics, *Employment and Earnings* 45 (February 1998), Tables A-1 and A-2.

2000: U.S. Bureau of Labor Statistics, *Employment Situation* (News Release, October 2001), Table A-1.

2010: U.S. Bureau of Labor Statistics, *Employment Situation* (Economic News Release, May 2010), Table A-1.

2013: U.S. Bureau of Labor Statistics, *Employment Situation* (Economic News Release, May 2013), Table A-1.

Data and news releases are available online at <http://www.bls.gov>.

Table 2.2

Nominal and Real Hourly Earnings, U.S. Nonsupervisory Workers in the Private Sector, 1980–2012

	1980	1990	2012
Average hourly earnings	\$ 6.85	\$10.20	\$19.77
Consumer Price Index (CPI) using 1982–1984 as a base	82.4	130.7	229.6
Average hourly earnings, 1982–1984 dollars (using CPI)	\$ 8.31	\$ 7.80	\$ 8.61
Average hourly earnings, 2012 dollars (using CPI)	\$19.09	\$17.92	\$19.77
Average hourly earnings, 2012 dollars (using CPI inflation less 1 percent per year)	\$13.96	\$14.48	\$19.77

Source: U.S. President, *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, 2013), Tables B-47 and B-60.

Modern Labor Economics

Preface

Modern Labor Economics: Theory and Public Policy has grown out of our experiences over the last four decades in teaching labor market economics and conducting research aimed at influencing public policy. Our text develops the modern theory of labor market behavior, summarizes empirical evidence that supports or contradicts each hypothesis, and illustrates in detail the usefulness of the theory for public policy analysis. We believe that showing students the social implications of concepts enhances the motivation to learn them, and that using the concepts of each chapter in an analytic setting allows students to see the concepts in action. The extensive use of detailed policy applications constitutes a major contribution of this text.

If, as economists believe, passing “the market test” is the ultimate criterion for judging the success of an innovation, launching this twelfth edition of *Modern Labor Economics* is an endeavor that we have approached with both satisfaction and enthusiasm. We believe that economic analysis has become more widely accepted and valued in the area of policy analysis and evaluation, and that labor economics has become an ever-more vibrant and vigorous field within economics. *Modern Labor Economics* was first published about a decade after neoclassical analysis of the labor market replaced institutional treatment as the dominant paradigm, and in the intervening decades, this paradigm has grown increasingly sophisticated in its treatment of labor-market issues and the institutions that affect them. This period has been a very exciting and rewarding time to be a labor economist, and our enthusiasm for bringing this field to the student remains unabated.

New to This Edition

- This twelfth edition of *Modern Labor Economics* has been thoroughly updated to include the latest descriptive data pertaining to the labor market and the latest references to professional literature. Through these updates our goal is to make our textbook a comprehensive reference for critical factual information about the labor market *and* to the professional literature in labor economics.
- We analyze the effects of the Great Recession of 2008 on retirement ages (Chapter 7), on immigration (Chapter 10), on international differences in unemployment (Chapter 14), and on earnings inequality (Chapter 15). We have also added a section (in Chapter 3) analyzing the efficacy of cutting payroll taxes as a means of stimulating employment during a recession.
- In light of the growing debate on unauthorized immigration, we have expanded our treatment of the labor-market effects of immigration (Chapter 10) to

include analyses of the elasticity of the labor demand curve and the economic effects of low-skilled immigration on higher-skilled workers.

- Our discussion of human capital investments in Chapter 9 has been enhanced to include a more detailed analysis of how “behavioral skills,” psychic costs of learning, and personal discount rates affect the returns to education.
- Boxed examples, which illustrate the applicability of economic concepts to the understanding of both daily life and historical developments, have been a key characteristic of *Modern Labor Economics* in its previous eleven editions. In this twelfth edition, we have added eight new boxed examples, ranging from the “Big Mac” real-wage index and how housing subsidies affect labor supply, to the effects of linguistics on personal discount rates and the effects of race on called strikes in baseball.

Overview of the Text

Modern Labor Economics is designed for one-semester or one-quarter courses in labor economics at the undergraduate or graduate level for students who may not have extensive backgrounds in economics. Since 1974, we have taught such courses at the School of Industrial and Labor Relations at Cornell University. The undergraduate course requires only principles of economics as a prerequisite, and the graduate course (for students in a professional program akin to an MBA program) has no prerequisites. We have found that it is not necessary to be highly technical in one’s presentation in order to convey important concepts and that students with limited backgrounds in economics can comprehend a great deal of material in a single course. However, for students who have had intermediate microeconomics, we have included seven chapter appendixes that discuss more advanced material or develop technical concepts in much greater detail than the text discussion permits.

Labor economics has always been an “applied” branch of study, and a thorough grounding in the field requires at least an acquaintance with basic methodological techniques and problems. The appendix to Chapter 1 presents a brief overview of regression analysis. Then, each succeeding chapter ends with an “empirical study”—relevant to that chapter’s content—that introduces students to different *methodological* issues faced by economists doing applied research. It is our hope that this unique feature of the textbook will both enlighten students about, and interest them in, the challenges of empirical research.

After an introduction to basic economic concepts in Chapter 1, Chapter 2 presents a quick overview of demand and supply in labor markets so that students will see from the outset the interrelationship of the major forces at work shaping labor market behavior. This chapter can be skipped or skimmed by students with strong backgrounds in economics or by students in one-quarter courses. Chapters 3–5 are concerned primarily with the demand for labor, while Chapters 6–10 focus on labor supply issues.

Beginning with Chapter 11, the concepts of economics are used to analyze several topics of special interest to students of labor markets. The relationship between

pay and productivity is analyzed in Chapter 11, and the earnings of women and minorities—encompassing issues of discrimination—are the subjects of Chapter 12. Chapter 13 uses economic concepts to analyze collective bargaining in the private and public sectors, and Chapter 14 discusses the issue of unemployment.

Chapters 15 and 16 offer analyses of two issues of major policy importance in the last two or three decades: the growth in earnings inequality (Chapter 15) and the effects of greater international trade and production sharing (Chapter 16). Both chapters serve a dual role: analyzing important policy issues while *reviewing and utilizing key concepts presented in earlier chapters*.

In addition to the use of public policy examples, the inclusion of technical appendixes, and our end-of-chapter discussions of methodological issues, the text has a number of other important pedagogical features. First, each chapter contains boxed examples that illustrate an application of that chapter's theory in a nontraditional, historical, business, or cross-cultural setting. Second, each chapter contains a number of discussion or review questions that allow students to apply what they have learned to specific policy issues. To enhance student mastery, we provide answers to the odd-numbered questions at the back of the book. Third, lists of selected readings at the ends of chapters refer students to more advanced sources of study. Fourth, the footnotes in the text have been updated to cite the most recent literature on each given topic; they are intended as a reference for students and professors alike who may want to delve more deeply into a given topic.

Accompanying Supplements

Supplements enrich the twelfth edition of *Modern Labor Economics* for both students and instructors.

Students receive a cohesive set of online study tools that are available on the **Companion Web site**, www.pearsonhighered.com/ehrenberg/. For each chapter, students will find a chapter summary, review questions, problems, and applications written by Léonie Stone at the State University of New York at Geneseo, a multiple-choice quiz revised by Kevin J. Murphy of Oakland University, econometric and quantitative problems revised by Elizabeth Wheaton of Southern Methodist University, case studies compiled by Lawrence Wohl of Gustavus Adolphus College that illustrate concepts central to the chapters, Web links to labor data sources, and PowerPoint presentations containing all numbered figures and tables from the text. In addition, students can also access Web Appendix 9B: A Hedonic Model of Earnings and Educational Level.

For instructors, an extensive set of online course materials is available for download at the Instructor Resource Center (www.pearsonhighered.com) on the catalog page for *Modern Labor Economics*. All resources are password-protected for instructor use only. An **Online Test Bank** consists of approximately 600 multiple-choice and short-answer questions that can be downloaded and edited for use in problem sets and exams. The Test Bank has been thoroughly revised and updated by Kevin J. Murphy and is also available as an **Online Computerized Test Bank** in TestGen format.

Also available is the **Online Instructor's Manual**, written by co-author Robert Smith. The Online Instructor's Manual presents answers to the even-numbered review questions and problems in the text, outlines the major concepts in each chapter, and contains two suggested essay questions per chapter (with answers).

Finally, an **Online PowerPoint presentation** is available for each chapter. The slides consist of all numbered figures and tables from the text. New to the twelfth edition are accompanying lecture notes, written by Oluwole Owoye of Western Connecticut State University.

Acknowledgments

Enormous debts are owed to three groups of people. First are those instrumental in teaching us the concepts and social relevance of labor economics when we were students or young professionals: Orley Ashenfelter, Frank Brechling, George Delehanty, Dale Mortensen, John Pencavel, Orme Phelps, and Mel Reder. Second are the generations of undergraduate and graduate students who sat through the lectures that preceded the publication of each new edition of *Modern Labor Economics* and, by their questions and responses, forced us to make ourselves clear.

Third, several colleagues have contributed, both formally and informally, to this twelfth edition. We appreciate the suggestions of the following people:

Casey Abington
Northwest Missouri State University

John Abowd
Cornell University

John T. Addison
University of South Carolina

Sherrilyn M. Billger
Illinois State University

Francine Blau
Cornell University

George Boyer
Cornell University

Robert Chirinko
University of Illinois, Chicago

Gary Fields
Cornell University

Matthew Freedman
Cornell University

Kevin Hallock
Cornell University

Robert Hutchens
Cornell University

George Jakubson
Cornell University

Lawrence Kahn
Cornell University

Richard Mansfield
Cornell University

Brian McCall
University of Michigan

Kevin J. Murphy
Oakland University

Walter Oi
University of Rochester

Victoria Prowse
Cornell University

Silvio Rendon
Stony Brook University

Teresa Riley
Youngstown State University

Tim Schmidle
*Workers' Compensation Board,
New York State*

Douglas Webber
Temple University

Ronald G. Ehrenberg
Robert S. Smith

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