HISTORY OF THE

AMERICAN ECONOMY

THIRTEENTH EDITION





Fit your coursework into your hectic life.

Make the most of your time by learning your way. Access the resources you need to succeed wherever, whenever.



Study with digital flashcards, listen to audio textbooks, and take quizzes.



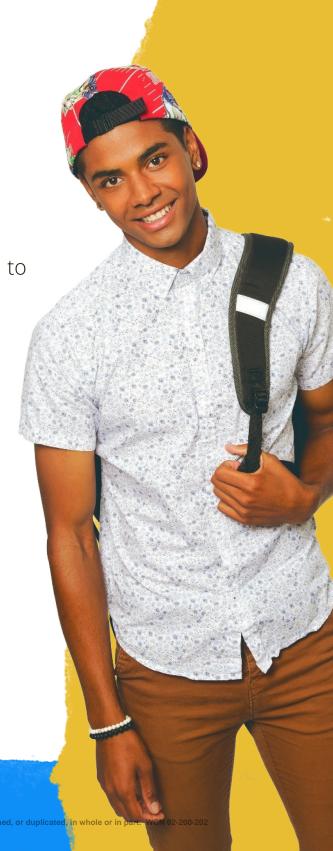
Review your current course grade and compare your progress with your peers.



Get the free MindTap Mobile App and learn wherever you are.

Break Limitations. Create your own potential, and be unstoppable with MindTap.

MINDTAP. POWERED BY YOU.



History of the American Economy

GARY M. WALTON

University of California, Davis

HUGH ROCKOFF

Rutgers University





History of the American Economy, Thirteenth Edition Gary M. Walton and Hugh Rockoff

Senior Vice President, General Manager, Social Sciences, Humanities & Business: Erin Joyner

Product Director: Jason Fremder

Product Manager: Michael Parthenakis

Project Manager: Julie Dierig

Content Developer: Kayci Wyatt, MPS

Product Assistant: Denisse Zavala-Rosales

Marketing Manager: John Carey

Manufacturing Planner: Kevin Kluck

Intellectual Property Analyst: Jennifer Bowes

Intellectual Property Project Manager: Sarah Shainwald

Art and Cover Direction, Production Management, and Composition: Lumina Datamatics Inc.

Sr. Art Director: Michelle Kunkler

Cover Image: hxdbzxy/Shutterstock.com

© 2018, 2014 Cengage Learning, Inc.

Unless otherwise noted, all content is © Cengage

ALL RIGHTS RESERVED. No part of this work covered by the copyright herein may be reproduced or distributed in any form or by any means, except as permitted by U.S. copyright law, without the prior written permission of the copyright owner.

For product information and technology assistance, contact us at Cengage Learning Customer & Sales Support, 1-800-354-9706

For permission to use material from this text or product, submit all requests online at www.cengage.com/permissions

Further permissions questions can be emailed to permissionrequest@cengage.com

Library of Congress Control Number: 2017942573

ISBN-13: 978-1-337-10460-9

Cengage Learning

20 Channel Center Street Boston, MA 02210 USA

Cengage Learning is a leading provider of customized learning solutions with employees residing in nearly 40 different countries and sales in more than 125 countries around the world. Find your local representative at www.cengage.com

Cengage Learning products are represented in Canada by Nelson Education, Ltd.

To learn more about Cengage Learning Solutions, visit **www.cengage.com**

Purchase any of our products at your local college store or at our preferred online store **www.cengagebrain.com**

Printed in the United States of America
Print Number: 01 Print Year: 2017

In memory of our dissertation advisors, the late Douglass C. North and Robert W. Fogel, Nobel Laureates in Economics, 1993

Brief Contents

PREFACE

ACKNOWLEDGMENTS About the Authors	
CHAPTER 1	Growth, Welfare, and the American Economy
PART 1	The Colonial Era: 1607-1776
CHAPTER 2	Founding the Colonies
CHAPTER 3	Colonial Economic Activities
CHAPTER 4	The Economic Relations of the Colonies
CHAPTER 5	Economic Progress and Wealth
CHAPTER 6	Three Crises and Revolt
PART 2	The Revolutionary, Early National, and Antebellum Eras: 1776–1860
CHAPTER 7	Hard Realities for a New Nation
CHAPTER 8	Land and the Early Westward Movements
CHAPTER 9	Transportation and Market Growth
CHAPTER 10	Market Expansion and Industry in First Transition
CHAPTER 11	Labor during the Early Industrial Period
CHAPTER 12	Money and Banking in the Developing Economy
CHAPTER 13	The Entrenchment of Slavery and Regional Conflict
PART 3	The Reunification Era: 1860–1920
CHAPTER 14	War, Recovery, and Regional Divergence
CHAPTER 15	Agriculture's Western Advance
CHAPTER 16	Railroads and Economic Change
CHAPTER 17	Industrial Expansion and Concentration
CHAPTER 18	The Emergence of America's Labor Consciousness
CHAPTER 19	Money, Prices, and Finance in the Postbellum Era
CHAPTER 20	Commerce at Home and Abroad

PART 4	War, Depression, and War Again: 1914–1946
CHAPTER 21	World War I, 1914–1918
CHAPTER 22	The Roaring Twenties
CHAPTER 23	The Great Depression
CHAPTER 24	The New Deal
CHAPTER 25	World War II
PART 5	The Postwar Era: 1946 to the Present
CHAPTER 26	The Changing Role of the Federal Government
CHAPTER 27	The Changing Role of the Federal Government: Consumer Safety, Agriculture, the Environment, and Housing
CHAPTER 28	Monetary Policy, Fiscal Policy, and the Business Cycle after World War II
CHAPTER 29	Manufacturing, Productivity, and Labor
CHAPTER 30	Achievements of the Past, Challenges for the Future
Subject Index	
Name Index	

Contents

PREFACE
ACKNOWLEDGMENTS xxi
ABOUT THE AUTHORS xxiii
CHAPTER 1
Growth, Welfare, and the American Economy
Americans 1900-2017 1
A Study with a Purpose 6 Nation Building 6
Critical Skills for Personal Development 8
The Long Road Out of Poverty 9
An Institutional Road Map to Plenty 13
PART 1 The Colonial Era: 1607-1776
CHAPTER 2
Founding the Colonies
European Background to the Voyages of Discovery 22 European Roots and Expanding Empires 23
Portugal and the First Discoveries 23
Portugal and Spain: Expanding Empires 24
The Latecomers: Holland, France, and England 26
First British Settlements in North America 27 Perilous Beginnings 27
Early Reforms 28
Bringing in Settlers 30
Demographic Change 32
Underpopulation Despite High Rates of Population Growth 32
Population Growth in British North America 33
The Racial Profile 35 Imperial European Rivalries in North America 36
CHAPTER 3
Colonial Economic Activities
Land and Natural Resource Abundance, Labor Scarcity 40
Agriculture and Regional Specializations 41
The Southern Colonies 41
The Middle Colonies 46
New England 47 vii

The Extractive Industries 47 Furs, Forests, and Ores 47
Sea Products 48
The Manufacturing Industries 49 Household Manufacture and Craftshops 50 Mills and Yards 51 Shipbuilding 52
Occupational Groups 53
CHAPTER 4 The Economic Relations of the Colonies
English Mercantilism and the Colonies 56 The Early Navigation Acts 57
Exports, Imports, and Markets 58
Overseas Shipping and Trade 59
Intercolonial Commerce 63
Money and Trade 64
Commodity Money 64
Coins, Specie, and Paper Money 65
Trade Deficits with England 66
Interpretations: Money, Debt, and Capital 67
CHAPTER 5
Economic Progress and Wealth
Growth and Change in the Colonial Economy 73 Productivity Change in Agriculture 73
Productivity Gains in Transportation and Distribution 77
Technological Change and Productivity 81
Wealth Holdings in the Colonies 84
Per Capita Wealth and Income, 1774 85
The Distribution of Income and Wealth 86
CHAPTER 6
Three Crises and Revolt
The Old Colonial Policy 90
The New Colonial Policy and the First Crisis 93
More Changes and the Second Crisis 95
The Third Crisis and Rebellion 96
Support in the Countryside 98
Economic Exploitation Reconsidered 101
PART 2 The Revolutionary, Early National, and Antebellum Eras: 1776–1860
CHAPTER 7
Hard Realities for a New Nation
The War and the Economy 106
The Constitution 108

American Independence and Economic Change 111
A Quantitative Analysis of Economic Change 112
War, Neutrality, and Economic Resurgence 115
CHAPTER 8 Land and the Early Westward Movements
The Acquisition of the Public Domain 120 Disposing of the Public Domain 122 The Northwest Land Ordinance of 1785 123 The Northwest Ordinance of 1787 124 The Later Land Acts, 1796–1862 125
The Migrations to the West 127 The Northwestern Migration and Hogs, Corn, and Wheat 128 Agricultural Specialization and Regional Dislocation 130
The Southwestern Migration and Cotton 131
The Far Western Migration 135
CHAPTER 9 Transportation and Market Growth
The Antebellum Transportation Revolution 138
The Routes of Western Commerce 140
Steamboats and the Natural Waterways 141 Competition, Productivity, and Endangered Species 143
Public versus Private Initiative on the Natural Waterways 145
The Canal Era 146
The Iron Horse 149
Roads 151 Turnpikes 152
The Antebellum Interregional Growth Hypothesis 153
Ocean Transport 153
CHAPTER 10 Market Expansion and Industry in First Transition
Early Changes in U.S. Manufacturing 157
The Decline of Household Production 157
Craftshops and Mills 158
The Emergence of U.S. Factories 159 The Lowell Shops and the Waltham System 159
Iron and Other Factories 161
The Rise of Corporate Organization 162
Leading Industries, 1860 163
Prerequisites to Factory Production 164
Machines and Technology 164
Standardized Interchangeable Parts 165 Continuous Process and Assembly Lines 165
Power and Energy 166
Factor Proportions and Borrowing and Adapting Technology 168
Productivity Advances in Manufactures 169
Protection from Foreign Competition 170

CHAPTER 11 Labor during the Farky Industrial Pariod
Labor during the Early Industrial Period
The Growth of the Population and the Labor Force 173 The Changing Labor Force Distribution and Composition 174
The Changing Labor Force Distribution and Composition 174 Factories and Workers 175
The Rhode Island and Waltham Systems 176
The Impact of Immigration 178
The Wages of Male Labor in Manufacturing 179
English-American Wage Gaps 181 Skilled-Unskilled Wage Ratios 182
Growing Inequality of Income 182
The Early Union Movement 183
Legal Setbacks and Gains 183
Organizational Gains 184
Political Gains for Common Working People 185
Suffrage 185 Public Education 185
Debts, Military Service, and Jail 186
The 10-Hour Day 187
CHAPTER 12 Money and Banking in the Developing Economy
The "Federalist Financial Revolution" 189
The Debt 190
The American Monetary Unit 190
The Bimetallic Standard 191
Bank Notes as Paper Money 192
The First Bank of the United States 193
The Second Bank of the United States 196
Economic Fluctuations and the Second Bank 200
Experiments in State Banking Controls 201
The Suffolk System 202
Free Banking 202
The Depression of 1837–1844 203
The Economic Consequences of the Gold Rush 204
CHAPTER 13
The Entrenchment of Slavery and Regional Conflict
African Slavery in the Western Hemisphere 207
First U.S. Constraints on Slavery 210
Northern Emancipation at Bargain Prices 210
The Persistence of Southern Slavery 211
Plantation Efficiency 212
Economic Exploitation 217
Economic Entrenchment and Regional Incomes 218
Political Compromises and Regional Conflict 220

PART 3 The Reunification Era: 1860–1920
CHAPTER 14 War, Recovery, and Regional Divergence
The Economics of War 229 Trade and Finance Policies South and North 230
The Civil War and Northern Industrialization 232
Economic Retardation in the South 233 Decline in the Deep South 236 The Inequities of War 237
The Legacy of Slavery 238
CHAPTER 15 Agriculture's Western Advance
The Expansion of Land under Cultivation 246
Federal Land Policy 247
The Impact of Federal Land Policy 249
Growth and Change in Agriculture 250 New Areas and Methods of Cultivation 250
Hard Times on the Farm, 1864–1896 252
Agrarian Political Organizations 256 The Grangers 256 The Greenback Movement 257 The Alliances 257 The Populists 258
The Beginnings of Federal Assistance to Agriculture 258 The Department of Agriculture 259 Agricultural Education 259
Natural Resource Conservation: The First Stages 259 Land, Water, and Timber Conservation 260
CHAPTER 16 Railroads and Economic Change
The Transcontinentals 263
Total Construction: Pace and Patterns 265 Productivity Advance and Slowdown 267
Building Ahead of Demand? 268
Land Grants, Financial Assistance, and Private Capital 269
Unscrupulous Financial Practices 270
Government Regulation of the Railroads 271 State Regulation 273 Federal Regulation 274 Capturing the Regulators? 275
Railroads and Economic Growth 276

CHAPTER 17 Industrial Expansion and Concentration
Structural Change and Industry Composition 280
New Technologies 282
New Forms and Sources of Energy 284
Mass Production 286
Economies of Scale and Industry Concentration—"The Chandler Thesis" 288
Early Business Combinations 288
Trusts and Holding Companies 288
The Two Phases of the Concentration Movement 289 Phase 1: Horizontal Mergers (1879–1893) 289 Phase 2: The Vertical Mergers (1898–1904)—The "Chandler Thesis" 291
The Sherman Antitrust Act 293
The Supreme Court as Trustbuster 295
The Federal Trade Commission 296
CHAPTER 18
The Emergence of America's Labor Consciousness
Demographic Change and the Supply of Labor 299 Birth and Death Rates 299 Immigration 301
Immigration: Politics and Economics 302
Foreign Workers and American Labor 303
Workers in the Postbellum Period 305
Hours and Wages 305
Women 306 Children 308
Unions, Employers, and Conflict, 1860–1914 309 The Unions and the Courts 312
Labor's Gains and the Unions 313
Labor 8 Gains and the Onions 313
CHAPTER 19 Money, Prices, and Finance in the Postbellum Era
New Forms of Currency 318
A Dual Banking System 319
Gold, Greenbacks, or Bimetallism? 322 Returning to the Gold Standard after the Civil War 322 The Crime of '73 325 The Commitment to the Gold Standard 327
The International Gold Standard 329
The Rise of Investment Banking 330
Financial Panics and Depressions 333
National Monetary Commission 335
Federal Reserve Act 335

CHAPTER 20 Commerce at Home and Abroad
Urbanization 338
A Cornucopia of New Products 339
Marketing and Selling 340 Wholesaling 340 Retailing 343
Product Differentiation and Advertising 344
The First Steps toward Consumer Protection 346
Foreign Trade 347 Changing Composition of Exports and Imports 349 Changes in the Balance of Trade 350
Tariffs for Revenue and Protection 351
The Income Tax 353
The United States in an Imperialist World 354
PART 4 War, Depression, and War Again: 1914–1946
CHAPTER 21
World War I, 1914–1918
The Origins of the War 362
The United States Goes to War 363 Financing the War 364
Attempting to Replace the Market with a Command System 367 The War Industries Board 367 The Food and Fuel Administrations 367
Labor during the War 369
The Costs of the War 371
The Legacies of the War 372
The Economy in the Aftermath of the War 372
The Domestic Legacies 373
The International Legacies: The Treaty of Versailles 373
CHAPTER 22
The Roaring Twenties
Social Changes in the Aftermath of War 375
New Goods and the Rise of the Middle Class 376 The Automobile 377
Buy Now, Pay Later 378
Prohibition 380
The Labor Force in the Twenties 381
The Paycheck Rises 381
The Unions 382
Immigration Is Restricted 383
America Goes to High School 385

On the Land 385
Economic Distress in Agriculture 386
First Steps toward Farm Subsidies 386
Inequality Increases 387
Macroeconomic Policies 389
Fiscal Policy 389
Monetary Policy 390
International Developments 391
An Age of Speculation 392
The Ponzi Scheme 392
The Florida Land Boom 392
The Stock Market Boom 393
The Crash 395
CHAPTER 23
The Great Depression
Dimensions of the Depression 398
Causes of the Depression 400
The Stock Market Crash 401
The Banking Crises 403
Growing Inequality of Income? 406
Economic Distortions in the 1920s?—Hayek and the Austrian School 406
The Smoot-Hawley Tariff? 406
The Role of the Financial Crises 407
Monetary Effects of the Financial Crises 407
Nonmonetary Effects of the Financial Crisis 408
Why Didn't the Federal Reserve Save the Banking System? 409
Roosevelt and the Gold Standard 410
Fiscal Policy in the 1930s 411
Partial Recovery and Then a New Downturn 412
Climbing Out of the Abyss 412
The Recession within the Depression 413
Why Did the Depression Last So Long? 414
Unintended Consequences of the New Deal? 414
Can It Happen Again? 416
What Does the Depression Tell Us about Capitalism? 416
what Does the Depression Ten Os about Capitansin: 410
CHAPTER 24
The New Deal
The First New Deal 419
Relief 419
Recovery 423
Reform the Financial System 424
A Safety Net for the Banking System 425
Increased Regulation of Securities Markets 425
The Mortgage Market 425
The End of America's Commitment to the Gold Standard 426
Centralization of Monetary Authority in the Federal Reserve Board 426

Reform of the Agricultural Sector 427
Labor and the New Deal 430
A New Institutional Framework for Labor Markets 431
Why Was Unemployment So High for So Long? 433
The Supreme Court and the New Deal 434
The Second New Deal: The Welfare State 435
The Critics of the New Deal 436
The Legacy of the New Deal 437
CHAPTER 25
World War II
Mobilizing for War 440
Trade-Offs 443
Overwhelming Firepower 444
The "Gold Rush of 1942" 444
Fiscal and Monetary Policy 447
Wage and Price Controls 449
Hidden Price Increases and the Black Market 450
Rationing 450
Wartime Prosperity? 451
Labor during the War 452
Wartime Minority Experiences 454
Rosie the Riveter 454
African Americans 454
Agriculture during the War 457
Demobilization and Reconversion 457
Would the Depression Return? 457
The GI Bill of Rights 458
Birth of the Consumer Society 459
PART 5 The Postwar Era: 1946 to the Present
CHAPTER 26
The Changing Role of the Federal Government
The Size of Government in the Postwar Era 464
Total Federal Spending 464
Federal Employment 467
Winners and Losers in the Federal Budget 467
The Liberal Era 468
The "Little New Deal" 469
The Conservative Era 470
Reaganomics 471
What Was Behind the Changing Ideological Tides? 472
Long-Run Trends 473
Wars—Hot and Cold 474

CHAPTER 27
The Changing Role of the Federal Government: Consumer Safety,
Agriculture, the Environment, and Housing
Regulating the Market to Protect the Consumer 477
Deregulation 479
Agriculture 480 Price Supports and Subsidies 482
The Environment 485 The Conservation Movement 485 The Rise of the Environmental Movement 485 Housing after World War II 488
CHAPTER 28 Monetary Policy, Fiscal Policy, and the Business Cycle after World War II 492
The Keynesian Era 492
The Korean War and the Treasury-Federal Reserve Accord 496 Dwight D. Eisenhower: The Conservative Approach to the Business Cycle 496 John F. Kennedy and Lyndon Johnson: The New Economics 497 Richard M. Nixon: Price Controls and the End of Bretton Woods 498 Jimmy Carter: The Great Inflation Reaches a Climax 500
Was the Economy More Stable during the Keynesian Era Than before the Depression? 502
The Monetarist Era 503 Paul Volcker 503 Ronald Reagan: Supply-Side Economics 506 From Greenspan to Bernanke at the Federal Reserve 508 The Panic of 2008 and the Slow Recovery 510
The Famile of 2000 and the old with the old
CHAPTER 29 Manufacturing, Productivity, and Labor
Gales of Creative Destruction 515 Productivity Growth 519 The Energy Crisis 520
Changes in the Organization of Industry 521
Antitrust Policy 523
The Rise of the Service Sector 524
The Changing Role of Women in the Labor Force 525 The Gender Gap 527 The Baby Boom 528
Minorities 529 African Americans 529 Native Americans 531
The New Immigration 534
Unions 535
Real Wages 537

CHAPTER 30
Achievements of the Past, Challenges for the Future
Achievements of the Past 540
Real Incomes Have Grown Rapidly 540
Lagging Regions Have Caught Up 542
Alternative Measures of Well-Being Show Improvement 543
Education Levels Reached by Americans Have Increased Steadily 548
Challenges for the Future 549
Improving the Distribution of Income 549
Caring for an Aging Population 552
Winning the Race between Technology and Education 553
Protecting the Environment 554
The Search for a Meaningful Life 554
Prophets of Decline 555
Subject Index559
Name Index. 578

Preface

This new edition of *History of the American Economy* was deemed necessary because of the continued advance of research in economic history and the rapid changes unfolding in the United States and global economies. The struggle of many nations to convert from centrally controlled to market-led economies in recent decades, the rapid economic expansion of India and China, and the growing economic integration in Europe invite new perspectives on the historical record of the American economy. Moreover, the terrorist attacks of September 11, 2001, on the World Trade Center and the Pentagon and the subsequent wars in Afghanistan and Iraq have created enduring challenges for the United States. The financial crisis of 2008 and the slow climb back to full employment have reawakened concerns about stability of the financial system, about the level of economic inequality, and prospects for economic growth that have not been seen since the Great Depression of the 1930s. To properly convey the speed of change of American lifestyles and economic well-being, chapter 1 begins with a focus on twentieth-century American life, mostly but not entirely economic. The purpose is to show how dramatically different the way we live today is compared with the times of our grandparents and great-grandparents. The remarkable contrasts in living standards, length of life, and how we work and consume from 1900 to the present provide a "wake-up call" for the nation on the changes soon to unfold in our lives and in the lives of generations to come. This wake-up call serves a vital purpose: preparation for the future. As Professor Deirdre McCloskey admonishes us in her book Second Thoughts, in preparing for the future we best arm ourselves with a good understanding of the past.

Boxed discussions called "New Views" draw explicit analogies between current issues and past experiences—drug prohibition today and alcohol prohibition in the 1920s, and war finance today and war finance in the past, to name two. Economic historians, of course, have always made these connections for their students, but we believe that by drawing attention to them in the text, we reinforce the lesson that history has much to teach us about the present, and perhaps the equally important lesson that detailed study of the past is needed to determine both the relevance and the limitations of historical analogies.

We have retained the presentation of material in chronological order, albeit not rigidly. Part 1, "The Colonial Era: 1607-1776," focuses on the legacies of that era and the institutions, policies, economic activities, and growth that brought the colonies to a point at which they could challenge the mother country for their independence. Part 2, "The Revolutionary, Early National, and Antebellum Eras: 1776-1860," and Part 3, "The Reunification Era: 1860-1920," each begin with a chapter on the impact of war and its aftermath. The other chapters in these parts follow a parallel sequence of discussion topics—land, agriculture, and natural resources; transportation; product markets and structural change; conditions of labor; and money, banking, and economic fluctuations. Each of these parts, as well as Part 4, "War, Depression, and War Again: 1914-1946," closes with a chapter on an issue of special importance to the period: Part 1, the causes of the American Revolution; Part 2, slavery; and Part 3, domestic markets and foreign trade. Part 4 closes with a discussion of World War II. All the chapters have been rewritten to improve the exposition and to incorporate the latest findings. Part 5, "The Postwar Era: 1946 to the Present" moreover, has been extensively revised to reflect the greater clarity with which we can now view the key developments that shaped postwar America.

Throughout the text, the primary subject is economic growth, with an emphasis on institutions and institutional changes, especially markets and the role of government, including monetary and fiscal policy. Three additional themes round out the foundation of the book: the quest for security, international exchange (in goods, services, and people), and demographic forces.

Finally, this edition sustains a list of historical and economic perspectives, introducing each of the five parts of the book, providing a summary of the key characteristics and events that gave distinction to each era. Furthermore, each chapter retains a reference list of articles, books, and Web sites that form the basis of the scholarship underlying each chapter. Additional sources and suggested readings are available on the Web site. In addition to these pedagogical aids, each chapter begins with a "Chapter Theme" that provides a brief overview and summary of the key lesson objectives and issues. In addition to the "New Views" boxed feature described earlier, we have retained the "Perspectives" boxes that discuss policies and events affecting disadvantaged groups.

MindTap: Empower Your Students

MindTap is a platform that propels students from memorization to mastery. It gives you complete control of your course, so you can provide engaging content, challenge every learner, and build student confidence. Customize interactive syllabi to emphasize priority topics, then add your own material or notes to the eBook as desired. This outcomes-driven application gives you the tools needed to empower students and boost both understanding and performance.

Access Everything You Need in One Place

Cut down on prep with the preloaded and organized MindTap course materials. Teach more efficiently with interactive multimedia, assignments, quizzes, and more. Give your students the power to read, listen, and study on their phones, so they can learn on their terms.

Empower Students to Reach Their Potential

Twelve distinct metrics give you actionable insights into student engagement. Identify topics troubling your entire class and instantly communicate with those struggling. Students can track their scores to stay motivated toward their goals. Together, you can be unstoppable.

Control Your Course and Your Content

Get the flexibility to reorder textbook chapters, add your own notes, and embed a variety of content including Open Educational Resources (OER). Personalize course content to your students' needs. They can even read your notes, add their own, and highlight key text to aid their learning.

Get a Dedicated Team, Whenever You Need Them

MindTap isn't just a tool, it's backed by a personalized team eager to support you. We can help set up your course and tailor it to your specific objectives, so you'll be ready to make an impact from day one. Know we'll be standing by to help you and your students until the final day of the term.

A Test Bank and PowerPoint slides accompany the *History of the American Economy*, 12th edition, and are available to qualified instructors through the Web site (**www.cengage.com/login**).

Acknowledgments

We are especially grateful to the past reviewers of *History of the American Economy*: Phil Coelho, Martha L. Olney, David Mitch, Michael R. Haines, Daniel Barbezat, and David Mustard. Farley Grubb, Pamela Nickless, and John Wallis were of special help with ideas for the first half of text. Richard England provided a detailed list of comments on and criticisms of a previous edition that was extremely helpful.

This edition, moreover, reflects the contributions of many other individuals who have helped us with this and previous editions. Here we gratefully acknowledge the contributions of Lee Alston, Terry Anderson, Fred Bateman, Diane Betts, Stuart Bruchey, Colleen Callahan, Ann Carlos, Susan Carter, Phil Coelho, Raymond L. Cohn, James Cypher, Paul A. David, Lance Davis, William Dougherty, Richard A. Easterlin, Barry Eichengreen, Stanley Engerman, Dennis Farnsworth, Price Fishback, Robert W. Fogel, Andrew Foshee, Claudia Goldin, Joseph Gowaskie, George Green, Robert Higgs, John A. James, Stewart Lee, Gary D. Libecap, James Mak, Deirdre McCloskey, Russell Menard, Lloyd Mercer, Douglass C. North, Anthony O'Brien, Jeff Owen, Edwin Perkins, Roger L. Ransom, David Rasmussen, Joseph D. Reid Jr., Paul Rhode, Elyce Rotella, Barbara Sands, Don Schaefer, R. L. Sexton, James Shepherd, Mark Siegler, Austin Spencer, Richard H. Steckel, Paul Uselding, Jeffrey Williamson, Richard Winkelman, Gavin Wright, and Mary Yeager. The length of this list (which is by no means complete) reflects the extraordinary enthusiasm and generosity that characterizes the discipline of economic history.

Gary Walton is grateful to his colleagues at the University of California, Davis, for advice and encouragement, especially Alan Olmstead, Alan Taylor, Greg Clark, and Peter Lindert.

Hugh Rockoff thanks his colleagues at Rutgers, especially Michael Bordo, John Landon-Lane, Carolyn Moehling, and Eugene White. Hugh owes his largest debt to his wife, Hope Corman, who provided instruction in the subtleties of labor economics and unflagging encouragement for the whole project.

> GARY WALTON HUGH ROCKOFF

About the Authors

Gary M. Walton became the Founding Dean of the Graduate School of Management at the University of California, Davis, in 1981 and is Professor of Economics Emeritus at the University of California, Davis. From 1991 to 2014, he served as President of the Foundation for Teaching Economics, where he designed and administered highly acclaimed economics and leadership programs (domestically and internationally) for high school seniors selected for their leadership potential, as well as for high school teachers.

Walton credits much of his personal success to his coach at the University of California, Berkeley, the legendary Brutus Hamilton (U.S. Head Coach of Track and Field in the 1952 Olympics), and his success as an economist to his doctoral dissertation advisor, the late Douglass C. North (1993 Nobel Laureate in Economics).

Hugh Rockoff is Professor of Economics at Rutgers University and a research associate of the National Bureau of Economic Research. He was a member of the inaugural class of fellows of the Cliometrics Society. He has written extensively on banking and monetary history and wartime economic policies. He enjoys teaching economic history to undergraduates and credits his success as an economist to his doctoral dissertation advisor, the late Robert W. Fogel (1993 Nobel Laureate in Economics).



Growth, Welfare, and the American Economy

AMERICANS 1900-2017

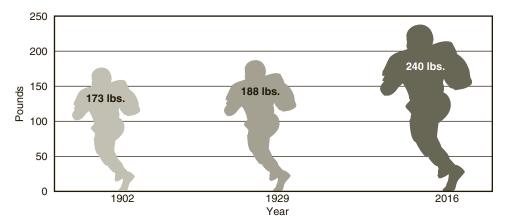
When Rutgers and Princeton played the first intercollegiate football game in 1869, it is doubtful any person alive could have foreseen the impact football would have on twenty-first-century American life. From the money and passion fans pour into their favorite teams to the media hype and parties linked to season-ending bowl games, football is truly big business, both in college and in the pros. And how the game has changed!

By the turn of the twentieth century, some of the land-grant colleges of the Midwest were also fielding teams, one of the earliest being the University of Wisconsin–Madison (UW). The Badgers, as they are popularly called today, enjoy a long-standing sports tradition, which provides some historically interesting facts. As shown in Figure 1.1, in 1902, UW's football team was made up of players whose average size was 173 pounds. Most of the athletes played "both sides of the ball," on offense and on defense, and substitutions were infrequent. Economists today would say they were short on specialization. By 1929, the average size had increased modestly to 188 pounds, and players were increasingly, though not yet exclusively, specializing on offense or defense. By 2016, the average weight of Wisconsin football players was 240 pounds, and players routinely specialized not just on defense or offense, but by particular positions and by special teams, and sometimes by types of formations. Even more dramatic size changes are revealed by comparing the weight of the five largest players. UW's five biggest players in 1902 averaged 184 pounds, hardly more than the average weight of the whole team. As shown in Figure 1.2, in 1929, the five biggest players averaged 199 pounds. By 2016, the five largest offensive players averaged 334 pounds, more than a 60 percent jump over 1929.

UW alumni and students have also been big-time basketball enthusiasts, favoring players with speed, shooting and jumping skills, and height. In 1939, the Badgers' starting five had a considerable range of heights by position just as they do today. Figure 1.3 conveys not only the consistent differences among guards, forwards, and centers, but also the dramatic gains in height by players at every position taking the court today. The 2016 guards were taller than the 1939 forwards and center. Such dramatic height gains are partly a result of the growing college entrance opportunities that exceptionally talented players enjoy today compared with young players long ago. But the height gains also reflect more general increases in average heights for the U.S. population overall, and these gains in turn indicate improvements in diet and health.

Changes in average height tell us quite a lot about a society; nations whose people are becoming taller—as they have in Japan over the last 50 years—are becoming richer and eating better. Because of genetic differences among individuals, an individual woman who

FIGURE 1.1University of Wisconsin Starting Football Players' Average Weight



Source: Sport Information Office, University of Wisconsin-Madison.

FIGURE 1.2University of Wisconsin
Football: Average Weight
of Five Largest Players

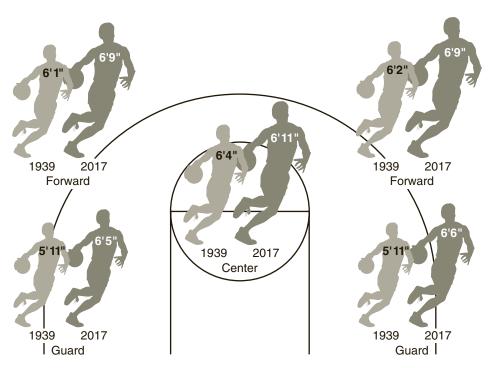


Source: Sport Information Office, University of Wisconsin-Madison.

is short cannot be considered to be poor. Such a conclusion would not be unreasonable, however, especially along with other evidence, for a society of short people. Adult heights reflect the accumulative past nutritional experience during the growing years, the disease environment, and health care, as well as genetic factors (which change very slowly). Americans are the heaviest people in the world; the Germans are second. Dutchmen are the world's tallest, with male adults averaging 6 feet 1 inches. Americans today, with adult males averaging 5 feet 10 inches and 172 pounds, are nearly 2 inches taller than their grandparents. The average height gain of Americans during the twentieth century was a little more than 3 inches. Americans are richer and eat more and better than they did 100 years ago, sometimes to excess, with a third of the population currently measured as obese or overweight.

Another, and arguably, even better measure of a society's vitality and well-being is the length of life of its citizens. Throughout most of history, individuals and societies have fought against early death. The gain in life expectancy at birth from the low 20s to nearly 30 by around 1750 took thousands of years. Since then, life expectancy in advanced countries has jumped to 75 years, or 150 percent, and in 2011, in the United States it was 79 years. This phenomenal change is not merely a reflection of decline in infant mortality; as Table 1.1 shows for the United States, the advances in the length of life are spread across all age groups. As a consequence, in 2017, 324 million people were living in the United States, up from 76 million in 1900.

FIGURE 1.3 University of Wisconsin Basketball Players' Heights



Source: Sport Information Office, University of Wisconsin-Madison.

TABLE 1.1 LIFE EXPECTANCY BY AGE IN THE UNITED STATES

AGE	1901	1954	2000	2014
0	49	70	77	78.7
15	62	72	78	79.4
45	70	74	79	81.0
75	82	84	86	87.1
90				94.6

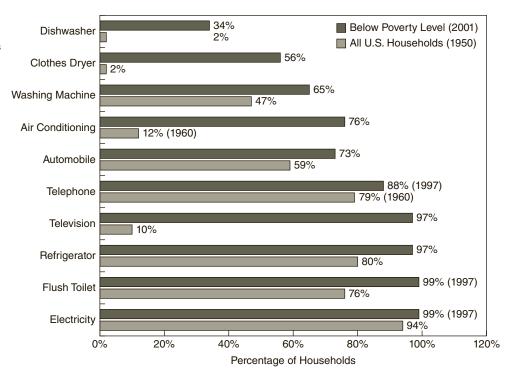
Source: Data for 1901: U.S. Department of Commerce 1921, 52–53; and data for 1940–1996: National Center for Health Statistics, www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60-04.pdf to see National Vital Statistics Reports, Vol. 64, Table 11, 2015.

The gains in population size and in length of life stem primarily from economic growth, because such growth leads to better diets and cleaner water, to sewage disposal, and other health-enhancing changes. The broadest and most commonly used measures of overall economic performance are the levels and the rise in real gross domestic product (GDP). The U.S. real GDP increased from \$0.5 trillion in 1900 to more than \$13.3 trillion in 2011, measured in constant real purchasing power of 2005 dollars. When divided by the population, GDP per capita averaged \$5,557 (in 2005 constant dollars) in 1900. In 2011 it was \$42,671, almost eight times higher. Average yearly increases of 2 percent, which for any given year appear small, have compounded year after year to realize this advance.

These gains have not been exclusive to the few, the middle class, or the very rich. Individuals and households that the government classifies "officially poor" have incomes surpassing those of average Americans in 1950 and all but the richest (top 5 percent) in 1900. The poverty income level in the United States, about one-fourth the U.S. average, is far higher than average per capita incomes in most of the rest of the world. To show how widespread the gains from economic growth have been, Figure 1.4 lists items owned or used by average households in the United States in 1950 compared to below poverty-threshold Americans

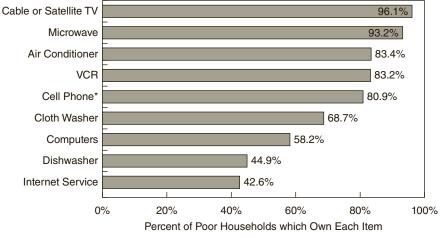
4 Chapter 1: Growth, Welfare, and the American Economy

FIGURE 1.4Ownership by Poor
Households (2001) versus
Ownership by All U.S.
Households (1950)



Source: U.S. Census Bureau.

FIGURE 1.5 Amenities in Poor Households 2011



*Among poor families with children in 2011.

Source: U.S. Department of Energy.

in the last decade. Figure 1.5 further reveals the many amenities used by households labeled poor. Air-conditioned homes with electricity, a refrigerator, a flush toilet, television, and telephones are common among Americans, rich and poor. Indeed, the substantial gap among income classes as measured by income or wealth becomes much narrower when measured by basic categories: food, housing, and items and services for comfort and entertainment. In the United States there are more radios owned than ears to listen to them.

Despite gains for people labeled "poor" in the United States, the gap between the rich and the poor remains wide. This gap is an important element in drawing conclusions about the success or failure of an economic system. It bears on the cohesion, welfare, and security

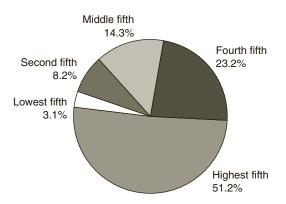
of a society. A useful starting point from which to consider this issue is to view a snapshot of the division of income in the United States. Figure 1.6 shows this distribution in fifths for all U.S. households for 2014. As in other years, a large gap existed between the top fifth and the bottom fifth. In fact, the richest fifth of the population received more than half the income (51.2 percent), about the amount the remaining four-fifths received. The poorest fifth U.S. households received only 3.1 percent of total income in 2014 (not including food stamps, assisted housing, Medicaid, and other such assistance).

The household quintile shares (bottom to top) were: for 1947, 5.0, 11.9, 17.0, 23.1, and 43.0; and for 1977, 4.1, 9.0, 14.7, 24.0, and 48.2. Such distribution changes, including the 2014 quintiles in Figure 1.6, appear rather modest, albeit rising in recent decades as many observers emphasize.

The important question, however, is whether the people in the bottom fifth in one period were also in that category decades later. If all the people in the top category in 1977 had switched places by 2014 with all the people in the bottom category (the bottom fifth rising to the top fifth by 2014), no change would be observed in the data shown in these measures. But surely such a switch would be considered a huge change in the distribution of income among people.

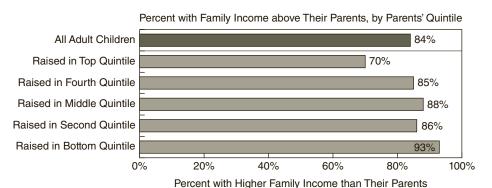
Thanks to the Pew Charitable Trusts' Economic Mobility Project (2012), data extending back in time from 2009 show the degrees of change in family income between generations. Figure 1.7 shows the percentage gains of current Americans over their parents' family income: 84 percent for all adult children; those raised in the top quintile gained 70 percent

FIGURE 1.6 The American Income Pie by Fifths, 2014



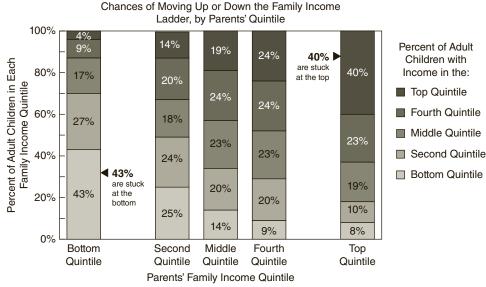
Source: U.S. Census Bureau. "Share of Aggregate Income Received by Each Fifth and Top 5 Percent of Households, All Races: 1967 to 2007" (www.census.gov/hhes/www /income/histinc/h02AR.html).

FIGURE 1.7 The Percentage Gains of Current Americans over Their Parents' Family Income (2009)



Note: Income is adjusted for family size.

FIGURE 1.8 The Mobility into Different Quintiles (2009)



Note: Numbers are adjusted for family size.

over their "rich" parents and those in the bottom gained 93 percent. Figure 1.8 shows the mobility into different quintiles. Forty-three percent in the bottom quintile stayed there, but 57 percent moved into higher quintiles, albeit only 4 percent into the top quintile, 40 percent in the top stayed there, and 8 percent of this wealthy group fell to the bottom quintile by adulthood. Clearly, this is considerable mobility both ways.

A STUDY WITH A PURPOSE

Nation Building

Why should you study economic history? The best short answer is to better prepare you for the future. Economic history provides you with a clear perspective on the forces of change and a good understanding of the lessons of the past. The study of economic history also provides lessons on nation building and ways to analyze policies and institutions that affect the nation as well as you personally.

One hundred years ago, citizens of Great Britain enjoyed the highest standards of living in the world, and the British Empire was the leading world power. In 1892, the dominant European powers upgraded the ranks of their diplomats in Washington, DC, from ministers to ambassadors, thereby elevating the United States to first-division status among nations. On economic grounds, this upgrading should have occurred much earlier, because in 1892, output per capita in the United States was much higher than in France and Germany and not far below that in Great Britain.

In 1950, the United States was the most powerful nation in the world, and Americans enjoyed standards of living higher, by far, than those of any other people. Another "super power," however, was intensely challenging this supremacy. As the Cold War unfolded and intensified after World War II, nations became divided into two clusters: communist nations emphasizing command, control, and central planning systems; and free nations emphasizing markets, trade, competition, and limited government. This division into clusters was especially apparent in Europe and Asia, and many other nations sat on the sidelines pondering their futures and which system to follow. By all appearances, the Soviet Union displayed levels of economic, technological, and military strength rivaling those of the

United States. It launched its space satellite, called *Sputnik*, in 1957, placing the first vehicle constructed on Earth in space. The Cold War ended in 1989, and many satellite nations of the Soviet Union (e.g., Eastern Germany and the former Czechoslovakia) broke free. By the mid-1990s, the Russian Federation desperately needed aid just to feed its people. The life expectancy of men in Russia plummeted from the low 60s (mid-1980s) to 56 (mid-1990s). The economic and political collapse of the Soviet Union and the overwhelming relative success of market-driven systems provide another example of the importance of studying economic history.

Such swings in international power, status, and relative well-being are sobering reminders that the present is forever changing and slipping into the past. Are the changes that all of us will see and experience in our lifetimes inevitable, or can destinies be steered? How did we get where we are today?

It is unfortunate that history is often presented in forms that seem irrelevant to our everyday lives. Merely memorizing and recalling dates and places, generals and wars, presidents, and legislative acts misdirect our attention to what happened to whom (and when) rather than the more useful focus on how and why events happened. One of the special virtues of the study of economic history is its focus on how and why. It provides us a deeper understanding of how we developed as a nation, how different segments of the population have fared, and what principal policies or compelling forces brought about differential progress (or regress) among regions and people. In short, the study of economic history enriches our intellectual development and provides an essential perspective on contemporary affairs. It also offers practical analytical guidance on matters of policy. The study of economic history is best suited for those who care about the next 1 to 1,000 years and who want to make the future better than the past.

This is no empty claim. Surely one of the primary reasons students major in economics or American history is to ultimately enhance the operation and performance of the American economy and to gain personally. Certainly instructors hope their students will be better-informed citizens and more productive businesspeople, politicians, and professionals. "If this is so," as Gavin Wright recently properly chastised his economic colleagues,

if the whole operation has something to do with improving the performance of the U.S. economy, then it is perfectly scandalous that the majority of economics students complete their studies with no knowledge whatsoever about how the United States became the leading economy in the world, as of the first half of the twentieth century. What sort of doctor would diagnose and prescribe without taking a medical history? (1986, 81)

Too often, students are victims of economics textbooks that convey no information on the rise and development of the U.S. economy. Rather, textbooks convey the status quo of American preeminence as if it just happened, as if there were no puzzle to it, as if growth were more or less an automatic, year-by-year, self-sustained process. Authors of such textbooks need an eye-opening sabbatical in Greece, Russia, or Zimbabwe.

Economic history is a longitudinal study but not so long and slow as, say, geology, in which only imperceptible changes occur in one's lifetime. In contrast, the pace of modern economic change is fast and accelerating in many dimensions. Within living memory of most Americans, nations have risen from minor economic significance to world prominence (Hong Kong, China; Japan; and the Republic of Korea), while others have fallen from first-position powers to stagnation (Russia in the 1990s and Argentina after 2002). Whole new systems of international economic trade and payments have been developed (the North American Free Trade Agreement, European Union). New institutions, regulations, and laws (Clean Air Act of 1990, Welfare Reform Act of 1996) have swiftly emerged; these sometimes expand and sometimes constrain our range of economic choices.

The role of government in the economy is vastly different from what it was only 60 or 70 years ago; undoubtedly, it will be strikingly different 50 years from now. The study of economic history stresses the role of institutional change, how certain groups brought about economic change, and why. The study of history, then, is more than an activity to amuse us or sharpen our wits. History is a vast body of information essential to making public policy decisions. Indeed, history is the testing grounds for the economic theory and principles taught in economics classes, as well as for the theories taught in other subjects.

As an example of application, consider the state of our roads and highways. Policy decisions require choices that bring benefits and impose cost. Repair and expand? Or charge for use? We have the technology to identify every vehicle in use by place and time. Vehicles in operation in dense traffic (morning and evening commutes) could be charged more than at other times when traffic flows are uncongested. This would give people incentives to be judicious in their selected times of travel. Taxes from gasoline sales, which fund highway repairs, have been waning because rates have not been raised, and cars have become efficient, and more and more users are driving electric-powered cars. Charges for road use could replace the gasoline tax to finance new and improved infrastructures. Such changes in the law would change incentives and help guide people's choices in predictable ways. Arguments about this policy suggestion and other policy issues are best addressed by references to historical evidence and sound theory.

We encourage skepticism of mere statements of opinion. An opinion is a good way to start a discussion but not a good way to end one. Not all opinions are equal, not when we want to understand how and why things happen. Two of the great advantages of economic history are its quantitative features and use of economic theory to give useful organization to historical facts. In combination, use of theory and evidence enhances our ability to test (refute or support) particular propositions and recommendations. This helps us choose among opinions that differ.

CRITICAL SKILLS FOR PERSONAL DEVELOPMENT

Granted that economic history is important to the professional economist or economic policymaker, but is there any practical reason for studying it if a student has other long-term goals? The answer is yes. See Black, Sanders, and Taylor (2003), who show that undergrad economics majors do better financially than do business, math, or physics majors. The skills developed in studying economic history—critically analyzing the economic record, drawing conclusions from it based on economic theory, and writing up the results in clear English—are valuable in many lines of everyday work. The attorney who reviews banking statutes to determine the intent of the law, the investment banker who studies past stock market crashes to find clues on how to foretell a possible crash, and the owner-operator of a small business who thinks about what happened to other small businesses that were sold to larger firms are all taking on the role of economic historian. It will help them if they can do it well.¹

Besides the importance of historical study for its vital role in deliberating private and public policy recommendations, knowledge of history has other merits. For one thing, history can be fun—especially as we grow older and try to recapture parts of our lives in nostalgic reminiscence. For another, history entertains as well as enriches our self-consciousness, and, often, because of television, the historical account is provided almost

instantly (e.g., news coverage of the 2003 war in Iraq). A sense of history is really a sense of participation in high drama—a sense of having a part in the great flow of events that links us with people of earlier times and with those yet to be born.

We conclude this section with the reminder that two of the principal tasks of economic historians are to examine a society's overall economic growth (or stagnation or decline) and to find out what happens to the welfare of groups within the society as economic change occurs. Our primary purpose in the following pages is to explain how the American economy grew and changed to fit into an evolving world economy. We study the past to better understand the causes of economic change today and to learn how standards of living can be affected by policies and other forces stemming from technological, demographical, and institutional change.2

THE LONG ROAD OUT OF POVERTY

Before diving into the chronology of American economic history emphasizing the forces of economic growth, it is essential to place the present-day circumstances of Americans and others in proper historical perspective. As Winston Churchill (1956) is credited with saying, "The longer back you look, the farther into the future you can see." However, we rarely see the distant past clearly, let alone the future.

Reflecting on some historical episode—perhaps from the Bible or Shakespeare or some Hollywood epic—is an interesting exercise. For most of us, the stories we recall are about great people, or great episodes, tales of love, war, religion, and other dramas of the human experience. Kings, heroes, or religious leaders in castles, palaces, or cathedrals—engaging armies in battles or discovering inventions or new worlds—readily come to mind, often glorifying the past.3

To be sure, there were so-called golden ages, as in Ancient Greece and during the Roman Era, the Sung Dynasty (in China), and other periods and places in which small fractions of societies rose above the levels of meager subsistence and lived in reasonable comfort, and still smaller fractions lived in splendor. But such periods of improvement were never sustained.4 Taking the long view, and judging the lives of almost all our distant ancestors, their reality was one of almost utter wretchedness. Except for the fortunate few, humans everywhere lived in abysmal squalor. To capture the magnitude of this deprivation and sheer length of the road out of poverty, consider this time capsule summary of human history from Douglass C. North's 1993 Nobel address:

Let us represent the human experience to date as a 24-hour clock in which the beginning consists of the time (apparently in Africa between 4 and 5 million years ago) when humans became separate from other primates. Then the beginning of so-called civilization occurs with the development of agriculture and permanent settlement in about 8000 B.C. in the Fertile Crescent—in the last 3 of 4 minutes of the clock [emphasis added]. For the other 23 hours and 56 or 57 minutes, humans remained hunters and gatherers, and while population grew, it did so at a very slow pace. Now if we make a new 24-hour clock for the time of civilization—the 10,000 years from development of agriculture to the present—the pace of

²For examples of institutional change, see Alston (1994) and Siniecki (1996).

³Such glorification has a long tradition: "The humour of blaming the present, and admiring the past, is strongly rooted in human nature, and has an influence even on persons endued with the profoundest judgment and most extensive learning" (Hume 1742/1987, 464).

⁴For example, see Churchill's (1956) description of life in Britain during and after the Roman Era.