Unequal Gains

American Growth and Inequality since 1700

Chapters 1 and 10, and some figures and tables

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Abstract

Combining new data in a new way reveals a clearer picture about what has been exceptional, and what has not, about the growth and distribution of incomes in America. This country has been truly exceptional in the widening of its gaps between rich and middle and poor. In fact, that pronounced widening has occurred twice in American history, and the second widening – the one we are living through – could have been partly avoided with no cost in terms of economic growth. What has not been exceptional has been America’s income leadership in the world. In fact, Americans are no further ahead of Britain and other countries today than were the American colonists before the Revolution. Unlike the usual story of a nation that came from behind after Independence, our new history emphasizes that America lost its leadership three times in the past, so that its faster growth at other times has merely restored a relative position it had in colonial times. Thus the exceptional rise of inequality has had no correlation with any gain in relative income.

[For an expanded summary of the book’s findings, see Pages 9-14 below.]

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Chapter 1
Persistent Debate, a New Approach, More Data, Rich Findings

How and when did Americans become so prosperous and so unequal? Generations of Americans have debated competing visions of what was happening to national income and how it was divided. Yet they lacked the solid evidence needed to choose between the competing visions. We still know little about the growth and (especially) the inequality of American incomes before the twentieth century. We also need to understand what has caused the dramatic movements in inequality over the last century, and its future prospects.

When did America grow fast enough to make it a world leader in average living standards? There is little disagreement about how American incomes have grown since the early twentieth century and even as far back as 1870, thanks to the pioneering work of Simon Kuznets and many others. But income estimates are weak for the years before 1870— weaker than in some western European countries.

To be sure, others before us have struggled admirably to reduce uncertainties about the pre-1870 history of national income. Yet the debate continues about income levels and growth before and during the Civil War. And even those estimates that most people agree on probably give the wrong impression about how American incomes compared with those of other countries. Our history textbooks imply that the road to prosperity was paved by the institutional wisdom of the country’s founders and those who refined that wisdom over the two centuries that followed. While those institutions were well chosen and largely well borrowed, this book will show that America had reached world leadership in living standards long before the country’s founders constructed their new republic. We will also find that the road to prosperity was far bumpier than the standard, benign tale of American economic progress implies.

How unequally was income distributed between the rich, middle, and poor, and why? The steep rise in inequality since the 1970s is now unmistakable. New measures of inequality avoid the faulty official numbers that hid most of the true movements in the incomes of the richest.

1 For the current state of knowledge about the history of US gross domestic product (GDP) and national income, see Richard Sutch’s encyclopedic coverage in volume 3 of Historical Statistics of the United States (Carter et al. 2006, vol. 3, chap. Ca) and the sources cited there.
Since the 1960s, the official US Census Bureau estimates have badly understated top incomes and (unintentionally) hidden much of the rise in the share going to the richest 1 percent.\textsuperscript{2} Fortunately, an international research team led by Anthony Atkinson, Thomas Piketty, and Emmanuel Saez solved that twentieth-century problem. Starting from income tax returns, this team has charted the dramatic twentieth-century fall and rise of top incomes in countries around the world. Their evidence, however, is only available for the twentieth century. Since the US income tax was only introduced in 1913, there is still no history of American top income inequality for the centuries before, though economic historians have certainly offered many plausible guesses.\textsuperscript{3}

Why does all this new twentieth-century American evidence matter, and why do we think it’s necessary to use new methods to mine the thinner evidence documenting the three centuries before? The answer is that two fundamental questions important for policy debate have been left unanswered by American history. First, does modern economic growth inevitably drive up

\textsuperscript{2} The main shortcoming, though not the only one, of the official Census Bureau estimates based on its Current Population Survey (CPS) is known as the “top-coding” problem. The Census Bureau knew it would be sensitive and difficult to ask top income people about the exact magnitude of their incomes. The official response to this difficulty has been a top-coding solution that seriously understates top incomes. As others have pointed out in Congress and the media back in the 1990s, the census values all top household incomes at the \textit{floor} of that top income class. That floor was only $50,000 for 1967–76, then $100,000 for 1977–84, $300,000 for 1985–92, and $1 million after 1993. The official CPS estimates imply that between 1980 and 1997, Bill Gates of Microsoft earned less than $8 million—from which he somehow accumulated a personal net worth valued at over $36 billion in 1997 (\textit{Newsweek}, August 4, 1997, 49–50). Worse yet, the published official CPS figures display even lower top-class cutoffs, frustrating any attempt to view what has happened within the top 5 percent of households.

\textsuperscript{3} For a summary of what is now known about American top-income shares in the twentieth century, see Atkinson, Piketty, and Saez 2011. Rough numbers on American inequality before the twentieth century were summarized more than three decades ago by the two of us (Williamson and Lindert 1980b, chaps. 2–4), with updates by Lindert (2000).
inequality? And second, does inequality favor or disfavor growth? This book speaks to those two questions by exploring American incomes since the 1600s.

A Different Approach with New Data

New Evidence, Helped Greatly by Four Data Pioneers

Information about the distant past keeps growing, thanks to advances in archival recovery technology. The leading estimates of nineteenth-century American gross domestic product (GDP) date from pioneering research in a great quantification wave from the 1960s through the late 1980s. Nineteenth-century evidence on inequality and growth did not advance so quickly, but the same quantification wave did give us new impressions about colonial American inequality. Those impressions were still limited by incomplete evidence on the distribution of wealth, property income, labor earnings, and thus total income.

Since then, several new sources have become available that this book exploits—new evidence supplemented by some old sources that have been underutilized in the past. The new evidence did not appear by some official release of long-locked archives. Rather, it came from the previous efforts of several others. We are delighted to acknowledge their labors before describing our own method of extracting a new income history from the mass of information they have patiently extracted. Our American incomes history has benefited especially from the contributions of four scholars. The landmark study of American wealth around 1774 by Alice Hanson Jones had already appeared by 1980 and launches our new income history in chapter 2.4 Jackson Turner Main scoured the colonial archives and delivered much of what we know about rates of pay on the eve of the revolution.5 As far as we know, we are the first to mine systematically the numbers in his Social Structure of Revolutionary America. Gloria Lund Main, first with her late husband and then on her own, wrote widely on colonial American wealth inequality. Central to our chapter 3, she has just made available—in machine-readable form—their rich sample of New England probates from 1631 to 1776. Finally, Steven Ruggles, director of the University of Minnesota Population Center, leads the continuing development of the

4 J. Main 1965.
Integrated Public Use Microdata Series (IPUMS), which has revolutionized the use of past censuses. One of its many accomplishments is the set of 1 percent samples of the US population censuses from 1850 onward. Our new history of American incomes reported in chapters 5 and 6 would have taken vastly longer to research without the 1850, 1860, and 1870 IPUMS samples of individual wealth, occupation, location, and other attributes.

Building Social Tables on the Income Side

Armed with new evidence, this book applies a different approach to the historical estimation of what Americans have produced, earned, and consumed. National income and product accounting reminds us that we should end up with the same number for GDP by assembling its value from any of three sides—the production side, the expenditure side, or the income side. All previous American estimates for the years before 1929 have proceeded from either the production side or the expenditure side. Taking the production route, others have assembled real GDP by applying fixed base-period weights to time series of such physical output indicators as bushels of grain harvested, pigs slaughtered, yards of cloth woven, bricks used to build houses, and service workers employed. These weighted output trends are then applied to some benchmark year, where the evidence is thick enough—like an early census—to build what are hoped to be solid estimates for that year. Here the leading historical extension has been the pioneering work of Robert Gallman, who provided annual estimates back to 1834. Paul David used his “controlled conjectures” to push aggregate output back to 1800, and more recently, Thomas Weiss and his collaborators have used the same method to push the aggregates back into the colonial era. The second leading approach to GDP estimation before 1929 has taken the expenditure side, adding

6 Production-side estimates of GDP or gross national product (GNP) before 1929 include the following series in Historical Statistics of the United States (Carter et al. 2006, hereafter HSUS): the Millennial Edition series Ca9–17 back to 1790, by Richard Sutch and others; the Balke and Gordon as well as Romer series Ca208–18 for 1869–1929, which can be traced back via Kuznets to William Howard Shaw’s (1947) commodity output series by sector.
7 See the Gallman estimates for 1834–1909 in HSUS series Ca192–207, Ca219–32.
up estimates of household consumption, capital formation, government expenditures, and the
difference between exports and imports. The production and expenditure approaches have helped
support each other by using much the same data from federal censuses.

We work instead on the income side, constructing nominal (current price) GDP from
free-labor earnings, property incomes, and (up to 1860) slaves’ retained earnings (that is, slave
maintenance or actual consumption). What are called “social tables” are built up to income
aggregates from occupation and location (described at greater length in chapter 2) in the
“political arithmetic” tradition spawned by such Englishmen as Sir William Petty and Gregory
King in the seventeenth century. Development economists will recognize a similarity between
our social tables and their social accounting matrices. We have built five social tables for the
benchmark years 1774, 1800, 1850, 1860, and 1870—years where the data are most plentiful. No
such income estimates were available for any year before 1929 until now.

Our different approach leads to rewards not attainable by sticking to the production or
expenditure side. One reward is the chance to confront and challenge the production-side

9 We use the terms GDP, gross national income (GNI), and household income interchangeably
in this book. This rhetorical convenience violates some accounting conventions, but it seems
harmless given that the different national income and product aggregates are so close in
magnitude and concept. For a discussion of why these different measures come out nearly
equal today and almost exactly equal before the twentieth century, see appendix A.

10 For previous uses of this approach, see Lindert and Williamson 1982, 1983a; Milanovic,
Lindert, and Williamson 2011. We are preceded by at least two early Americans who
imitated Petty and King with their own calculations of what their region was worth—
presumably to estimate its ability to pay taxes and fight wars. Colonial governor James
Glen of South Carolina made an imaginative social table for his colony in
1751 (cited in McCusker 2006), and Samuel Blodget (1964, 99) made another social table a
half century later for the United States as a whole. Both Glen and Blodget started with
occupations and/or social classes in building their social tables, and in so doing, appear to
have been readers of the English political arithmeticians, whose writings multiplied with the
growing need to finance wars. On the rise of the quantification culture in late eighteenth-
century England, see Hoppit 1996.
estimates using very different data, sources, and methods. The production side and the income side should add up to the same GDP total, once one either multiplies the production side’s real GDP estimate by a price index or divides the income side’s nominal GDP by the same price index. As we will see, some instructive tensions arise between the two kinds of estimates, exposing the need to rethink the index-number alignment of real GDP and its price deflator.

An even bigger reward from using the income approach is that it exposes how income was distributed by socio-occupational class, race, and gender as well as by region and urban–rural location. Furthermore, our income approach allows us to travel deeper into the past than just 1790, 1834, or 1870. Our estimated social tables capture the distribution of national income going back to the colonial era. In addition, we can break that distribution down into component parts—skill premiums, urban–rural wage and income gaps, regional inequality, earnings inequality, property income shares, and property income distribution—thus better to understand the determinants of aggregate income inequality and its change over time.

Why Not Wealth or Capital?

We elect to chart a new history of American incomes rather than revisit the history of American wealth. Our choice of income, as opposed to wealth or capital, may seem surprising given that it comes in the wake of Piketty’s best-selling book *Capital in the Twenty-First Century* and his article with Gabriel Zucman proclaiming that “capital is back.” Piketty dwells at great length on wealth inequality and the ratio of wealth to GDP. We have explored the history of American wealth before, so why not return to it with new data to address the debate that Piketty has reignited? The answer is that wealth is an incomplete measure of one’s lifetime resources. It only includes nonhuman assets, missing the investments people make to augment their earnings capacity—formal education, on-the-job training, health, and migration.

At this point, we need to emphasize that the inequality we should really care about is the distribution of *lifetime* resources, as shared within a household. It can be measured either as an inflow, by lifetime earnings plus inheritance, or an outflow, by lifetime consumption plus bequest. For most people, any calculation of their lifetime income reveals the quantitative

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11 See Piketty 2014; Piketty and Zucman 2015. For our earlier history of American wealth inequality, see Williamson and Lindert 1980a, chap. 3.
dominance of labor earnings or consumption flows, not wealth. Earnings from accumulated skills, ability, and effort account for more than half of lifetime incomes, and wealth misses this. More important, the modern distribution debate has failed to note the fact that inequality of lifetime income must have been reduced dramatically by rising life expectancy, as we have pointed out some years ago. Since the nineteenth century, the spectacular decline in infant and child mortality—and that of young mothers in childbirth—has not only improved average life expectancy but also caused a spectacular convergence in those rates across income classes. This point is never introduced into inequality debates. While we do not fully approve of the narrower focus on current income, we follow the convention in this book so that our new evidence can be compared with that of others.

Granted, studying wealth does have some practical benefits. First, the study of wealth inequality is a useful prelude to the study of inheritance—an issue worth public debate. In addition, data on household wealth offer clues about income inequality in earlier centuries, when direct income measures are sparse. Yet because we have found a way to trace the long history of income levels and income inequality, we can afford to set aside a separate, and narrower, discussion of the distribution of wealth.

Three Things Left Out

This book omits three things that matter. It excludes Native Americans—a big part of the colonial population—since information on their living conditions is simply too limited. Second, our seventeenth- and eighteenth-century analysis only covers the thirteen mainland British colonies, ignoring the West Indies, Canada, and all other North American settlements. Third, and most important, we see no way to place any monetary value on the freedom that slaves were denied. Nor can their inhumane treatment be quantified. Only slave consumption is measured

12 While a few authors have tried to estimate lifetime income inequality (e.g., Lillard 1977), it is much too large a task for this book. We must be content with a short-term proxy for life-span inequality—current income.
13 Lindert and Williamson 1985, 347.
14 See, however, the conjectured incomes per capita for Native Americans in the lower South, 1720–1800, in Mancall, Rosenbloom, and Weiss 2003, table 4.
here—a much narrower concept than their well-being. The last of these qualifications deserves particular emphasis since so much of this book will deal with income inequality. While we will stress that the distribution of American incomes was strikingly “equal” or “egalitarian” before 1790 or 1800 and the start of modern economic growth, this evidence should be understood to mean “equal in income” or “income egalitarian.” A society with slavery should not be viewed as egalitarian in any broader sense.

Though we use a different income-building approach than have others, our estimates should be viewed as part of a research tradition that David so aptly described as “new evidence and controlled conjectures.” Our estimates use new evidence that was not available when others were writing on this topic, and we offer them only as controlled conjectures, since they are laden with explicit assumptions about information that is still lacking from the historical record. Far from claiming closure, we present the implications of currently available evidence, awaiting revision as more and better evidence accumulates.

New Findings

Our new approach and new data yield a rich harvest of new findings. They are:

• **American world leadership in income per person has waxed and waned for centuries.** (see Table 10-1, Figure 10-2)

    Before the twentieth century, the period in which Americans most clearly led Britain and all of western Europe in purchasing power per capita was during colonial times—that is, when North Americans were still British. They were already ahead by the late seventeenth century. America lost that lead in the Revolutionary War and the Articles of Confederation years, gained it back by 1860, lost most of it again in the Civil War decade, gained it back once more by 1900, and briefly lost it again in the Great Depression of the 1930s. Angus Maddison’s claim that American income per capita did not catch up to that of Britain until the start of the twentieth century seems to be off the mark by at least two centuries.

    Over the whole span of over 360 years since the mid-seventeenth century, America’s income advantage over Britain has not increased and may have
decreased slightly. The only historical moment in which the United States soared far ahead of the rest of the world in average income came at the end of World War II. Since then, Western Europe and Japan have been growing faster than the United States in terms of incomes per person.

• **Demography mattered from the start.**
  
  American colonists probably had the highest fertility rates in the world, and their children probably had the highest survival rates in the world. Thus, the American colonies had much higher child dependency rates and family sizes than did Europe, and even higher than does the Third World today.\(^{15}\) What was true of the colonies was also true of the young republic. It follows that America’s early lead in income per capita was exceeded by its early lead in income per household or per worker.

• **The colonial era saw little growth per capita, because extensive growth in the poorer hinterland offset intensive growth on the richer coast.** (Figure 5-2)
  
  Our evidence supports the slow- or no-growth side of the colonial growth debate. This is not a “pessimist” result, however, since it is consistent with more than a century of relative prosperity based on a growing colonial supply of primary products to Atlantic markets and the rapid expansion of an interior poorly integrated with those markets. It was a dualistic economy, with the richer coastal strip producing high-value exports and undergoing intensive growth, and with an interior producing a high level of subsistence (or what colonial historians have called “subsistence-plus”) and undergoing extensive development. The interior won the colonial population race, bringing de-urbanization over the century up to independence.

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\(^{15}\) We are talking about free whites here, but we suspect the same was true of the mainland slave population, especially inland from the southern coast, and especially by the mid-eighteenth century.
• **The southern reversal of fortune started early.** (Figure 5-2 again)
  
The South’s relative income per capita fell for at least two hundred years between 1670 and 1870, starting from its being clearly the richest part of the thirteen colonies—even when slaves are counted as low-income residents. The South’s relative decline had multiple causes, but prominent among them were diminishing returns to land as the frontier pushed inland, Revolutionary War losses, declining export prices after independence, Civil War losses, and its failure in the nineteenth century to provide public education, even for free whites.

• **Independence was costly.**
  
The Revolutionary War and the dysfunctional confederation years were costly. The large American colonial per capita income lead over Britain was lost by 1800. The causes seem clear: war damage, mortality and morbidity among young adult males, the destruction of loyalist social networks, a collapse of foreign markets for American commodity exports, hyperinflation, a dysfunctional financial system, and much more. The per capita income loss up to 1790 may have been as large as 30 percent.

• **The young republic was a modern economic growth leader.**
  
From 1800 (and probably even from 1790) to 1860, American per capita incomes grew much faster than in Western Europe, well above Kuznets’s criterion for modern economic growth (more than 1 percent per annum over many decades). This was a period of catching up with and overtaking the average income of Western Europe, including that of Britain. Fast per capita income

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16 The South was probably not the richest of all the British American colonies in terms of free white incomes. What little we know about white wealth and indirectly about income suggests that white incomes in the British West Indies were higher than in any mainland colony. See McCusker and Menard 1985, 61, table 3.3; Higman 1996, 321–24; Burnhard 2001. But income per capita of all—white and black—was probably higher on the mainland since the percent slave was much lower.
growth and even faster population growth quickly made the American economy by 1860 one of the biggest in the Western world.\(^\text{17}\)

- **America’s first great rise in inequality was as big as the rise since 1970.** (Figures 5-3, 5-4)
  
  There was a long steep rise in American inequality between 1800 and 1860, matching the widening of income gaps we have lived through since the 1970s. The earlier rise was *not* dominated by a surge in the property income share, however, as has been true since the 1970s. Rather, the first great rise in inequality was even more broadly based, with a widening of income gaps throughout the whole income spectrum—urban–rural income gaps, skill premiums, gaps between slave and free, North–South income gaps, earnings inequality, and even property income inequality.

- **The Civil War made incomes more unequal overall, though much less unequal within the South.**
  
  Income inequality rose in the North during the 1860s, continuing the long upward march that started with the creation of the republic in 1789. But emancipation and defeat greatly reduced southern inequality. The widening within the North and the widening between the North and the South were sufficient to offset the massively egalitarian redistribution within the South, thus keeping income inequality from falling at the national level.

- **Emancipation raised black incomes by about 30 percent.** (Figure 7-2)
  
  The big rise in black incomes is apparent despite the predictable decline in black labor force participation. Emancipation meant that the freed slaves could now capture something close to their marginal product rather than the 40 to 50

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\(^{17}\) Maddison (2010) reports the 1860 GDP of the United Kingdom as the biggest in the West, with France at 86.3 percent and the United States at 84.8 percent of the leader. Our aggregate income revisions suggest that the US economy was probably the second largest by 1860.
percent of it that slavery permitted. As of 1870, African Americans of a given age and sex still worked more than did their white counterparts, but much less than under slavery.

- **The Great Leveling between the 1910s and 1970s offered America a second chance to start with great equality.**
  
  For almost all countries supplying the necessary data, the income share captured by the richest 1 percent fell dramatically between the 1910s and 1970s, and that of the bottom half rose, for several reasons. Wars and other macro-shocks destroyed private wealth (especially financial wealth) and shifted the political balance toward the Left. The labor force grew more slowly and automation was less rapid, improving wages for the less skilled. Rising trade barriers lowered the import of labor-intensive products and the export of skill-intensive products, favoring the less skilled in the lower-middle ranks and at the bottom. And in the United States, the financial crash of 1929–33 was followed by half a century of tight financial regulation, which held down the incomes of those employed in the financial sector and the net returns reaped by rich investors.

- **The second great rise of American inequality after the 1970s was partly avoidable.**
  
  The equality gained during the Great Leveling slipped away after the 1970s in North America, the United Kingdom, and Australia, while inequality hardly changed at all in continental Western Europe. These countries’ new income gaps were partly due to inegalitarian policy shifts. The United States lost its lead in the quantity and quality of mass education, and its gaps in educational achievement have widened relative to other leading countries. Financial deregulation has also worked particularly poorly in the United States since 1980. In addition, a regressive pattern in tax cuts has allowed more wealth to be inherited rather than earned. All three of these shortfalls—in basic education, financial regulation, and the taxation of heritable wealth—are potentially reversible, without any clear loss in GDP.
• A booming, unregulated financial sector contributes to inequality. (Figure 8-3)

Unregulated financial growth amplified the two great rises of American inequality: the longer, slower rise before 1910, and the shorter, faster one since 1970. The intervening Great Leveling era saw financial crises, stiff financial regulations, a fall in incomes of those employed in finance, and a drop in top income shares. The correlation between high finance and inequality is not spurious. Skilled individuals with financial knowledge have been well rewarded during the two booms and heavily penalized during the one slump.

• There is no fundamental law driving the history of income inequality.

Inequality movements are driven not by any fundamental law of capitalist development but instead by episodic shifts in six basic forces: politics, demography, education policy, trade competition, finance, and laborsaving technological change. These forces appear to be exogenous with respect to inequality. If they are indeed exogenous and hard to predict, then four centuries of American inequality can hardly have been driven by some capitalist law of motion.

Now then, how did we arrive at these conclusions?
Chapter 10
Inequality and Growth - History Lessons for the Future

The new income history charted in this book reveals one way in which the United States is truly exceptional among advanced countries, and one way in which it is not. The widening of its income gaps between the rich and the poor is exceptional, but its per capita income growth is not. Both results will help in shaping our forecasts for the first half of the twenty-first century.

What is clearly exceptional is that prolonged rise of income inequality from the colonial times to the present, with only two temporary interruptions. The much-discussed widening of our income gaps since the 1970s is only part of this longer history. What in the eighteenth century was called “the best poor man’s country”—when income was much more equally distributed than in Europe—might today be called “the best rich man’s country”—that is, the most unequal society in the postindustrial community.¹ Will its inequality continue to pull away from that in Europe, Japan, and the rest?

American inequality has been exceptional not only in the size of the gaps between what the top and the bottom receive in the marketplace but also in the lack of political will to transfer income from the rich to the poor. The American political process has not been nearly so progressive in its income transfers as has northern Europe. Furthermore, since the 1960s, the United States has also made relatively low investments in its young compared to its old.²

Perhaps more surprisingly, Americans have not prospered any faster in terms of their average purchasing power per person than have residents of other rich countries. While American real income per person has maintained its lead, this chapter will show that its income advantage today is not much different than it was in the previous three centuries.

¹ Among the countries having a greater post-fisc inequality than the United States, the only rich country that might be called “postindustrial” would be Singapore.
² Here we refer to ratios of (subsidies per person in the targeted age group) to (GDP per capita), using international comparisons for 2010. Three other OECD countries that are similar to the United States in tilting toward favoring the elderly are Greece, Italy, and Japan. See Lindert 2014; Arroyo Abad and Lindert, forthcoming, figure 3.
Will American Income Gaps Continue to Widen?

As we saw in chapters 8 and 9, six forces shaped income inequality trends across the twentieth century, and the same six should have a similar impact on inequality in this century. What makes inequality predictions difficult, however, is the uncertainty that surrounds the future of some of these six basic forces: political shocks, including wars; growth in the working-age population; growth in labor skills; changes in import competition; biased technological change; and changes in the financial sector. All the usual forecasting dangers apply, so our inequality projections must be cautionary, conditional, and limited to the next few decades.

Political Shocks and Wars

Political change helps explain both the timing and the geography of inequality. No explanation of why the Great Leveling occurred between World War I and the 1970s can ignore the rise of mass voting power, the displacement of empires, and the leftward shift in political preferences. The massive income redistribution from white southerners to emancipated blacks in the 1860s was also implemented in the political arena. The same can be said of the high school movement in the early twentieth century and the immigration quotas imposed during the 1920s and kept in place until the 1960s. The geography of inequality over the last two centuries—especially the North–South gaps—also reflects political forces. That the United Kingdom and the United States have exhibited a greater rise of inequality than other advanced countries correlates with a shared rightward shift during the Reagan and Thatcher years.

Since future political influences on inequality are highly uncertain, we turn to the remaining five basic forces for answers to the conditional question: If the politics of redistribution remains the same, what will the inequality trends be like up to 2050?

Slower Growth of the Labor Force

Demographers can generate good population forecasts for a generation or two into the future. While there are always uncertainties about future birthrates, death rates, and especially, immigration rates, demographers can predict the size of any age group in 2050 far more accurately than anybody can predict political or technological change. The US Census Bureau
projections of the fifteen- to sixty-four-year-old age group are added to the American population
history since 1774 plotted in figure 10-1. That history reminds us that American labor supply
growth, which was once several times faster than that of western Europe, has slowed down
dramatically over two and a half centuries. The Census Bureau predicts that the slowdown will
continue. The working-age population will grow only modestly from now until 2050.

These working-age population projections are driven primarily by the postwar baby
boom. The first baby boom birth cohort, born in 1945, started to pass age sixty-five in 2010. The
last cohort, born in 1963, will celebrate its sixty-fifth birthday in 2028. The rapid outflow of
baby boomers from the under-sixty-five age group should generate a slowdown in the growth of
the working-age population. These projections also imply that once all the baby boomers have
passed the age of sixty-five, the rate of growth of the working-age population might pick up
again, however slightly. But it will continue to grow much more slowly than in the American
past, and about as slowly as it is growing today in Europe and Japan.

Of course, the population in the fifteen to sixty-four age range is not necessarily the same
as the labor force. More and more of those in their late teens and early twenties will elect to stay
in school. Moreover, the retirement age may rise above sixty-five. Even so, these demographic
forces should lower labor force growth rates and thus dampen forces contributing to the
widening of income gaps for the reasons we have already given in previous chapters.

The Census Bureau’s projections also may have missed something that could make labor
force growth slow down even more. Using direct extrapolations from the recent past, the Census
Bureau estimates that US gross immigration will rise by 51 percent from 2014 to 2030, implying
that the foreign-born share will rise. However, there are many conditions in emigrant source
countries that are likely to check that extrapolation. The determinants of Third World emigration
include each sending country’s cohort size for those in prime migration age, its income per
capita, its education, its poverty rate, the existing share of the sending country’s population that
is already in the host country, and the immigration policies of the United States and other host
countries. Armed with an international panel of migration histories, Timothy Hatton and one of
the present authors generated explanations for recent migration flows, and then used them to
predict immigration up to 2030–34. The recent history suggests that Asia, Latin America, and

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3 Hatton and Williamson 2010.
the Middle East will send fewer migrants (as a percent of the US population) to the United States in the years ahead. Migration from sub-Saharan Africa will grow somewhat, but that region still supplies less than 10 percent of the US total immigration. Hatton and Williamson suggest that immigration to the United States may drop by 6 to 7 percent up to 2030–34. These calculations reinforce our prediction that the US will see slower labor force growth and weaker pro-inequality forces in the near future.

The possibility that the supply of immigrants will decline seems less likely for Europe than for North America. Migration from sub-Saharan Africa and the Middle Eastern war zone is still on the earlier upslope of what Hatton and Williamson call the migration life cycle. Since it is closer to the source, western Europe will feel rising immigrant pressure the most. Western Europe already faces a hard choice in its immigration policy. Any tightening of restrictions would produce more domestic equality only by making average incomes more unequal internationally. The other outcome would be that the rising tide of immigration into Europe would be greater than tighter restrictions can hold back. In this case, greater immigration would be a mechanism generating more income inequality in Europe, thereby making it more like the United States.

Labor Skills: A Rise in US Schooling Growth?

Might working Americans get more schooling in the future? The trends since 2000 suggest as much, since they show an upturn in educational attainment growth after the slowdown in the 1980s and 1990s (figure 8-8, table 8-2, and table 9-2). The share of GDP spent on education also rose by 1.1 percentage points after 2000. Of this, the majority was funded publicly. A

4 For the shares spent on education, see Organization for Economic Cooperation and Development 2013, tables B2.1 and B4.2). Recent media coverage has emphasized the privatization of universities through the elevation of fees, especially in Chile, South Korea, the United Kingdom, and the United States. Offsetting this policy shift in the US, however, has been a rise in the generosity of mean-tested fee remissions, both by the government and top US universities. Meanwhile, primary and secondary education continues to have its slowly expanding budgets funded mainly by taxpayers (Organization for Economic Cooperation and Development 2013, sec. B5).
continuation of this recent trend would serve to slow down the rise of inequality. Its effects will be delayed, of course, since extra student learning today does not affect the distribution of earnings until some years later, when those students participate in the labor market.

The chances of accelerating public commitment to education are a bit better in some other developed countries than they are in the United States. Such has already been the trend for some decades. If this continues, a number of countries will enjoy better equality and growth outcomes than the United States.

Import Competition and International Trade

Trends in the world trade environment seem to be the most predictable source of rising US inequality. Pessimists claim that low-skill jobs in the United States have been lost to foreign trade competition. The pessimists are correct, but we should be clear about the causes of this rising low-skill job competition. What has been destroying American low-skill jobs since the 1970s has not been a shift toward free trade policies. The United States and all other rich countries had already liberalized international trade so much by the 1970s that there was little left to liberalize. While proposals for new trade agreements still draw heated opposition from threatened labor groups, the basic fact remains that the lower-skill jobs in high-income countries are in danger, even though trade barriers fell long ago. The threat to low-skill jobs in US industries producing tradable goods has not been trade policy. Instead, such jobs are being lost to newly exporting countries, particularly in Asia, because these countries are finally repairing their institutions and becoming more competitive.

The leading conqueror of international markets in manufactured goods is China, the new “workshop of the world.” Consumers in Europe, North America, and elsewhere have become accustomed to seeing “made in China” on every manufactured good. China’s rising competitiveness and export growth have been unprecedented. Yet there is no reason to think that China has discovered economic institutions that the United States should emulate, or that China will surpass American GDP per capita any time soon. After all, their comparative advantage in labor-intensive manufactures is eroding and will continue to do so. Indeed, their competitive success has caused wage rates to soar in Chinese industry, thereby reducing their competitive edge over American workers in the labor-intensive industries that produce tradable goods. But marching right behind China are many still-poorer Asian and African countries ready to take
China’s place at the bottom of the low-skilled, labor-intensive end of the industrial ladder. As soon as these latecomers join the modern economic growth club, their rising exports will continue to widen pay gaps within rich countries like the United States.

**Biased Technological Change**

Will technological change continue to favor the skilled and disfavor the unskilled, as it has since the 1970s? Media coverage of automation, robots, and the digital age suggest that the verdict is already in, and that we are doomed to live in a world where a small group of high-skilled winners takes all.

Yet we should reserve judgment on whether to expect the further displacement of low-skilled labor from future exogenous (independently caused) technological changes. We see nothing predictable about future breakthroughs in information technology, for example, that will disfavor the hiring of low-skilled labor more than of skilled labor. Yes, jobs have been lost more rapidly in the lower-skilled and older job categories. Yes, there has been a trend toward outsourcing low-skilled jobs to other countries. Nevertheless, in our view this is a development driven largely by the belated upsurge in foreign productivity and competitiveness, and not simply an exogenous global change in technology. For example, while increased outsourcing since the 1970s can be partially explained by the arrival of new information technologies that allow the long-distance monitoring of Asian production, we think there is a more powerful explanation. Had today’s more stable and efficient institutions prevailed in China a hundred years ago, the production outsourced to China could have been monitored a hundred years ago, even without computers and satellites. Telegraph and telephone could have done the job. Thus, we see part of the apparent laborsaving bias of technological change since the 1970s as an induced response to the international changes just discussed, and part of it as an exogenous—and still hard to predict—determinant of future trends in inequality.

**The State of the Financial Sector**

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6 For an informed weighing of the predictable components of technological change (and factor bias) in the near future, see Gordon (2016, 579-604).
Long-run trends in the inequality impact of the financial sector are hard to predict. It certainly rises in “quantity,” relative to the rest of the economy, as measured by the long upward rise in the wealth–income ratio. Yet its “price,” the rate of return on capital, keeps dropping. We see no long-run rise in the share of the financial sector in the economy, or its effect on overall inequality.

Still, even without an ability to predict the secular trend effect of the financial sector on inequality, we are much more certain that it will contribute to volatile swings in GDP and inequality. Throughout the history of capitalism, the tension between those who trumpet the productivity gains from active, innovative, and free financial markets and those who point to the damage caused by financial booms and busts was present even before the Industrial Revolution. Will the Great Recession of 2008–2011, triggered by an under-regulated financial market, generate a political and institutional response much like that of the 1910s–1970s era? We accept Eichengreen’s prediction that the financial sector will remain under-regulated and unstable. We also accept his reason for believing so: the very success of the Federal Reserve’s vigorous lending, the federal government’s stimulus package, and bailouts in keeping the Great Recession of 2008–2011 so much milder than the Great Depression of the 1930s has sapped political will for tighter regulation. Hence, we, like Eichengreen, foresee recurring rounds of financial booms stoking an inequality rise, followed by financial busts when inequality drops or stops rising.7

Our predictions about income inequality up to 2050 are thus a guarded mixture based on the movements in these six basic forces:

- Unpredictable political shocks, including wars
- A slowdown in growth in the working-age population, which should lower inequality slightly up to 2028
- Renewed growth in labor skills, which should lower inequality slightly

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• Trade competition from lower-wage countries, which should worsen inequality for a long time
• Biased technological change, which we consider largely unpredictable, but partly a by-product of the previous force
• Unpredictable shifts in the finance sector, which should cause swings in inequality

The balance of these forces will fluctuate, creating episodes of rising and falling inequality. American history tells us to expect inequality episodes, not a monotonic march driven by some law of capitalist development.

How Has America’s International Leadership Changed?

What impacted America’s domination as a rich country has been nearly the opposite of what happened to the rich within America. It was during the Great Leveling era that international GDP per capita gaps reached their greatest heights, with the United States at the top, well above Britain. The renewed rise of income inequality in the United States since the 1970s was accompanied by a fall in America’s global advantage in income per capita. The earlier trends in the eighteenth and nineteenth centuries also produced a contrast between the position of this rich country and that of the rich within it: while inequality within the country was rising dramatically over those earlier centuries, our average income advantage over northwestern Europe stayed much the same. Our new history of American incomes allows us to take a fresh look at the history of this country’s leadership.

The Long View: American versus British Incomes since 1700

How American real incomes compare with Britain can now be traced over more than three hundred years. The result is not what previous scholarship has taught.

When an economic history course begins to discuss economic leadership, the curtain rises with Britain’s Industrial Revolution, in which the Americans play little part. By the end of the Industrial Revolution around 1850, Britain, we are told, was the clear GDP per capita leader.8

8 And Britain may have been so even before the Industrial Revolution since recent research has repeatedly lowered the estimated growth rate during the Industrial Revolution, not by cutting
Then, the instructor explains, Britain was awakened by America’s unexpected innovations on display at the Crystal Palace Exhibition in 1851. We are also told that America was starting to catch up. The Anglo-American comparisons for the late nineteenth century tell us that America was overtaking British in manufacturing technology and trade competitiveness. Britain fell farther behind in the two world wars and the first postwar generation, when its industry was seen as particularly anemic and uncompetitive. If one were to bundle these narratives together into a long history of relative income growth, the impression would be that Britain was well ahead up to 1850, but that America has outperformed Britain ever since.

What is missing from this traditional comparison of American and British income per capita is the great depth of America’s three economic crises—the Revolutionary War and early independence, the Civil War, and the Great Depression of the 1930s. In all three, income per capita fell dramatically in the United States relative to Britain.

To see how we have come to our revisionist position, let us again pick up the tool we used earlier in this book when comparing American income per person with the United Kingdom up to 1870. The tool is used to divide each country’s nominal income by the cost of a fixed bundle of consumer goods and services in the same year. This comparison of purchasing power in the same year for all countries makes sense because it stays within the same historical context. It avoids using the cost of bundles from some distant time and place, like that of 1990 international (Geary and Khamis) dollars. When comparing the ability of Americans and others to purchase what they wanted in, say, 1860, this comparison is faithful to the fact that they used candles rather than fluorescent lighting, and ate mutton rather than pizza.

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9 We are referring here to Maddison’s (2010) extensively used database.

10 Here, as in chapter 5, we are applying the same measurement strategy as Ward and Devereux (2003, 2004, 2006), Robert Allen and his coauthors (2010, 2012), and the direct-price comparisons in Feenstra, Inklaar, and Timmer (forthcoming 2015). Ward and Devereux’s comparisons (2003, 840; 2006, 252) also yield a loss of US income per person leadership around 1870, and a peak in that leadership in the 1950s, even though they are using quite-
American average purchasing power relative to Britain can be found in table 10-1 and figure 10-2. For the period 1700–1870, we can compare America and Great Britain in terms of the ability to buy a bundle of staple goods, which Allen has called a bare-bones or bare subsistence bundle. To avoid the danger of viewing all national income in terms of its ability to buy a poor household’s bare-bones market basket, we also display the American and British comparisons in terms of the ability to buy a more respectable living standard. As noted in chapter 3, this second kind of comparison is available just for a few nineteenth-century dates. The price deflator for the years from 1950 on is based on the entire bundle representing all national expenditures on goods and services.

Our history of comparative purchasing power yields some striking results (figure 10-2). In spite of all the familiar stories of overtaking and surpassing Britain, the United States advantage in purchasing power is today no greater than before independence. But things were different in between. The Americans spent most of the intervening three centuries growing faster than Britain, yet suffered those three massive setbacks visible in figure 10-2: the Revolutionary War era, the Civil War decade, and the Great Depression of the 1930s—a depression much deeper in the United States than in Britain.

Postwar Convergence among the Leaders

For the years since the early twentieth century, figure 10-3 compares the purchasing power of average US incomes with those of many other countries, not just the United Kingdom. Even among this larger group, it is clear that World War II created the biggest gap between America and the rest. The exceptional American moment arrived in 1945, at the end of World War II. Equally obvious is the reason why: Asia and Europe were destroyed in that war. Yet across the different data sets.

11 For the relative prices of the respectability bundle of nine goods, see appendix D, table D-4.

12 If the drops in figure 10-2 seem abrupt, note two features of this chart. First, it compresses 312 years into a single graph, so that a drop occurring over a decade (e.g., 1860–70) or a quarter century (1774–1800) might seem almost instantaneous. Second, the first two drops in this American–Britain ratio reflect British progress as well as American decline.
postwar decades, Europe and Japan gained on the United States: France, Japan, Sweden, and the United Kingdom all were catching up on US income levels until the late 1970s. Since then, the gap has been fairly stable.

Were there other countries, not shown in figure 10-3, with higher average incomes than the United Kingdom, or even than the United States? Switzerland, another country not ravaged by World War II, has had a slightly higher average purchasing power than the United States in most years since 1930. As of 1980, Switzerland was still the only rich country richer than the United States, although five other countries (Australia, Canada, Iceland, New Zealand, and Sweden) were ahead of Britain. As of 2011, the residents of Norway and Singapore also had greater average purchasing power than residents of the United States. But the central message from figure 10-3 is this: Japan and western Europe converged on the United States up until the 1970s, although there’s been little convergence since.

One might ask whether different consumer bundles, or even different income concepts, might change this comparative income history. While we do not delve deeply into this question here, we can show that a study based on a different consumer bundle and unskilled wage rates yields a similar leadership history. Figure 10-4 compares the purchasing power of wages over a century and a half, drawing on a study by one of the present authors. Here too, the lead of the United States over the United Kingdom is much the same today as it was before the world wars. Again, those wars, especially World War II, catapulted the United States into exceptional world economic dominance. Overall, the leading countries have been converging since the Second World War, but that convergence has been more dramatic for real wages than for income per capita, especially after the 1970s. The steeper rise in US inequality since the 1970s is quite

13 The Swiss–US comparison is from Maddison (2010) for 1920–49, and Penn World Table 8.1 (http://www.rug.nl/research/ggdc/data/pwt/pwt-8.1 [accessed August 23, 2015]) for 1950–2011. This paragraph’s list of richest countries ignores microstates based on oil or financial havens, such as Bermuda, Brunei, the Emirates, or Hong Kong, though we do include Singapore.

14 What other data-supplying countries had unskilled real wage rates above that of the United Kingdom? Two other migrant-destination countries did: Australia from 1870 (or earlier)
consistent with that result.

Thus, the United States has now fallen back to the moderate-income advantage that it had from colonial times to 1914. The two world wars made America economically dominant in the twentieth century, and since then it has fallen back to the long-run peacetime norm.

Global Economic Leadership

How does this twentieth-century convergence among the rich countries fit into the global history of international per capita income gaps? Is there a hollowing out where the leaders form one rich club, leaving poor countries farther behind? The answer has been yes during the globalization waves of both the nineteenth and twentieth centuries; in 1870–1914 and the last quarter of the twentieth century, gaps opened up between the richer West and the poorer rest. Yet, and as we all know, China and India both began to experience rapid growth in per capita income starting in the 1980s and 1990s. Their populations are so large that any judgment as to whether income gaps between rich and poor countries are shrinking depends mainly on the performance of those two countries. According to that criterion, the early twenty-first century has brought some global convergence: China and India are gaining on the United States.15

Raising the American Income Floor

Is there anything the United States could do to diminish its upward inequality trend without eroding its income leadership? Tying the equality and growth goals together, as we have done implicitly throughout this book, is especially appropriate for the decades since the 1970s. The share of those in poverty is greater in the United States than in most rich countries, even using a common absolute consumption standard to define the same poverty line for all countries.16

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16 This remarkable result has emerged consistently from the Luxembourg Income Study ever since the appearance of estimates by Timothy Smeeding and his colleagues (1990). For
Having greater absolute poverty than many other rich countries while also having a higher average income prompts a search for ways to promote equality without harming growth.

Assembling a Tool Kit for Raising the Income Floor

So what could be done to diminish income inequality without reducing the average income per person? The direct transfer approach would guarantee a minimum income for all and a tax on the rich to pay for it. That direct transfer route, however, probably would reduce work effort, investment, risk taking, and hence GDP, as suggested even by the literature that shows no direct effect on these by the overall welfare state package. One must always keep in mind that the likely “GDP growth free lunch” of the welfare state refers to the whole welfare state package, in which different negatives and positives cancel out. Thus, while direct transfers might be part of a policy package that makes people more equal without harming growth, it’s the rest of the package that is crucial to delivering this result.

History suggests a set of policies consistent with egalitarian growth—a set drawn from the basic causal forces we have identified to explain twentieth-century inequality trends. Among the many policies that could be used to promote income equality without compromising economic growth, we emphasize three that have emerged from our new history of American incomes:

- Improve public education in order to raise the floor on labor skills
- Tax inheritances so as to diminish inequality persistence across generations
- Regulate the financial sector to reduce GDP volatility that taxes the non-rich to bail out the rich, and makes the poor also pay by unemployment

_Improvements in public education._ The obvious way to equalizing incomes while also raising the average is to raise schooling achievement at the bottom by improving public education at the preprimary, primary, and secondary levels. The United States once led in this policy strategy, which allowed this country, along with Canada and Prussia, to pull ahead of

updates and time series on relative poverty rates, see http://www.lisdacenter.org/ (accessed August 23, 2015).

\(^{17}\) For a broader menu of egalitarian-growth options than we give here, see Gordon 2016, 643-52.
other countries in the nineteenth century. Since the 1970s, as we have seen in chapter 9, others have caught up to the United States in cumulative years of schooling, and are ahead of the United States in achievement test scores. All studies of the social returns on early schooling continue to yield high rates of return.

One might infer that the United States should ramp up its public spending on education at the preprimary, primary, and secondary levels. The inference is valid, but history points to some caveats. Do extra public expenditures on mass schooling really keep children in school longer and make them learn more effectively? The answer has clearly been yes, both for the United States and other countries. Extra public money did raise student performance in the United States, at least for those attending secondary school in the 1960s. Since then, however, it is not clear that spending more each year has delivered either extra years of schooling or better learning. The “does money matter” debate remains unresolved for the United States. It is for this reason that we have titled this first tool “improvements in public education” rather than “increased budgets for public education.” Whether or not the improvements involve expanding budgets, there can be little doubt that one way to raise the income floor is to raise the floor on their learning.

Inheritance taxation. This type of taxation continues to be urged as an egalitarian mechanism, and rightly so. Its egalitarian effect is noticeable, especially for the strength of its effect as a commitment to equality of opportunity. Any society wanting to claim that “in our country, individuals make their own way, with their own hard work and abilities,” should favor a high level of inheritance taxation in order to honor that claim. As Andrew Carnegie famously declared,

The parent who leaves his son enormous wealth generally deadens the talents and energies of the son, and tempts him to lead a less useful and less worthy life than he otherwise would. … [W]ealth left to young men, as a rule, is disadvantageous.

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18 For the positive effect of extra public school spending on students up to the secondary-schooling cohorts of the 1960s, see Loeb and Bound 1966. For a still-apt summary of the “does money matter” debate on school finance, see Burtless 1996. For a recent study finding that court-ordered expenditure increases do raise student performance, see Jackson, Johnson, and Persico 2014, 2015.
Recent empirics seem to confirm this “Carnegie effect”: namely, that excusing heirs from taxation has significantly negative effects on growth by cutting their work and income.\(^1^9\)

Three East Asian countries and Germany have some of the world’s highest rates of inheritance taxation plus a more equal distribution of earnings, with no obvious growth disadvantage. The marginal tax rate on inheritances is 50 percent in Germany, Japan, Korea, and Taiwan.\(^2^0\) By contrast, the top rate is only 45 percent in France; 40 percent in the United Kingdom and the United States; followed by lower top rates for Denmark, Finland, Italy, Norway, and Switzerland; and zero in the Netherlands, New Zealand, and Sweden.\(^2^1\)

The historical experience of the leading industrialized countries yields no evidence that higher inheritance taxation or, for that matter, higher marginal tax rates on top wealth have slowed down GDP growth. Indeed, as we noted in chapter 8, Piketty has shown that such top tax rates peaked in the era of fastest growth in GDP per capita. For the United States, those top marginal tax rates were as high as 77 percent on inheritances (1942–1977) and 90 percent on incomes (1952–1964). Experience from the fast-growing postwar years shows no lost GDP from taxing the wealthy heavily.

**Regulation of the financial sector.** We see little reason to doubt that tighter financial regulations would equalize incomes and raise the long-run trend in national income per capita. Recall from chapter 5 that financial development outpaced GDP growth before the Civil War,

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19 For this famous passage, see Carnegie 1901, 54–55. For a study of the different negative effects of inheritance on heirs’ labor income and working hours, and the positive effect on their take-up of early retirement options, see Bø, Halvorsen, and Thoresen 2015, and earlier studies cited there.

20 Note an upcoming test case of East Asian taxation of top inheritances: when Korea’s ailing patriarch Lee Kun-hee of Samsung dies, his heirs may have to pay $6,000 million at the statutory 50 percent inheritance tax rate.

21 Ernst and Young 2013. The Swiss system is administered at the canton level, with rates ranging from 0 to 55 percent. As for top income taxes, our three East Asians have top rates above the world median and are similar to other leading countries. Examples from 2010 were: Japan = United Kingdom = 50 percent; Taiwan = Switzerland = 40 percent (with France at 41 percent); and Korea = United States = 35 percent (KMPG Global 2015).
correlating with rising inequality. Chapters 8 and 9 further noted the tight connection between financial deregulation, higher incomes in the financial sector, and a higher share of the top 1 percent in national incomes. For a verdict tied more closely to regulation itself, note the half century of financial stability and relatively equal incomes ushered in by the 1933 Glass-Steagall legislation setting up closer auditing and an enforced separation of commercial banking from financial investment. Until the repeal of the Glass-Steagall Act in 1999, the only financial crises were the international debt collapse of 1982, and the savings and loan meltdown of the 1980s, both of them caused in part by deregulation. While more income equality is not a direct outcome of tighter financial regulation, the income floor under those near the bottom would be raised by the prevention of unemployment caused by financial busts. What is required is the political will to go beyond the partial regulatory provisions of the Dodd-Frank bill of 2010. Reducing the costs of financial busts at the expense of curbing financial booms or bubbles would help reduce inequality over the long run, just as it did from 1933 into the 1970s. It might also raise income per capita growth by minimizing downward departures from full employment GDP.

No Necessary Conflict between Equalizing Incomes and Raising Them

To lay a factual foundation to the argument for raising the American income floor, we need to sweep away the remnants of an older view that policies cannot promote both equality and growth. The older view assumed an “efficiency-equity trade-off.” If such were true, then nothing could be done to foster economic growth without the collateral damage of greater inequality, or greater equality without the collateral damage of less growth.

History does not confirm such a trade-off. To remember why, first consider a simple point about the political process—one that we noted long ago. A dominant historical outcome has been that vested interests have blocked initiatives that would promote growth and/or equality. A conspicuous example is the suppression of mass public schooling—an investment that clearly promotes both equality and growth. Our second consideration comes from the

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22 Lindert and Williamson 1985, 369–70.
23 For a summary history of the prevalence of vested interest obstructionism and the power of “extractive institutions,” see Acemoglu and Robinson 2012; Engerman and Sokoloff 2012.
24 On the blockage of efficient and egalitarian education, see Lindert 2004, chap. 5; Go and
numbers: history does not record any correlation—negative or positive—between income equalization and economic growth, either in our new American history over the past 360 years or world history over the past 150 years. The correlation does not emerge, regardless of whether “growth” means the GDP per capita growth rate or its absolute level, and regardless of whether “equalization” means the share of social spending in GDP, some measure of policy-induced redistribution, the level of pre-fisc income inequality before taxes and transfers, or even the rate of change in any of these.

Economists have explored the effects on income per capita growth of three kinds of egalitarian variables: tax-based social spending and its composition; fiscal redistribution, measured by the gap between pre- and post-fisc inequality; and the greater equality of pre-fisc incomes before taxes and transfers. An empirical literature using contemporary world evidence finds that the growth effect of equalizing incomes is not significant. History agrees. American experience does not reveal any clear effect on GDP of greater tax-based social spending or more progressive redistribution from rich to poor. Indeed, recent analyses suggest that greater pre-fisc equality has a positive effect on growth. 25 This result supports the argument that egalitarian investments in human capital simultaneously achieve more equality and more growth. While these statistical results can be and have been debated, they do not support any claim that equalizing incomes must lower growth. American income history offers no support either.

Lindert 2010; Ramcharan 2010.

25 For important results on types of expenditure and taxation, see Ostry et al. 2014; Kneller, Bleaney, and Gemmell 1999; Gemmell, Kneller, and Sanz 2011, 2014a, 2014b. These studies find that public investments, including human investments, financed by indirect taxes have positive growth effects, while pure transfers financed by direct taxation have negative effects, without any overall significant effects of just larger government budgets. For a summary and extension of earlier tests, see Lindert 2004, chaps. 10 and 18. On the growth effects of greater fiscal progressivity, Ostry, Berg, and Tsangarides 2014 get a near-zero result. On a positive growth effect of more equality in pre-fisc incomes, see Easterly 2007; Ostry, Berg, and Tsangarides 2014.
If there were any fulcrum at which historical insight might be applied to move inequality, it would be political. As we have said, no nation has used up all its political opportunities for leveling income without harming economic growth. Improving education, taxing large inheritances, and taming financial instability with regulatory vigilance—the opportunities are there, like hundred dollar bills lying on the sidewalk. Of course, the fact that they are still lying there testifies to the political difficulty of bending over to pick them up.
Figure 5-2. Real GDP per Capita - Britain and America 1650-1870
Figure 5-3. Income Inequality in America, Britain, and the Netherlands, 1732-2010
Figure 5-4. Top One percent’s Share of Income in Four Countries in Recent Centuries
Figure 7-2. Black / White Ratios of Earnings per Worker and of Income per Capita, 1774-2010
Figure 8-3. Relative Salaries of Financial Occupations, With Some Correlates, 1909-2006
Table 10-1.  American Real Income per Capita, Relative to Great Britain, 1700-1870
Purchasing power of American income per capita, relative to Great Britain = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>(a) Using a &quot;bare-bones&quot; consumer price deflator, Philadelphia</th>
<th>(b) Using a &quot;respectability&quot; consumer price deflator, Pennsylvania and Massachusetts</th>
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<td>2010</td>
<td></td>
<td>130</td>
</tr>
</tbody>
</table>

Sources and notes to table 10-1: The figures for 1700–1870 use five-year averages for prices and British national product, as consistently as the data allow. Accordingly, the numbers here will differ from those based on the longer-period averages in table 3-6 and figure 3-3.

As in chapters 3 and 5, the sources for the years up through 1870 are as follows:
Nominal national product up through 1870 = our own estimates for America, and for Great Britain, Broadberry et al. 2011, 2015. For 1700–1774, see table 3-6. For 1850–1870, see tables 5-1, 5-2, and 6-1. The population estimates are from Carter et al. 2006.
The individual series are derived as follows:
(b) The respectability price series is based on the consumer expenditure weights given for Great Britain 1801–3, in Broadberry et al. 2015, 339. It refers to a budget about triple that of the bare-bones budget suggested by the same authors, yet still refers to somebody in the low-skilled ranks, near the poverty line. From that bundle we were able to use the expenditure weighted prices for nine commodities: beans, beef, bread, butter, candles, cheese, eggs, linen cloth, and soap for the benchmark years 1800, 1850, and 1860 only. The British prices used in comparing
the costs of the respectability bundle are those supplied by Clark’s file of English prices, 1209–1914, in http://gpih. The American prices are a mixture of Philadelphia prices (beef, bread, butter, and soap) and Massachusetts prices (the other five commodities, with adjustments for linen cloth). See the file “Respectability Bundle Costs Am-Br,” http://gpih.
(c) For 1950–2010, we use the expenditure-based income measure (cgedp) per capita from Penn World tables 8.1, http://www.rug.nl/research/ggdc/data/pwt/pwt-8.1 (accessed April 17, 2015), and our ratios refer to the United Kingdom, not to Great Britain.

Figure 10-1: The 1774 population of fifteen- to sixty-four-year-olds is our own estimate as described and documented in chapters 2 and 3. The numbers for the 1800–2000 censuses are from Carter et al. 2006. The projections of the age sixteen to sixty-four population from 2010 to 2050 are from Statistical Abstract of the United States 2012.

Figure 10-2: For 1700–1870, series (a) and (b), see the notes to table 10-1.
(c) For 1950–2011, we have used the expenditure side, purchasing power parity measures of GDP per capita from Penn World Tables 8.1, http://www.rug.nl/research/ggdc/data/pwt/pwt-8.1 (accessed April 17, 2015). For 1920–50, lacking any Penn World tables for that era, we spliced Maddison’s estimates onto the Penn World tables estimates at 1950. Our 1920–1949 figures thus differ from Maddison’s because ours use updated price weights based on 2005 prices.

Figure 10-3: Same as for series (c) in figure 10-2.

Figure 10-4: Williamson 1995, tables A1.1–A2.3. The cost of living deflators are presented and documented in his tables A3.1–A3.4.
Figure 10-1. Growth in the Working-Age Population, United States 1774-2050
Figure 10-2. American Real Income per Capita, Relative to Britain, 1700-2011
Figure 10-3. American Income Leadership and Convergence, 1920-2011
Figure 10-4. Real Wages Relative to the United Kingdom, 1830-1988
### Table 1. American Social Table for 1774

<table>
<thead>
<tr>
<th>Group definition</th>
<th>New</th>
<th>Middle</th>
<th>South</th>
<th>Col’s</th>
<th>Ave. income per HH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main cities (Bos, NYC, Phil, Charleston)</strong> --</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All occupational groups, urban</td>
<td>2,037</td>
<td>9,385</td>
<td>3,696</td>
<td>15,118</td>
<td>343  650  1,670  858</td>
</tr>
<tr>
<td>Officials, titled, professions</td>
<td>73</td>
<td>418</td>
<td>882</td>
<td>1,374</td>
<td>2,617  2,438  4,840  3,990</td>
</tr>
<tr>
<td>Merchant &amp; shopkeepers</td>
<td>405</td>
<td>2,387</td>
<td>931</td>
<td>3,723</td>
<td>531  1,280  585  1,025</td>
</tr>
<tr>
<td>Artisans (excl. construction)</td>
<td>273</td>
<td>1,514</td>
<td>299</td>
<td>2,086</td>
<td>403  513  612  512</td>
</tr>
<tr>
<td>Construction</td>
<td>198</td>
<td>686</td>
<td>216</td>
<td>1,100</td>
<td>423  555  673  554</td>
</tr>
<tr>
<td>Farm operators or farm LF</td>
<td>8</td>
<td>255</td>
<td>385</td>
<td>647</td>
<td>345  351  2,009  1,336</td>
</tr>
<tr>
<td>Unskilled male workers</td>
<td>164</td>
<td>860</td>
<td>138</td>
<td>1,162</td>
<td>232  266  321  268</td>
</tr>
<tr>
<td>Unskilled female workers</td>
<td>41</td>
<td>236</td>
<td>88</td>
<td>365</td>
<td>39  43  43  42</td>
</tr>
<tr>
<td>Male HHs w/wealth, no occ state</td>
<td>105</td>
<td>1,140</td>
<td>564</td>
<td>1,808</td>
<td>141  159  235  182</td>
</tr>
<tr>
<td>Female HHs w/wealth, no occ sta</td>
<td>69</td>
<td>231</td>
<td>193</td>
<td>493</td>
<td>135  204  384  265</td>
</tr>
<tr>
<td>Zero-wealth free HHs</td>
<td>701</td>
<td>673</td>
<td></td>
<td>1,374</td>
<td>44  56  50</td>
</tr>
<tr>
<td>Slaves, retained earnings</td>
<td>987</td>
<td>987</td>
<td></td>
<td>987</td>
<td>280</td>
</tr>
</tbody>
</table>

| Rural and towns --                                                              |     |        |       |       |                    |
| All occup. groups, town-rural                                                    | 127,733 | 122,892 | 236,526 | 487,150 | 254  249  373  310 |
| Officials, titled, professions                                                    | 536 | 1,353  | 6,823  | 8,712  | 1,348  1,596  2,316  2,145 |
| Merchant & shopkeepers                                                           | 2,560 | 6,350  | 3,134  | 12,044 | 524  428  508  469 |
| Artisans (excl. construction)                                                    | 6,524 | 17,516 | 4,819  | 28,859 | 377  257  322  295 |
| Construction                                                                     | 3,640 | 10,381 | 2,954  | 16,975 | 387  294  347  324 |
| Farm operators - top 2% in prope                                                 | 1,132 | 426    | 2,025  | 3,584  | 631  817  1,463  1,124 |
| Farm operators - next 18%                                                        | 10,192 | 3,835  | 18,226 | 32,253 | 449  448  672  575 |
| Farm operators - 40th-79th%                                                      | 22,648 | 8,523  | 40,503 | 71,674 | 382  335  544  468 |
| Farm operators - 0-39th%                                                         | 22,648 | 8,523  | 40,503 | 71,674 | 333  282  384  356 |
| Farm operators - all, New York                                                    | 10,726 | 10,726 |       | 10,726 | 391  391  |
| Unskilled male workers                                                           | 2,559 | 7,141  | 2,297  | 11,997 | 301  203  278  238 |
| Unskilled female workers                                                         | 202  | 416    | 159    | 777    | 43  43  43  43 |
| Male HHs w/wealth, no occ state                                                  | 20,644 | 32,433 | 6,922  | 60,000 | 132  114  122  |
| Female HHs w/wealth, no occ sta                                                  | 756  | 2,003  | 7,722  | 10,481 | 122  209  213  206 |
| Zero-wealth free HHs                                                             | 32,911 | 6,948  | 0      | 39,860 | 39  37  |
| MD white male servants                                                           | 10,810 | 10,810 |       |       | 153  153  |
| MD white female servants                                                         | 690  | 690    |       |       | 153  153  |
| Slaves, retained earnings                                                        | 781  | 6,317  | 88,938 | 96,036 | 169  124  117  118 |
| Free HHs with property                                                           | 95,377 | 117,353 | 139,783 | 352,513 | 256  285  587  383 |
| All free households                                                              | 128,989 | 124,974 | 139,783 | 393,746 | 255  277  392  327 |

(76 groups in all) Property income share (%) | 14.7  | 23.5  | 29.0  | 24.6 |
| Gini, all HHs                                                                     | 0.367  | 0.376  | 0.464  | 0.441 |
| Gini, free HH's                                                                  | 0.341  | 0.409  |

<table>
<thead>
<tr>
<th>Group definition</th>
<th>Numbers of wage-salary data</th>
<th>Numbers of probates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New</td>
<td>Middle</td>
</tr>
<tr>
<td><strong>Main cities (Bos, NYC, Phil, Charleston)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All occupational groups, urban</td>
<td>38</td>
<td>35</td>
</tr>
<tr>
<td>Officials, titled, professions</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Merchant &amp; shopkeepers</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Artisans (excl. construction)</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Construction</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Farm operators or farm LF</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unskilled male workers</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Unskilled female workers</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Male HHs w/wealth, no occ state</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Female HHs w/wealth, no occ sta</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Zero-wealth free HHs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Slaves, retained earnings</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Rural and towns --</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All occup. groups, town-rural</td>
<td>63</td>
<td>22</td>
</tr>
<tr>
<td>Officials, titled, professions</td>
<td>48</td>
<td>9</td>
</tr>
<tr>
<td>Merchant &amp; shopkeepers</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Artisans (excl. construction)</td>
<td>0</td>
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<tr>
<td>Construction</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Farm operators</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unskilled male workers</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Unskilled female workers</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Male HHs w/wealth, no occ state</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Female HHs w/wealth, no occ sta</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Zero-wealth free HHs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MD white male servants</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MD white female servants</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Slaves, retained earnings</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total direct observations</strong></td>
<td>101</td>
<td>57</td>
</tr>
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</table>