The Fall and Rise of Income Inequality in the United States: Economic Trends and Political-Economy Explanations

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ABSTRACT

Income inequality in the United States decreased dramatically between 1928 and 1944. This equalization was driven largely by policy changes affecting education, labor relations and wage-setting institutions, financial regulation, and taxes. Many of these relatively egalitarian policies were reduced or reversed in the 1970s and 1980s. When combined with an apparent rapid increase in the demand for highly skilled labor and changes in the structure of households, these policy reversals caused income inequality to rise rapidly. By some measures, the level of inequality is now as great as or greater than the level of a century before. However, the increase in inequality has been far from uniform. Those at the top of the income distribution have pulled away from those in the middle, but the middle and lower income groups have experienced similarly mediocre income growth. Also, despite the rise in *overall* income inequality, women have improved their relative standing substantially since the 1970s, and African Americans have made some progress, especially in the South. This paper contains a review of the facts and economic explanations, along with some thoughts on the political-economy environment in which these changes have taken place. I make the case that race is the most important of the many political factors that have contributed to the increase in inequality in recent decades: Many whites, especially in the South, reacted to the Civil Rights movement by switching their allegiance to the Republican Party, and this has contributed to the adoption of more anti-egalitarian economic policies.

The Fall and Rise of Income Inequality in the United States: Economic Trends and Political-Economy Explanations

The distribution of income in the United States has become dramatically more unequal since the 1970s. This trend is certainly one of the most important economic stories of our time, and arguably *the* most important.[1] This "Great Divergence"[2] has continued for so long that most Americans alive today have no memory of a time when income inequality was not increasing. However, the U.S. economy also experienced a rapid *equalization* in the 1930s and 1940s. This "Great Compression" or "Great Convergence" was even more dramatic than the disequalization of the last 40 years. Consequently, if we are to develop a complete understanding of the evolution of the U.S. income distribution, we must analyze the earlier equalization, as well as the more recent disequalization.

I begin this paper with a review of the facts of the changes in income inequality over the last century in the United States. I will then discuss and evaluate the economic explanations for those trends. However, the *economic* trends cannot be understood fully without reference to *political* factors. I argue that both the Great Compression and the Great Divergence are primarily the result of deliberate political choices. Toward the end of the paper, I will review the

[1] Survey evidence suggests that most Americans are aware of the increase in income inequality. Remarkably, however, despite the tremendous size of the disequalization, it appears that a substantial minority is unaware of the change. Bartels (2005) reports on data from the 2002 National Election Study, in which about one-fourth of respondents said that income differences had stayed about the same, or had shrunk. Two recent surveys by Michigan State University's State of the State Survey (SOSS) find similar results. In the middle of 2010 and again at the end of 2014, SOSS interviewers asked a random sample of Michigan adults what had happened to the income gap between high-income people and low-income people since 1980. In 2010, 15.7 percent said the gap had remained about the same, and 13.2 percent said it had decreased. In 2014, 16.7 percent said the gap had remained about the same, and once again 13.2 percent said it had decreased.

[2] The phrase "Great Divergence" was popularized by Krugman (2007) and Noah (2012).

political and institutional forces that have shaped the changes in income inequality. I argue that race is the most important of the many political factors that have contributed to the Great Divergence of the last 40 years: Many whites, especially in the South, reacted to the Civil Rights movement by switching their allegiance to the Republican Party, and this has contributed to the adoption of more anti-egalitarian economic policies.

I. Trends in Income Inequality in the United States

The best starting point for a discussion of long-term trends in U.S. income inequality is the paper by Piketty and Saez (2003). Their original paper contains data through 1998, but they have updated the data annually, so that we now have a complete series covering a full century, from 1913 to 2015.[3] Piketty and Saez use tax-return data, which makes it necessary for them to use a variety of adjustments and imputations. The use of tax-return data also means that they focus exclusively on the income shares of the top 10 percent of the income distribution, since the coverage of the federal individual income tax was limited until the Second World War.[4] These limitations are offset by the advantage of being able to produce extremely detailed estimates for the income shares of the very top income strata, up to the top one-hundredth of one percent.

Some of the trends in income shares derived by Piketty and Saez are shown in Figure 1. Reading from the top of the figure to the bottom, Figure 1 shows the income shares of (a) the top five percent of U.S. households, (b) the top one percent, (c) the top one-tenth of one percent, and

[3] The updated series can be found at http://eml.berkeley.edu/~saez/. Due to data limitations, some of their series begin in 1917.

[4] Since Piketty and Saez use the tax unit as the unit of account, their data do not correspond precisely to Census data, for which the household is the unit of account. (The vast majority of households are a single tax unit, but an increasing proportion of households do not correspond to a particular tax unit.) However, the trends are similar.

(d) the top one-hundredth of one percent. Thus, (b) is a subset of (a), (c) is a subset of (b), and (d) is a subset of (c).

<Figure 1 here>

The data depicted in Figure 1 reveal that the shares of the top groups fell sharply in the early 1940s. The share of the top five percent plummeted from 31.3 percent of total income in 1940 to 21.8 percent in 1944. In that same four-year span, the share of the top one percent fell from 15.7 percent of total income to 10.5 percent.[5]

After the Second World War, the shares of the top groups continued to fall (although at a much slower pace) until the early 1970s. Then, in the late 1970s and early 1980s, the shares of the top groups surged upward almost as dramatically as they had fallen in the early 1940s. In the most recent 10 years, the share of the top one percent has been in the vicinity of 18 percent of total income, which is higher than the average in the first 15 years shown in Figure 1. Thus by some measures, the income distribution in the United States today is more unequal than it was a century ago.

The disequalization that has occurred since the 1970s has been extremely top-heavy. A majority of the gains in share for the top five percent accrued to the top one percent, a majority of the gains in share for the top one percent accrued to the top one-tenth of one percent, and about half of the gains in share for the top one-tenth of one percent accrued to the top one-hundredth of one percent.

[5] The rapid *decrease* in the share of the top five percent from 1940 to 1944 is the mirror image of the rapid *increase* in the share of the bottom 95 percent. At the same time, mobilization for the Second World War led to dramatic increases in aggregate income. Since the bottom 95 percent gained a greatly increased share of total income, and since total income was rising rapidly, it follows that the standard of living of the bottom 95 percent of Americans showed exceptional improvement during this period.

The magnitude of the Great Divergence of the last 40 years is truly remarkable. According to the data compiled by Piketty and Saez, the income share of the top one percent has increased from about eight percent of total income in the 1970s to about 18 percent of total income in recent years.[6] When this change in shares is applied to the total amount of personal income in the United States, it amounts to a redistribution on the order of magnitude of *one trillion dollars per year*. In other words, if the total income of today's U.S. economy were distributed in the same manner as it had been distributed in the 1970s, the incomes of the top one percent would be on the order of $1 trillion per year less than they are now, and the incomes of the bottom 99 percent would be on the order of $1 trillion per year more than they are now.

The data on top income shares compiled by Piketty and Saez have performed a useful service by helping to raise public awareness of the Great Divergence. However, due to their emphasis on the groups at the top of the income distribution, and especially on the top one percent and its components, one could easily conclude that few important changes have occurred among the bottom 90 or 95 percent of households. However, this is not the case.

Figure 2(a) uses Census data from Semega, Fontenot, and Kollar (2017) to show the levels of inflation-adjusted income at different percentiles of the household income distribution, from 1973 to 2016.

<Figure 2(a) here>

Figure 2(a) shows that, just as the 99th percentile pulled away from the 95th percentile since the 1970s, so the 95th, 90th, 80th, and 60th percentiles pulled away from those further down

[6] Figure 1 is based on calculations by Piketty and Saez that exclude capital gains. When capital gains are included, the share of the top one percent rises to around nine percent of total income in the 1970s, and to about 20 percent in recent years. It is not surprising that these income shares are larger when we include capital gains, since capital gains are highly concentrated at the top of the income distribution.

in the income distribution. In the years shown in Figure 2(a), the household at the 95th percentile experienced a real income gain of 61 percent, and the real income of the household at the 90th percentile rose by 52 percent. These gains compare with gains of 39 percent for the household at the 80th percentile, 24 percent for the household at the 60th percentile, and 16 percent for the median household. For the households at the 40th, 20th, and 10th percentiles, the real income gains from 1973 to 2016 were about 12 percent, 13 percent, and 7 percent.[7]

Figure 2(a) shows the inflation-adjusted *income levels* for households at selected percentiles of the income distribution. The trends in *income inequality* may be seen more clearly in Figure 2(b), which shows the 95/50 Ratio (*i.e*., the ratio of the income of the household at the 95th percentile to the income of the household at the 50th percentile) and the 50/10 Ratio.[8] Figure 2(b) shows that the income of the median household increased slightly when compared with the income of the household at the 10th percentile, so that the 50/10 Ratio increased somewhat. By 2016, the 50/10 Ratio was about eight percent larger than it had been in 1973. On the other hand, the 95/50 Ratio grew fairly steadily throughout the entire 44-year period shown in Figure 2(b). By 2016, the 95/50 Ratio was about 39 percent larger than it had been in 1973.

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[7] The data shown in Figure 2(a) are from Semega, Fontenot, and Kollar (2017), the annual Census publication that is the best-known source for information on the U.S. income distribution. The data shown there are adjusted for inflation on the basis of the version of the Consumer Price Index known as the CPI-U-RS. (The Consumer Price Index is calculated by the Bureau of Labor Statistics.) According to this measure, the overall price level in the U.S. increased by a factor of about 4.83 from 1973 to 2016. However, over the same time period, the Personal Consumption Expenditures deflator (another widely used index, calculated by the Commerce Department's Bureau of Economic Analysis) increased by a factor of only 4.37. Thus the PCE deflator suggests that real incomes have not been eaten away by inflation to the same extent as is suggested by the CPI-U-RS. If we were to apply the PCE deflator to the nominal income levels from the Census report, every group would have a somewhat larger amount of income growth than the amount mentioned in this paragraph.

[8] Whereas the changes in the *levels* of real income will change when a different price index is used, the income *ratios* are invariant with respect to the choice of price index.

<Figure 2(b) here>

Thus during the Great Divergence, those at the very, very top of the income distribution pulled away from those at the very top, those at the very top pulled away from those at the top, and those at the top pulled away from those in the middle. On the other hand, those in the middle of the income distribution have gained only slightly when compared with those at the bottom.

We have just shown that the Great Divergence has extended through much of the income distribution. Similarly, the Great Compression did not merely affect the relationship between the top income groups and the rest of the income distribution. Goldin and Margo (1992) show that the relative gaps in wages between the 90th, 50th, and 10th percentiles all plummeted from 1940 to 1950. Although the data used by Goldin and Margo are for wages, rather than income, they probably present a fairly accurate picture of what was happening with incomes. Budd (1967) pieces together data on the U.S. income distribution in the early 20th century from a wide variety of sources, and finds evidence of a substantial equalization of incomes among the four lowest quintiles, especially between 1941 and 1947.

II. Cross Currents: Economic Progress for Women and African Americans

Since women and African Americans have long been disproportionately represented in the lower rungs of the income and earnings distributions, it would be natural to imagine that they might have been disproportionately harmed by the Great Divergence. It is perhaps surprising that this did not occur. Thus before we dig more deeply into the causes of the Great Compression and the Great Divergence, we will discuss the gaps between men and women, and the gaps between whites and blacks.

A. Economic Progress for Women During the Great Divergence

A century ago, women had very low rates of labor-force participation, and when they did work, they were paid much less than their male counterparts. Goldin and Polachek (1987) report that the female-male earnings ratio for full-time workers stood at 46.3 percent in 1890. (Remarkably, this was a substantially higher ratio than those observed early in the 19th century, some of which were below 30 percent.) The ratio rose to 56 percent by 1930, but it did not change greatly in the 40 years after that. However, changes were afoot that would eventually narrow the gender earnings gap substantially. One of the most important of these changes was the increase in female labor-force participation. In the late 19th century, the labor-force participation rate for women was less than 20 percent. However, it rose steadily until the 1940s, after which the increase accelerated. (See Goldin (1990) and Costa (2000).) A stronger attachment to the labor force would ultimately lead to an increase in the rate of return to labor-market experience for women. (See O'Neill and Polachek (1993).)

Also, although women lagged well behind men in college graduation rates in the 1920s, 1930s, and 1940s, the college gap between women and men began to decrease after 1947. Since the late 1970s, women have received more college degrees than men. (See Goldin, Katz, and Kuziemko (2006).) In addition, occupational segregation has decreased substantially, especially for women with higher levels of education. (See Blau, Brummund, and Liu (2013).) Finally, although discrimination is difficult to measure, it appears that gender discrimination in the labor market has decreased. (For one of the few direct demonstrations of reduced discrimination, see the paper by Goldin and Rouse (2000) regarding discrimination in auditions for professional orchestras.)

As a result of these changes, women made substantial progress relative to men, despite

the overall increase in inequality during the Great Divergence. Figure 3 shows that, for full-time, year-round workers, the median female-male earnings ratio grew very rapidly in the late 1970s and throughout the 1980s, and continued to grow thereafter. Blau and Kahn (1997) use the phrase "swimming upstream" to characterize the remarkable ability of women to close the gender wage gap, at the same time as an economy-wide increase in income inequality. (See also Blau and Kahn (2000) and O'Neill and Polachek (1993).) By 2016, the median gender earnings ratio stood at an all-time high of 80.5 percent.

<Figure 3 here>

B. Economic Progress for African-Americans during the Great Divergence

In the early 20th century, African Americans were concentrated in the agricultural sector in the South. Their median educational attainment was far less than that of whites. In addition, most whites openly approved of labor-market discrimination against blacks.[9] Thus it is probably not surprising that, in 1939, mean weekly earnings of black men were only 47 percent of mean weekly earnings for white men, and mean weekly earnings for black women were only 41 percent of mean weekly earnings for white women. (For discussion, see Jaynes (1990).)

However, a number of factors led to substantial improvement in the economic status of blacks. As we have already seen, the Great Compression of the 1940s boosted the incomes of those at the bottom of the economic ladder. This helped low-income blacks, as well as low-

[9] Schuman, Steeh, and Bobo (1985) report the responses to a question in a 1944 survey by the National Opinion Research Center. When asked "Do you think Negroes should have as good a chance as white people to get any kind of job, or do you think white people should have the first chance at any kind of job?", 55 percent of all white Americans and 80 percent of white southerners answered "white people first."

income whites. Moreover, northward migration provided African Americans with access to employment in the North, especially in the booming manufacturing sector. Also, educational attainment for African Americans was increasing, due in part to a boost from the 5000 schoolhouses built for southern rural black children by the Chicago philanthropist Julius Rosenwald.[10] In addition, the Civil Rights movement helped to reduce further the barriers to economic opportunity for blacks. Finally, survey evidence suggests that prejudice against blacks has decreased over time, although prejudicial attitudes are still widespread, and more common in the East South Central and South Atlantic Census Divisions than in other parts of the country.[11]

The black/white annual earnings ratio for men rose from 44 percent in 1939 to 66 percent in 1979, and it rose even more dramatically for women. By 1979, black women were essentially at parity with white women in terms of labor-market earnings. (For discussion, see Donohue and Heckman (1991), Freeman, *et al.* (1973), Jaynes (1990), and Reardon (1997).)

We have seen that the Great Divergence has harmed the relative economic standing of those in the bottom half of the income distribution. However, this has not led to a major reversal of the economic gains of African Americans. When we compare the earnings of the median worker, black women have lost some ground relative to their white counterparts since the 1970s, but the earnings of black men have inched upward fairly steadily, when compared with the earnings of white men. As shown in Figure 4(a), by 2016, for full-time, year-round workers, the median African-American woman earned about 86 percent as much as the median white woman,

[10] See Aaronson and Mazumder (2011).

[11] Charles and Guryan (2008) provide a wealth of information on racial attitudes, using responses to the General Social Surveys from 1972 to 2004. They use these responses to construct a measure of prejudice, which is used to test the predictions of Becker's (1971) theory of discrimination. Charles and Guryan find strong support for Becker's model. Their estimates suggest that one-fourth of the racial wage gap is directly due to prejudice.

and the median African-American man earned about 79 percent as much as the median white man.

<Figure 4(a) here>

These figures for earnings hide the fact that full-time employment is less common for blacks than for whites. (See Brown (1984).) Nevertheless, as shown in Figure 4(b), the black-white ratio for median household income is higher now than it was in the late 1970s, at the beginning of the Great Divergence. Black household incomes performed relatively well in the 1990s, and the black-white ratio reached its all-time high in 2000. Although the gap has widened in the 21st century, the ratio in 2016 was still about 63 percent for the nation as a whole, and 65 percent in the South Census Region. These household income ratios compare with ratios in 1979 of 59 percent nationwide, and 57 percent in the South.

<Figure 4(b) here>

Women "swam upstream" since the 1970s, despite the strong currents of the Great Divergence. Figures 4(a) and 4(b) show that African Americans also swam upstream until 2000, although they have fared somewhat less well in the 21st century. Although it could be said that African Americans ceased to swim upstream after 2000, they certainly were not swept out to sea; their relative economic position is still better than it was a few decades ago.

Figure 4(b) shows that, in the early 1980s, the black-white ratio for median household income was lower in the South than in the nation as a whole. That relationship was reversed by the middle 1990s, and the black-white ratio has remained higher in the South than in other regions ever since. Later in the paper, we will have more to say about racial issues, and about differences between the South and the rest of the country.

Although the changes in the gaps between men and women, and between whites and

blacks, are prominent features of American economic history, they do not provide us with an explanation of the Great Divergence. To understand the rise of income inequality since the 1970s, we will have to look elsewhere. We begin by looking at the economic causes of the Great Compression of the 1930s and 1940s. As we shall see, the Great Divergence stemmed largely from the reversal or reduction of the policies that fueled the Great Compression.

III. Economic Explanations of the Great Compression

A large number of economic explanations have been offered in an effort to understand the trends in income inequality, and we will consider many of these. In my view, all of the popular explanations have at least some validity. However, each explanation should be viewed as referring to an "all-else-equal" phenomenon. Each explanation describes a phenomenon that has the *potential* to push the overall degree of income inequality in a particular direction, but each could possibly be offset by any of several other factors. The story told here is definitely *not* one of historical determinism or inevitability.

As we go along, it will be useful to keep two things in mind. First, the best explanations are the ones that can account not only for the Great Divergence, but also for the Great Compression that preceded it. Second, the best explanations will need to deal with the fact that other developed countries, such as France, Germany, and Japan, have not disequalized nearly as much as the United States in recent decades, even though their economies bear many similarities to the U.S. economy. (For discussion, see Alvaredo, Atkinson, Piketty, and Saez (2013).)

By the end of this discussion, we will see that while many *economic* explanations contribute to our understanding, they will leave many questions unanswered unless they are augmented by *political* explanations. The dramatic changes in income distribution over the last

century did not just happen as a result of mysterious economic forces. To a very large extent, the changes were a direct result of policy changes. Just as the Great Compression is what Americans voted for when they elected Franklin Roosevelt in 1932, 1936, 1940, and 1944, the Great Divergence is what Americans voted for when they elected Ronald Reagan in 1980 and 1984. (Below, I will address the question of whether Americans understood what they were voting for.)

Education Wins the Race with Technology

I begin the discussion of the causes of the Great Compression with changes in American education. All else equal, an increase in education will tend to reduce wage differentials, as the increased supply of more highly skilled workers puts downward pressure on the wages of those at the top of the skill distribution, and the decreased supply of less-skilled workers puts upward pressure on the wages of those at the bottom.

Educational attainment in the United States increased with stunning speed for the first three-quarters of the 20th century, and the evidence suggests that this contributed substantially to the Great Compression. The high-school graduation rate increased from about nine percent in 1910 to about 70 percent in 1960.[12] Like many other changes discussed here, the rapid increase of high-school graduation rates in the early and middle 20th century did not happen by accident. The rapid rise in attainment of a high-school diploma was the result of a nationwide movement at the grass-roots level. Compulsory attendance laws helped, but Goldin (1999) argues that an even more important source of change was the adoption of "free-tuition laws," under which school

[12] In addition, the length of the elementary and secondary school year increased substantially. The nationwide average number of school days per year rose from 131 in 1882, to 144 in 1900, to 162 in 1920, to 178 in 1949. Thus, in addition to the fact that the Great Compression was stimulated by the increase in the *quantity* of high-school graduates, it is likely that an increase in the *quality* of elementary and secondary education also played a role.

districts were compelled to provide funds for secondary schools. Goldin also documents the transformation of American secondary education from a system with an emphasis on college preparation to a potentially terminal program, with greatly increased emphasis on acquisition of skills that could be directly useful to employers.[13] As a result, by the 1930s and 1940s, millions of Americans had acquired enough skills to compete for jobs above the rank of laborer. The G.I. Bill of 1944 then provided the impetus for a surge in the college-educated population.

While the *supply* of relatively skilled workers was increasing rapidly in the first half of the 20th century, it does not appear that the *demand* was tilting in favor of highly skilled workers. The "American system" of interchangeable parts and assembly-line technology generated large demands for workers of moderate skill. The Second World War created a tremendous increase in the demand for relatively less-skilled labor.

Thus, in the early and middle decades of the 20th century, the U.S. economy experienced a rapid increase in the supply of relatively highly skilled workers (which tends to reduce wage differentials, all else equal), without a rapid increase in the demand for relatively highly skilled workers (which would have pushed wage differentials in the opposite direction, all else equal). Putting these two forces together, the victory of education over technology was a major force for reduced income inequality.

Wage-Setting Institutions

The revolutionary changes in access to secondary education described above are among the most important achievements of the Progressive Era. These educational changes sprang from the

[13] Goldin explicitly makes the connection between the push for greater educational opportunities and the desire for a more equal distribution of income-- the first word in the title of her 1999 paper is "egalitarianism".

same liberalizing, democratizing political forces that led to other changes in institutions and policies from that era, such as antitrust legislation, direct election of U.S. Senators, and suffrage for women. The common theme of these achievements is that they resulted from an effort to equalize political participation and economic opportunity. And yet, by the 1930s, earnings and incomes remained much more unequally distributed than they would be by 1950. The combination of a rapidly expanding supply of skilled labor with much less rapidly expanding demand for skilled labor set the stage for the Great Compression, but the changes in supply and demand did not *guarantee* that earnings and incomes would equalize. Changes in wage-setting institutions would have to occur before the Great Compression could be fully realized.

The National Labor Relations Act of 1935 made it much easier for labor unions to organize successfully. In 1935, about 13 percent of U.S. workers were members of a labor union. By 1945, the rate of union membership had risen to about 35 percent. The rapid rise in union membership contributed to the Great Compression, as labor unions helped to boost the incomes of Americans in the lower and middle strata of the income distribution. At the height of their strength in the 1940s and 1950s, unions were having their greatest success in the manufacturing sector.

Three years after the passage of the National Labor Relations Act, President Franklin Roosevelt signed the Fair Labor Standards Act of 1938. This law established, among other things, a federal minimum wage of 25 cents per hour. The minimum wage also may have contributed somewhat to the Great Compression.

The growth of unions certainly contributed to the Great Compression, and the minimum wage probably did so, as well. However, the magnitude of the equalization of the early 1940s was startling. Something else was needed to accomplish a compression of that size.

Goldin and Margo (1992) document the crucial role played by the National War Labor Board during the Second World War. As part of the effort to control the inflationary pressures stemming from the war, the Board was given the power to approve or deny requests for wage increases. The Board was much more likely to approve wage increases for low-wage workers, and this contributed substantially to the Great Compression.

Early in the 20th century, a number of economic and institutional factors combined to generate a very high level of income inequality. In a sense, these factors created a levee which kept equalization in check. The dramatic increase in educational attainment built up pressure against the levee, but the levee held. The growth of unions and the minimum wage increased the pressure further, but still the levee mostly held. Finally, with the National War Labor Board, the levee was breached, and the U.S. economy experienced the astounding equalization of the early 1940s, shown in Figure 1.

Social Norms

Remarkably, even after the wartime wage controls were dismantled, the income distribution remained much more equal than it had been a decade before. This was partly due to the continuation of rising educational attainment, stronger unions, and the minimum wage,[14] as well as to other factors that we will discuss below. But it was probably also due, at least in part, to a change in social norms.

Social norms are difficult to measure, and economists are often reluctant to say much about them, but it is impossible to deny their importance. It is easy for an economist to prove

[14] The largest percentage increase in the history of the minimum wage in the United States took place in 1950, when the minimum was increased from 40 cents per hour to 75 cents per hour.

that, in a competitive labor market, a worker should be paid the value of her marginal product. But the marginal products of many workers are difficult or impossible to measure with precision. Moreover, real-world wages can potentially be influenced by favoritism, nepotism, discrimination, bargaining skill, monopsony power, bureaucratic inertia, the physical appearance of the worker,[15] and many other factors. Thus, while the worker's marginal product may provide a good starting point for the analysis, the actual wage could potentially be located at any place within a very wide band. This means that the informal rules governing social and economic interactions, which we could call social norms, must inevitably play a role. The role played by social norms has the potential to be very important.

I believe that a set of relatively egalitarian social norms were set in place by the experience of the Second World War, although I acknowledge it is difficult to prove this rigorously. All Americans were intimately acquainted with people who served in the armed forces during the war, and with others who supported the war effort on the Home Front, and the vast majority of Americans knew someone who died during the struggle. It appears to me that these shared sacrifices created an atmosphere of solidarity that lasted for a generation after 1945, thus helping to maintain the reduced level of inequality brought about by the Great Compression.

Regulation of Financial Services

For the most part, the factors discussed so far apply broadly across many sectors of the U.S. economy. However, when it comes to explaining the changes in income distribution discussed here, the financial-services sector stands out in spectacular fashion.

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[15] See Hamermesh and Biddle (1994).

The first century and a half of the history of the United States are littered with financial crises. The largely unregulated financial sector produced a multitude of stock-watering schemes and other shenanigans. Financiers such as Jim Fisk and Jay Gould are legendary for enriching themselves through fraudulent stock deals, bribery, and market manipulation. The Credit Mobilier scandal of 1872-73 and the Knickerbocker Trust affair of 1907 contributed to major economic downturns.

Finally, the largest financial crisis of all, the Great Depression of the 1930s, produced such catastrophic results that the 73rd Congress established a strong regulatory regime for the financial-services sector. The stronger regulations had two effects. First, they led to the only time in American history when the nation went for a half century without a financial crisis. Second, they led to substantial reductions in the incomes of financiers. Since those who work at Wall Street firms and big banks are very prominent in the top strata of the income distribution, the reduction in their incomes was an important force for equalization.

Taxes

Until the 20th century, the revenue system of the United States relied primarily on customs duties and excise taxes, which tend to be regressive.[16] However, during the Progressive Era, concern about the unequal distribution of income and wealth led to political pressure for enactment of more progressive revenue sources. An income tax was passed by Congress in 1894, but it was declared unconstitutional by the Supreme Court. Thus it was not until 1913, with the 16th Amendment to the Constitution, that the U.S. established the income tax that was to become a

[16] In a proportional tax, the percentage of income paid in tax is constant. In a progressive tax, the percentage of income paid in tax increases as income increases. In a regressive tax, the percentage of income paid in tax decreases as income increases.

permanent feature of the economy. At first, the income tax had a top marginal rate of seven percent. The marginal income-tax rate faced by the highest-income Americans was increased dramatically during the Democratic administration of Franklin Roosevelt, reaching 94 percent at the height of the Second World War. But then, remarkably, the top rate stayed at 91 percent throughout the Republican administration of Dwight Eisenhower.

Corporate-source income is disproportionately received by those with high incomes. Thus the corporation income tax, established in 1909, was part of the same political movement toward a more progressive tax system that would spawn the individual income tax four years later. At first, the tax rate on corporate income was one percent, but the corporation tax, like the personal tax, was raised substantially during the administration of Franklin Roosevelt. During the Second World War, the top marginal rate in the corporation tax reached 53 percent, and the top rate stayed above 50 percent for two decades after the end of the War.

The third key element of the trend toward more progressive taxation was the estate tax on the estates of wealthy decedents, established in 1916. The top marginal rate in the estate tax was originally 10 percent, but it also was increased substantially during the Roosevelt administration. The top rate reached 77 percent in 1941, and stayed there until 1976.

These three taxes were all established within a period of less than a decade. They eventually reduced inequality substantially.

Immigration

From 1890 to 1910, the rates of immigration into the United States reached all-time highs. In reaction against this influx, Congress passed laws in the 1920s that severely restricted immigration, so that the rates of immigration decreased dramatically. During the Great

Depression of the 1930s, rates of immigration fell to especially low levels.

The flood of immigrants in the early 20th century almost certainly put downward pressure on the wages of low-skilled native-born workers in the U.S. When immigration plummeted in the 1920s, that pressure was reduced, for two reasons. First, the reduced supply of immigrants would be expected to lead to an increase in equilibrium wage rates for low-skilled workers, through the ordinary interaction of supply and demand (although it is always important to emphasize the importance of labor-market institutions, as discussed above). The second effect is that many of the immigrants who arrived in the late 19th and early 20th centuries eventually became citizens, and were able to vote. This, combined with the decrease in the number of new arrivals, greatly reduced the size of the low-wage population that had no political voice.

IV. Economic Explanations of the Great Divergence

In this section, I will review and analyze the explanations that economists have suggested, in an effort to explain the Great Divergence. I will consider the various explanations, in what I consider to be their order of importance. However, I readily acknowledge that any judgment about the relative importance of these factors must necessarily be somewhat subjective.

Technology Begins to Win the Race with Education

We have seen that increases in the *supply* of relatively highly skilled labor will tend to equalize the distribution of earnings. On the other hand, all else equal, if technological changes increase the *demand* for highly skilled workers, and decrease the demand for less-skilled workers, the technological changes will tend to increase wage differentials. This led Goldin and Katz (2008) to use *The Race between Education and Technology* as the title for their book.

In the final third of the 20th century, the pattern of growth rates of supply and demand for highly skilled labor was reversed. As shown in Figure 5, the high-school graduation rate stopped growing. The college graduation rate continued to increase, but the rate of increase slowed down in the 1970s.

<Figure 5 here>

At the same time, it appears that the demand for highly skilled workers began to increase rapidly. Economists sometimes refer to "skill-biased technological change," although it is now clear that the technological changes of the last 40 years are sufficiently complex that it is inappropriate to characterize them as a simple and uniform process of skill-biased change. What is clear is that many jobs that once involved simple, repetitive tasks have been replaced by automated processes. For example, 50 years ago, automobile factories employed large numbers of workers who performed relatively simple, repetitive tasks. Today's auto workers are fewer in number, and they are much more likely to program the computers or fix the robots and other machines that do most of the work.[17]

There is controversy among economists about the precise extent to which technological change has contributed to the rise in income inequality. However, there appears to be a consensus in the literature that it has played a prominent role. For discussion, see Acemoglu and Autor (2011), Autor, Katz, and Krueger (1998), Bound and Johnson (1992), Bresnahan (1999), Katz and Murphy (1992), and Levy and Murnane (1992). For a view that puts relatively less emphasis on the importance of technological change, see Card and DiNardo (2002).[18]

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[17] The parking lot at the General Motors Delta Township Plant is much smaller than the parking lots at the factories it replaced, because far fewer workers are needed.

[18] Acemoglu (1998, 2002) provides a theory that connects the divergent patterns of skill

One of the best-known features of the Great Divergence has been the widening earnings gap between college graduates and those with only a high-school diploma. As documented by Lemieux (2006), the earnings gap between those with education beyond a Bachelor's degree and those with only a Bachelor's degree has also widened.[19]

Unions Lose Strength

As mentioned earlier, union membership rose very rapidly in the decade following enactment of the National Labor Relations Act in 1935. Figure 6(a) shows that increase, and also shows the subsequent erosion of the relative strength of unions, which has now continued fairly steadily for 60 years. By 2016, the unionized percentage of the U.S. labor force had returned to about the level that existed before passage of the NLRA.

<Figure 6(a) here>

In the last 60 years, manufacturing's share of economic activity and employment shrank

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acquisition and technological change in the early and late decades of the 20th century. By mid-century, American employers could be assured of a steady supply of relatively skilled workers. This may have directed firms to search more actively for more sophisticated technologies, safe in the knowledge that they would be able to find workers with sufficient skill to interact effectively with the new technologies. In particular, Acemoglu suggests that the large increase in the number of college graduates in the 1970s may have spurred further skill-biased technical change, which may have contributed to the disequalization of the 1980s.

[19] Ballard, Menchik, and Tan (2013) and Ballard and Menchik (2015) estimate the effects of a variety of covariates on measures of income inequality in the 50 states and the District of Columbia from 1976 to 2013, controlling for jurisdiction fixed effects. If an explanatory variable for the percentage of each jurisdiction's population with at least a Bachelor's degree is included, the regression coefficient suggests that jurisdictions with a high percentage of college graduates disequalized at a more rapid rate, all else equal. However, if a variable for the percentage with education *beyond* a Bachelor's degree is also included, the coefficient on the Bachelor's variable becomes insignificant, while the coefficient for the post-Bachelor's variable is highly significant. This is consistent with the findings of Lemieux, regarding the importance of the widening gap between those with education beyond a Bachelor's degree and everyone else.

considerably. Thus, as shown in Figure 6(b), the decline of manufacturing has proceeded along a path that is very similar to the decline of unions.

<Figure 6(b) here>

This weakening of labor unions contributed to the Great Divergence in two ways. First, as unions weakened, they lost some of their ability to secure more favorable wages and benefits. Blackburn, Bloom, and Freeman (1990) estimate that de-unionization can explain 20% of the increase in wage inequality for U.S. men. DiNardo, Fortin, and Lemieux (1996) find strong evidence that de-unionization contributed to the rise in wage inequality from 1979 to 1998. Second, unions have long been a bastion of support for the Democratic Party, which has been more egalitarian (or at least less anti-egalitarian) than the Republican Party during the period studied here. Below, we will discuss further the causes and consequences of changes in the Democratic Party.

Deregulation of Financial Services

We have seen that regulation of the financial-services sector was greatly strengthened in the 1930s. Not surprisingly, however, Wall Street fought back. Beginning in the 1970s, the financial regulations were slowly but steadily stripped away. After a boring 50 years, banking became exciting again. Talented young people, who in 1960 might have become automotive engineers, aerospace engineers, or electrical engineers, instead became financial engineers, designing complex financial products. The results were predictable.[20] First, the incomes of

[20] Despite the fact that the results were predictable, few economists did predict them. I did not. Having come of age in the era of boring banking, and concentrating my research on taxation rather than finance, I paid little heed to the gathering storm. In fact, many economists who did study finance were arrogantly confident that financial deregulation was an unalloyed blessing for the economy. Johnson and Kwak (2011) describe the role of academic economists in providing

financiers skyrocketed. Second, in September 2008, the financial system experienced its worst crisis since 1933, and the economy suffered its deepest downturn since the Great Depression.

Philippon and Reshef (2012) document these trends in detail. Figure 7 is a reproduction of their Figure VIII.C. The piecewise-linear data series in Figure 7 is their measure of financial deregulation. Thus when the line goes *downward*, it represents an *increase* in the stringency of regulation. The other line in Figure 7 is Philippon's and Reshef's measure of the wage premium associated with working in the financial-services sector. The relationship between the two lines is striking. The increased regulation of the 1930s led to a regime in which the earnings of financial workers were only slightly higher than the earnings of comparably skilled workers in other sectors. When the regulations were removed, it once again became possible for financial-service workers to earn a very substantial premium, relative to comparable workers in the rest of the economy.

<Figure 7 here>

Philippon and Reshef estimate that the premium for top executives in finance grew even more than the average premium shown in Figure 7. By their estimate, the premium for top executives reached 250 percent nationwide, and 300 percent in the New York metropolitan area.

Philippon and Reshef estimate that finance accounts for 15 percent to 25 percent of the overall increase in income inequality since 1980.

Changes in Family Structure

Incomes are shared within households, and most of our data on income distribution are for households or families. There is ample evidence that single-parent families tend to face more

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the intellectual underpinnings for financial deregulation.

severe economic challenges than married-couple families. For example, in 2016, the poverty rate for married-couple families with children was 6.6 percent, while the poverty rate for male-headed families with children and no wife present was 17.6 percent, and the poverty rate for female-headed families with children and no husband present was 35.6 percent.

Thus, an increase in the prevalence of single-parent families is likely to exacerbate inequality. As shown in Figure 8, the proportion of families with children that are headed by a single parent has been rising for many decades. In 1950, 7.4 percent of families with children were headed by a single parent. By 2016, that fraction had grown to 31.6 percent.

Haskins and Sawhill (2016) estimate that these changes in family structure are responsible for at least 15 percent of the increase in inequality, and possibly much more.

<Figure 8 here>

I have emphasized that much of the roller-coaster ride of income inequality has been the direct result of public policies. However, as I assess the evidence, I conclude that these changes in family structure should *not* be attributed primarily to policy changes. A substantial part of the change in family structure is due to changing attitudes toward marriage and divorce. On the other hand, public policies have exacerbated the breakup of the family. First, one source of family instability is the presence of large numbers of non-marriageable men (*i.e.*, men whose earnings prospects are sufficiently poor that they are unlikely to be seen as a reliable husband and father). Since several of the policies discussed here have put downward pressure on the earnings of less-skilled men, those policies have contributed indirectly to the increase in the prevalence of single-parent families.

In addition, public policies toward crime and punishment have undoubtedly had an effect on family structure. In Figure 9, we see the rate of incarceration in state and federal prisons,

from 1930 to 2009. From the end of the Second World War until 1973, on average, state and federal prisons housed about 108 prisoners for every 100,000 people. In other words, during the time when incomes in the United States were distributed most equally, the rate of incarceration in state and federal prisons was slightly more than one person in 1000. The incarceration rate began to increase in the late 1970s, and then skyrocketed in the 1980s and 1990s. By 2006, the incarceration rate reached 500 per 100,000 population for the first time. The rate of incarceration in the mid-2000s was more than five times as high as it had been in 1972.

Mass incarceration surely contributed to the breakdown of families, which, as we have seen, was a major force in contributing to the Great Divergence. In addition to this indirect effect, mass incarceration has probably also played a direct role in the Great Divergence, since convicts often suffer permanent damage to their earnings prospects. Finally, mass incarceration disfranchises a part of the population that is disproportionately poor.

<Figure 9 here>

The sudden and dramatic increase in incarceration shown in Figure 9 is striking. The increase coincides almost precisely with the onset of the Great Divergence. The increase began only a few years after the passage of the Civil Rights Act and the Voting Rights Act, and it is difficult to escape the conclusion that mass incarceration is, in large part, a method of racial control. African Americans are much more likely to be incarcerated than whites, and most of the states with the highest rates of incarceration are in the former Confederacy. Alexander (2010) argues convincingly that mass incarceration is a "system of racialized social control that functions in a manner strikingly similar to Jim Crow."

At the same time that the breakdown of the family was increasing income inequality by increasing the number of single-parent families, another change in family structure was

increasing income inequality by increasing the incomes of many relatively more affluent families. Assortative mating is the practice whereby men and women with similar levels of education are more likely to form families than are men and women with different levels of education. The evidence suggests that assortative mating has increased in the last few decades. However, before the increase in women's labor-force participation, assortative mating would have had little effect on the distribution of household income: If a married-couple household has only one earner, the education of the non-working spouse is largely irrelevant to the distribution of income. However, when we combine increased assortative mating with increased female labor-force participation, we have yet another factor that contributes to the Great Divergence. Greenwood, *et al.* (2014) find that assortative mating made essentially no difference in 1960, but that it contributed very substantially to inequality in 2005.

When we combine the growth of single-parent families with assortative mating and the increase in female labor-force participation, we are compelled to the conclusion that changes in household structure played a very major role in creating the Great Divergence.

International Trade

A casual observer of the 2016 presidential election campaign would be tempted to conclude that the economic problems of the United States are caused almost exclusively by foreigners, either through import competition or through immigration. (We will discuss immigration below.) My assessment is that import competition and immigration have indeed contributed to rising income inequality. However, I also believe that these effects have often been greatly exaggerated, and I will try to present a balanced view here.

If we desire to slow down or reverse the increase of income inequality, many policies are

available. For example, since the slowdown in educational attainment has contributed to the Great Divergence, the obvious policy prescription is to increase investments in education. Since deregulation of the financial-services sector has contributed to the Great Divergence, the obvious policy prescription is to strengthen the regulation of financial firms. Below, we will see that another factor contributing to the Great Divergence is the decrease in the progressivity of the tax system. The obvious policy prescription would be to reverse the trend, by making the tax system more progressive. Based on my values, which include a desire for a less unequal distribution of income, all three of the prescriptions described in this paragraph would be sound policies. However, when we consider the fact that import competition has contributed to the Great Divergence, the obvious policy prescriptions of tariffs and import quotas are associated with great risks. Although some may contend that tariffs and quotas are a "cure" for the "disease" of import competition, I will make the case that the cure could be much worse than the disease.

Figure 10 shows the time trends for U.S. imports and exports as a percent of gross domestic product, from 1929 to 2016. For the first few decades shown in Figure 10, international trade played a fairly small role in the U.S. economy. The United States had a uniquely large internal market, long-distance transportation was more costly than it is today, and tariff barriers were relatively high. Thus it is difficult to argue that international trade played any substantial role in the Great Compression.

<Figure 10 here>

However, the catastrophic effects of the Great Depression and the Second World War led the United States to take the lead in building a more integrated global economy in the postwar period. These efforts included a series of multilateral negotiations that led to major reductions in tariffs and other trade barriers. As shown in Figure 10, the relative importance of international

trade increased significantly in the 1970s, and has continued to increase since then (although both imports and exports can fluctuate substantially, depending on macroeconomic conditions in the United States and abroad).

When the value of exports exceeds the value of imports, we say that there is a trade surplus. When the value of imports exceeds the value of exports, there is a trade deficit. Figure 10 shows the sum of the value of U.S. exports to and imports from all countries, as a fraction of U.S. gross domestic product. In any given year, the United States has trade surpluses with some countries, and trade deficits with others. However, Figure 10 clearly indicates that, in the aggregate, the U.S. has been running trade deficits in recent decades, and that some of these deficits have been very large.

More than 20 years ago, Burtless (1995) suggested that import competition had contributed substantially to rising income inequality, and he was writing at a time when imports from China were relatively small. After China joined the World Trade Organization in 2001, the pressure on American manufacturing from Chinese imports intensified. Acemoglu, *et al*. (2016) and Autor, Dorn, and Hanson (2013) have shown that the effects have been very substantial. Acemoglu, *et al.* calculate that the increase in imports from China may have been responsible for a direct loss of more than 800,000 American manufacturing jobs between 1991 and 2011, and that indirect effects may have caused an equal or greater number of additional job losses.

However, it is important not to overstate the effects of rising imports during the Great Divergence. In the automobile industry, for example, the cozy oligopoly enjoyed by domestic producers in the 1950s was broken by foreign (mostly Japanese) firms. However, if foreign firms had not provided competition, there is no guarantee that competition would not have arisen from domestic sources. If the Japanese had not entered the market, the high profits of the U.S.

auto industry at mid-century would have served as a signal for entry into the industry by potential American entrants with lower costs. Also, as we have noted above, technological change has done a great deal to change conditions in many manufacturing industries in the United States, and would have done so even if there had not been any import competition.

For the first several decades shown in Figure 10, aggregate exports were more likely to exceed aggregate imports than *vice versa*. Thus over much of this period, the U.S. was running overall trade surpluses. This changed in the 1970s, and the U.S. has now had aggregate trade deficits in every year for more than four decades. It is sometimes argued that the trade deficits stem from unfair commercial policies of other countries, and thus the trade deficits are sometimes used as a justification for imposing barriers to trade. President Donald Trump often speaks as if a U.S. trade deficit with any country is *prima facie* evidence of unfair trading practices on the part of that country.[21]

However, a close examination of Figure 10 suggests a different interpretation. The trade deficits of the last 40 years are significantly correlated with the federal government's budget deficits. The trade deficits grew rapidly during the 1980s, at exactly the time when a combination of tax cuts and increased federal spending led to federal budget deficits that were, at that time, the largest peacetime deficits in U.S. history. The smallest trade deficits of the last 40

[21] Even though the U.S. has had *aggregate* trade deficits in recent decades, it does not have a trade deficit with every country. In fact, the U.S. has substantial trade surpluses with Argentina, Australia, Belgium, Brazil, the Netherlands, the United Kingdom, and other countries. If we accept the argument that U.S. trade deficits with some countries are caused by unfair trading practices (which I do not accept), it would only be logical to conclude that our surpluses with some other countries are caused by unfair trading practices on the part of the United States. I do not believe that U.S. trading policies toward these countries are unfair, and I believe that greater public awareness of the surpluses might take some of the wind out of the sails of the arguments for trade barriers. However, American trade surpluses are almost completely absent from contemporary political discussions of trade.

years were in the late 1990s, which are the only time since 1969 when the federal government managed to balance its budget.

The connections are complicated, of course, but there is an element of a causal relationship between budget deficits and trade deficits. The private savings rate in the United States has been low for decades. When large government budget deficits are combined with a low rate of private saving, we get a rate of national saving that is low or negative. Mechanically, this has to lead to one of two outcomes, or a combination of the two. Either investment in the U.S. must collapse, or, if investment is to continue, it must receive substantial funding from abroad. The latter is what has in fact occurred during the last 40 years. In effect, Americans have consumed more than they have produced. If a nation consumes more than it produces, the extra consumption can only come from other countries. Thus we have run trade deficits, and we have borrowed greatly from abroad.

If Americans desire to reduce the gap between imports and exports, a good policy would be to reduce our government budget deficits. If we wished to do this in a way that would push toward reduced income inequality, an increase in the progressivity of the tax system would be one way to go.

Economists are generally wary of "beggar-thy-neighbor" trade policies, in part because they invite retaliation. The experience of the Smoot-Hawley tariffs of 1930 is sobering. Within days after the United States imposed the most stringent tariffs in our history, several of our trading partners retaliated with tariffs of their own, and Atlantic trade plummeted. The collapse of trade is certainly not the only cause of the Great Depression, or even the most important one, but it did contribute to the downward spiral of economic activity. The members of Congress who voted for the tariffs argued that they were protecting American jobs. By two years after

passage of the tariff bill, one-third of the American non-farm labor force was out of work. If the tariffs were conceived as a job-promotion policy, they were spectacularly unsuccessful.

It is important to remember that international trade does other things, in addition to generating import competition that can put pressure on domestic producers. U.S. firms export more than $2 trillion per year, and every one of those export dollars is associated with employment in the United States. A cycle of retaliatory tariffs could do profound damage to the export sector. Finally, although imports can do harm to domestic *producers*, they are unquestionably beneficial for domestic *consumers*, since they bring more choices and lower prices.

Thus when I hear loose talk about imposing massive tariffs on imports from China, I (like many economists) worry about the potential for protectionist measures to trigger a global depression, which could not possibly be good for American workers.

However, any economist who urges caution about using tough measures to restrict trade will risk appearing unsympathetic to the American workers who have suffered very real losses as a result of import competition. Thus I also emphasize that I am *not* saying that we should ignore the needs of these workers. Public policies in the United States could have been crafted in the past, and should be crafted in the future, in such a way that they would do much more than we have done, to provide income support, education, and training for displaced workers.

Taxes

We have seen that the U.S. tax rates on those with high incomes and large amounts of wealth were quite high in the middle of the 20th century. Even after a set of tax cuts was enacted in 1964, the top marginal tax rate in the federal individual income tax only fell to 70 percent.

Those tax cuts, which were proposed by the Democratic President John Kennedy and enacted under his successor, Lyndon Johnson, had been justified as providing a Keynesian stimulus to the economy.

In 1981, the newly elected Republican President Ronald Reagan succeeded in getting another major tax cut through Congress. Although the substance of the Reagan tax cuts was quite similar to that of the Kennedy-Johnson tax cut, the rhetoric was distinctly different. Reagan justified his tax cut as an attempt to reduce the burden on taxpayers, and to restrict the revenues available to the federal government. The Tax Reform Act of 1986 reduced the top marginal tax rate further.[22]

In the last 25 years, the top marginal rate has twice been raised to 39.6 percent, during the Democratic administrations of Bill Clinton and Barack Obama. In between, the top rate was reduced to 35 percent during the Republican administration of George W. Bush. The Bush tax cuts, like the Reagan tax cuts, delivered most of their benefits to very high-income households. All of these recent changes have left the top marginal rate at levels far below those that prevailed from the 1930s to the 1970s. President Donald Trump has proposed to reduce the top rate to 35 percent, once again providing large benefits to the most affluent households.

The pattern of top marginal tax rates in the federal individual income tax, shown in Figure 11, is roughly "inverse-U-shaped." The pattern of top marginal tax rates is somewhat

[22] In Figure 11, the top rate is shown as falling to 28 percent as a result of the Tax Reform Act of 1986. This is indeed the marginal rate faced by those with the highest incomes. However, in a departure from previous practice, the rate faced by those with the highest incomes was not the same as the highest marginal rate. The highest rate, which was paid by taxpayers just below the highest incomes, was 33 percent. This was a method by which elected officials could claim that the top marginal rate was 28 percent, while collecting additional revenue. Today, it is once again the case that the marginal rate faced by those with the highest incomes (currently 39.6 percent) is actually the highest marginal rate.

similar to the pattern of unionization, shown in Figure 6(a). The pattern for each of these is roughly the reverse of the U-shaped pattern for top income shares, shown in Figure 1, and the patterns for financial deregulation and the wage premium for workers in the financial-services sector, shown in Figure 7. My purpose in showing all of these is to suggest that a wide variety of political and economic phenomena went in one direction in the 1930s and 1940s, and then reversed course a few decades later.

<Figure 11 here>

The top marginal income-tax rates are informative, but they give us only a glimpse of the true extent to which the U.S. tax system is progressive, proportional, or regressive. For one thing, although the federal income tax is progressive (even after the reductions in top rates), it only raises about one-fourth of the total tax revenues collected by all units of government in the United States.

However, a number of factors reinforce the impression given by Figure 11. The fastest-growing revenue source in the last half century has been the payroll tax, which is believed by most economists to be roughly proportional over much of the income range, and regressive at high incomes. This regressivity is due to the fact that the payroll-tax rate decreases dramatically when earnings exceed a ceiling (in 2017, this threshold was $127,200), and also because the payroll tax does not apply to capital income, which is highly concentrated at the top of the income scale.

While the relative importance of the payroll tax (which is not progressive) has been increasing, the relative importance of the corporation income tax (which is progressive) has been shrinking.[23] During the Second World War, the highest marginal tax rate in the corporate tax

[23] If the corporate tax is borne by stockholders, it is highly progressive. If (as suggested by

was 53 percent. Piketty and Saez (2003) point out that corporate profits *increased* during the War, but dividend distributions nevertheless *decreased* because of the tax. The corporate tax rate stayed at 52 percent from 1952 to 1963, but it is 35 percent now. (President Donald Trump has proposed a further reduction, to 20 percent.) The fraction of federal revenues derived from the corporate tax has declined substantially. In 1945, the corporate tax raised about 35 percent of the total revenues of the federal government. This proportion shrank to about 22 percent in 1965, and to about 10.6 percent in 2015.

The estate tax is a relatively small part of the revenue system, but it is strongly progressive, since it applies only to *very* wealthy decedents. The top rate in the federal estate tax was 77 percent from 1942 to 1976, but it was decreased to 70 percent in 1977, and to 50 percent in 1982. The top rate in the estate tax is now 40 percent, and President Trump has proposed to eliminate the estate tax.

Finally, in addition to cutting the top marginal tax rate generally, the tax cuts signed into law by George W. Bush in 2001 and 2003 reduced the tax rates on dividends and capital gains. Each of these types of income is disproportionately received by high-income households.

Kasten, Sammartino, and Toder (1994) provide estimates of the effects of the tax-law changes from 1980 to 1993. They show that the exact effects depend on a variety of assumptions. However, their calculations generally point to the conclusion that the tax changes of the 1980s were quite favorable to those at the top of the income scale. One of their calculations finds no change in the total effective tax rate for the bottom quintile of the income

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Harberger (1962)) it is borne by all owners of capital, including those who are not shareholders, it is still progressive, although less so. If (as suggested by Fullerton, King, Shoven, and Whalley (1981)) it is borne partly by workers, it is even less progressive. My assessment is that the corporate tax is borne mainly by owners of capital, and is thus progressive.

distribution, tax *increases* for the three middle quintiles, and a 2.1-percent tax *cut* for the top quintile. They estimate that the top one percent received a tax cut of 8.2 percent.

I believe that most economists share the consensus that the sharp increases in tax rates on high-income and high-wealth households in the 1930s and 1940s contributed importantly to the Great Compression. Similarly, the reductions in tax rates on taxpayers with high incomes (and especially those with high capital incomes) and high wealth in the last few decades have made a substantial contribution to the Great Divergence.

Immigration

Earlier, we saw that immigration decreased sharply in the 1920s and 1930s, and that this contributed to the Great Compression. The decreases in immigration had both economic effects (through a reduction in the supply of low-skilled workers) and political effects (through a reduction in the size of the low-wage population that could not vote).

After immigration restrictions were relaxed in 1965, the rate of immigration rose substantially. It appears that this increase in immigration has contributed to the Great Divergence, just as the earlier decrease in immigration contributed to the Great Compression. As before, the immigration increases of recent years have had both political and economic effects. McCarty, Poole, and Rosenthal (2016) emphasize the political effect: There has been a large increase in the number of low-income Americans who are not eligible to vote. This means that the American *electorate* is significantly more affluent than the American *population*, with predictable consequences for public policy.

I am convinced that the political effect is important. The size of the economic effect is the subject of controversy; my reading of the literature is that the economic effect has been

relatively small. In the words of Friedberg and Hunt (1995), “empirical estimates in a variety of settings and using a variety of approaches have shown that the effect of immigration on the labor market outcomes of natives is small.”[24] Recently, Blau and Mackie (2017) have performed an extraordinarily comprehensive review of the literature. They find that “when measured over a period of 10 years or more, the impact of immigration on the wages of natives overall is very small. However, estimates for subgroups span a comparatively wider range.” The native-born workers who are affected most adversely are native high-school dropouts, especially if they are members of disadvantaged minorities. This downward pressure on the wages of those who have also been adversely affected by many other economic forces tells us that immigration has indeed contributed to the Great Divergence. However, as I see it, the effects of immigration are smaller than the effects of other influences discussed earlier, and much smaller than they sometimes been portrayed by political leaders.[25]

The political economy of immigration stands in contrast to the political economy of the other issues discussed here. The anti-egalitarian policy reversals in the 1970s and 1980s were pushed by conservative, anti-egalitarian forces. However, the relaxation of immigration laws in 1965 was supported by those who were otherwise egalitarian. Their support for reducing the restrictions on immigration arose, at least in part, because the restrictions on immigration had a distinctly racist tinge. Similarly, opposition to immigration in recent decades is a staple of the

[24] For an interesting case study, see Card (1990).

[25] Agitation against immigrants from Mexico was one of the central themes of Donald Trump’s campaign for the presidency in 2016. However, his rhetoric did not focus exclusively on economic issues. Much of Trump’s anti-immigrant message, like much of the anti-immigrant messages delivered at earlier times in American history, focused on issues other jobs and wages. In one well-publicized speech, Trump said of Mexican immigrants “They’re bringing drugs. They’re bringing crime. They’re rapists.”

conservative, anti-egalitarian wing of the American political spectrum. I have suggested that the increase in immigration has probably contributed to the Great Divergence, although the effects are small. If that is true, however, then a clampdown on immigration could have mild equalizing effects, despite the fact that today's most ardent advocates of reduced immigration are those who advocate anti-egalitarian policies in other policy areas.

The Minimum Wage

Figure 12 shows that, after adjusting for inflation, the federal minimum wage rose substantially in the 1950s and 1960s, and reached its peak in 1968.[26] Since then, however, the minimum wage has failed to keep up with inflation. Lee (1999) suggested that the decrease in the real value of the minimum wage could explain most of the growth in inequality in the lower tail of the earnings distribution for women in the 1980s, as well as a substantial portion of the disequalization of the men's distribution. However, Autor, Manning, and Smith (2016) argue persuasively that the effect of the minimum wage on lower-tail inequality is less than half as large as reported by Lee. Even so, Autor, Manning, and Smith agree that the reduction in the real minimum wage played a role, although they argue that the increase in lower-tail inequality after 1980 was due primarily to a substantial change in wage structure, rather than to an unmasking of latent inequality that had previously been obscured by the minimum wage.

<Figure 12 here>

At best, the minimum wage is a very imperfect policy for reducing earnings inequality. The first reason for this is that minimum-wage laws may have disemployment effects: Either

[26] In Figure 12, the adjustment for inflation is on the basis of the Personal Consumption Expenditures deflator.

some low-wage workers may lose their jobs, or (especially for young low-wage workers) may have difficulty finding a job in the first place. Because of data limitations and statistical challenges, there is controversy among economists regarding the size of the disemployment effects of the minimum wage. Brown, Gilroy, and Cohen (1982) provide an early survey of the literature. They suggest that the disemployment effects are small, although not zero. Card and Krueger (1994) suggest that these effects are essentially zero, or even that a minimum-wage increase could *increase* employment. Neumark and Wascher (2000) criticize the methods of Card and Krueger, and find the standard result that an increase in the minimum wage would reduce employment, although the size of the effect estimated by Neumark and Wascher is modest.

My reading of the literature is that the disemployment effects are not large enough to erase completely the possible benefits of the minimum wage, but that they are large enough to worry about.[27] Also, one reason for the modest size of the disemployment effects is that the minimum wage has never applied to a very large fraction of the population. The larger the increase in the minimum wage, the larger will be the affected population, and thus the larger will be the potential employment losses.[28]

The second problem with the minimum wage is that it is not targeted at workers in low-income households. A substantial fraction of the workers who receive the minimum wage are

[27] This is one reason why economists are nearly unanimous in their belief that, in the fight against poverty and inequality, the Earned Income Tax Credit is a more effective policy than the minimum wage. The Earned Income Tax Credit avoids the disemployment effects of the minimum wage.

[28] This is why even the staunchest advocates of a higher minimum wage do not advocate for a minimum of $50 or $100 per hour. A truly massive increase in the minimum wage would almost certainly lead to very large job losses, or to a dramatic increase in the size of the underground economy.

secondary workers in middle-income and high-income families. See Neumark, Schweitzer, and Wascher (2005) and MaCurdy (2015).[29] A final objection to the minimum wage is that, if it reduces the ability of young people to find employment, it may reduce their labor-market experience, tenure, and acquisition of job skills. Neumark and Nizalova (2007) suggest that these longer-run effects may actually be larger than the contemporaneous effects on employment that have drawn most of the attention in the literature.

My assessment of the evidence regarding minimum-wage laws is that they contributed some to the equalization of the 1940s, 1950s, and 1960s, and that the falling real value of the minimum wage also contributed some to the widening income gap of the 1980s. However, my view is that the minimum wage has not been one of the most important sources of the Great Divergence, despite the considerable amount of attention given to the minimum wage in the political arena.

Executive Compensation

In Figure 13, we see a calculation by Davis and Mishel (2014) of the average ratio of compensation of chief executive officers (CEOs) to the compensation of the average worker in their firms, for a sample of 350 large U.S. companies. In the 1960s and early 1970s, this ratio was in the low 20s. The ratio then began to rise rapidly, reaching 383 in 2000, before falling back to "only" 296 in 2013.

<Figure 13 here>

Bebchuk and Fried (2004) discuss the explosion of executive compensation in detail. It is

[29] This is another reason why economists tend to prefer the Earned Income Tax Credit to the minimum wage. The EITC is targeted toward low-income households, while the minimum wage is not.

possible that some of the rise in CEO compensation may be a response to improved productivity on the part of executives. However, it is difficult to escape the explanation that the phenomenal increases in executive compensation are largely due to a change in social norms. Earlier in this paper, it was suggested that public policies in the United States were made in the context of a relatively egalitarian set of social norms in the generation after the Second World War. The relatively low ratio of CEO compensation to average-worker compensation in the 1960s is consistent with this view. Skyrocketing CEO compensation since the 1970s is consistent with a change in social norms, under which executives and their Boards of Directors lost any "outrage constraint" that might previously have prevented them from pushing CEO compensation to stratospheric heights.

Summary of the Economic Explanations of the Great Divergence

We have now reviewed a long list of economic explanations for the enormous changes in income inequality that have taken place in the United States over the last 100 years. As I see it, none of these potential explanations can be dismissed. At least a portion of the roller-coaster ride of income inequality can be explained by *all* of the following: (a) the uneven pattern of increase in educational attainment, (b) changes in the character of technological change, (c) the rise and fall of unions, (d) the egalitarian policies of the National War Labor Board, (e) the rise and fall of financial-market regulation, (f) the increased prevalence of single-parent families, (g) the combination of assortative mating with the rise of female labor-force participation, (h) the increase in import competition, (i) the rise and fall of progressive taxation, (j) the fall and rise of immigration, (k) the rise and fall of the minimum wage, and (l) the phenomenal increase in compensation of CEOs.

However, regardless of the exact magnitude of the various contributing factors, one of the most remarkable features of this analysis is that so many factors tended to move in one direction for many decades, and so many factors then reversed direction over a relatively short period of time. In searching for an explanation for these seemingly coordinated movements, I begin with the fact that most of these factors are substantially the result of public-policy decisions, with the exceptions of the acceleration of technological change, the increase in single-parent families, and the combination of assortative mating and increased female labor-force participation.

Once we understand that we are dealing primarily with *policy-driven* changes in income inequality, it is natural to turn our attention to politics.

V. Political Explanations

Below, we consider the ways in which the American political landscape has changed in the last hundred years. However, it is first worthwhile to say something about the deep background and the *very* long-term forces that have shaped politics (and thus income distribution) in the United States.

According to Semega, Fontenot, and Kollar (2017), the Gini Ratio for household income in the United States was 0.397 in 1967, and it rose to 0.481 in 2016.[30] International comparisons of income inequality are difficult to make, so that different sources can yield somewhat different results. However, one source calculates that the Gini Ratio for family income is 0.323 for the United Kingdom, 0.270 for Germany, and 0.230 for Sweden.[31] Thus even when the U.S.

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[30] If incomes were distributed completely equally, the Gini Ratio would take on a value of zero. If one household were to receive all of the income, the Gini Ratio would be 1.0. Between these extreme values, an increase in inequality is associated with an increase in the Gini Ratio.

[31] These data are from The World Factbook, compiled by the U.S. Central Intelligence Agency, available at https://www.cia.gov/library/publications/the-world-

economy was more equal than at any other time in history, in the late 1960s and early 1970s, incomes in the U.S. were distributed far more unequally than incomes are distributed in many other developed countries today.

Therefore, the ups and downs of income inequality in the U.S., which are the main topics of this paper, must be seen against a long-term tradition of very substantial inequality. Alesina and Glaeser (2004) offer an excellent discussion of the long-term differences between the U.S. and Europe. Here, I briefly discuss three of the factors identified by Alesina and Glaeser (A-G).

First, A-G discuss perceptions of income mobility. They present evidence that Americans tend to *perceive* that they live in a highly mobile society, while Europeans perceive themselves to live in more stratified societies. The "rags-to-riches" idea appears to be deeply ingrained in the American psyche. If people believe they live in a highly mobile society, then it would be natural for them to be unenthusiastic about egalitarian policies. Why should one rely on egalitarian public policies, when it is so easy to become rich, merely by working hard? This belief in income mobility fits neatly with the idea that those who are poor in America are poor because they are lazy, and therefore undeserving.

In fact, however, there is now ample evidence that American society is *more* stratified than most European societies. Solon (1992) finds that intergenerational income mobility in the United States is modest, and less than suggested by some earlier estimates. In a recent review

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factbook/rankorder/2172rank.html. The estimates are for different years for different countries, but all are from the 21st century. These estimates are for family income, which tends to be distributed slightly more equally than household income. For example, the CIA's estimate for the U.S. is for 2007, when they estimate that the Gini Ratio for *family* income was 0.450. In that year, the Census Bureau's estimate is that the Gini Ratio for *household* income in the U.S. was 0.463. Thus the difference between the Gini Ratio for household income and family income is fairly small, and not nearly as large as the differences between the Gini Ratios for the United States and other affluent countries.

article, Corak (2013) reports international comparisons of the intergenerational earnings elasticity. An intergenerational elasticity of zero means that a parent's earnings have no effect on a child's earnings. At the other extreme, an intergenerational elasticity of one means that a child's earnings are completely determined by his/her parent's earnings, which would correspond to a very stratified society. Between zero and one, as the intergenerational elasticity increases, there is less mobility. Corak shows that the United States has an intergenerational elasticity of about 0.5, which makes it one of the countries with the least mobility. The countries with the most mobility are Denmark, Finland, and Norway, with elasticities of about 0.2.

The intergenerational earnings elasticity is a measure of "relative mobility". It measures the extent to which a child's *relative* position in the earnings distribution is influenced by the parent's *relative* position. This has to do with one version of the "American Dream", which is that children can do *relatively* better than their parents, by moving to a higher percentile in the earnings distribution. Chetty, *et al.* (2016) study "absolute mobility," which has to do with whether children earn more than their parents. They find that, among Americans born in 1940, 92% did better than their parents. For those born in 1980, only about 50% have done better than their parents.

And yet, despite the fact that American society is less mobile than European societies, the *perceptions* of Americans and Europeans are just the opposite of the realities. It is possible that Europeans are unrealistically pessimistic about income mobility, but my sense is that the main factor here is that Americans are unrealistically optimistic. When Americans overstate the extent of income mobility, their perceptions can contribute to a general atmosphere of skepticism toward egalitarian policies.

The second important factor identified by A-G is that, although American forces helped

turn the tide in the First World War, the War had much smaller effects on the United States than on Europe. American deaths numbered in the tens of thousands, while European deaths were in the millions. The United States emerged from the war economically intact, while the European economies suffered tremendous losses of labor and capital. In the eyes of many Europeans, the war completely discredited the monarchs and aristocrats who blundered into the war, and executed the war with stunning incompetence.[32] As a result, the Habsburg, Hohenzollern, and Romanov dynasties were swept away, and socialist political parties gained a degree of power in Europe that they have never experienced in the United States. These parties work more closely with labor unions in Europe than the Democratic Party has ever worked with unions in the United States. Moreover, the European unions developed a level of power and organization far greater than American unions have ever achieved.

The final, and probably most important, reason given by A-G for the differences between the U.S. and Europe is race. Most European countries are far more homogeneous than the U.S. in terms of race and ethnicity. A-G present strong evidence that middle- and upper-income people are much more likely to support egalitarian policies if they perceive the poor to be similar to themselves. In countries where a despised minority is disproportionately poor, such as the United States, egalitarian policies will tend to lack support because they will be seen as aiding the despised group.[33] Thus the animosity of many whites toward African Americans has always

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[32] On July 1, 1916, the first day of the Battle of the Somme, 20,000 British soldiers were killed, and another 40,000 were wounded. The attack was planned and carried out in such a cavalier fashion that it is impossible to avoid the conclusion that the generals had callous disregard for their soldiers' lives. One of the wounded from that day was Corporal R.H. Tawney, who would become a leading socialist writer and activist. His book, *Equality* (1931) is an eloquent statement of egalitarian principles, which were clearly shaped by his battlefield experiences.

[33] The increased levels of immigration into Europe in recent decades have eroded the ethnic homogeneity of several countries. This has helped to fuel the rise of France's National Front and

helped to make the United States less egalitarian than it would otherwise be. I will argue that, in addition to this very long-run role played by racial antagonism, it has also played a very important role in creating the Great Divergence.

First, however, I will review some of the other political explanations that have been put forth, in an attempt to explain how such a massive disequalization could take place in a country like the United States, in which many important policy decisions are made by elected leaders. Tax cuts for those with high incomes, financial deregulation, and the other policies described above have been extraordinarily beneficial for a relatively small number of affluent Americans. But these beneficiaries are greatly outnumbered by those whose economic interests have been harmed by the changes. Thus the question is why so many congressional and presidential elections have been won by those who espouse and carry out anti-egalitarian economic policies.

A. Social Issues

Very often, candidates for public office who espouse conservative, anti-egalitarian views on economic issues also have conservative views on social issues, such as abortion and gay rights. Thus when a voter casts her vote primarily on the basis of opposition to abortion or gay rights, she will usually be voting for a candidate who also has anti-egalitarian views on economic issues. Unless this voter is fairly affluent, she will thereby be voting against her economic interests. Note that it does not matter whether these voters are *aware* of the economic implications of the votes they cast on the basis of their views about social issues. As long as they

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Germany's AfD, as well as several other right-wing political movements. The experience of the United States suggests that this is likely to result in a weakening of the social safety net in Europe, with excellent consequences for affluent native-born Europeans, and bad consequences for native-born Europeans of modest means.

vote on the basis of opposition to abortion and gay rights, low- and middle-income voters will tend to vote against their economic interests, regardless of whether they realize the economic implications of their votes.

Frank (2004) argues that conservatives have skillfully used social issues to drive a wedge between many voters and their economic interests. My view is that, although social issues are only a part of the picture, they cannot be dismissed. Elections are often won by small margins. If even a relatively small number of voters are persuaded to vote against their economic interests by social and cultural appeals, the effects on policy can be large.

B. Political Organization and Voter Turnout

In my view, Edsall (1984) may be the very best study of the political economy of the Great Divergence. Edsall's book is especially noteworthy, since he was writing in the very early years of the Great Divergence, when many social scientists were only beginning to see that a change was underway. He describes a business community that developed a sense of class consciousness and class solidarity. Along with increasingly energetic conservative ideologues, the business community provided increasingly unified support, and plenty of money, for conservative, anti-egalitarian candidates for public office. This movement was augmented by the fact that it gained momentum at a time when political campaigns were becoming increasingly expensive, so that candidates were increasingly dependent on fund-raising.

Edsall also identifies a series of changes that unmoored the Democratic Party from its long tradition of strong connections with working-class voters. In the 1960s and 1970s, anti-war activists, environmentalists, and women's-rights advocates joined the Democratic Party in increasing numbers. These groups were not necessarily hostile to organized labor and working-

class Democrats, but workers' issues and income inequality were not at the top of their agendas. In addition, a well-meaning set of reforms to party procedures greatly enhanced the power of upper-middle-class Democrats, and weakened the Party's ties to labor unions and working-class Democrats. Thus, although the Republican Party has taken the lead in advancing conservative, anti-egalitarian policies, the Democratic Party has been less effective than it might otherwise have been at resisting the anti-egalitarian trend. For example, the large tax cuts for the affluent that were signed into law by Ronald Reagan in 1981 were passed by a Congress with a Democratic majority in the House of Representatives. Another example is that much of the deregulation of the financial-services sector took place during the Democratic administration of Bill Clinton.

Edsall also emphasizes that lower-income voters tend to have lower rates of turnout than those with higher incomes. Relatively small changes in turnout can have very large effects. If turnout in American elections were anywhere near 100 percent, the Great Divergence might have been much smaller than it has been.

C. Electoral Institutions

Proportional voting schemes are used in parliamentary elections in many European countries. These electoral systems stand in contrast to the "first-past-the-post" system used in elections for the U.S. Congress. Many of the proportional systems were adopted in the wake of the First World War, so it is difficult to disentangle the effects of the proportional voting systems from the effects of the War itself, which I have discussed above. Nevertheless, Alesina and Glaeser (2004) argue that proportional voting schemes contribute to the adoption of egalitarian policies. The first-past-the-post system rewards political parties whose supporters are not geographically

concentrated, such as the Republican Party in the United States today.

The first-past-the-post system is also subject to gerrymandering. Although gerrymandering has benefited Democratic candidates on some occasions in the past, it tends to benefit Republican candidates today, since so many state legislatures are controlled by Republicans. In recent years, modern techniques of data analysis have increased the ability of partisans to draw district lines to their advantage. To the extent that the first-past-the-post system has come to favor Republicans, it has contributed to the Great Divergence. My view is that this is a relatively important effect.

Gerrymandering also means that most districts of the U.S. House of Representatives are safe for one political party. In districts that are safe for one party, if a meaningful election takes place at all, it takes place in the partisan primary. This may have contributed to the increasing polarization of Congress, and the rise of a group of *very* anti-egalitarian Congressional Republicans. For discussion of polarization, see McCarty, Poole, and Rosenthal (2016).

In the United States, Presidents are chosen according to the Electoral College, an 18th-century institution that was deliberately designed to reduce the influence of the broad public. To the best of my knowledge, the elections for President of the United States are the only elections in the world in which the second-highest vote getter is sometimes declared the winner. In most presidential elections, the Electoral College has chosen the candidate who also won a plurality of the popular vote. However, the second-place vote getter has won the presidential election on five occasions, including two of the last five elections.

In 2000, the Republican George W. Bush was elected, despite losing the popular vote to the Democrat Al Gore by more than 500,000 votes. The Republican Donald Trump was elected in 2016, despite losing the popular vote to the Democrat Hillary Clinton by more than 2.8 million

votes. We do not know exactly what policies would have been pursued by Gore, who was Vice President during the Presidency of Bill Clinton. However, it is safe to say that Gore would not have pursued the strongly anti-egalitarian tax policies that were signed into law by George W. Bush. Similarly, in the 2016 campaign, the tax, regulatory, and health-care proposals of the Democrat Hillary Clinton were far more egalitarian than those of her Republican opponent, Donald Trump.

Of course, there is no guarantee that the Electoral College will only go against the popular vote in a way that favors the anti-egalitarian candidate. Especially when elections are relatively close, it is possible to construct scenarios in which the Democrat would win the Electoral College, while losing the popular vote. For example, in 2004, the Republican George W. Bush won the popular vote by a margin of about three million, and also won the Electoral College. However, if only 60,000 Ohio voters had switched from Bush to his Democratic opponent, John Kerry, the Electoral College would have been won by Kerry. Nevertheless, in 2000 and 2016, what actually happened was that anti-egalitarian Republicans won the Electoral College, while losing the popular vote.

As described by Acemoglu and Robinson (2012), small effects can accumulate and reinforce themselves over time. An important example of this is that Supreme Court Justices in the United States are nominated by Presidents who win the Electoral College, regardless of whether those Presidents won the popular vote. Thus the second-place vote getter in the 2000 presidential election, George W. Bush, was able to nominate two conservative Justices (John Roberts and Samuel Alito) to the Supreme Court. If the first-place vote getter, the Democrat Al Gore, had been able to nominate Justices, he certainly would have nominated people with significantly more egalitarian views than those of Roberts and Alito.

Since we do not know the precise identities of those whom Gore would have nominated, it is not possible to say with certainty how they would have voted in particular cases. However, in my view, it is very likely that Gore nominees would have voted differently from Roberts and Alito in two very important cases. The first of these is the 2010 decision in *Citizens United v. Federal Elections Commission*, in which the conservative majority voted to reduce substantially the restrictions on political expenditures. The second is the 2013 decision in *Shelby County v. Holder*, in which the conservative majority voted to eviscerate key provisions of the Voting Rights Act of 1965. If presidential elections were always won by the top vote getter, it is likely that the decisions in *Citizens United* and *Shelby County* would have gone the other way. If these cases had been decided differently, the anti-egalitarian tide of recent years might have been reduced.

D. Voter Ignorance

Bartels (2005, 2008) emphasizes voter misunderstanding of a variety of policies. For example, although surveys indicate that a majority of Americans favor a progressive tax structure, many do not seem to have comprehended the highly regressive nature of the 2001 tax cuts. I agree that voter misperceptions may have played a role in facilitating the policies that led to the Great Divergence. However, for reasons described below, I conclude that voter misperceptions fall far short of providing a full explanation for the political economy of the Great Divergence.

I certainly accept the idea that large segments of the public are not well informed. I have already mentioned survey evidence that perhaps 25 to 30 percent of the public are unaware of the increase in income inequality. Also, Americans tend to understate the relative size of the white population, and overstate the relative size of minority populations, often to an astonishing

degree. Gallup and Newport (1990) report that "The average American thinks that America is 32% black, 21% Hispanic, and 18% Jewish."[34] Walstad (1997) reports in detail on a 1992 survey of economic literacy. The results of the survey reveal a substantial lack of knowledge of the nature of fiscal policy, monetary policy, budget deficits, and other important economic phenomena. The Kaiser Family Foundation (2013) found that the average American believes that 28 percent of the federal budget is spent on foreign aid, whereas the correct figure is about one percent. In my own work (Ballard and Gupta (2017)), I have found that a sample of Michigan adults tend, on average, to overstate the percentage of their income that is paid in federal income tax by almost a factor of two.

Slemrod (2006) presents evidence that people believe, contrary to fact, that the existing income tax is regressive, and that high-income people would pay more under a flat tax. This misperception appears to explain some of the support for a flat tax. Slemrod and Bakija (2004) report on a 1989 survey, in which the public believes that 45 percent of millionaires pay no income tax at all, while Internal Revenue Service data show that the correct figure is less than 2 percent.

Thus there is ample evidence that large portions of the public are often woefully uninformed, and I accept that this provides a partial explanation for the Great Divergence. However, there is no evidence that voter ignorance is a new phenomenon. It strains credulity to think that voters were well-informed until the 1970s, and then suddenly became ignorant 40 years ago.

The economic *data* presented here strongly suggest that the Great Compression of the

[34] The U.S. Census reports that in 1990 blacks accounted for 12.1% of the U.S. population, Hispanics were 9.0%, and Jews were 2.1%. Nadeau, Niemi, and Levine (1993) and Alba, Rumbaut, and Marotz (2005) report similar findings.

1930s and 1940s benefited a large majority of the American population, whereas the Great Divergence has benefited only a small minority. The economic *explanations* presented here strongly suggest that both the Great Compression and the Great Divergence were largely the results of policies enacted by elected officials. If we accept these two conclusions, then it is very difficult to escape the further conclusion that low- and middle-income Americans mostly voted in accord with their economic interests early in the 20th century, while a significant number of them voted against their economic interests toward the end of the 20th century, and into the 21st. If we want to rely heavily on the hypothesis that the Great Divergence was driven by voter ignorance, then we must somehow conclude that most voters were well-informed in the early and middle part of the 20th century, but that many voters suddenly became less well-informed in the 1970s. I am not persuaded that this is what happened.

An even more telling piece of evidence against placing too much weight on the ignorance hypothesis is that the shift toward voting against one's economic interests was almost exclusively confined to white voters. African-American voters, who are disproportionately represented in the lower rungs of the income scale, tended to vote for candidates espousing relatively egalitarian policies in the early and middle part of the 20th century (when they were allowed to vote). Black voters have continued to vote in overwhelming majorities for the Democratic Party, which is clearly the more egalitarian (or at least the less anti-egalitarian) of the two major parties. Thus in order to place a lot of weight on the ignorance hypothesis, it is necessary for us to believe that nearly all black voters avoided ignorance throughout the period studied here, and thus retained their ability to vote in accord with their economic interests, while substantial numbers of white voters suddenly became more ignorant, and thus lost the ability to vote with their economic interests.

This leads me to the conclusion that racial issues provide more fertile ground for understanding the Great Divergence.

E. Race

An old Russian proverb: Two poor peasants, Ivan and Dmitri, are neighbors. They hate each other. One day, God appears to Ivan with a remarkable proposition: "Ivan, I will give you anything you want, as long as Dmitri gets twice as much." At first, Ivan is overjoyed. "I can have a house with 100 rooms?" "Yes," replies God. But then Ivan is filled with rage. "But if I have a house with 100 rooms, would Dmitri get a house with 200 rooms?" "Yes." After pulling at his beard for a long time, Ivan asks for more time to decide what to ask for. God agrees, and promises to return in three days. Three days later, God again appears to Ivan. "Do you remember our conversation from three days ago, Ivan?" Now Ivan is beaming with happiness, because he knows what he should ask for. "God, please make me blind in one eye."

In my view, race explains more of the Great Divergence than any other single influence. This does *not* mean that I believe that the other explanations discussed above are invalid. In fact, I believe that all of them can explain some of what has happened. I cannot overemphasize the fact that many elections are won by margins of 52 percent to 48 percent, rather than 93 percent to 7 percent. Thus each of a number of factors can turn out to be critically important.

My emphasis on the importance of race also does *not* suggest that no real progress has been made on racial issues in the United States. As seen earlier in this paper, African Americans have made very significant strides in education, earnings, and income. In addition, as a result of the dismantling of the Jim Crow laws, most African Americans do not have to endure as many daily humiliations as they once were forced to endure. In 2008 and 2012, an African American won the presidential election (both in the Electoral College and in the popular vote), which would have been unimaginable for almost all of American history.

My assertion about the importance of race also does *not* mean that the attitudes of a substantial portion of the white population have not changed for the better. Also, I am *not* saying

that anyone whose policy preferences differ from mine is a racist. Nevertheless, as I survey the evidence, I cannot avoid the conclusion that race has played a very important role in generating the Great Divergence, and that the role of race is more important than the roles of the other influences discussed above.

Before I trace out the implications of this view, it may be appropriate for me to disclose some details of my background, which have undoubtedly shaped my views on racial issues. I grew up in a small town in Texas, which was named after the family that once owned a slave plantation in the area. When I was in elementary school, I was told a "joke" on several occasions by several different classmates. The classmate would approach with hand outstretched. When I responded by shaking the classmate's hand, he would say with a big smile, "I'm Abraham Lincoln. You're a free n*****." When I was in middle school, the Student Council held a fundraiser called "Slave Day": For a donation of one dollar, the donor student would be able to choose a member of the Student Council to be his or her "slave" for a day. I believe it was understood that, despite the "slave" designation, the donor students were expected to refrain from whipping, raping, or selling their "slaves". Nevertheless, this casual normalization of slavery (which must certainly have been approved by the school's administrators) is remarkable.

Space constraints prevent me from detailing many other examples. Suffice it to say that I have been exposed to a great deal of racial hatred. The racial animus that I witnessed in Texas in the 1960s did not disappear when I moved to Michigan in 1983.

Moving from my personal experiences to the historical record, one of the strongest pieces of evidence for the importance of race in the United States is that a conflict over whether there could be any restrictions on the spread of slavery was the reason for the only crisis in American history that led to a civil war. However, although the Civil War was about slavery, it was most

certainly *not* about equal rights for African Americans. By 1860, a large fraction of the Northern public was opposed to the extension of slavery, but only a small group on the left fringe of the Northern political spectrum believed in equal rights for African Americans at that time. Much of Northern opinion was simultaneously anti-slavery and deeply racist. (For excellent discussions, see McPherson (1964) and Wilentz (2005).)

Thus it is not surprising that, especially after 1877, Northern opinion largely abandoned the freedmen to their fate, and white southerners moved steadily to re-establish racial hegemony. One of the institutional arrangements that was put into place was the convict-labor system, described by Blackmon (2008). For the century after the Civil War, the Jim-Crow South was dominated by the Democratic Party, which was pro-slavery before the War, and segregationist afterward. When the Democratic President Franklin Roosevelt succeeded in passing the most egalitarian package of policies in American history, he avoided any direct challenge to white supremacy. Some New Deal policies were *indirectly* beneficial to African Americans, but Roosevelt understood that any substantial effort to help blacks *directly* could jeopardize his program, since Congress was dominated by Southern white committee chairmen.

However, in July, 1948, Minneapolis Mayor Hubert Humphrey delivered an impassioned speech in favor of civil rights at the Democratic National Convention, and Democratic President Harry Truman issued an executive order to desegregate the armed forces. In response, South Carolina's Strom Thurmond ran for President on the "Dixiecrat" ticket, and carried Alabama, Louisiana, Mississippi, and South Carolina. Sixteen years later, Democratic President Lyndon Johnson signed the Civil Rights Act of 1964. His Republican opponent, Barry Goldwater, voted against the Civil Rights Act, and carried the same four states that Thurmond had won, in addition to Georgia and his home state of Arizona. From that time onward, the Democratic Party was

closely linked in the public mind with civil rights for African Americans. In 1968, the Republican Richard Nixon carried five states from the former Confederacy on the way to winning the Presidency with a "southern strategy" and calls for "law and order," and the third-party segregationist George Wallace carried five more southern states.

Over the course of the next three decades, the transformation of political-party affiliations in the South became more and more complete. The Georgia Democrat Jimmy Carter did win all but one of the states of the former Confederacy in 1976, and the Arkansas Democrat Bill Clinton managed to carry four southern states in 1992 and again in 1996. However, by 2000, the transformation was essentially complete. The Democrat Franklin Roosevelt never lost a single state in the former Confederacy in his four successful presidential campaigns from 1932 to 1944, and the Republican George W. Bush never lost a single state in the former Confederacy in his successful campaigns for President in 2000 and 2004.

Figure 14 shows the fraction of the popular vote received by the Democratic candidate in every presidential election from 1900 to 2016, in the 11 states of the former Confederacy and in six states that I refer to as the Deep South.[35] From 1900 to 1944, the Democratic candidates averaged about 68 percent of the popular vote in the former Confederacy. From 1948 to 2016, this average was about 44 percent, for a decrease of about 24 percentage points. In the subset of the former Confederacy that I call the Deep South, the plunge was even more dramatic, from about 77 percent from 1900 to 1944, to about 43 percent from 1948 to 2016.[36]

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[35] I include Alabama, Arkansas, Georgia, Louisiana, Mississippi, and South Carolina in the Deep South. These are the states that voted for at least one of the following for President: Strom Thurmond in 1948, and/or Barry Goldwater in 1964, and/or George Wallace in 1968.

[36] Note that few blacks were able to vote in these southern states in the early part of the period shown in Figure 14. Thus the figure understates the extent to which white southerners switched parties.

<Figure 14 here>

Thus the South, and especially the Deep South, transformed in a generation from solidly supporting the relatively more egalitarian Democratic Party, to solidly supporting the relatively anti-egalitarian Republican Party. Black southerners continued to vote for Democratic candidates in overwhelming numbers. However, the northward migration in the middle of the 20th century meant that, when southern blacks gained the ability to vote in the South after the Voting Rights Act of 1965, they no longer constituted a majority of the population in any state.[37]

It is possible that the sudden switch of political loyalties among white southerners was due, at least in part, to something other than race. Perhaps white southerners voted for Barry Goldwater because of his lack of enthusiasm for Social Security, or his support for a strong military. However, the horrific racial history of the South leads me to believe that race was the dominant factor.

The white backlash against the Civil Rights movement has been stronger in the South than elsewhere. However, this does not mean that racial issues are unimportant in the rest of the country. The Democrat John Dingell, the longest-serving member in the history of the House of Representatives, represented an area to the south and west of Detroit. He has said that his most difficult campaign for re-election was in 1964, when some of his constituents loudly derided him as a "n***** lover" because of his support for the Civil Rights Act. Although we in Michigan are uncomfortable discussing race, it is an omnipresent issue in a state whose largest metropolitan area is more heavily segregated by race than any other area in the country.[38]

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[37] In 1900, African Americans were more than 58 percent of the population in both Mississippi and South Carolina. By 1970, these proportions had fallen to about 37 percent in Mississippi and 30 percent in South Carolina.

[38] I like to refer to Eight Mile Road, which separates overwhelmingly black Detroit from some of its overwhelmingly white suburbs, as "Michigan's Berlin Wall." See Ballard (2010), pp. 47-50.

The racial fears and hatreds of whites have also helped to stimulate the anti-government sentiments that have become very widespread in recent decades. For most of American history, governments were openly and actively hostile to the interests of African Americans. Thus the Civil Rights Act, and especially affirmative-action programs, represented a dramatic reversal. After 350 years of slavery, segregation, and affirmative action for whites, the federal government of the United States began to pursue affirmative action for blacks. This was enough to turn some whites against "government" generally. A watershed moment was the assertion in 1981 by the Republican President Ronald Reagan, in his first inaugural address, that "government is the problem." Of course, Reagan was really referring only to *some* governmental actions. In the same speech, he called for a more active policy to confront the Soviet Union. This policy was to be carried out by a large increase in spending by the Department of Defense, which is indeed a part of the federal government. Thus anti-government rhetoric came to be used as code for opposition to some activities of government, but not others. The government activities that have been under greatest attack have been those with an egalitarian flavor. (Anti-government rhetoric has been used most prominently by Republicans, but it has also been used by Democrats such as President Bill Clinton, who famously said in 1996 that "the era of big government is over.")

Egalitarian government policies were essential to the Great Compression. In my view, although the "anti-government" rhetoric of the past 40 years has sometimes had a libertarian

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In 2007, I spoke to the North Oakland County Republican Club, at which one member of the audience said "Maybe we're asking too much of the public schools—we're asking them to educate Black and Hispanic children…". In response, I said that I believe all children can learn, but no one else said anything. One highly educated acquaintance of mine from the Lansing area once offered his view that, under Barack Obama, race relations were worse than at any other time in American history. His evidence for the parlous state of race relations was that threats had been made against George Zimmerman, the "neighborhood watch volunteer" who shot to death an unarmed African-American teenager.

element, its main effects have been anti-egalitarian.[39]

I want to emphasize once more that it is very difficult to quantify the various political influences that have contributed to the adoption of the anti-egalitarian policies that have fueled the Great Divergence. My view is that each of the factors discussed above (social issues, political organization, electoral institutions, and voter ignorance) has played a significant role. This is especially true since elections are won at the margin, so that relatively small changes in voter behavior can have large consequences. However, I believe that race has played a larger role than any other factor.[40] More than anything else, the anti-egalitarian, anti-government tide of the last four decades has been the product of a protracted backlash against the Civil Rights movement.

If the assertions that I have made here are correct, they represent an irony that is painfully sad, at least for me. White voters of modest economic circumstances supported the egalitarian policies that led to the Great Compression, and this advanced their economic interests. Economic inequality was reduced dramatically, and the standard of living of low- and middle-income whites skyrocketed. However, when the federal government moved to reduce *racial* inequality, the support for egalitarian *economic* policies among low- and middle-income white voters was reduced enough to usher in the anti-egalitarian tide of the last 40 years, to the detriment of many of those same white voters.[41]

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[39] The wave of anti-government rhetoric has sometimes generated remarkable ironies and paradoxes, such as when a South Carolina woman in 2009 shouted to a member of Congress that he should "keep your government hands off my Medicare." Appelbaum and Gebeloff (2012) report on the tendency for conservative critics of the social safety net to rely on the social safety net, apparently without noticing the irony.

[40] See Edsall and Edsall (1991) for a good discussion of race and other issues that have helped to stimulate support for anti-egalitarian policies.

[41] In my view, this use of race to distract many whites from their interests is not at all new. I see

And yet, in a further irony, we have seen in Figure 4(b) that African Americans made significant economic strides, especially in the region of the country where the white backlash was strongest.

When I first presented an earlier version of this paper in October, 2015, some participants in the conference expressed the opinion that I had *overstated* the importance of race. However, subsequent events have convinced me that I may actually have *understated* the importance of race. As I see it, Donald Trump's 2016 campaign was the most overtly racist presidential campaign since George Wallace's campaign in 1968, or possible even since Strom Thurmond's campaign in 1948. Trump's campaign featured heavy doses of xenophobia directed at non-European countries, opposition to immigration from non-European countries, and religious intolerance toward Muslims, but I assert that racism toward blacks was an especially important part of his appeal. Trump appears to have achieved considerable popularity with a segment of the electorate, in large part because of his repeated assertions (despite the lack of any evidence) that President Barack Obama was not born in the United States. These assertions were widely viewed as thinly veiled messages of racial resentment toward the first African-American president of the United States. In the minds of many of Trump's supporters, the messages of racial resentment and religious intolerance were intertwined-- in one public-opinion survey, 43 percent of Republicans said they believe Obama is Muslim, while only 28 percent of Republicans said they believe (correctly) that he is Protestant. (See Bailey (2015).)

VI. What Does the Future Hold?

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it as a continuation of a long trend also seen in the Civil War, when hundreds of thousands of southern white men who did not own slaves (including one of my great-great-grandfathers) fought for the Confederacy, the government of which was dominated by wealthy slaveowners.

In one of the best works of political economy ever written, Acemoglu and Robinson (2012) describe "critical junctures"—moments in history that disturb the established system. They show that small differences in initial conditions can lead to large differences in the response to a critical juncture. For example, the Black Death of the late 1340s reduced the labor supply in parts of Europe by one-third or more. Standard economic theory predicts that this would put upward pressure on wages. In England, despite the strenuous efforts of King Edward III and the nobility to maintain serfdom, conditions *did* improve for the laborers who survived the plague. However, in Eastern Europe, the nobility were slightly stronger, and serfdom continued and even strengthened for the next 300 years.

Is the abrupt policy reversal of the 1970s and 1980s a critical juncture, and if so, where will it lead? In the words of the late sage Yogi Berra, "It's tough to make predictions, especially about the future." Moreover, as an economist, I know that economic predictions are even tougher than many other predictions. Thus I approach the answer to the question at the beginning of this paragraph with much humility.

On the one hand, there is plenty of reason to believe that the Great Divergence will continue, and that income inequality in the United States will remain very high. Wall Street firms have fought strenuously to water down the implementation of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. The strength of labor unions continues to erode. Further tax cuts for those at the top of the income scale, along with repeal of the estate tax, continue to be standard policy proposals by Republican officials and candidates. Wealthy anti-egalitarians, such as Charles and David Koch, continue to provide strong financial support for anti-egalitarian causes and candidates. The flood of money into the political system was further encouraged by the *Citizens United* decision, and enforcement of the Voting Rights Act was

weakened by the *Shelby County* decision.

On the other hand, many of the egalitarian victories of American history are still intact. We still have universal elementary and secondary education. Despite huge reductions in public funding, we still have the strongest system of higher education in the world. No one is seriously suggesting that we should repeal the 13th, 15th, or 19th Amendments to the U.S. Constitution. Despite the fact that it is not in long-run balance, the Social Security system continues to provide income support for tens of millions of elderly Americans. We still have an income tax. Moreover, income inequality is probably getting more attention than ever before, and some candidates for public office are campaigning on egalitarian platforms. Perhaps most importantly, although it is clear that racial animus is still very much alive and well in America, there is evidence that racial bias has diminished over time. (For example, see Charles and Guryan (2008).)

Thus, although I would love to make a dramatic prediction, I believe it is impossible to know for certain the future direction of income inequality in the United States. Personally, I would prefer to see a substantial reduction in inequality, and I believe that American democracy is still sufficiently vital that it is possible this will occur.

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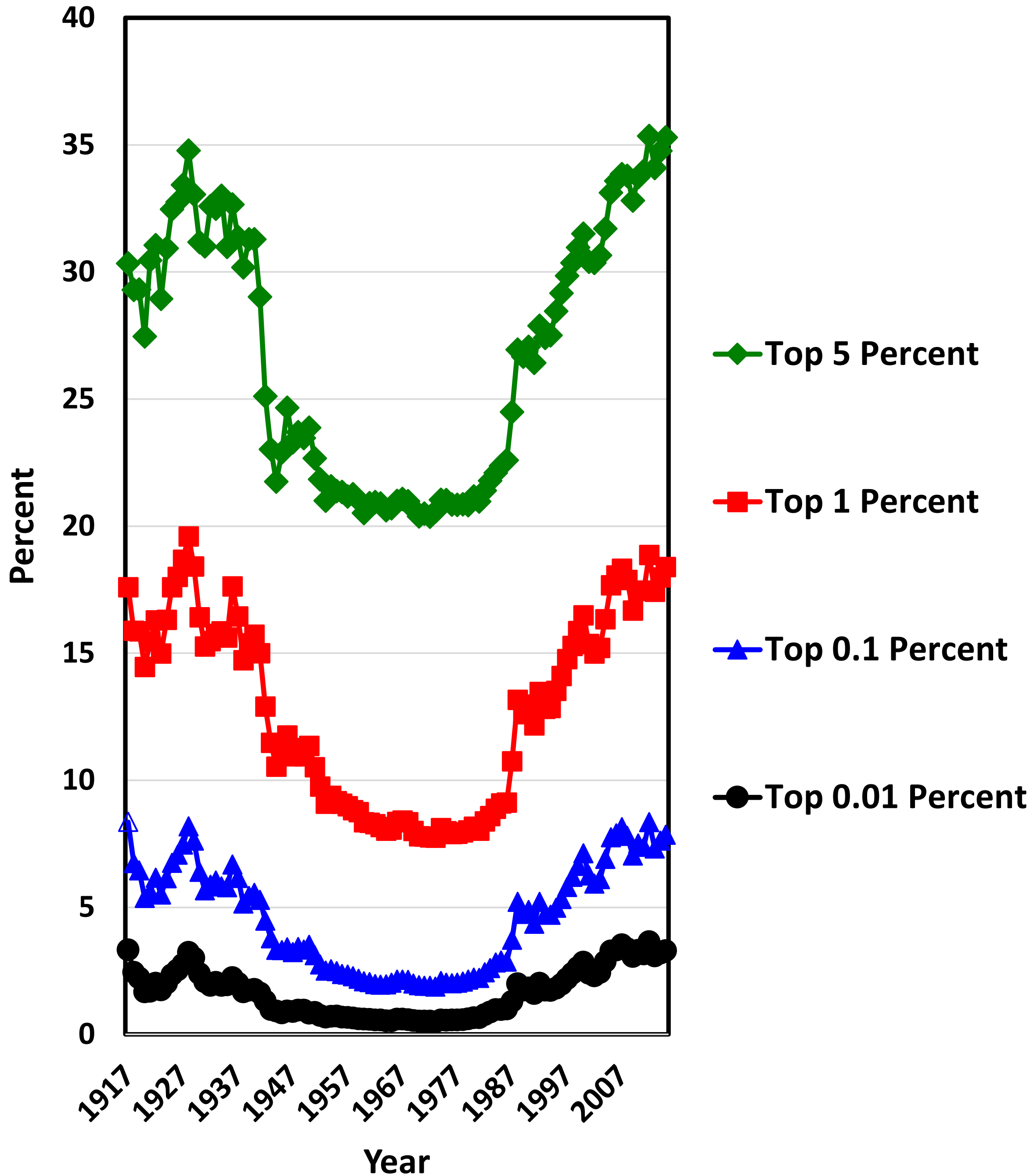
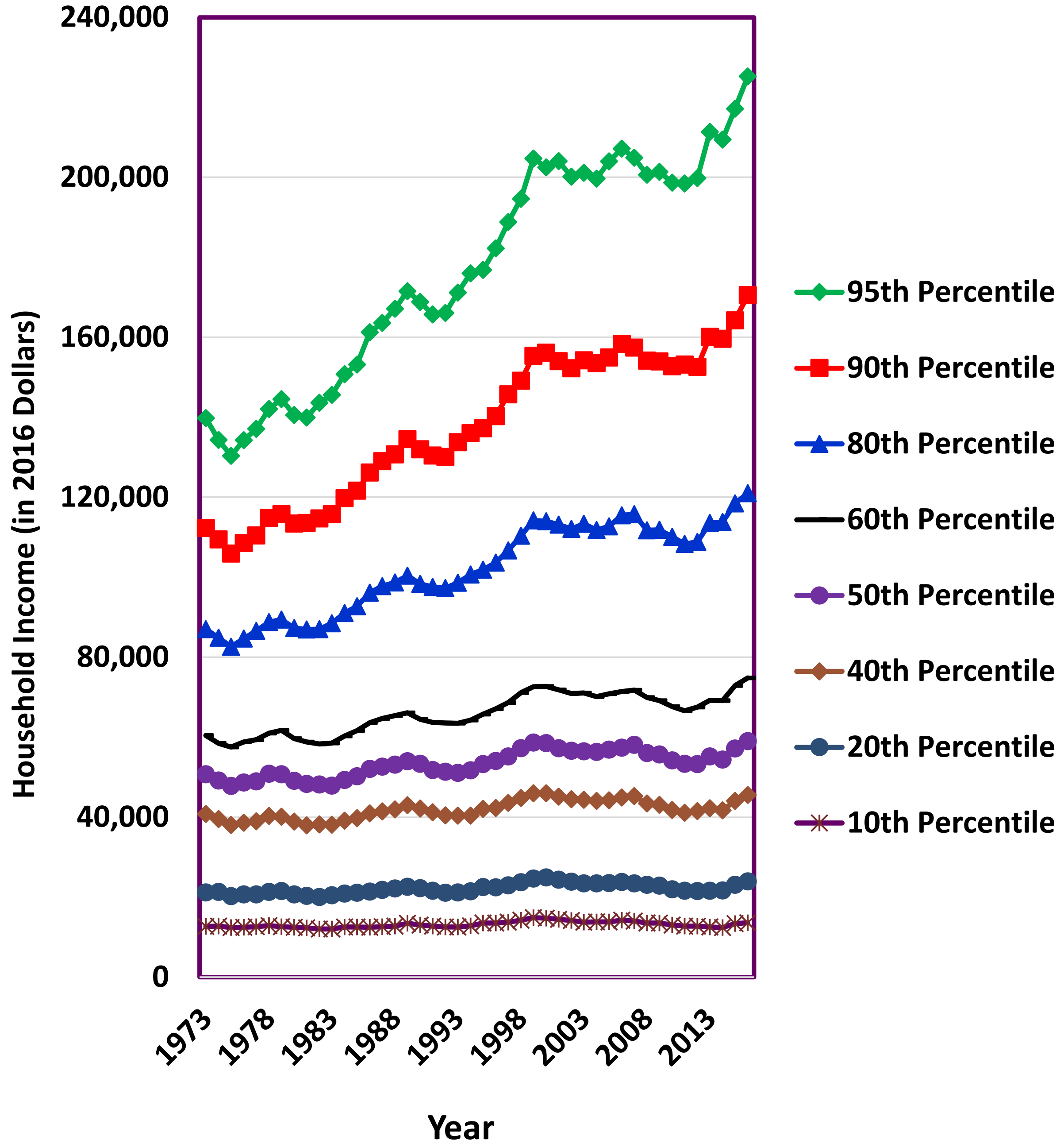
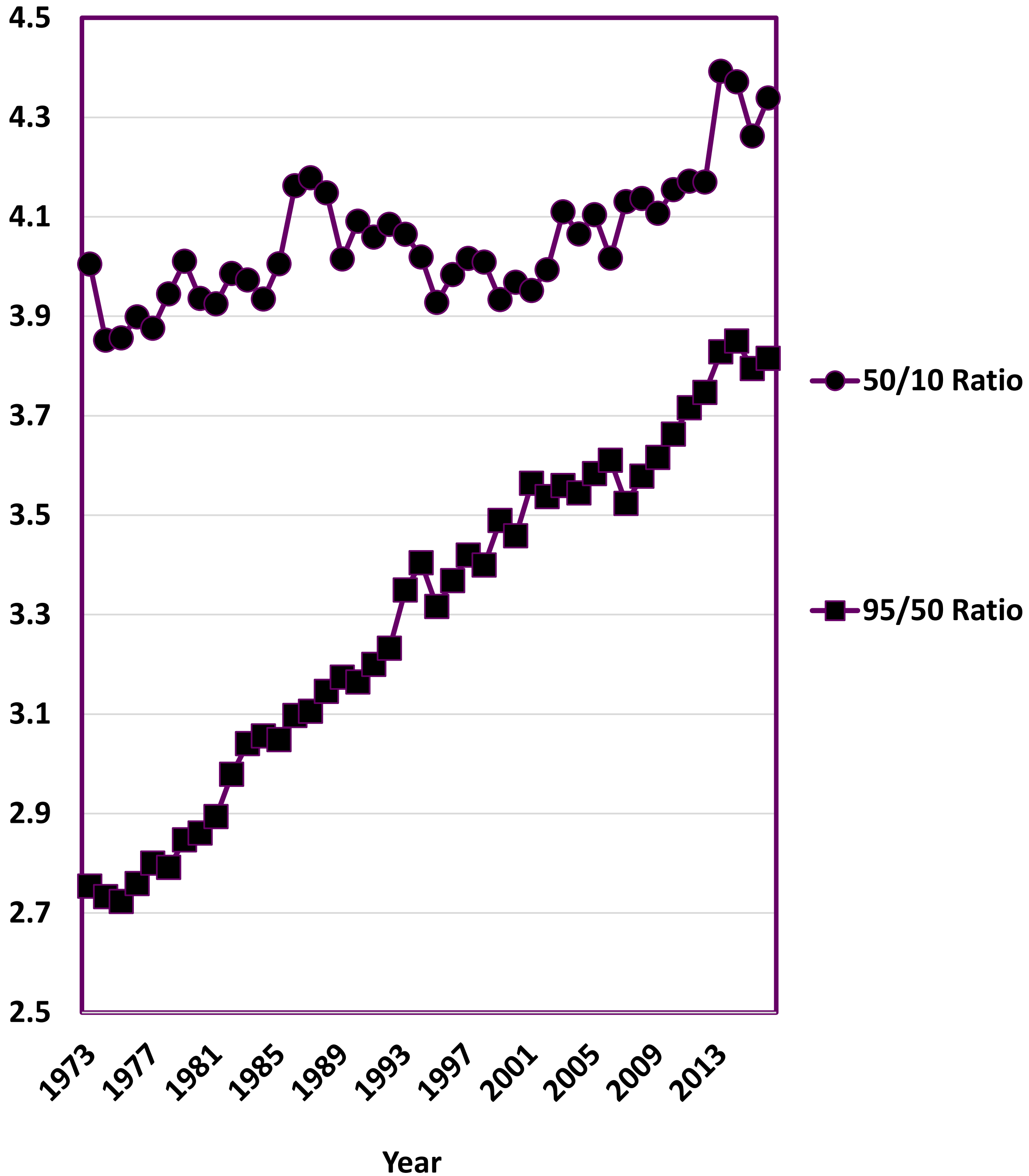


Source: Piketty and Saez (2003), with data updated to 2015 from http://eml.berkeley.edu/~saez/.



Source: Semega, Fontenot, and Kollar (2017), Table A-2.



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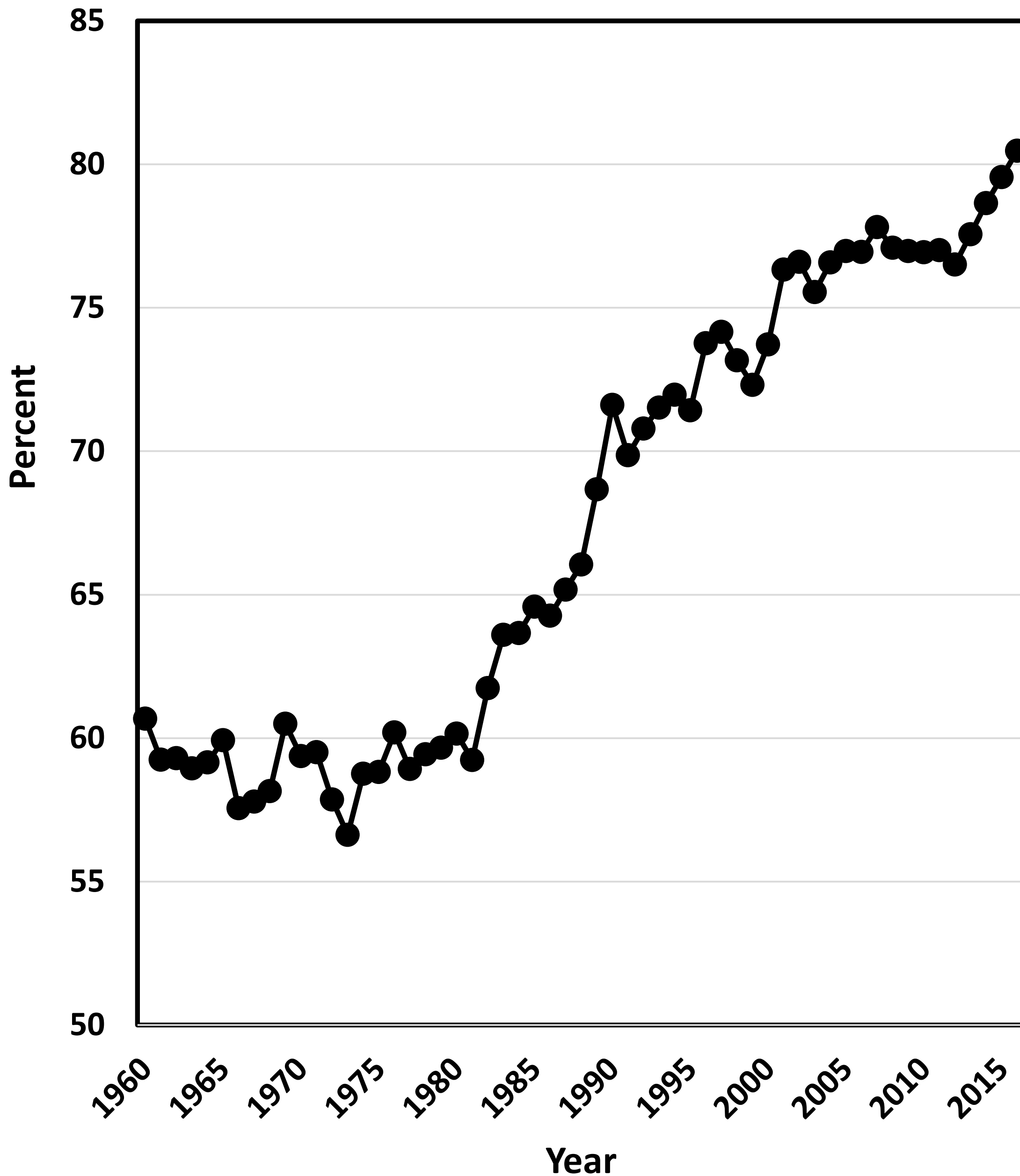
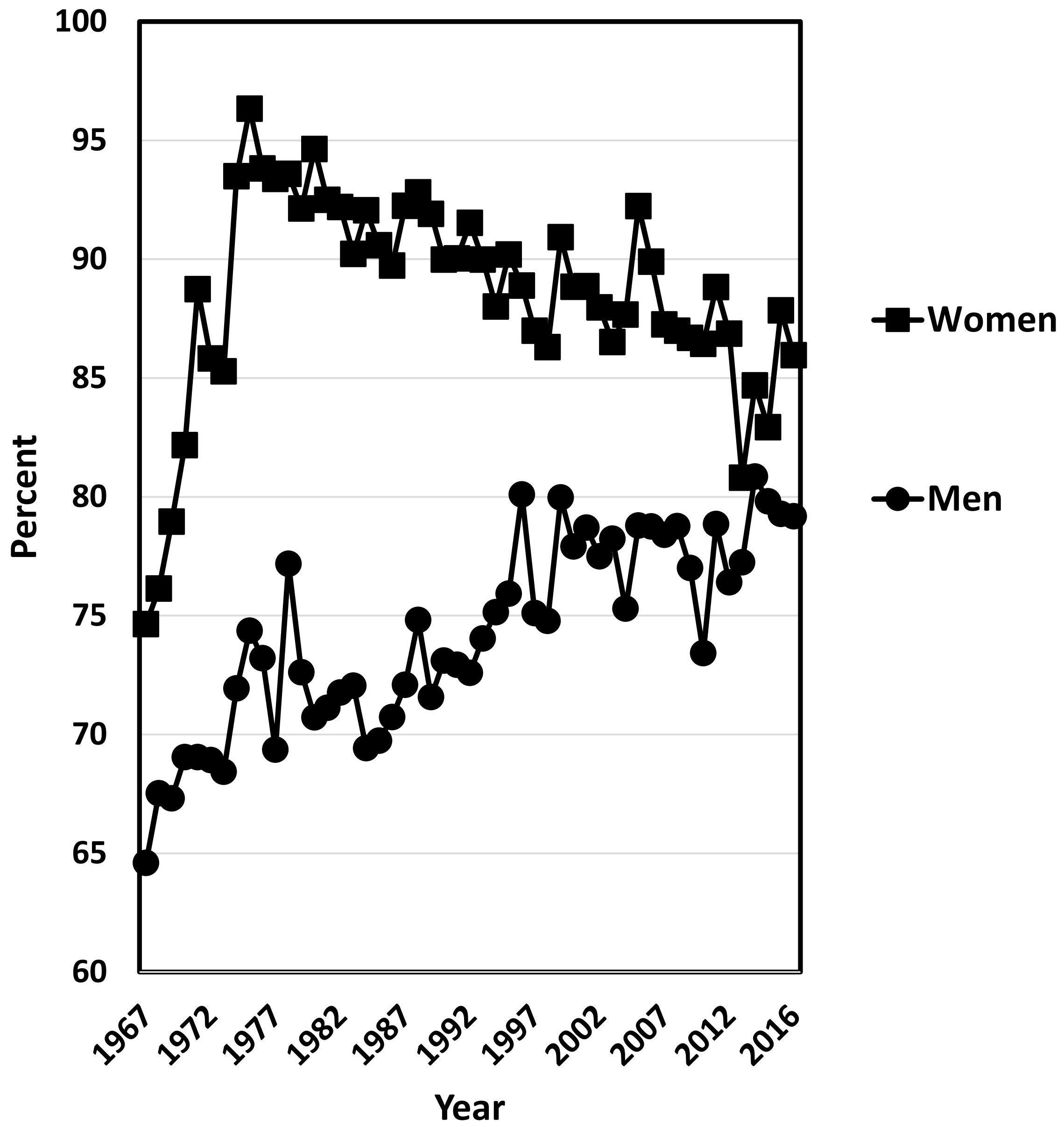


Source: U.S. Bureau of the Census, Historical Income Tables: People, Table P-38ar, available at http://www.census.gov/hhes/www/income/data/historical/people/.



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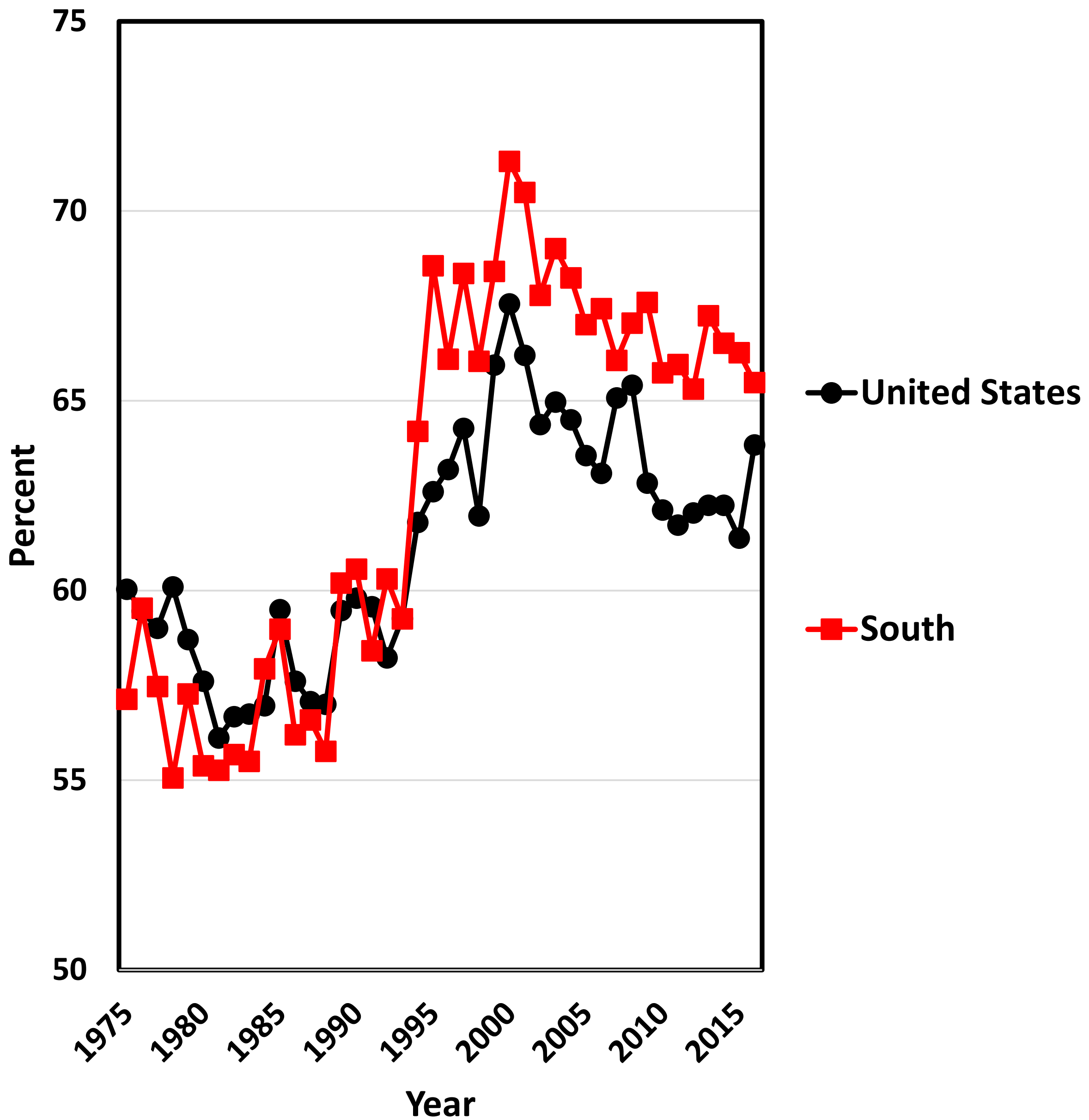

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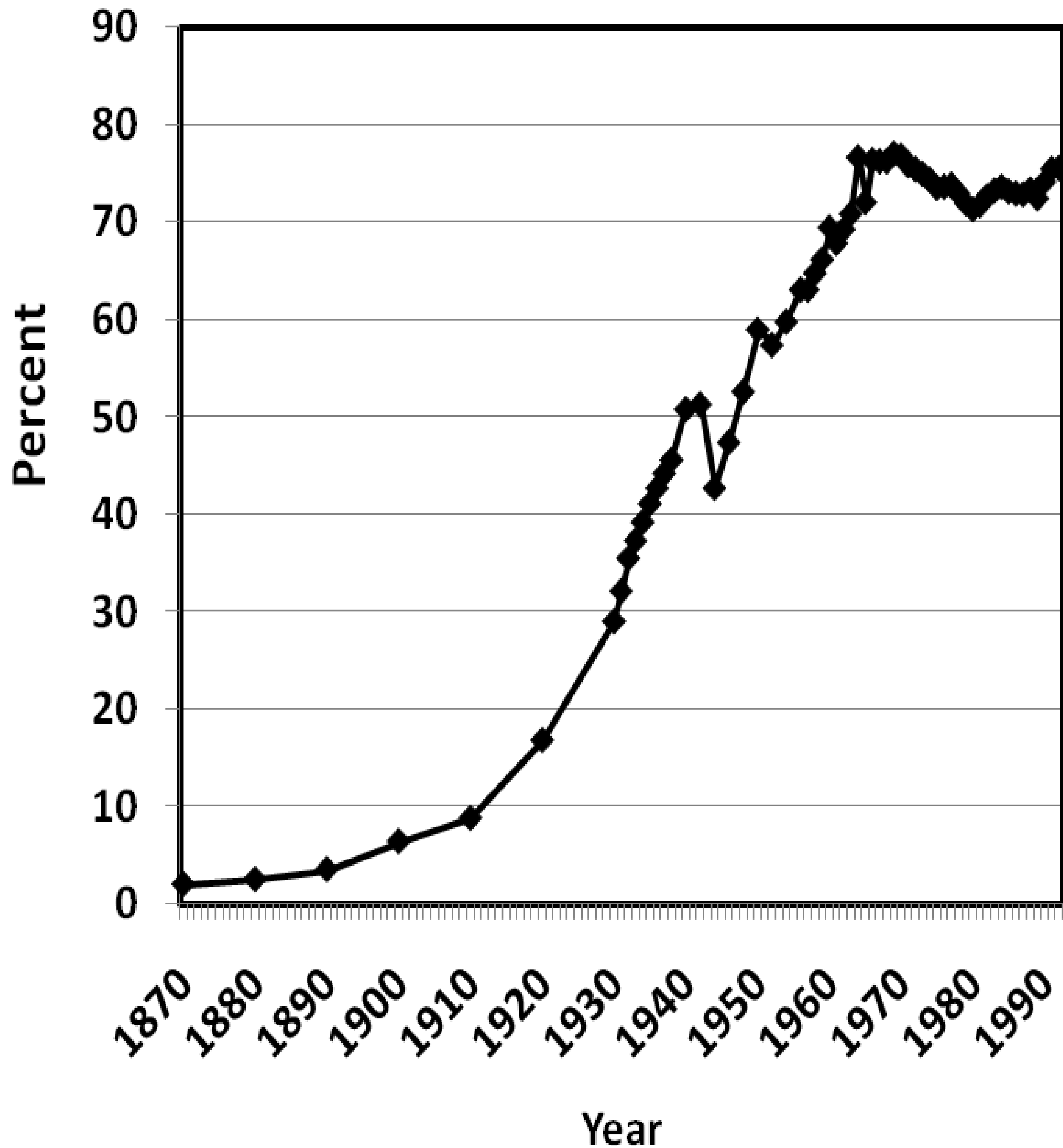


Source: U.S. Department of Education (1993).

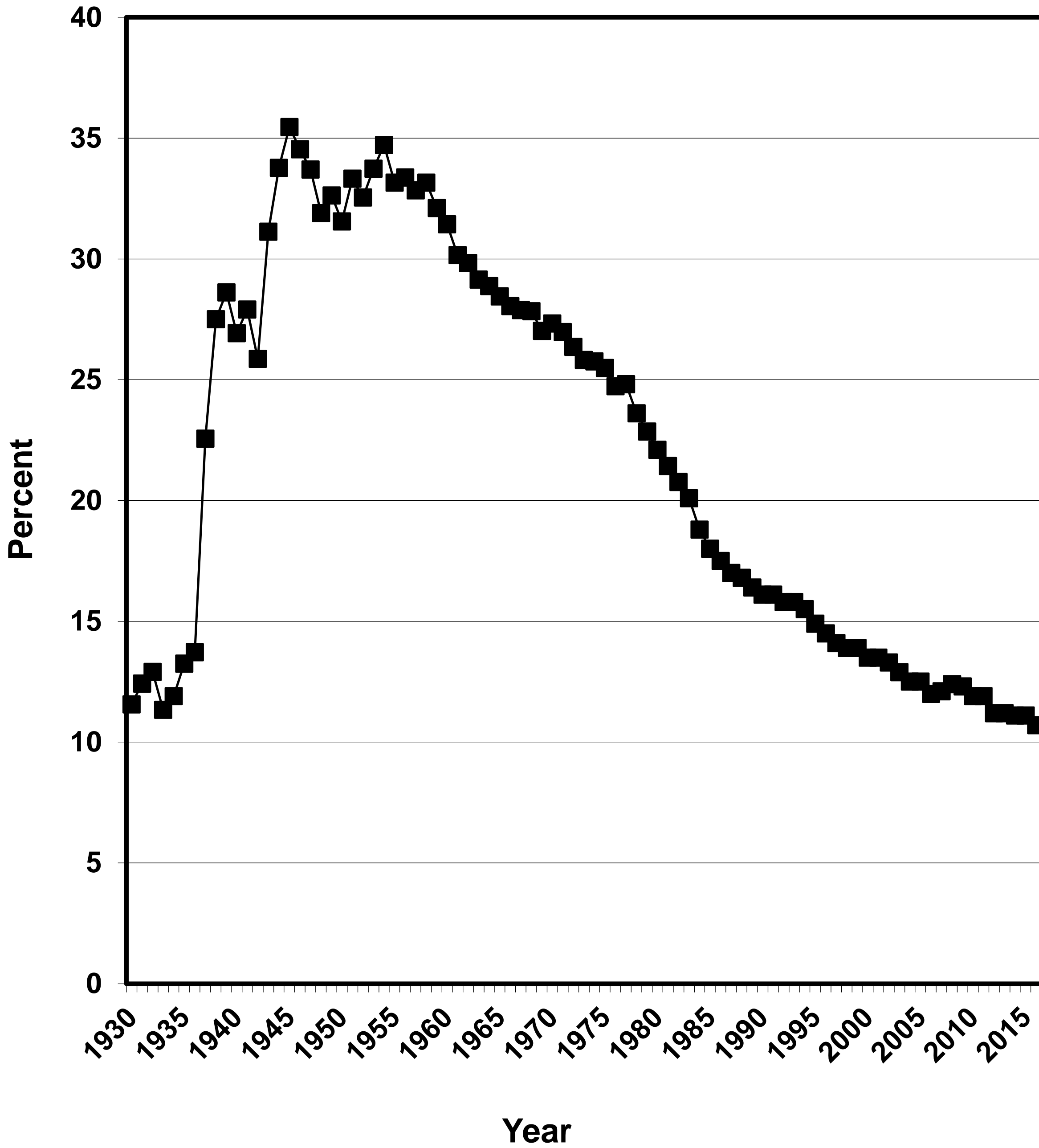
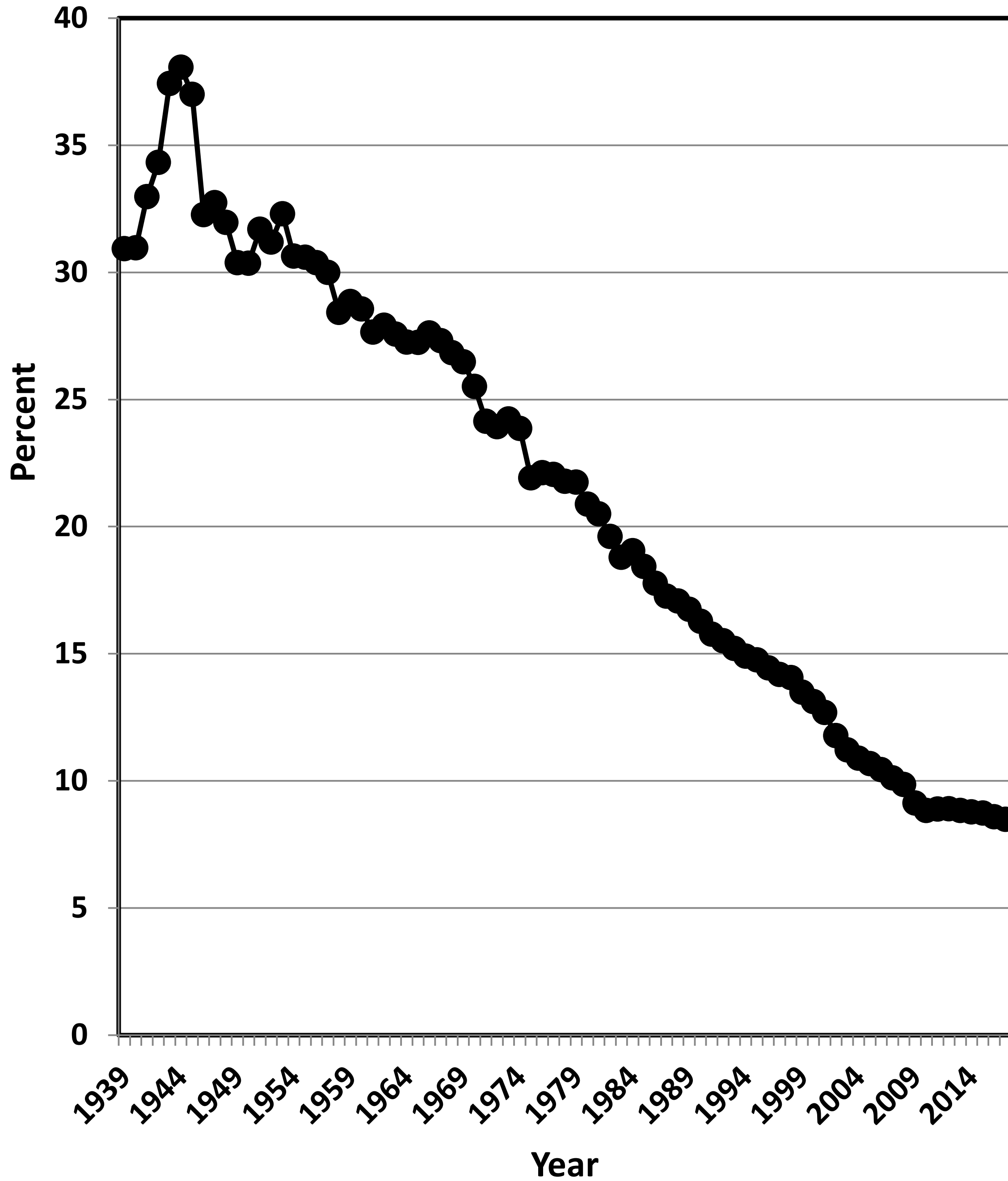
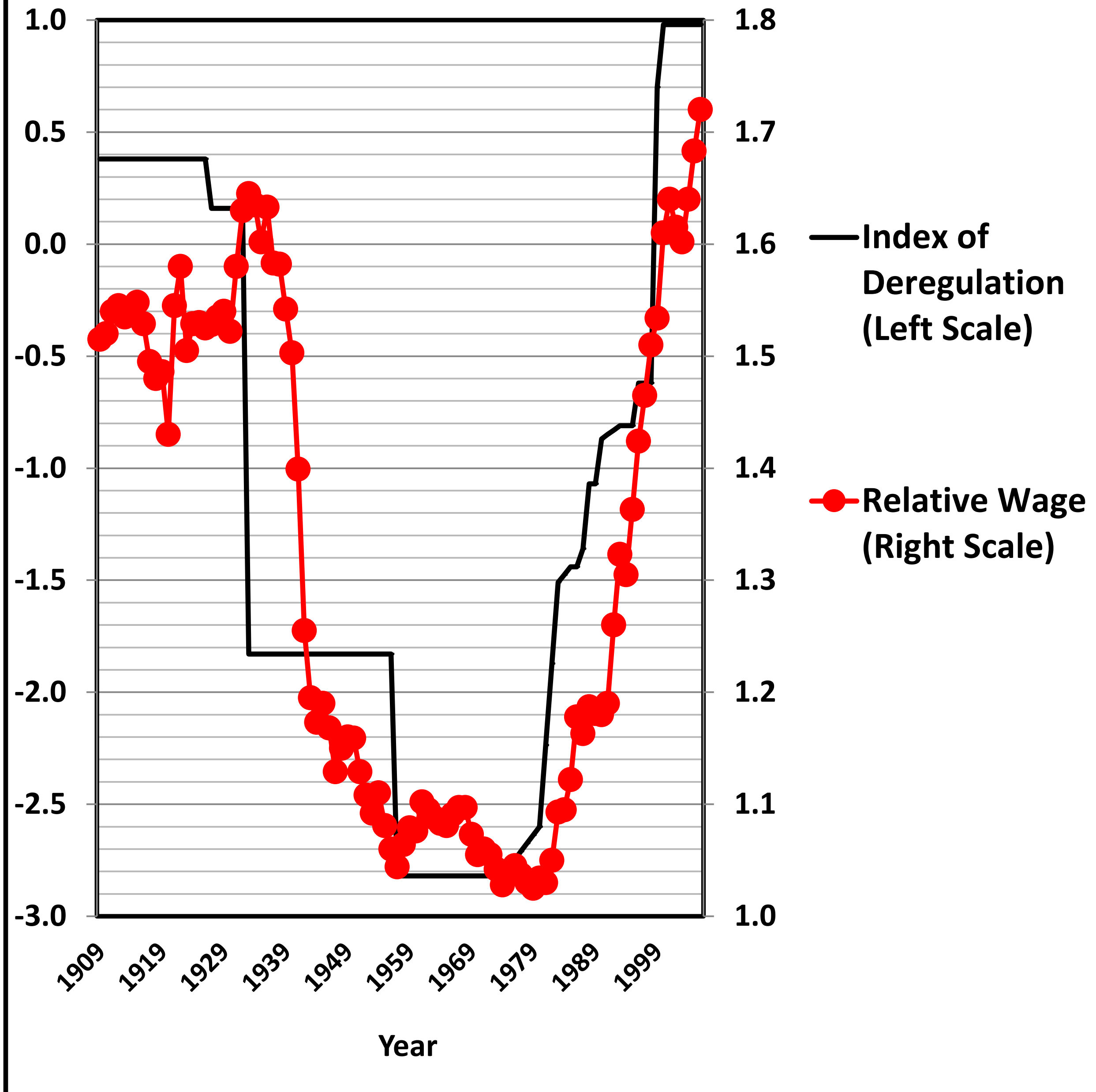


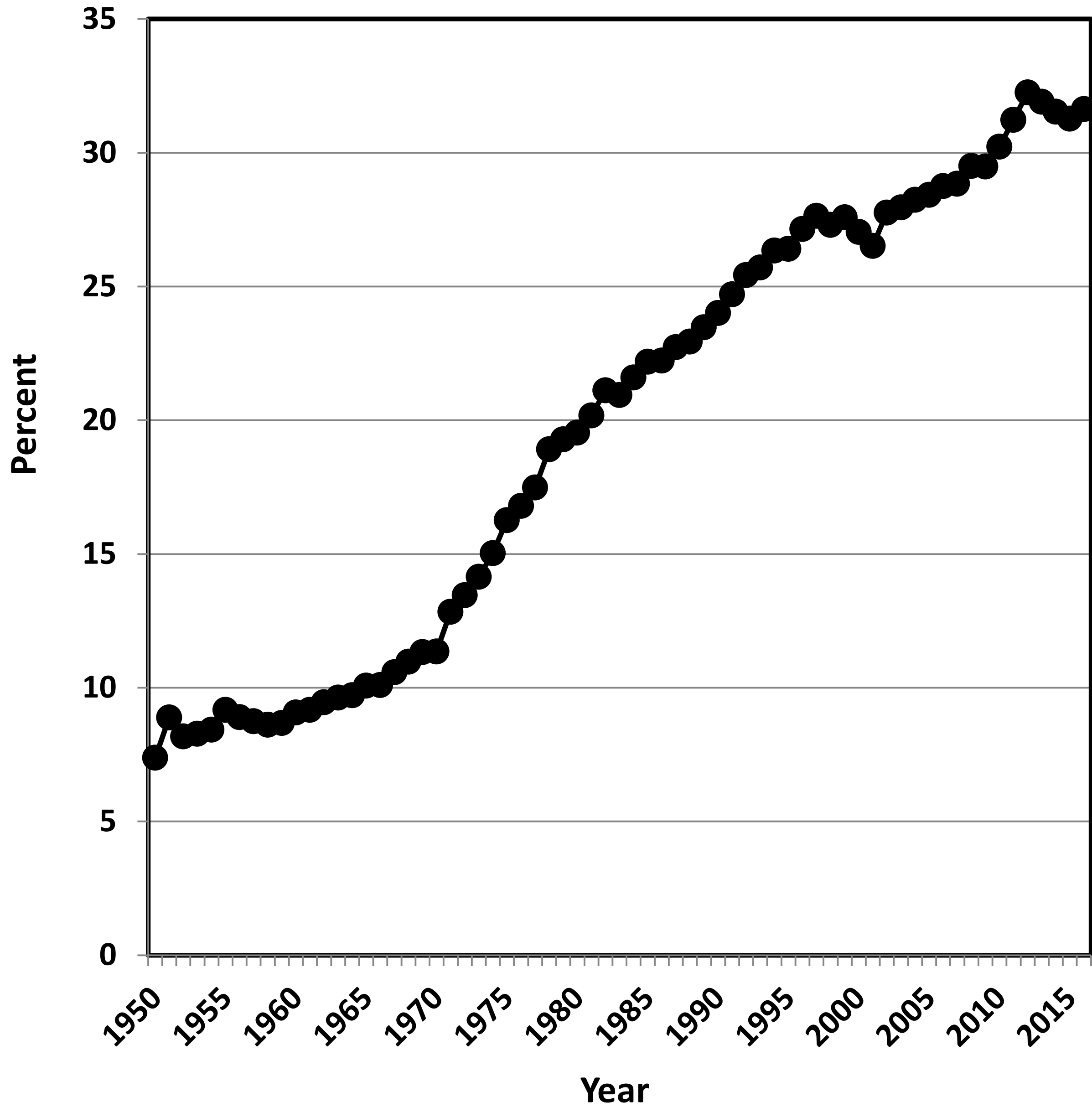
Figure 6(a)
Union Members as Percentage of
U.S. Workers, 1930-2016
Percent
40
35
30
25
20
15
10
5
0
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
Year



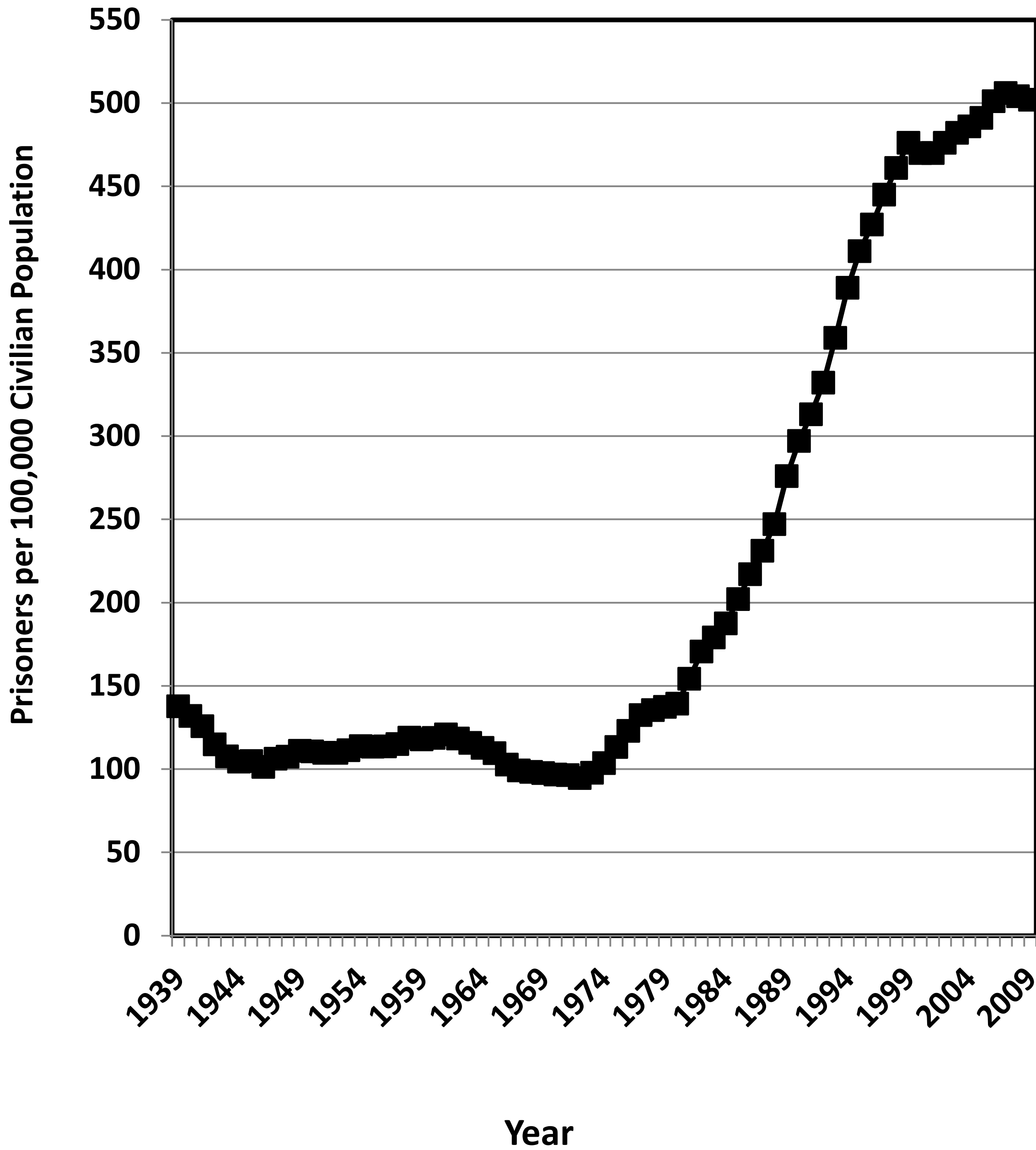
Source: Bureau of Labor Statistics.



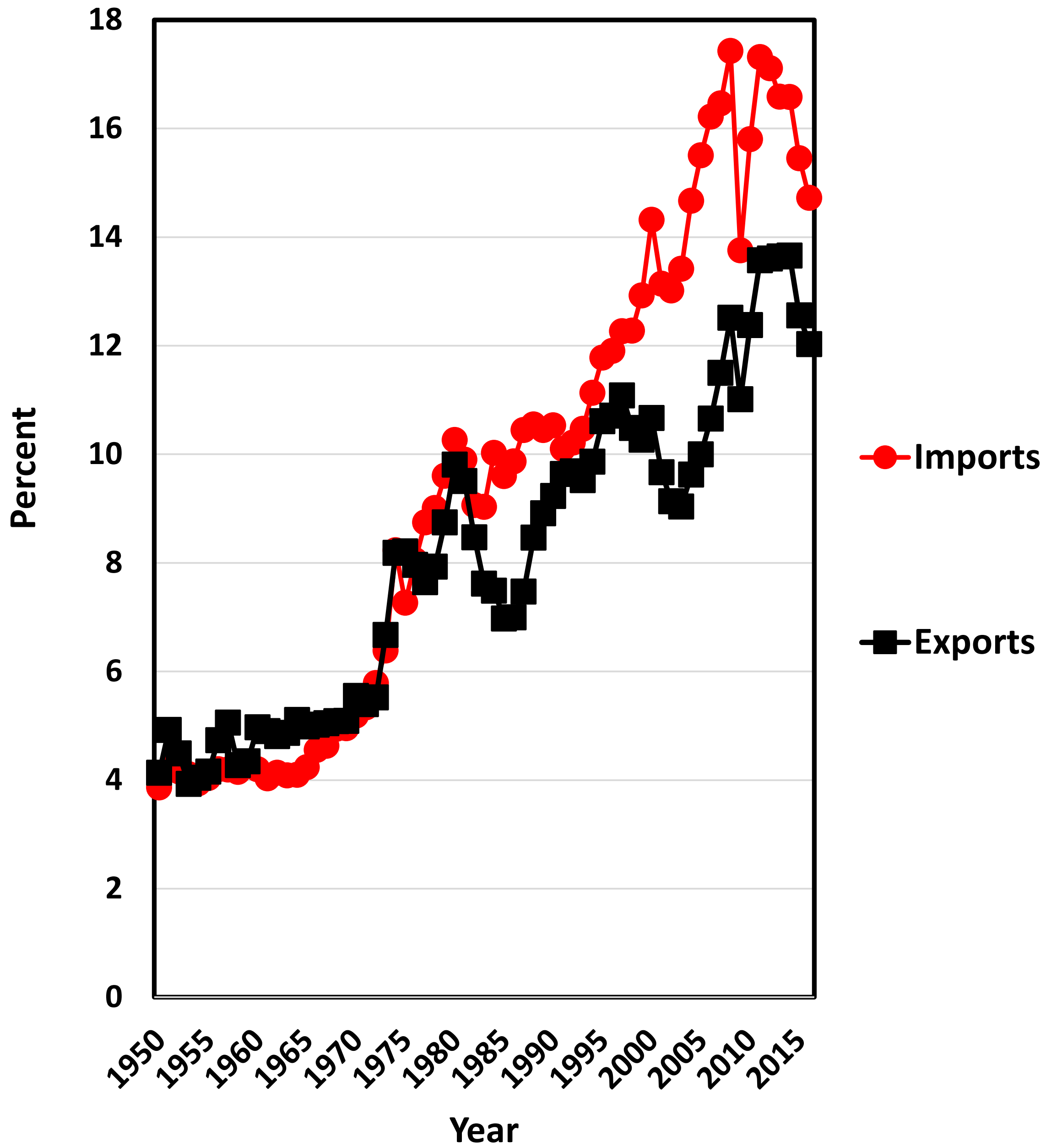
Source: Philippon and Reshef (2012).



Source: U.S. Census Bureau, Historical Tables: FM-1. Families by presence of own children under 18, 1950 to present. https://www.census.gov/hhes/families/data/families.html



Source: Statistical Abstract of the United States, various years.



Source: U.S. Department of Commerce, Bureau of Economic Analysis, "Gross Domestic Product", Table 1.1.5 at http://www.bea.gov/iTable/index_nipa.cfm.

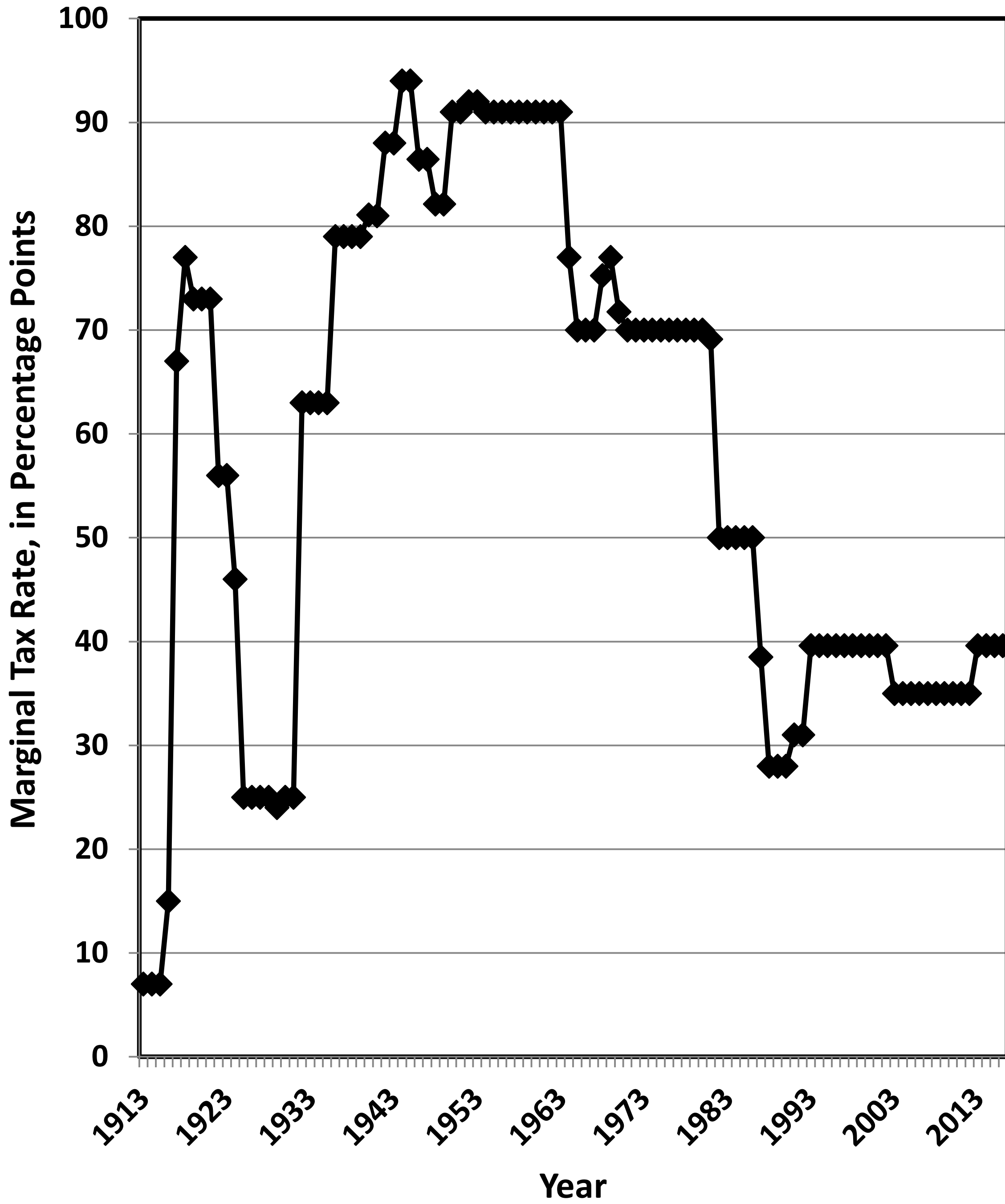


Figure 11
Highest Marginal Tax Rate in the
U.S. Federal Individual Income Tax, 1913-2016
Marginal Tax Rate, in Percentage Points
100
90
80
70
60
50
40
30
20
10
0
1913
1923
1933
1943
1953
1963
1973
1983
1993
2003
2013
Year

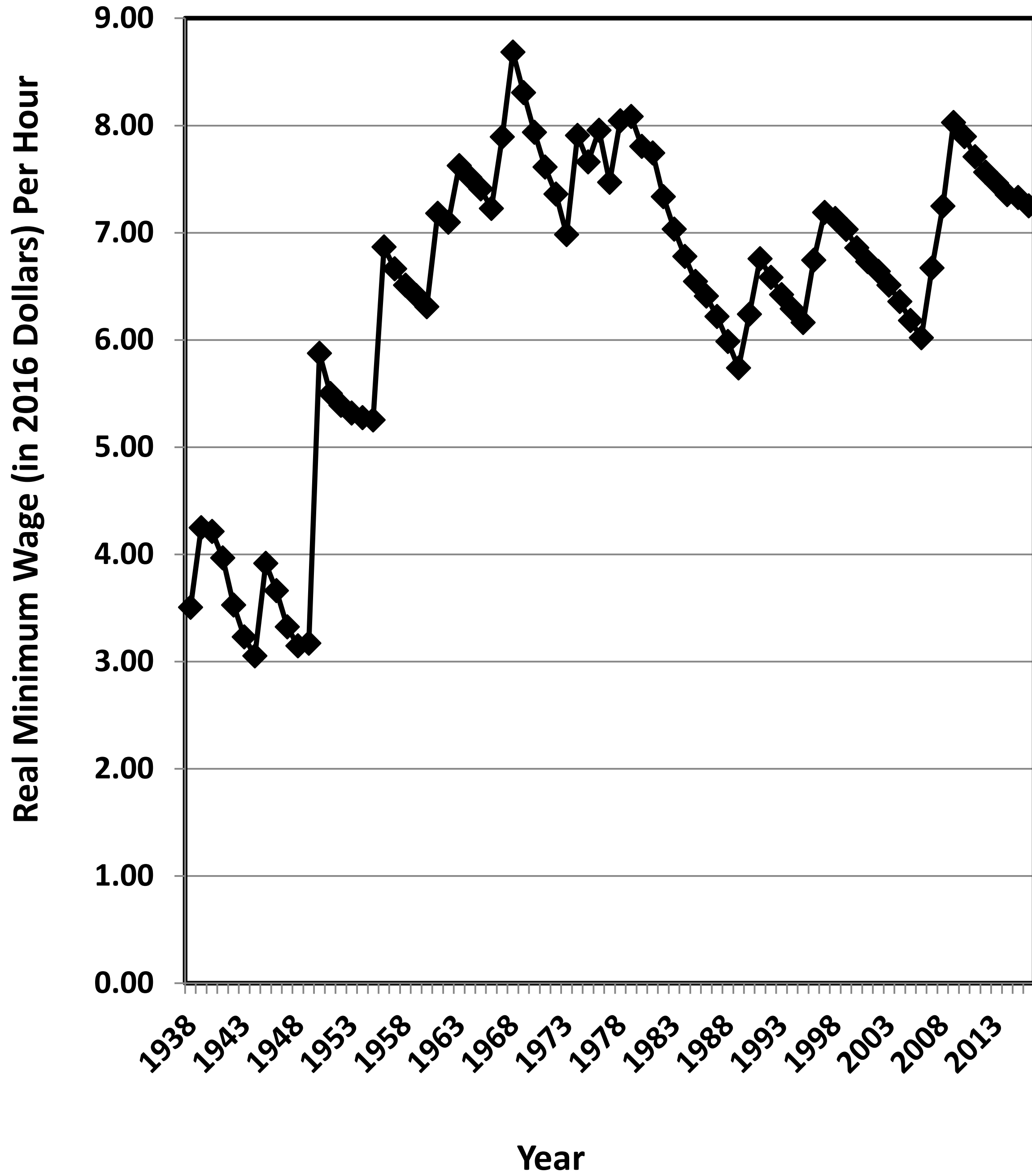
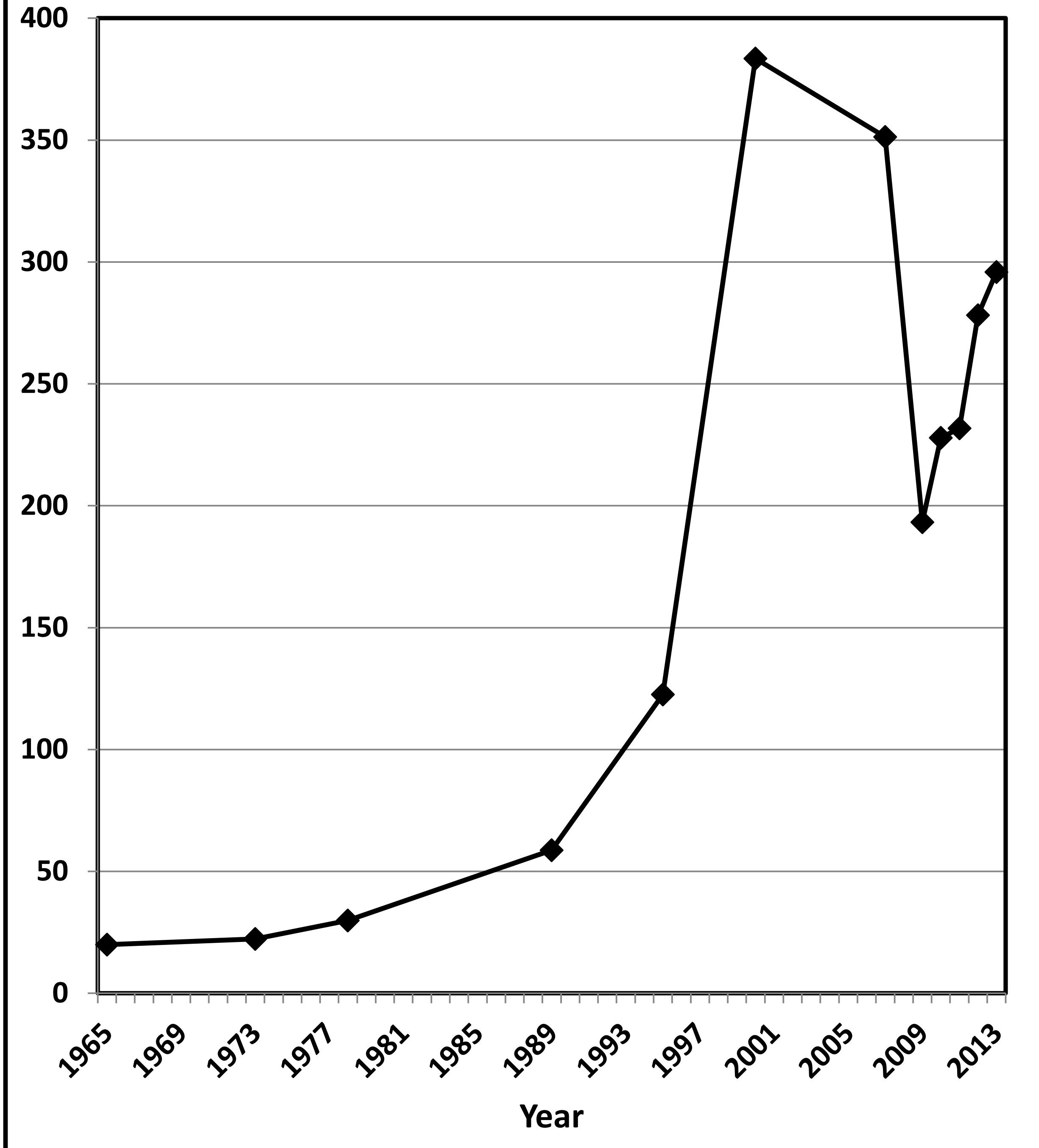


Figure 12
Real (Inflation-Adjusted) Federal Minimum Wage, 1938-2016 (in 2016 Dollars)
Real Minimum Wage (in 2016 Dollars) Per Hour
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1938
1943
1948
1953
1958
1963
1968
1973
1978
1983
1988
1993
1998
2003
2008
2013
Year



Source: Davis and Mishel (2014).

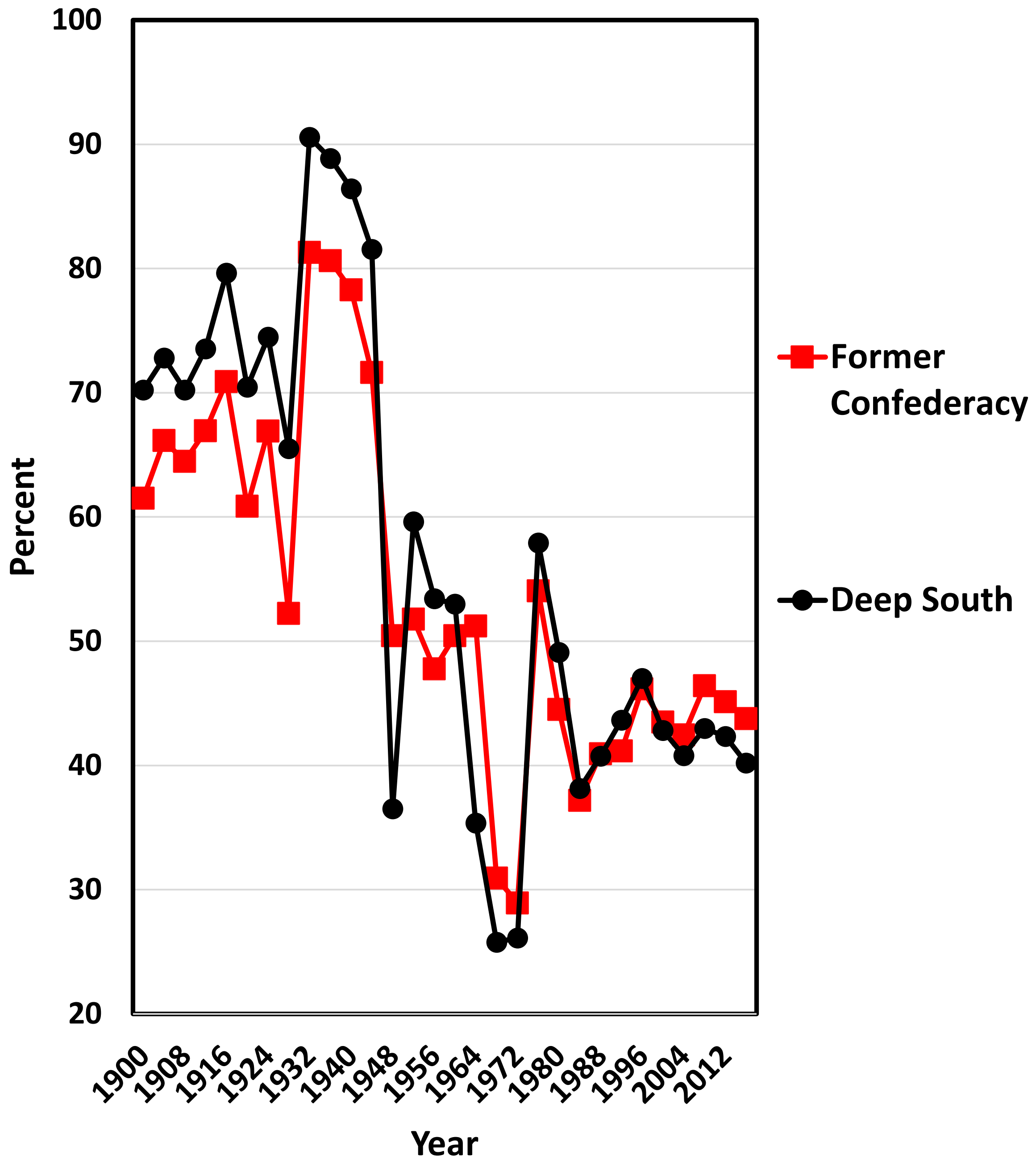


Figure 14
Percent of Popular Vote Received by the Democratic Candidate, in the Former Confederacy and the Deep South, In Presidential Elections, 1900-2016
100
90
80
70
60
50
40
30
20
Percent
1900
1908
1916
1924
1932
1940
1948
1956
1964
1972
1980
1988
1996
2004
2012
Year
Former Confederacy
Deep South