



Beyond the Wage Stagnation Story

Better Measures Show America's Workers Doing Better Than Previously Reported

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August 2015

According to the lead editorial in the *New York Times* on May 1, 2015, “it is hard to overstate the extent to which work no longer results in a decent paycheck and a rising standard of living in this country.”¹

The notion that wages have stagnated for many decades has also appeared in the *Washington Post*, the *Huffington Post*, and other columns in the printed and online versions of the *New York Times*.² The idea that earnings growth has stalled is bolstered by research showing that family incomes adjusted for inflation have changed little over the past three to four decades (DeNavas-Walt and Proctor 2014; Picketty and Saez 2015).

Reports of long-term stagnation in wages, earnings, and income, however, are misleading and likely understate the actual growth in the compensation earned by workers and the resources available to families. In contrast to reports of stagnation, the Congressional Budget Office (CBO; 2014) finds that between 1979 and 2007, median household incomes adjusted for inflation grew by 41 percent—that is not a large increase (barely more than 1 percent a year), but it is far greater than the 5 to 15 percent rise reported in other research.

CBO's results differ from those of other researchers for two principal reasons: (1) CBO includes outlays employers make for their workers (e.g., payroll taxes and employer contributions toward health insurance and retirement) in addition to cash earnings and income, and (2) CBO uses a different measure of inflation.

Using the CBO approach for measuring workers' pay and adjusting for rising prices, I find real median compensation of all workers increased by 38 percent from 1979 to 2013, more than double the

rate obtained when considering only cash earnings and using the most conventional adjustment for inflation.

Focusing on changes in median compensation also obscures important differences in the experiences of different demographic groups. For example, although real median compensation for men grew by only 13 percent, it grew by 73 percent for women. Compensation declined for workers without four-year college degrees, but it rose for those with bachelor's and graduate degrees. Compensation grew more rapidly among older workers than younger workers. The differences in compensation growth were modest across race/ethnic groups as the real median grew by 52 percent for non-Hispanic white workers and 42 percent for non-Hispanic African American workers.

The 38 percent growth rate at the median is significantly lower than the 100 percent growth rate for the average compensation of the highest-paid 10 percent of workers. These top earners got a disproportionate share of the available growth: If everyone had moved forward at the same rate, real growth would have been 67 percent across all workers.

This brief shows that methodological choices are crucial in determining what the earnings growth rate is. The first section of the paper discusses various methodological issues and argues that the CBO approach is superior to the approaches used by other researchers. The second section shows how real median annual compensation grew from 1979 to 2013 for different populations and includes breakouts by sex, age, race/ethnicity, and education. After the conclusion, three appendices discuss data construction, employer-provided benefits, and declines in male earnings.

Methodology

This paper uses data from the Annual Social and Economic Supplement (March) Current Population Survey to examine annual earnings (see appendix A for a more in-depth discussion of the data and definitions used).³ I focus on the period between 1979 and 2013 for several reasons: 1979 is a common starting point for this type of analysis because it is the last business cycle peak before income inequality started rising sharply in the early 1980s. It is also the first year for which CBO's enhanced data on compensation are available. To assess long-term trends, it is generally considered good practice to compare similar points in the business cycle. The last business cycle peak, however, occurred in 2007. To capture changes that occurred during the Great Recession and to make this analysis as current as possible, I extend my analysis through 2013, which was not a business cycle peak but was well into the recovery and four years removed from the business cycle trough of 2009. The labor market was somewhat weaker in 2013 than in 1979 based on unemployment rates, but the share of the population working was similar in both years. The implication of comparing a business cycle peak to a recovery year is that this analysis slightly understates the long-term trend in income growth.

The data are reported for all workers ages 16 and over. I examine yearly earnings rather than hourly wages because earnings are more closely tied to household income and because women's hours of work per year have grown substantially. The increase in women's hours reflects a greater attachment

to the labor force and leads to an increase in women's hourly pay and their ability to obtain higher-paying jobs. By contrast, men's hours worked have remained mostly constant, so trends in annual earnings mirror those of hourly wages.

Current Population Survey earnings are based on cash payments to hired workers and salaries claimed by self-employed workers; these forms of income are called *earnings* in the rest of the paper. I use CBO data to augment each person's Current Population Survey earnings to include all payments that employers make on behalf of their workers; these payments are called *compensation* in the rest of the paper. In 2013, median compensation was 18.5 percent higher than median earnings (see appendix A for the procedure used to allocate benefits to each worker based on their earnings level). Moreover, because employer benefits, especially employer health care costs, grew faster than earnings, CBO median compensation grew approximately 8 percentage points higher than median earnings from 1979 to 2013.

Although most people think in terms of the money they bring in, most economists believe that all employer expenditures are effectively part of workers' incomes. From the employer's standpoint, the cost of each worker is the total package of cash wages and benefits. Employers have consistently said they view their benefit package as an important component in attracting workers, and they have no particular reason or incentive to reduce wages to increase benefits (see appendix B on the evolution of employer benefits). To the degree that workers have had a chance to negotiate the split between cash wages and benefits in union contracts, they have generally chosen generous benefit packages even at the cost of lower cash raises.

Another crucial issue is how to adjust for inflation. The rate of inflation has changed significantly across the last four decades in the United States even though the monetary authorities target an inflation rate of 2 percent a year. Although the Department of Commerce goes to great effort to follow prices of the same commodities year after year, sometimes there are new commodities, quality improvements in old commodities, and consumer shifts in the consumption of commodities in response to changing prices. These changes mean that under the best of circumstances it is challenging to determine a national inflation rate.

Each month, the Bureau of Labor Statistics puts out detailed tables on how prices changed overall and for a variety of separate commodities. There are long treatises on how the Consumer Price Index (CPI) is calculated, and over the last 30 years, there have been many small and two major changes in this computation. The purpose of the adjustments is to estimate the increase in the standard of living over time, not just the yearly gain in reported incomes (called *nominal dollars*). Thus, the price index divides the dollar increase into a price effect and a real effect (i.e., a rise in the standard of living).

Currently, US Census and Bureau of Labor Statistics reports use the CPI-U-RS (where *U* stands for urban, and *RS* stands for research series) to adjust nominal into real dollars. Bureau of Labor Statistics' researchers, however, decided in 2002 that the chained CPI (C-CPI-U) is a better measure of the rate of inflation.⁴ The C-CPI-U is computed in a way that is more consistent with the Bureau of Economic Analysis' personal consumer expenditure (PCE) price deflator, which is used to determine changes in

real gross domestic product. The main difference between the chained price indexes and the CPI-U-RS is that the C-CPI-U and PCE allow for consumers to respond to changes in relative prices in such a way as to maximize their well-being.

Many researchers (including CBO) now use PCE (the equivalent of C-CPI-U) in their research papers as the preferred way to adjust for inflation. Analytically, the consequence of moving from CPI-U-RS to C-CPI-U or PCE is to change the mix in the increase in nominal dollars to show less inflation and more growth. Programmatically, there is resistance to officially adopting the C-CPI-U because many government rules are affected: in particular, the inflation adjustment for Social Security payments and the IRS income levels at which marginal tax rates change. Showing less inflation would decrease the upward adjustments of yearly Social Security checks and cause more people to pay higher taxes.

Data Analyses

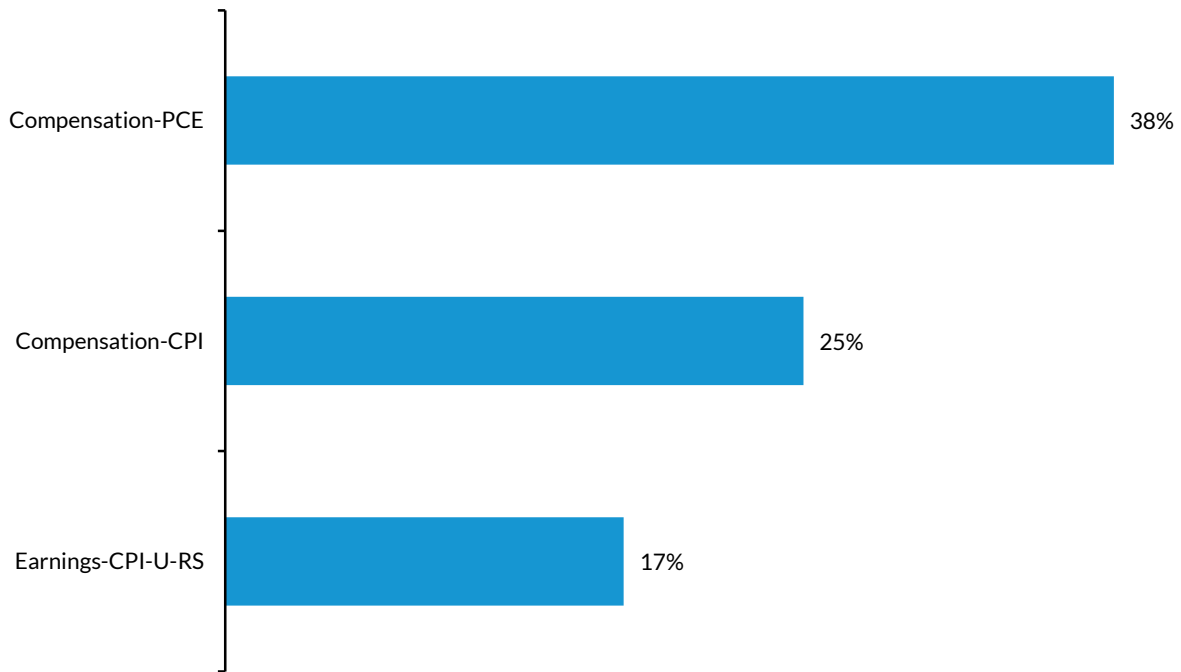
Among workers, real median earnings adjusted by the CPI-U-RS grew by 17 percent (or 0.4 percent per year) from 1979 to 2013 (figure 1). Adding employer-paid benefits to earnings to measure total compensation changes the picture: Median compensation grew by 25 percent (8 percentage points more than earnings). Finally, changing to the PCE price deflator results in median compensation growth of 38 percent (or 1.1 percent per year).

In one of the most widely referenced charts showing wage stagnation, Mishel, Gould, and Bevins (2015) report that real median hourly wages grew by just 6 percent from 1979 to 2013. The difference between 6 and 38 percent is based on the differences between (1) hourly wages and yearly earnings, (2) earnings and compensation, and (3) the adjustment for inflation (CPI versus PCE). Although it may seem odd that the results can be so far apart, the approach used here is the more meaningful one when talking about how economic growth has benefitted typical workers and their families.

Over the years considered the composition of the labor force changed in four ways: It became more female, older, more educated, and had more nonwhites. Two of these changes—more female and more nonwhite—increased the share of workers who have lower than average labor income, and the other two changes—older and more educated—increased the share of workers with higher than average labor income. Overall, these four changes more or less offset each other, but as shown below, they affected the growth rates of different subcomponents of the labor force relative to gender, age, race/ethnicity, and education.

FIGURE 1

Three Methods of Measuring Median Labor Income Growth, 1979–2013



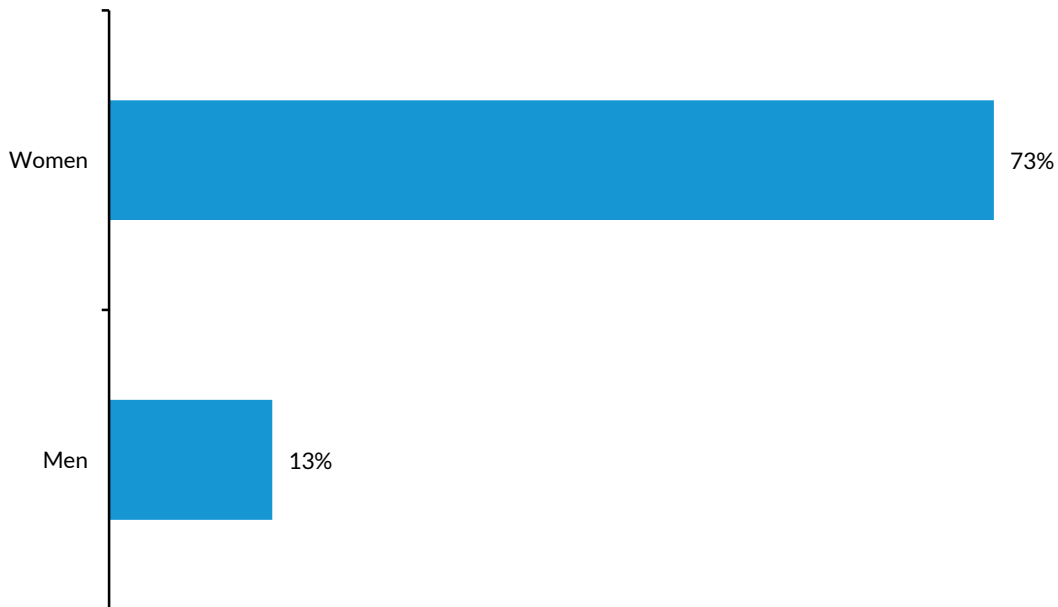
Source: Author’s computation from Current Population Survey data.

Within any specific classification of workers, the 38 percent growth in compensation adjusted for inflation by the PCE is not equal across the board. In particular, as figure 2 shows, women’s median compensation grew by 78 percent from 1979 to 2013, but men’s median compensation grew by an anemic 13 percent over these years (appendix C discusses how low-educated and young men’s median earnings using the CPI declined from 1979 to 2013). On a yearly basis, women’s yearly growth rate of 1.6 percent was nearly five times the male yearly growth rate of 0.34 percent.⁵

Men’s earnings grew less than women’s earnings over the period because many of the advantages men enjoyed between the end of World War II and 1979 proved to be unsustainable and began to erode in the following decades. First, low-skilled blue collar unionized men from 1950 to 1979 shared in some of the “rent” going to large American corporations; this premium was eliminated due to technological change and more international competition. Second, high-skilled men benefitted from women’s low participation in high-paying managerial and professional jobs. As highly educated women became more active participants in the labor force, the added competition had a negative effect on men’s real earnings growth.

FIGURE 2

Increases in Compensation for Workers by Sex, 1979–2013



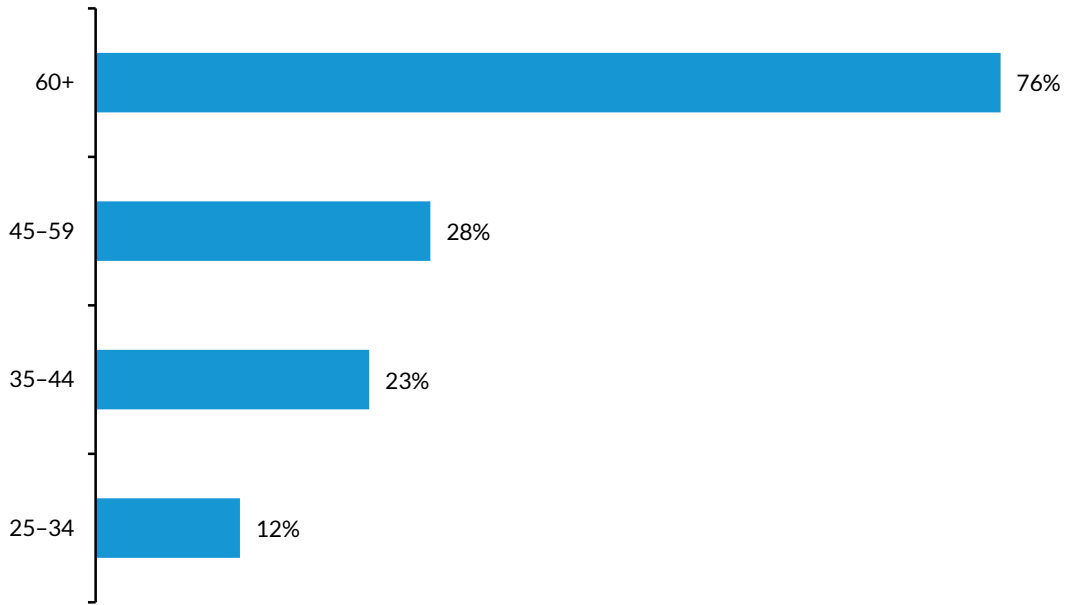
Source: Author’s computation from Current Population Survey data.

Compensation grew more for older workers than younger workers between 1979 and 2013 (figure 3). For those ages 60 and older, compensation rose by 76 percent, largely due to the continued presence in the workforce of many highly educated baby boomers who were delaying retirement. The other three age groups had median growth rates below the 38 percent rate for all workers. This result was caused by the rise in the share of workers over age 35, which grew from 52 percent in 1979 to 57 percent in 2013. Because older workers earn considerably more than younger workers, this increase drove up the average compensation of all workers and led to the gains based on comparisons of specific ages to be lower. In particular, the 12 percent growth of those ages 25 to 34 reflects the harder times that younger people face in starting their careers. For those ages 35 to 44, the median growth rate was 23 percent, and those at the end of their prime earning years (ages 45 to 59) had a compensation growth of 28 percent.

In terms of race/ethnicity, only Hispanics experienced median real compensation growth rates below the 38 percent median gain for all workers (figure 4). Non-Hispanic whites at 52 percent, non-Hispanic African Americans at 42 percent, and other races and multiple races at 48 percent all saw their compensation grow by more than the median 38 percent. The falling proportion of whites in the labor force coupled with the growth in the share of workers who are Hispanic depressed overall compensation growth as nonwhites, on average, earn less than whites.

FIGURE 3

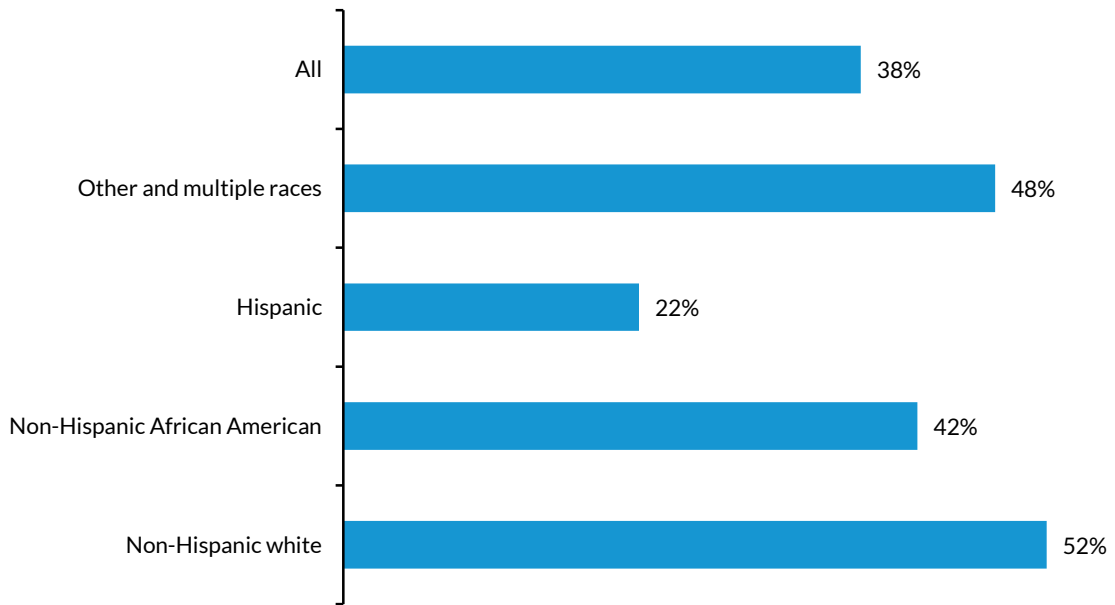
Increases in Compensation for Workers by Age Group, 1979–2007



Source: Author's computation from Current Population Survey data.

FIGURE 4

Increases in Compensation for Workers by Race and Ethnicity, 1979–2013



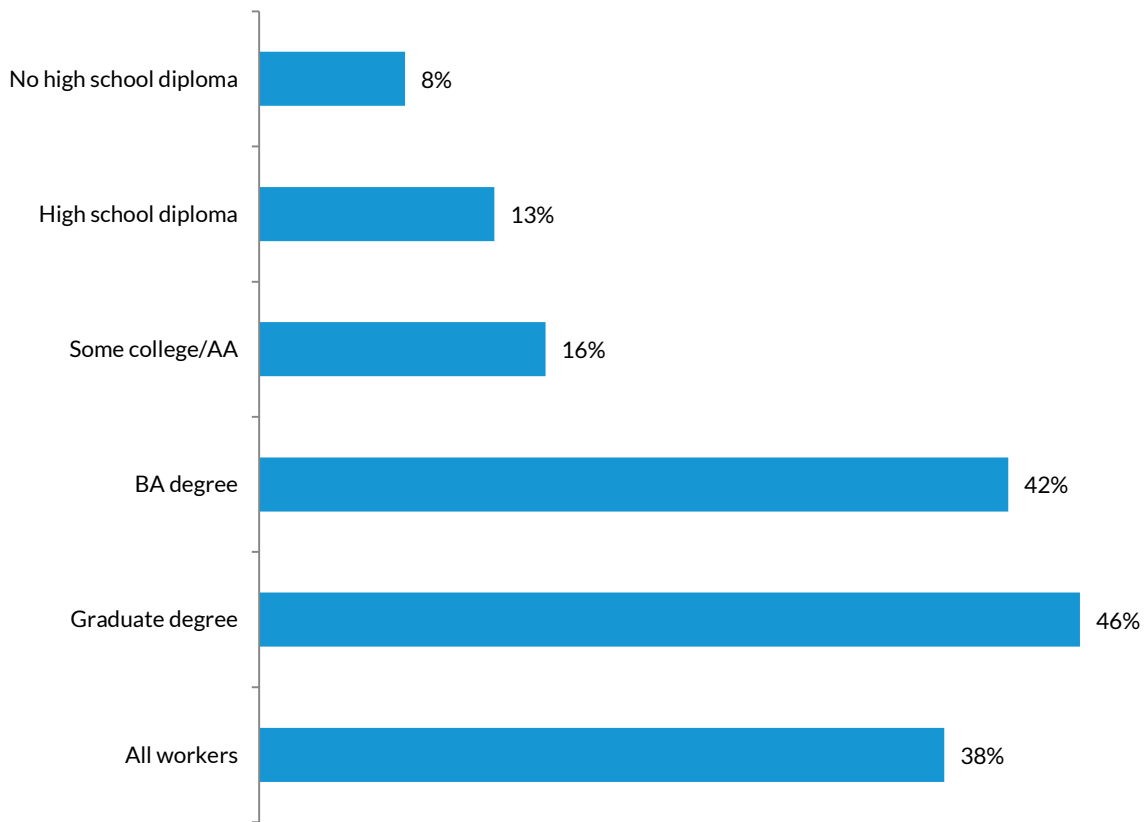
Source: Author's computation from Current Population Survey data.

Further, the 22 percent growth of the median real compensation for Hispanics was driven by the unusually large influx of low-educated Hispanic immigrants. Comparing 2013 to 1979 is not an apples-to-apples comparison because recent Hispanic immigrants tended to have lower earnings than Hispanics who have been in the country much longer.

Less-educated workers did not see large gains. The median real compensation for workers who did not complete high school was only 8 percent higher than that of their counterparts in 1979. The comparable figure for workers with a high school diploma or equivalent but no postsecondary education was just 13 percent (figure 5).

FIGURE 5

Increases in Compensation for Workers by Level of Education, 1979–2013



Source: Author's computation from Current Population Survey data.

Notes: AA refers to associates degree; BA refers to bachelor degree.

The group with some college or a two-year associate's degree also had a low level of growth (16 percent), but this comparison is another case of not comparing apples-to-apples because this group's relative position in the educational hierarchy changed. In 1979, 62 percent of workers had no postsecondary education: 21 percent had no high school diploma, and 41 percent had at most a high

school diploma. This overall low level of education among workers meant that the 18 percent of workers who had some college but not a four-year degree occupied the 63rd to 79th percentiles in the educational distribution.

By 2013, however, the share of workers without any postsecondary education had dropped to 36 percent: 9 percent without a high school diploma and 27 percent with a high school diploma. Thus, the 29 percent with some college now occupied the 37th to 65th percentiles. With the growing share of workers (35 percent) with a bachelor's or graduate degree, employers became increasingly likely to fill their top managerial and professional jobs with these most highly educated workers. Consequently, the changing position of the some-college workers meant they had less access to the highest-paying positions than they had in 1979.

Conclusion

This brief defines labor income to include worker's benefits paid by employers and adjusts for inflation by using the method used by the Department of Commerce in determining the real growth of consumption expenditures. Contrary to the conventional wisdom that wages have stagnated, this approach finds that real median earnings of all workers in the economy grew by 38 percent from 1979 to 2013. Although this 1.1 percent growth per year is only slightly less than half what it could have been if productivity growth had been equally shared across all workers, it is not stagnation. Not surprisingly, this growth rate is almost identical to the growth of real median income as reported by CBO (2014).

The choice to include benefits is consistent with the prevailing view of economists that all payments employers make on behalf of their workers should be considered as part of labor income. In terms of the price deflator, there has been a continuing discussion of how best to divide the change in prices between inflation and growth. Many researchers, including those at the Bureau of Labor Statistics, think the CPI overestimates the rate of inflation and thus understates the growth in people's standard of living. Without these two adjustments, median real earnings would have grown only 17 percent over the 1979 to 2013 period.

The 38 percent growth in compensation hides vast differences among groups of workers. Most dramatically, the real median growth of women's compensation over these years is 73 percent versus a male rate of 13 percent. Other groups with low real median growth rates include workers without a four-year degree (high school dropout growth rate was 8 percent, high school only was 13 percent, and some college/associate's degree was 16 percent) and young workers (12 percent).

The reasons for these discrepancies among types of workers are reasonably straightforward. The increasing participation of women as full-time workers, technological change, and rising international competition all eroded the advantages that male workers, especially blue-collar workers, had in the post-World War II period. The economy also shifted to demand more educational and workplace skills to the detriment of less-educated and young workers.

The findings of modest growth of compensation are more consistent with public opinion polls and the results of recent elections in which a Democrat was twice elected President while Republicans have recently taken over both Houses of Congress and won in many state races. Although polls show that many Americans have negative views about the state of the economy and its future, they respond positively about their own conditions and their view of their own future. For example, both Pew and the General Social Survey show that 60 percent of the population think they live better than their parents at the same age (only 20 percent think their living conditions are worse than their parents' living conditions), and nearly two-thirds think "people can get ahead if they work hard" (Pew 2015).

In countries where incomes have indeed stagnated or declined, political instability is common, with growing public sentiment to do something to stem the tide. Those analysts who argue that most workers have not had a raise in decades and are struggling to maintain their standard of living tend to call for large public programs and higher taxes on the wealthy. But in this country, public support for such policies is mixed at best, likely because actual standards of living have grown slowly, but faster than CPI-adjusted hourly wages suggest.

Appendix A. How the Data Are Constructed

There are two ways to study labor income using the Current Population Survey. One method is to use responses from the “outgoing rotation group” as to their working status during the previous week, their earnings that week, and the number of hours they worked. Many researchers use these data because they minimize recall errors and give a direct measure of hourly wages.

The other option is to use the March Supplement, which asks about earnings from the previous calendar year. Because total earnings are the main source of family income, there are some obvious advantages to tracking this figure. Further, many people move in and out of the labor force over the course of a year, which makes it that much harder to link labor income in a specific week to family income.

But the second method raises a different problem in that the number of people who have positive earnings in the previous year is over 15 percent greater than the number of people working at any time during that year. Because workers who frequently move in and out of the workforce tend to be low earners (in both yearly earnings and hourly wages), using the earnings of all workers with positive earnings in the previous year would reduce the level of median earnings and potentially add bias to interyear comparisons.

To ameliorate this problem, the procedure followed here was to identify people who were employed in the week at the time of the interview and then use their earnings from the previous year as their labor income. Of course, there is an unavoidable possible disconnect between the job at the time of the interview and the earnings from the previous calendar year. The only adjustment to deal with this problem was to exclude the 3 percent of interviewees with zero earnings in the previous year.

Finally, to determine compensation, CBO data were used that report the amount of employer benefits of workers at specific income levels. Thus, for each of the eight CBO income divisions (four bottom quintiles, 81st to 90th percentile, 91st to 95th percentile, 96th to 99th percentile, and top 1 percent), the share of benefits versus cash wages was computed, and this figure was used on the corresponding division of the earnings distribution. This computation takes into account that lower-paid workers have fewer benefits than more highly compensated workers and that highly compensated workers earning above the Social Security maximum receive a lower proportion of their compensation in the form of employer contributions toward Social Security than do lower-earning workers. The CBO data are available every year back to 1979.

Appendix B. Evolution of Employer-Provided Benefits

As industrialization spread and people moved to cities, workers were exposed to more risks of unemployment, accidents, and illnesses. When people were in rural areas, they usually had the option of minimally getting by through farm labor and also had extended families nearby to provide assistance in emergencies. By the late 19th century, a few American states and several European countries developed public funds to deal with these emergencies. Usually they were financed by contributions from both workers and employers. The use of public programs funded in part by employer contributions would expand step by step to include unemployment insurance, worker's compensation for disability assistance, social security for retirees and their surviving spouses and children, and medical care.

As the economy grew and companies became bigger, some companies started to offer retirement and health insurance benefits. At the beginning these costs were very small because people died at younger ages than today and because medical care was in its infancy and was not very effective.

In the 1940s, when America went to war, an odd thing happened when wage and price controls were adopted: expenditures for company-provided health insurance benefits were excluded. This omission caused some companies to expand health insurance coverage as a way to attract the best workers.

After World War II, many union contracts were sweetened by expanding health insurance benefits. Consequently, when President Truman tried to adopt a national health care program, the unions said they were for the plan but did not want to give up their benefits (which they viewed as likely to be superior to any public plan). Without the strong support of organized labor (which was 35 percent of employees at the time), Truman's health care initiative failed, and the practice of most prime-age people getting their health insurance through company individual and family plans became entrenched.

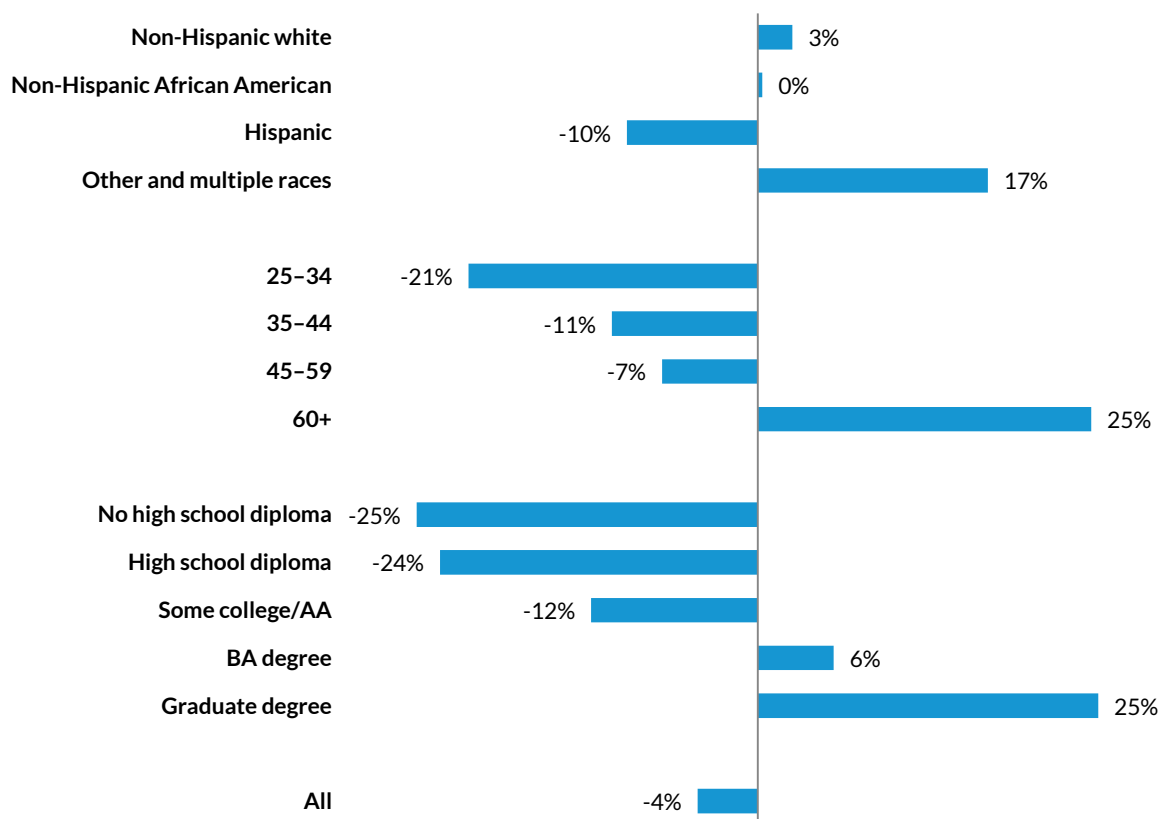
Employer benefits are very much like Social Security and Medicare. Workers could be given the money and choose for themselves how to prepare for retirement and their current and future health insurance. The reality, however, is that many workers would not set aside enough money, and society would be left with many impoverished seniors and many young and old people without health insurance. Therefore, the evolution of mandatory government programs and coverage through employee benefits paid for by their employers is a guarantee of stable minimum protection for current and future health insurance and future retirement income. Consequently, these payments are equivalent of worker savings and payments for individual health care insurance and should be treated as part of workers' labor income.

Appendix C. Signs of Male Earnings Declines

If the 13 percent growth of PCE price-adjusted median male compensation is anemic, then the growth of cash earnings using CPI is much lower. In fact, real median male earnings using the CPI are 4 percent lower in 2013 than in 1979. Part of the reason for the decline is the 6 percent fall in real male median earnings during the years of the Great Recession (2007–13). Nonetheless, that leaves just a 2 percent gain over the 28 years from 1979 to 2007.

TABLE C.1

Consumer Price Index Earnings Change among Men, 1979–2013



Source: Author’s computation from Current Population Survey data.

Notes: AA refers to associates degree; BA refers to bachelor degree.

As table C.1 shows, for various groups of male workers, the declines were much steeper. Men with no postsecondary education had earnings that were approximately one-quarter lower than they had been in 1979. Young workers 25 to 34 years old also had a substantial decline of 21 percent. Male workers with smaller declines include the some college/associate’s degree group, Hispanics, and workers ages 35 to 59.

Notes

1. Editorial Board, "Picking Up the Tab for Low Wages," *New York Times*, May 1, 2015, http://www.nytimes.com/2015/05/01/opinion/picking-up-the-tab-for-low-wages.html?_r=0.
2. Dylan Matthews, "Wages Aren't Stagnating, They're Plummeting," *Wonkblog* (blog), July 31, 2012, <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/07/31/wages-arent-stagnating-theyre-plummeting/>; Joseph Blasi, "The Argument for Profit Sharing," *Huffington Post*, March 16, 2015, http://www.huffingtonpost.com/joseph-biasi/the-argument-for-profit-s_b_6882290.html; Michael Greenstone and Adam Looney, "The Uncomfortable Truth about American Wages," *Economix* (blog), October 22, 2012, <http://economix.blogs.nytimes.com/2012/10/22/the-uncomfortable-truth-about-american-wages/>; Brad Plummer, "Here's Where Wages Have Been Stagnating," *Wonkblog* (blog), March 21, 2013, <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/03/21/heres-where-wages-have-been-stagnating-since-1970/>; Kevin Short, "Two-Thirds of America's Biggest Retailers Are Worried about Flat Wages," *Huffington Post*, October 15, 2014, http://www.huffingtonpost.com/2014/10/15/retailers-flat-wages_n_5983748.html; Eduardo Porter, "Income Inequality is Costing U.S. on Social Issues," *New York Times*, April 28, 2015, http://www.nytimes.com/2015/04/29/business/economy/income-inequality-is-costing-the-us-on-social-issues.html?ref=business&_r=2.
3. For documentation about the survey, go to <http://www.census.gov/cps/>.
4. Cage, Greenlees, and Jackman (2003) of the Bureau of Labor Statistics argue that the "new measure [the C-CPI-U] is designed to be a closer approximation to a 'cost-of-living' index than the existing BLS measures." See also Greenlees and McClelland's (2008) defense of the C-CPI in response to some of their critics.
5. Consequently, women's median compensation went from being 50 percent of median male compensation in 1979 to 25 percent less than median male compensation in 2013.

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