What Do Unions Do for the Middle Class?

By Richard Freeman, Eunice Han, Brendan V. Duke, and David Madland

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Introduction and summary

The United States has long called itself a middle-class nation. But that statement is less true today than it was 30 years ago.

The most widely used barometer of the financial health of the middle class—real median household income as published by the U.S. Census Bureau—has barely grown over the last thirty years. At the same time, the middle class has been hollowed out as incomes have polarized, with more households at the top and the bottom and fewer in the middle of the income distribution. A recent report by the Pew Research Center showed that the share of adults in the middle class—defined as adults whose households make between 67 percent and 200 percent of median U.S. income—fell from 61 percent in 1971 to just 50 percent in 2014.

Unsurprisingly, the same trends of slow growth and rapid polarization are also found in the main source of middle-class income: wage and salary earnings. Median weekly earnings of full-time workers grew 18 percent between 1984 and 2014 despite a 79 percent increase in labor productivity in the United States. As with the income distribution, the earnings distribution has polarized: the share of full-time workers who make between 67 percent and 200 percent of median U.S. earnings fell from 68 percent in 1984 to 60 percent in 2014.

This report examines the role that the decline of labor unions over the past 30 years has played in the hollowing out of the U.S. earnings distribution. We expect that the decline of unions has reduced the share of middle-class workers because union workers are more likely to be middle class than nonunion workers. Unions represent workers in the middle of the income distribution, which raises the earnings of workers who would otherwise fall below the middle-class threshold. We call the higher share of union workers among middle-class workers the union equality effect.

*All references to “we,” “us,” and “our” refer to the authors of this report.
In this report, we use a technique—known as a shift-share decomposition—that breaks down the falling share of middle-class workers into three factors associated with unionism:

- The first part is due to the decline in union coverage, namely the fact that when a smaller share of workers are in unions, fewer workers benefit from the union equality effect.
- The second part is due to a decline in the union equality effect. As earnings have polarized over the past 30 years, the middle-class share of union workers fell from 83 percent to 72 percent, which is more than the decrease in the share of nonunion workers in the middle class. This reduces the union equality effect.4
- The third part is associated with the interaction between the decline in union coverage and the union equality effect.

The decomposition leaves a residual part with no direct connection to unionism that is instead due to the decline in the middle-class share of nonunion workers.

Our main findings are that the decline in union coverage accounts for 35 percent of the falling share of middle-class workers and that the combination of the shrinking share of union workers and the reduction in the union equality effect explains almost half of the decline in middle-class workers. To the extent that union-induced wage increases spill over from union to nonunion workers and that union advocacy produces economic and social policies that benefit the middle class, our results understate the impact of the weakening labor movement on the hollowing out of the U.S. middle class.

| FIGURE 1 |
| Declining union coverage explains about one-third of the disappearance of middle-class workers |

Contributions to the falling share of full-time workers making between 67 percent and 200 percent of median U.S. earnings

<table>
<thead>
<tr>
<th>Nonunion effect: 52.3%</th>
<th>Declining union coverage: 35.1%</th>
<th>Declining union equality effect: 24%</th>
<th>Interaction between union coverage and union equality effects: -11.3%</th>
</tr>
</thead>
</table>

Note: Percentages may not add to 100 due to rounding.

Making America a middle-class country once again will require policies that raise median earnings and incomes and that bring more workers and households into the middle class. Increasing union coverage is important for both, as well as for possibly increasing economic mobility. For more on this topic, see the companion report, “What Do Unions Do for Mobility?”
Defining middle-class workers

Social scientists define the middle class in different ways depending on the type of analysis. This report focuses on the share of full-time workers whose weekly earnings place them toward the middle of the U.S. earnings distribution. We apply the Pew Research Center’s definition of middle class for household income level—67 percent to 200 percent of the median—to the worker earnings level. In 2014, median weekly earnings were $846, so our definition of middle class extends from weekly earnings of $567 to $1,692, which translates to approximately $30,000 to $88,000 per year or $14.17 to $42.30 per hour.

Our analysis begins in 1984 because that is the first year with consistent data on union status from the U.S. Bureau of the Census’ Outgoing Rotation Group files. If our analysis began earlier, it could show a stronger role played by the weakening labor movement in the falling share of middle-class workers since union coverage declined in the 1970s and 1980s. Our analysis thus captures the past three decades of the four-decade decline of union membership and coverage. The appendix has more details on our data source and examines what happens under alternative definitions of the middle class.

Figure 2, below, shows that the share of workers with earnings that place them in the middle class—those earning from 67 percent to 200 percent of the median—decreased 7.6 percentage points, or 11.2 percent, from 1984 to 2014. About three-quarters of the reduction resulted from a rising share of high-wage workers, while the remainder resulted from an increase in the share of low-wage workers. The inequality that has hollowed out the middle class reflects the upper tail of earners pulling away from the middle to a greater extent than it reflects a collapse of earnings at the lower tail. From 1984 to 2014, the ratio between the earnings of workers in the 90th and 50th percentiles grew 17 percent while the ratio between the earnings of workers in the 50th and 10th percentiles grew only 5 percent.
This pattern is preferable to a shrinking middle class resulting mostly from growth in the share of earners at the bottom, but it is far from the equitable growth that would have maintained the higher share of middle-class workers. Yet social scientists from diverse organizations with varying points of view have found deleterious effects of inequality on economic growth, human capital development, consumer demand, entrepreneurship, and the quality of political institutions.\textsuperscript{9} There is thus a strong case for seeking ways to prevent continued growth of inequality and to reverse the 1984–2014 pattern of change. This will require a new pattern of growth in earnings that is concentrated on middle- and low-wage workers rather than on workers at the top of the income distribution.
Unions and the middle class

During the same period that the share of middle-class workers fell 11 percent, the share of full-time workers in unions decreased by half, from 27 percent to 14 percent.\(^{10}\)

Several studies show that the decline of unions has been a leading contributor to rising wage inequality,\(^{11}\) which is closely linked to the hollowing out of the middle class described above. Bruce Western of Harvard University and Jake Rosenfeld of the University of Washington have recently shown that up to one-third of the rise in male wage inequality between 1979 and 2010 is explained by the decline of union membership.\(^{12}\) Studies by David Card of the University of California, Berkeley, and Thomas Lemieux and W. Craig Riddell of the Vancouver School of Economics at the University of British Columbia; John DiNardo of the University of Michigan, Nicole Fortin of the Vancouver School of Economics, and Lemieux; and Richard Freeman of Harvard University have reached similar conclusions.\(^{13}\) The Center for American Progress Action Fund has found that the decline in union density explains a significant percentage of the decrease in the share of national income going to the middle 60 percent of the income distribution.\(^{14}\)

These studies show that the decline of unions has increased wage inequality partly because there is less wage inequality among union workers than nonunion workers. Another way to view unions’ reduction of inequality is that union workers have higher wages than similar nonunion workers, which economists call the union wage premium. The union wage premium is concentrated among low- and middle-skilled workers, which thereby reduces wage inequality. The union wage premium for middle-skilled workers, for example, is 20 percent, compared with high-skilled workers, for whom the union premium is just 12 percent.\(^{15}\)

In addition, there are several indirect ways that unions reduce inequality for nonunion workers. First, higher wages for union workers tend to raise wages for nonunion workers when nonunion firms raise wages to avoid union organizing drives.\(^{16}\) Second, unions generally advocate for public policies that raise wages
for low-income workers such as higher minimum wages. Princeton University political scientist Martin Gilens recently found that unions are one of the few interest groups that promote policies that are also supported by low-income and middle-class Americans.\(^\text{17}\)

One way to measure how unions affect the share of middle-class workers is to compare the share of union and nonunion workers making between 67 percent and 200 percent of median earnings, as displayed in Figure 3. The higher share of union workers in the middle-class category is referred to as the union equality effect, as previously mentioned. In 1984, the share of union workers that were middle class was 20.9 percentage points higher than the share of nonunion workers that were middle class. Union workers remained much more likely to be middle class than nonunion workers in 2014, but the share of workers outside the middle class grew for both groups from 1984 to 2014.

**FIGURE 3**

Union workers are more likely to be middle class than nonunion workers

Share of full-time workers making between 67 percent and 200 percent of median U.S. earnings by union status

<table>
<thead>
<tr>
<th></th>
<th>Union workers</th>
<th>Nonunion workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>Union</td>
<td>82.8%</td>
</tr>
<tr>
<td></td>
<td>Middle class</td>
<td>72.0%</td>
</tr>
<tr>
<td></td>
<td>Low wage</td>
<td>14.3%</td>
</tr>
<tr>
<td></td>
<td>Nonunion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middle class</td>
<td>61.9%</td>
</tr>
<tr>
<td></td>
<td>Low wage</td>
<td>27.3%</td>
</tr>
</tbody>
</table>

How much did the decrease in unionization contribute to the falling share of middle-class workers?

We can assess how much the decrease in union coverage contributed to the falling share of middle-class workers using a shift-share decomposition. Union coverage includes workers who are members of unions and nonmembers who are covered by collective bargaining agreements. The decomposition breaks down the decline in the share of middle-class workers into three factors associated directly with unionism and estimates how much each contributed to the decrease:

• The part due to the declining share of union workers
• The part due to the decline in the union equality effect
• The part due to the interaction between changes in the share of union workers and the union equality effect

The remaining part of the decrease in the middle class share of workers is not directly related to the weaker labor movement, though it may be indirectly affected by the decline of union coverage and strength.

The appendix has more details about the decomposition.

Below is a breakdown of how much each of these different causes contributed to the 7.6 percentage point decline in the share of middle-class workers.

Part 1: Falling union coverage explains 35 percent of the shrinking share of middle-class workers

The decline in the share of union workers since 1984 contributed about 2.7 percentage points to the 7.6 percentage point decline in the share of middle-class workers—a 35.1 percent contribution. We calculated this by multiplying the change in the share of union workers between 1984 and 2014 by the 1984 union equality effect. This contribution reflects two facts—that union workers are more likely to belong to the middle-class group than nonunion workers and that the share of union workers has declined.
Part 2: Decline of the union equality effect explains 24 percent of the shrinking share of middle-class workers

Union workers have not been immune to wage polarization: the share of union workers in the middle class fell from 82.8 percent in 1984 to 72 percent in 2014, a 12.9 percent decline. But what matters for assessing the contribution of unions to the falling share of middle-class workers in our decomposition is whether the union equality effect—the higher probability that union workers are also middle-class workers—has changed. We find that it stood at 14.1 percent in 2014 compared with 20.8 percent in 1984. To measure how much the decline in the union equality effect lowered the middle-class share—if union coverage had remained constant—we multiply this change by the 1984 union coverage level. This results in a 1.8 percentage point contribution to the 7.6 percentage point decline in the share of middle-class workers, or 24 percent.

Taken together, the declining share of union workers and the decline of the union equality effect account for 59.1 percent of the reduced portion of the workforce in the middle of the income distribution. However, this estimate is too high because it ignores the interaction between the decline in the share of union workers and the decline in the union equality effect, which reflects the fact that unions are less able to improve worker well-being when union workers make up a smaller share of the workforce.

Part 3: Interaction between part 1 and part 2 produces an offsetting 11 percent increase in the share of middle-class workers

The interaction between the effects of declining union coverage and the decline in the union equality effect contributed a 0.86 percentage point, or 11 percent, increase to the share of middle-class workers. This mixed effect reflects the fact that a smaller union equality effect reduces the importance of the share of union workers and a smaller share of union workers reduces the importance of the union equality effect. This is because both effects ultimately depend on one another; fewer union workers would not reduce the share if the union equality effect did not exist. Similarly, a shrinking union equality effect would not reduce the middle-class share if there were no union workers.
Summing together the effects of parts 1, 2, and 3, we find that the weakening labor movement directly contributed about 47.7 percent of the falling share of middle-class workers between 1984 and 2014. This contribution—most of which was a result of decreasing union coverage—is substantial, especially when we consider that only about 27 percent of workers in 1984 were in unions.

The remaining 52 percent of the declining share of middle-class workers

Changes in the share of the middle class among nonunion workers between 1984 and 2014 contributed 4 percentage points to the 7.6 percentage point decline in the share of middle-class workers, or about 52.3 percent of the decline. It is likely that the weaker labor movement contributed indirectly to the declining share of middle-class workers in the nonunion group by placing less pressure on nonunion companies to match union companies’ wages and benefits. Nevertheless, we have not tried to estimate such effects, and thus we place any possible indirect union effects into this residual component of our decomposition.

The decomposition—along with the detailed analyses of the effects of unions on inequality described earlier—makes a strong case that the decline of unions has contributed to the economic problem of rising inequality and a hollowing out of the middle class in the earnings distribution.
Conclusion

Rebuilding the U.S. middle class is at the forefront of the discussion about today’s economy. Presidential candidates from both parties are releasing policy agendas that, at least rhetorically, embrace helping squeezed families cope with slow middle-class wage growth.

This report shows that unions have been and continue to be an important building block of the middle class. Building on earlier work showing that unions reduce wage inequality, it estimates the relationship between unions and the middle-class share of workers, defined as the portion of full-time workers making between 67 percent and 200 percent of median earnings.

The fact that about one-third of the falling share of middle-class workers was associated with decreasing union coverage between 1984 and 2014 raises questions about how the United States can restore a vibrant middle class without also taking action to restore workers’ ability to deal collectively with their employers, be it through traditional unions or another institution. Unions are still associated with a larger share of workers in the middle class—albeit at a lower rate than 30 years ago—which suggests that further weakening of unions will add to the decline of the middle class.

In short, our findings suggest that any serious effort to rebuild the middle class must include policies that will expand the share of workers with a collective voice—whether through unions or some other kind of comparable worker-based organization.
Appendix: Data and methods

The authors use the Outgoing Rotation Group, or ORG, of the Current Population Survey, or CPS, 1984 and 2014 data from the U.S. Census Bureau. 1984 is the first year that the ORG began collecting union data. Our sample focuses on workers between the ages of 25 and 65 who work more than 35 hours per week and who are not self-employed. We use the weekly earnings of these workers. Our measure of unionism is union coverage, which includes workers who are members of unions and those who are not members but are covered by collective-bargaining agreements.

We estimate the contribution of the drop in unionization to the reduction in the share of middle-class workers with a shift-share decomposition, breaking the trend into two main parts of interest: 1) the change in the share of union workers and 2) the change in the proportion of union workers who were middle class relative to the proportion of nonunion workers who were middle class, which we call the union equality effect. $MC_U$ is the share of union workers who have middle-class earnings; $MC_N$ is the share of nonunion workers with middle-class earnings; $U$ is the share of workers that are in a union. Then, if $MC$ is the overall share of workers with middle-class earnings, we have the following identity:

$$ (1) \quad MC = (1 - U)MC_N + UMC_U = MC_N + (MC_U - MC_N)U $$

Taking changes of equation 1 over time, the change in the share of middle-class workers can be decomposed as following:

$$ (2) \quad \Delta MC = \Delta MC_N + \Delta (MC_U - MC_N)U + (MC_U - MC_N)\Delta U + \Delta (MC_U - MC_N) \Delta U $$

The first term, $\Delta MC_N$, measures how the change in the proportion of nonunion workers that were middle class between 1984 and 2014 affects the overall change in the share of middle-class workers: This is 4 percentage points (61.9 percent – 57.9 percent).
The second term, \( \Delta (MC_U - MC_N)U \), measures the change in the union equality effect—the share of middle-class union workers compared to the share of middle-class nonunion workers—multiplied by the 1984 union coverage rate of 27.2 percent. The statistics from Figure 3 show a 6.7 percentage point drop in the difference in the share of union and nonunion workers making middle-class incomes, from 20.8 percentage points (82.8 percent – 61.9 percent) in 1984 to 14.1 percentage points in 2014 (72.0 percent – 57.9 percent). To the extent that this reflects weakening unionism over time, it contributes about 1.8 percentage points (6.7 percent multiplied by 27.2 percent) to the decline in the proportion of middle-class workers and is called a “pure share effect.”

The third term, \( (MC_U - MC_N) \Delta U \), is the standard shift component in a shift-share decomposition. It measures the impact of the 12.9 percentage point drop in union coverage between 1984 and 2014 by multiplying it by the 1984 union equality effect. It contributes about 2.7 percentage points (12.9 percent multiplied by 20.8 percent) to the reduction in the share of middle-class workers.

The final term, \( \Delta (MC_U - MC_N) \Delta U \), is the interaction between the change in union density and the change in the union equality effect. It adds about 0.9 percentage points (12.9 percent multiplied by 6.7 percent) to the middle class, providing a slight positive offsetting effect to the negative trends described above.

In sum, the decline of union coverage contributes about 35.1 percent to the 7.6 percentage point reduction in the share of middle-class workers due to the pure shift effect (2.7 percent/7.6 percent). Additionally, if we factor in the weakened ability of unions to boost workers into the middle-income group as well as the interaction between both effects, the decline of unionism contributed nearly 50 percent ((2.7 percent + 1.8 percent – 0.9 percent)/0.4 percent) to the reduction in the middle-class worker share.

One challenge in estimating the effect of the declining union share on the middle-class workers is that different measures of the middle class invariably yield somewhat different estimates of the contribution of declining unionism. Our analysis applies the definition of the middle class from the 2015 Pew Research Center study of household incomes to individual earnings. To see how the effect of declining unionism varies with other plausible measures of the middle
class, we have calculated the effects for several combinations of different earnings floors—50 percent, 67 percent, and 75 percent of median earnings—and ceilings—150 percent, 200 percent, and 250 percent of median earnings—for determining the middle class.

Here is the share of the decline of middle-class workers attributed to the decline in unionism using all nine different combinations:

• 50 percent to 150 percent of median earnings: 20.3 percent
• 50 percent to 200 percent of median earnings: 24.4 percent
• 50 percent to 200 percent of median earnings: 21.2 percent
• 67 percent to 150 percent of median earnings: 44.5 percent
• 67 percent to 200 percent of median earnings: 47.8 percent
• 67 percent to 250 percent of median earnings: 49.7 percent
• 75 percent to 150 percent of median earnings: 44.7 percent
• 75 percent to 200 percent of median earnings: 47.7 percent
• 75 percent to 250 percent of median earnings: 49.4 percent

The only set of numbers that are noticeably different from the results of using the Pew definition are those that come from using a floor of 50 percent, which is $423 per week. This comes to $22,000 per year or $10.60 per hour. This is almost certainly too low of a floor to consider it a middle-class earnings level; the hourly rate is about the same as the median wage of building cleaning workers, retail sales workers, and restaurant cooks. The annual earnings level is about equal to the qualification threshold for Supplemental Nutrition Assistance Program benefits for a family of two. Indeed, several U.S. senators had been pushing for a $10.10 per hour federal minimum wage and recently switched to $12 per hour because they thought $10.10 was too low.

We also verified that our definition of middle-class workers was consistent with an analysis using household earnings and that low-wage workers were at least co-breadwinners for their households in 2014. First, we examined whether the low-wage workers were in low-earning households—households making less than 67 percent of median household earnings. We found that while just 30 percent of full-time workers were in low-earning households, more than 56 percent of low-wage workers were in low-earning households and only 5 percent of them were in high-earning households, meaning households that make more than 200 percent of household earnings. When we use the 50 percent floor for the middle-class definition of workers and households, however, the share of low-wage workers in low-earning and middle-class households is the same.
Second, we examined the share of household earnings that low-wage workers’ earnings represented. We found that they contributed on average 50 percent to their household earnings compared to 57 percent of middle-class workers and 68 percent of high-wage workers. While it is unsurprising that the average share of household earnings a worker contributes should rise as a worker’s earnings do, the low-wage workers clearly make large contributions to their households’ earnings and give us confidence that low-wage workers do not primarily represent supplementary income for high-earning households.
About the authors

Richard Freeman holds the Herbert Ascherman chair in economics at Harvard University and is a research associate at the National Bureau of Economic Research in Cambridge, Massachusetts.

Eunice Han is a visiting professor of economics at Wellesley College and a senior research associate at the Labor and Worklife Program at Harvard Law School. Her research covers topics in labor economics and the economics of education with an emphasis on institutions and legal systems. She currently focuses on the impact of unionism on local labor markets, especially with regards to income inequality and economic mobility. She received her Ph.D. in economics from Harvard University in 2013.

Brendan V. Duke is a Policy Analyst for the Center for American Progress’ Middle-Out Economics project. His research focuses on economic inequality, intergenerational mobility, and economic growth. He holds a master’s degree in economics and public policy from Princeton University’s Woodrow Wilson School of Public and International Affairs.

David Madland is a Senior Fellow and the Strategic Director of the American Worker Project at the Center for American Progress. He has written extensively about the economy and American politics on a range of topics, including the middle class, economic inequality, retirement policy, labor unions, and workplace standards such as the minimum wage. His book, Hollowed Out: Why the Economy Doesn’t Work without a Strong Middle Class, was published by the University of California Press in June 2015. Madland has a doctorate in government from Georgetown University and received his bachelor’s degree from the University of California, Berkeley.
The U.S. Census Bureau’s median household income series does not control for changes in household size or aging and uses an inflation series—the Consumer Price Index for All Urban Consumers, or CPI-U-RS—that some argue overstates inflation. Yet even after making these adjustments, real middle-class income growth has been sluggish since 1980 and negative since 2000. See Brendan Duke and Andrew Schwartz, “Yes, We Need to Raise Middle-Class (Market) Incomes,” Center for American Progress, August 4, 2015, available at https://www.americanprogress.org/issues/economy/news/2015/08/04/118791/yes-we-need-to-raise-middle-class-market-incomes/.


Pew Research Center, “The American Middle Class Is Losing Ground.”

Unionstats.com, “All Wage & Salary Workers,” available at http://www.unionstats.com/ (last accessed August 2015). These numbers differ slightly from the estimates in this report because they do not apply only to full-time workers as the report’s estimates do and because they represent union membership rather than coverage.

Ibid.


Ibid.

Ibid.


Unions’ tendency to raise wages for nonunion workers because firms try to avoid unionization is called the threat effect. Unions could also reduce wages for nonunion workers if union wages and benefits reduced employment in the union sector, increasing the labor supply in nonunion work; this is called the crowding effect. Evidence suggests that the threat effect dominates the crowding effect and that unions raise wages for nonunion workers. See Henry S. Farber, “Nonunion Wage Rates and the Threat of Unionization,” ILR Review 28 (3) (2005): 335–352.


Pew Research Center, “The American Middle Class Is Losing Ground.”


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As progressives, we believe America should be a land of boundless opportunity, where people can climb the ladder of economic mobility. We believe we owe it to future generations to protect the planet and promote peace and shared global prosperity.

And we believe an effective government can earn the trust of the American people, champion the common good over narrow self-interest, and harness the strength of our diversity.

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