

BACKGROUND

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Shrinking Workweeks: A Sign of Unequal Recovery from the Great Recession

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Abstract

During the Great Recession of 2008 and 2009, employers cut many of their employees' work hours. For most, the average workweek eventually returned to pre-recession levels, but that was not true for those at the bottom quintile of the wage distribution. On average, low-wage employees work one hour less per week than they did in 2007, forgoing \$500 per year in income. This trend has significantly affected several industries and occupations. Obamacare will further reduce hours by increasing the costs of hiring full-time employees while discouraging workers from working full-time. Fewer work hours will impede income mobility for low-wage workers.

Five years after the end of the Great Recession, the labor market remains weak. In May 2014, the unemployment rate stood at 6.3 percent, matching the highest rate following the 2001 recession. Labor force participation has fallen to levels not seen since the Carter Administration, when far fewer women worked outside the home than do today.

Policymakers and the media have paid close attention to these figures, but they have paid much less attention to another sign of the labor market's condition: the length of the average workweek. This *Backgrounder* examines in detail the changes in the average workweek since the beginning of the recession.

During the 2008–2009 economic downturn, the average number of hours that U.S. employees worked each week dropped sharply. Since then, the length of the average workweek has recovered for most segments of the labor market—but *not* for workers in the bottom quintile of the wage distribution. The average workweek of an

KEY POINTS

- The length of the workweek generally falls during a recession and then recovers afterward. This did not happen for workers in the bottom quintile after the Great Recession.
- The hours of workers in the bottom quintile fell during the recession and never recovered. Their average workweek remains 1.1 hours—3.4 percent—shorter than at the end of 2007.
- These shorter hours have cut the average income of workers in the bottom quintile by nearly \$500 a year.
- Obamacare will further shorten workweeks by penalizing employers who hire low-wage workers full-time. In 2015, it will cost an average of one-sixth more per hour to employ a worker in the bottom quintile full-time than to employ that same worker part-time.
- Longer hours give workers more experience and help them earn raises and promotions faster. In the long term, these shorter workweeks will also mean slower wage growth and reduced living standards.

This paper, in its entirety, can be found at <http://report.heritage.org/bg2921>

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employee in the bottom quintile has fallen by over 3 percent—the equivalent of more than an hour each week—since 2007. These reduced hours have cut the incomes of low-wage workers by approximately \$500 a year.

All of this has happened even before the Affordable Care Act's (ACA) financial penalties for hiring full-time low-wage employees legally take effect. The ACA, known as Obamacare, also subsidizes low-income and moderate-income employees who work part-time. When fully implemented, Obamacare will put further downward pressure on hours for low-income workers.

Shift to Part-Time Employment

Average workweeks typically shrink during recessions. Employers cut back on overtime, reduce regular hours, and shift employment to part-time employees. During recovery, employers reverse these trends and the workweek returns to its previous level. However, during and after the Great Recession, this pattern has held only partially.¹

Between the end of 2007 and the end of 2009, the proportion of employees with full-time hours in the bottom four wage quintiles dropped significantly.² The probability of full-time employment fell the most for those with the lowest pay: those in the bottom quintile.

Full-time employment rates recovered for the middle three quintiles between the fourth quarter (Q4) of 2009 and Q4 2013. On net, the change in the proportion of workers in these quintiles with full-time hours was not statistically significant between Q4 2007 and Q4 2013.³

Not so for workers in the bottom income quintile. The proportion of full-time employees in the bottom quintile dropped 5.8 percentage points between the end of 2007 and the end of 2009, falling from 60.0 percent to 54.2 percent. Since then, it has not recovered, remaining at 54.2 percent in Q4 2013. In the top quintile, by contrast, full-time employment grew slightly (0.9 percentage point).

The decline in full-time jobs among low-income workers is large enough that it affects the economy-

wide averages. In Q4 2007, the proportion of employees who worked full-time (at least 35 hours a week) stood at 82.6 percent. Two years later, that figure dropped 2.5 percentage points to 80.1 percent and increased only slightly afterward. By Q4 2013, the proportion of full-time workers still stood at 80.9 percent, down 1.7 percentage points from pre-recession levels. Conversely, the proportion of employees who worked fewer than 35 hours per week increased, with nearly equal increases in the proportion working fewer than 25 hours, between 25 hours and 29 hours, and between 30 hours and 34 hours a week.

Declining Hours

Another way of examining the data involves examining changes in the length of the average workweek. A shift from full-time employees to part-time employees obviously reduces average work hours, as does a decrease in the length of full-time schedules (such as from 40 hours to 35 hours a week), reduced overtime, and changes in part-time schedules. Examining the average workweek shows how hours have changed for workers of all workweek lengths.

Table 1 shows the average workweek across income quintiles in Q4 2007 and Q4 2013. Workers in the top quintile worked more hours than those in lower quintiles, while those in the bottom quintile worked the fewest hours.

The length of the average workweek did not change in a statistically significant way for the middle three quintiles of the income distribution between Q4 2007 and Q4 2013. In the top quintile, the average workweek expanded by one-third of an hour, but for workers in the bottom quintile, average hours worked per week declined by 3.4 percent over this period—1.1 fewer hours a week. This segment of the labor market has yet to recover from the 2008–2009 recession.

These reduced hours impose an additional financial burden on low-income Americans. With a decline of a little more than one hour per week, the average low-skill (therefore, low-wage) worker forgoes roughly \$9.22 per week of pre-tax income. Yearly, that reduces his or her earnings by \$470.⁴

1. This trend of increasing hours in a recovery appears in Current Population Survey data. Data from the establishment survey show a downward secular trend in the average workweek since the 1960s.

2. Quintiles are defined as hourly wages, with salaried workers' earnings converted to an equivalent hourly rate. See Appendix for details.

3. These changes were not significant at the 10 percent level.

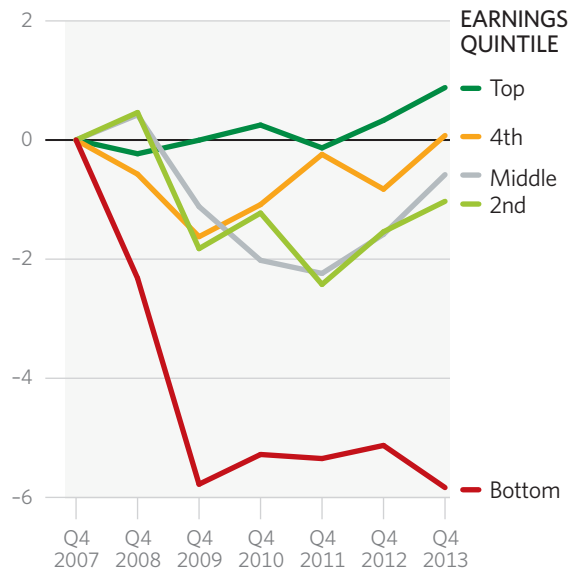
4. Based on average earnings in the bottom quintile of \$8.23 an hour and hours falling by 1.1 hours a week, 52 weeks a year.

CHART 1

Low-Income Workers Hit Hardest by Recession

The proportion of workers with full-time jobs dropped by nearly six percentage points in the bottom quintile since the recession started.

PERCENTAGE POINT CHANGE IN FULL-TIME WORKERS SINCE 2007, BY EARNINGS QUINTILE



Notes: Full-time workers are those working 35 or more hours per week. Figures shown are for the fourth quarter of the given year.
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

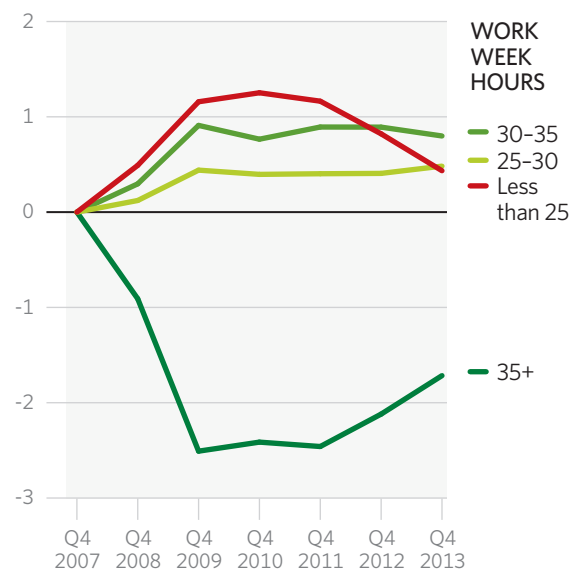
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CHART 2

Little Recovery for Full-Time Workers; Part-Time Jobs Increase

Since the recession, the workforce has shifted toward part-time workers. As a share of all workers, those working 35 hours a week or more declined by nearly 2 percentage points.

PERCENTAGE POINT CHANGE IN PROPORTION OF WORKERS SINCE 2007, BY LENGTH OF WORK WEEK



Note: Figures shown are for the fourth quarter of the given year.
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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TABLE 1

Average Hours Worked per Week, by Wage Quintiles

Wage Quintile	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
Bottom quintile	33.1	32.0	-1.1	0.0%	0.000
2nd quintile	37.8	37.6	-0.1	0.0%	0.345
Middle quintile	40.3	40.3	0.0	0.0%	0.816
4th quintile	41.3	41.2	-0.1	0.0%	0.581
Top quintile	41.5	41.9	0.3	0.0%	0.034

Statistically significant at the 5 percent level.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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In making these comparisons, it is important to compare the same quarter year-over-year. The average workweek of employees in the bottom quintile fluctuates wildly in the summer as high school and college students enter the labor force and take relatively low-paying jobs. However, even in the summer, the average workweek for employees in the bottom quintile remains shorter than it was in Q4 2007.

Workweek Changes by Industry and Occupation

The decline in the average workweek in the bottom quintile has not occurred uniformly among occupations or industries. Five industries recorded statistically significant reductions in average hours for workers in the bottom quintile between Q4 2007 and Q4 2013: (1) retail trade; (2) manufacturing; (3) construction; (4) public administration; and (5) arts, entertainment, and recreation. These industries collectively employ 37 percent of workers in the bottom quintile.⁵ Only in two industries—educational services and information—did the average workweek for employees in the bottom quintile rise, and only by a statistically insignificant amount.

Table 2 and Table 3 show the change in hours by industry and occupational group, respectively. The tables are ranked by the statistical significance of the total change in average weekly hours between Q4 2007 and Q4 2013. The p-value shows the probability that this measured change reflects random chance.⁶

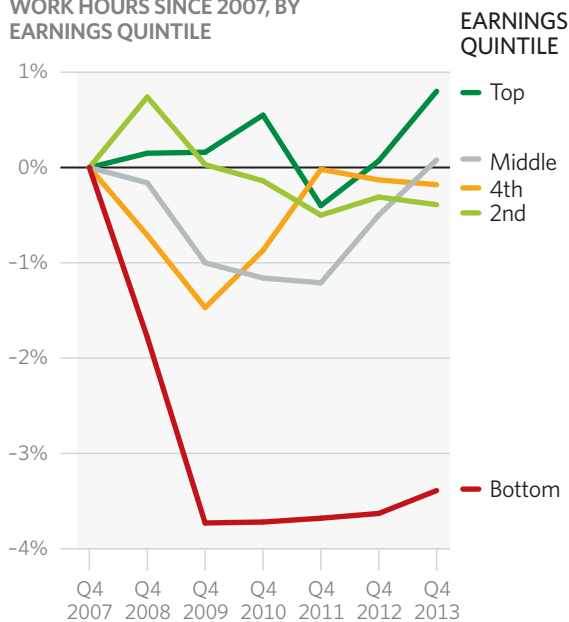
The largest significant decline occurred in arts, entertainment, and recreation, where the average workweek was shortened by 10.1 percent. The average worker in this industry in the bottom quintile today works the equivalent of five fewer weeks a year than before the recession. The most statistically significant decline in hours occurred in retail jobs. Despite the fact that retail sales have risen 2.6 percent above pre-recession levels, the average workweek for persons employed in the retail industry and in the bottom quintile dropped by 5.7 percent—nearly two hours per week.⁷ That amounts to rough-

CHART 3

Low-Income Workers Have Lost the Most Work Hours

While the top four quintiles have largely returned to pre-recession work hours, the bottom quintile lags far behind.

PERCENTAGE CHANGE IN AVERAGE WORK HOURS SINCE 2007, BY EARNINGS QUINTILE



Note: Figures shown are for the fourth quarter of the given year.
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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ly three fewer workweeks per year. The 6.8 percent drop in workweeks in the construction sector probably reflects the burst of the housing bubble.

While only five industries experienced a statistically significant decline in working hours of employees in the bottom quintile, 18 of the 20 industrial sectors experienced a decrease in average hours. The collective decrease in the 13 sectors with individually insignificant decreases was statistically significant.⁸

5. In Q4 2013, these industries employed 36.7 percent of workers in the bottom quintile.
 6. We considered changes statistically significant if the p-value was less than or equal to 0.05.
 7. Federal Reserve Economic Data, "Real Retail and Food Services Sales, Millions of Dollars, Quarterly, Seasonally Adjusted," Federal Reserve Bank of St. Louis, Economic Research Division, October 2007 to December 2013.
 8. Smaller sample sizes increase a survey's margin of error. Statistically insignificant changes in a smaller sample—such as workers in a particular industry—may become statistically significant when aggregated into a larger sample. In this case, these 13 sectors collectively experienced a 1.85 percent decrease in average work hours, a change significant at the 3.6 percent level.

TABLE 2

Change in the Average Workweek for Employees in the Bottom Quintile, by Industry

Industry	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
Retail trade	31.0	29.2	-1.8	-5.7%	0.000
Manufacturing	39.0	37.0	-2.0	-5.1%	0.000
Construction	38.5	35.8	-2.6	-6.8%	0.004
Public administration	38.0	34.2	-3.8	-10.0%	0.011
Arts, entertainment, and recreation	30.3	27.2	-3.1	-10.1%	0.015
Real estate rental and leasing	35.0	32.5	-2.6	-7.3%	0.100
Health care and social assistance	33.7	33.2	-0.6	-1.7%	0.291
Mining	51.3	45.0	-6.3	-12.3%	0.300
Agriculture, forestry, fishing, and hunting	40.8	38.8	-2.0	-4.9%	0.306
Transportation and warehousing	37.9	36.7	-1.2	-3.2%	0.341
Information	30.5	32.0	1.5	5.1%	0.407
Wholesale trade	37.3	36.3	-1.0	-2.6%	0.451
Utilities	38.8	36.5	-2.3	-5.9%	0.551
Management of companies and enterprises	40.0	34.3	-5.7	-14.2%	0.595
Professional, scientific, and technical services	33.3	32.7	-0.7	-2.0%	0.639
Accommodation and food services	29.8	29.6	-0.2	-0.6%	0.707
Other services	32.4	32.0	-0.4	-1.1%	0.714
Educational services	29.0	29.3	0.3	0.9%	0.750
Finance and insurance	36.7	36.6	-0.1	-0.4%	0.906
Administrative and support, including waste management and remediation services	34.6	34.6	-0.1	-0.2%	0.921

■ Statistically significant at the 5 percent level.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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Changes in work hours varied across occupations as well. Of the 22 different occupations used in this analysis, 18 had decreases in average workweeks for workers in the bottom quintile. Among these, six experienced statistically significant drops: (1) office and administrative support, (2) sales, (3) transportation and material moving, (4) production, (5) construction, and (6) protective service occupations. These six occupations collectively account for half of all jobs held by workers in the bottom quintile.

The changes in hours of the remaining 12 occupations with individually insignificant differences became significant when evaluated collectively.⁹ Four occupations experienced higher average hours, but only one with statistical significance.¹⁰

Protective service occupations experienced the largest drop (11.8 percent), a decline of more than four hours per week. That translates into six fewer weeks of work a year.

9. In these 12 occupations, average hours fell 2.3 percent, a change significant at the 3.1 percent level.

10. The exception occurred in life, physical, and social sciences occupations. However, this occupation group has an extremely small sample size of fewer than 30 workers a quarter: Very few workers in these occupations earn wages in the bottom quintile. The change between Q4 2007 and Q4 2013 is very large and statistically significant at the 5 percent level. However, on average in a table of 20 numbers, one of the 20 will be statistically significant at the 5 percent level by random chance—which probably applies here. We examined the average workweek in this occupation group, and the workweek changed sharply across quarters and years for workers in the bottom quintile.

TABLE 3

Change in the Average Workweek for Employees in the Bottom Quintile, by Occupation

Occupation	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
Office and administrative support occupations	32.0	29.5	-2.5	-7.8%	0.000
Sales and related occupations	30.7	29.1	-1.5	-5.0%	0.001
Transportation and material-moving occupations	35.2	33.1	-2.0	-5.7%	0.006
Production occupations	38.0	36.6	-1.4	-3.7%	0.006
Construction and extraction occupations	39.5	37.0	-2.6	-6.5%	0.007
Protective service occupations	36.8	32.4	-4.3	-11.8%	0.009
Life, physical, and social science occupations*	29.1	40.3	11.2	38.6%	0.042
Arts, design, entertainment, sports, and media occupations	30.9	26.9	-4.0	-13.0%	0.101
Food preparation and serving-related occupations	28.9	29.7	0.8	2.7%	0.116
Business and financial operations occupations	37.8	34.1	-3.7	-9.9%	0.153
Community and social service occupations	41.1	37.0	-4.1	-10.1%	0.165
Installation, maintenance, and repair occupations	36.6	38.3	1.7	4.7%	0.220
Management occupations	41.4	39.5	-1.9	-4.5%	0.231
Building, grounds-cleaning, and maintenance occupations	33.6	32.9	-0.7	-2.0%	0.288
Farming, fishing, and forestry occupations	40.9	39.0	-1.9	-4.6%	0.330
Legal occupations	40.4	37.3	-3.1	-7.6%	0.352
Health care support occupations	34.2	33.6	-0.6	-1.8%	0.503
Computer and mathematical science occupations	34.1	32.0	-2.1	-6.1%	0.578
Personal care and service occupations	30.9	30.7	-0.2	-0.7%	0.820
Education, training, and library occupations	32.3	32.1	-0.2	-0.7%	0.842
Healthcare practitioner and technical occupations	35.3	35.2	-0.1	-0.4%	0.942
Architecture and engineering occupations	36.2	36.3	0.1	0.3%	0.980

■ Statistically significant at the 5 percent level.

* This occupation has an extremely small sample size—less than 30 workers a quarter. Very few workers in this occupation have wages in the bottom quintile. The percentage change indicated in the table is very large and statistically significant at the 5 percent level. However, in a table showing changes in 20 random numbers, one of the changes will appear statistically significant at the 5 percent level by random chance. This probably applies here. The authors examined the average workweek in this occupation and it experienced large changes across quarters and years for workers in the bottom quintile.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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Entry-level jobs play a significant role in helping low-wage workers to build their personal human capital by gaining experience. Most Americans started out earning within a dollar of the minimum wage. Most of these workers also quickly earned promotions to higher-paying jobs.¹¹

Workers with full-time schedules earn raises and promotions significantly faster than do part-time employees. Full-time minimum-wage workers are 10 percentage points more likely to be promoted to a higher-paying position within a year than are part-time minimum-wage employees who work between 10 and 19 hours a week.¹² Thus, reduced work hours not only reduce take-home pay through shorter workweeks, but also slow the process of accumulating skills that would allow low-wage workers to command higher pay in the future.

Differences by Education Level

Individual human capital plays a significant role in wage mobility, and education remains one of the primary means of accumulating human capital. Between 2007 and 2013, the proportion of workers who had earned at least a college degree increased by 2.7 percentage points. However, a college degree did not necessarily protect workers from reduced work hours. The average workweek fell for employees of all educational levels, with the greatest proportionate decrease occurring among workers who had some college education (–1.8 percent) and the smallest drop occurring among high school dropouts (–0.8 percent). College graduates still work about 1 percent less than they did prior to the recession.

This picture shifts when focusing on workers in the bottom quintile—the only group of workers to experience statistically significant reductions in hours. Workers with a college degree or more who are in the bottom quintile had the largest decrease in hours of any educational category: a 9.9 percent

reduction amounting to 3.6 fewer hours a week. Workers with some college education or at most a high school or GED diploma saw their work hours fall roughly 4 percent. The average workweek of high school dropouts did not change significantly.

In 2007, before the recession, college-educated workers put in the longest workweek of all education groups in the bottom quintile. By 2013, the average workweek of high school graduates exceeded the workweek of college graduates.

Differences by Age

Breaking down the data by age can illuminate which demographic segments of the labor market bore the largest burden of the recession. The hours for workers ages 55 and older saw the smallest decline during the recession and subsequently recovered. This happened in addition to the increase in labor force participation among older workers during this period.¹³ Younger workers still struggle with declining work hours.

Younger workers, many still enrolled in school, unsurprisingly have highly seasonal workweeks, which rise during school breaks. This explains the spikes in the third quarter (July–September) each year for 16- to-24-year-olds. The workweek among the young dropped significantly, a decrease that comes in addition to sharply lower labor force participation and higher unemployment.¹⁴ For the middle group—prime-age workers between 25 and 54—the overall workweek declined by 1.3 percent.

Focusing on the bottom quintile, the workweek for 16- to-24-year-olds barely shifted throughout the recession, except for seasonal effects. However, the average hours for those older than age 25 dropped by more than 4 percent. Those in the bottom quintile of 25- to-54-year-olds lost 1.8 hours per week on average, while employees 55 and older now work 1.4 hours less per week than they did prior to the recession.

11. William Carrington and Bruce Fallick, “Do Some Workers Have Minimum Wage Careers?” *Monthly Labor Review*, May 2001, pp. 17–27, Table 2, <http://www.bls.gov/opub/mlr/2001/05/art2full.pdf> (accessed May 27, 2014).

12. William E. Even and David A. Macpherson, “Wage Growth Among Minimum Wage Workers,” Employment Policies Institute, June 2004, p. 8, Table 4, http://www.epionline.org/studies/macpherson_06-2004.pdf (accessed May 27, 2014).

13. Older workers have a lower overall labor force participation rate than 25-to-54-year-olds. James Sherk, “Not Looking for Work: Why Labor Force Participation Has Fallen in the Recession,” Heritage Foundation *Background* No. 2722, September 5, 2013, Table 2, <http://www.heritage.org/research/reports/2013/09/not-looking-for-work-why-labor-force-participation-has-fallen-during-the-recession>.

14. *Ibid.*

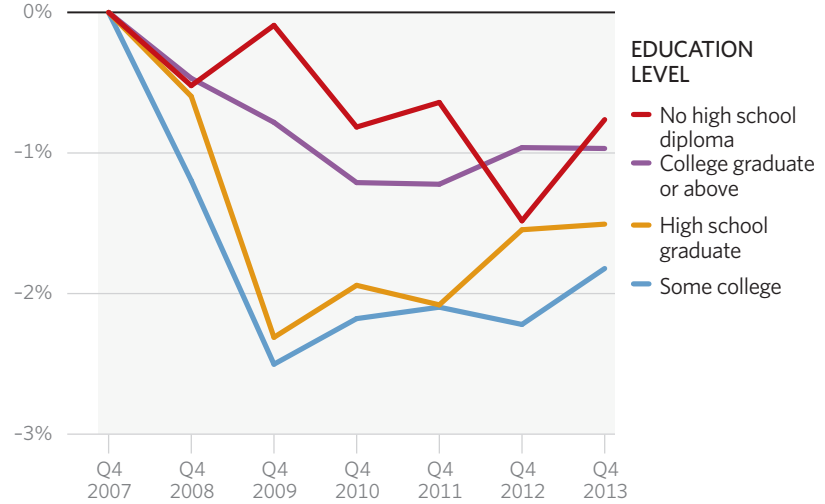
CHART 4

Fewer Work Hours, Regardless of Education

Work hours declined for all education groups, though those on opposite ends of the education spectrum—those with college degrees and those without a high school diploma—fared modestly better than those in the middle.

Note: Figures shown are for the fourth quarter of the given year.
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

PERCENTAGE CHANGE IN AVERAGE WORK HOURS SINCE 2007, BY EDUCATION LEVEL



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TABLE 4

Overall Average Hours Worked per Week, by Level of Education

Education Level	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
No high school diploma	34.5	34.2	-0.3	-0.8%	0.436
High school graduate	39.1	38.5	-0.6	-1.5%	0.000
Some college	38.2	37.5	-0.7	-1.8%	0.000
College graduate or above	40.9	40.5	-0.4	-1.0%	0.003

Statistically significant at the 5 percent level.

Note: P-values are rounded to three decimal places. A p-value of zero does not indicate a 0 percent probability, but a probability of less than 0.0005 which is consequently rounded to 0.000.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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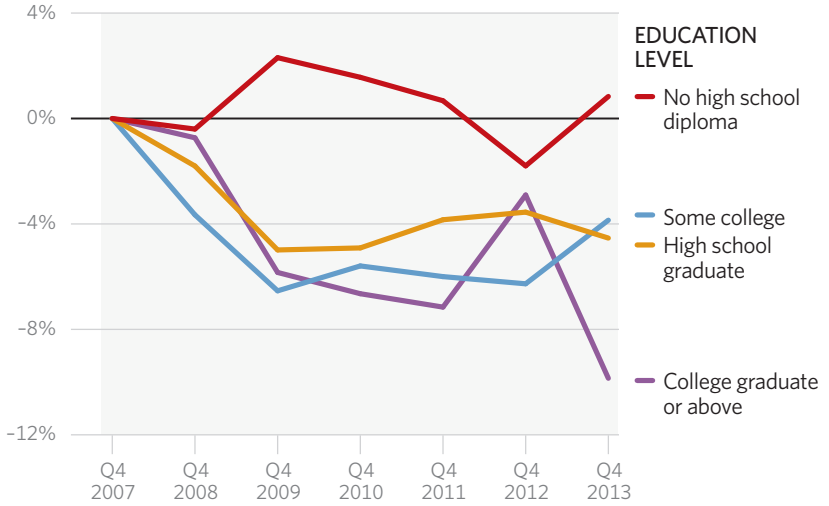
CHART 5

Fewer Hours for Most Low-Income Workers, Regardless of Education

Work hours declined more for low-income workers with college degrees than for those with similar incomes but less education.

Note: Figures shown are for the fourth quarter of the given year.
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

PERCENTAGE CHANGE IN AVERAGE WORK HOURS SINCE 2007, BOTTOM QUINTILE OF WAGE EARNERS, BY EDUCATION LEVEL



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TABLE 5

Average Hours Worked per Week for the Bottom Quintile of the Wage Distribution, by Level of Education

Education Level	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
No high school diploma	30.2	30.4	0.3	0.8%	0.606
High school graduate	35.2	33.6	-1.6	-4.5%	0.000
Some college	32.0	30.8	-1.2	-3.9%	0.001
College graduate or above	36.4	32.8	-3.6	-9.9%	0.000

Statistically significant at the 5 percent level.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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Future Trends

Average working hours dropped for workers in the bottom quintile during the recession, and government policy will probably accentuate this trend. Obamacare creates strong incentives for employers to create and employees to prefer part-time jobs.

Starting in 2015, Obamacare will impose a \$2,000 penalty tax on employers who hire full-time workers without offering them qualifying health benefits. Unlike wages and benefits, employers cannot deduct this penalty from their taxes, so the penalty costs businesses as much as raising a worker's compensation by \$3,279 would cost them.¹⁵ Few employers of low-wage workers provide the expensive benefits necessary to comply with this mandate. Consequently, the law will soon raise the cost of hiring full-time workers in the bottom quintile by an average of 18 percent.¹⁶ No penalty applies to hiring part-time employees.

Few businesses can absorb an 18 percent increase in their labor costs easily without a corresponding increase in productivity. When the Obamacare penalty takes effect, it will strongly encourage low-wage employers to cut their employees' hours below 30 a week to avoid the penalty. Hundreds of employers, including nonprofits and local governments, have already announced their plans to do so;¹⁷ when they do, the average workweek of low-wage employees will shrink further.

Obamacare also reduces the financial incentives for many Americans to work full-time. Employees generally work full-time for two reasons: to make more money than they would make at a part-time job and to receive health benefits. The ACA great-

ly diminishes these incentives. The law provides expensive health subsidies for workers with incomes between 138 percent and 400 percent of the federal poverty level, but only if their employers do not offer health benefits. These subsidies mean that many employees would make as much money working part-time, taking all of their compensation as cash wages, and collecting ACA subsidies as they would working full-time and taking part of their compensation as health benefits.

Dr. Casey Mulligan of the University of Chicago calculates that a parent with a total compensation of \$28 an hour would make as much money working 30 hours a week and collecting exchange subsidies as he or she would make working 40 hours a week with employer-provided health benefits.¹⁸ The law effectively removes the financial incentives for many Americans to work full-time. This will cause millions of Americans to prefer part-time jobs that provide them the same effective income as full-time positions. This will further shrink average workweeks.

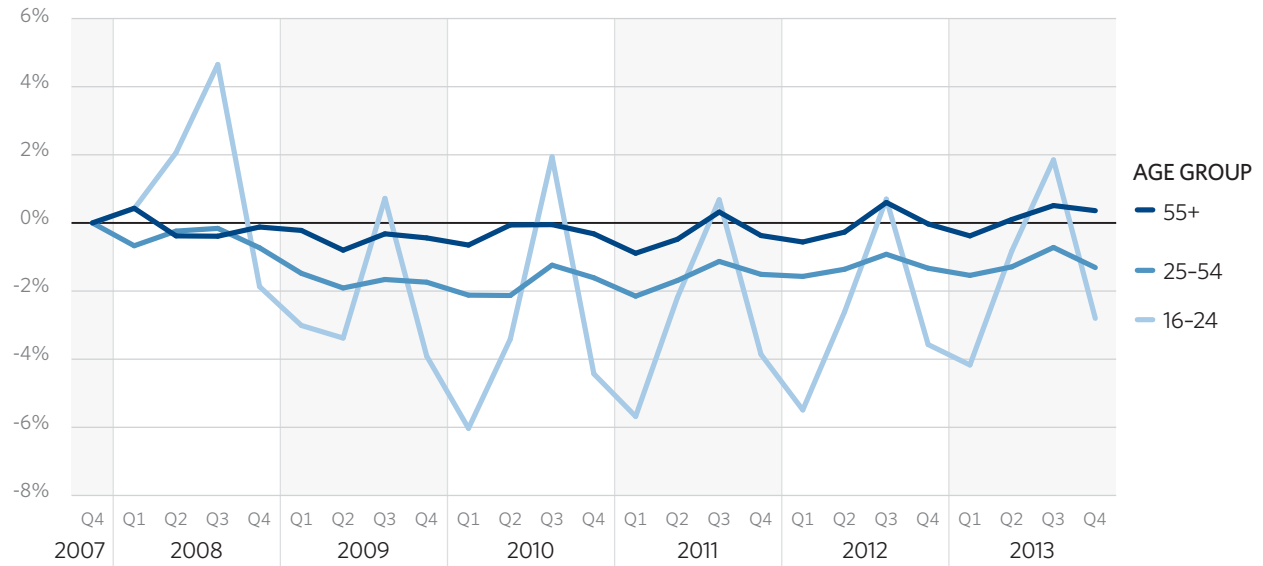
The Congressional Budget Office has estimated that from 2017 to 2024, the total number of hours worked will decline by up to 2 percent because of provisions in the Affordable Care Act that will reduce both the demand for and the supply of labor—particularly the labor of less-skilled workers. The reduction in hours would amount to a decline of 2.5 million full-time equivalent jobs by 2024.¹⁹ In the long run, these shorter workweeks will reduce experience and human capital growth and slow wage growth for millions of workers.

15. The average combined state and federal corporate tax rate in the United States is 39 percent. Payroll costs, such as wages and benefits, are deductible from these taxes. Consequently, increasing payroll costs by \$3,279 reduces tax obligations by \$1,279 ($0.39 \times \$3,279$). Such an increase in payroll costs reduces after-tax earnings by \$2,000 ($\$3,279 - \$1,279$)—the same amount as the ACA penalty.
16. The law will initially raise the cost of hiring workers in other quintiles as well. However, employers will compensate for that cost by reducing workers' pay by an offsetting amount, as happens with the employer share of payroll taxes. Since employers cannot cut the pay of employees in the bottom quintile below the minimum wage, they will bear the cost of the mandate penalty tax on these workers. This will raise the cost of hiring full-time workers in the bottom quintile relative to part-time employees. In Q4 2013, the average worker in the bottom quintile who worked at least 30 hours a week made \$8.35 an hour. Multiplied by 2,000 hours a year and the mandatory employer 7.65 percent share of payroll taxes, this provides total compensation of \$17,978 a year. In pre-tax terms, the non-deductible penalty tax of \$2,000 equates to increasing payroll costs by \$3,279 a year—18.2 percent of this total compensation.
17. Jed Graham, "ObamaCare Employer Mandate: A List of Cuts to Work Hours, Jobs," *Investor's Business Daily*, February 3, 2014, <http://news.investors.com/politics-obamacare/020314-669013-obamacare-employer-mandate-a-list-of-cuts-to-work-hours-jobs.htm> (accessed May 27, 2014).
18. Casey B. Mulligan, "The New Economics of Part-Time Employment," *The New York Times* Economix blog, July 3, 2013, <http://economix.blogs.nytimes.com/2013/07/03/the-new-economics-of-part-time-employment/> (accessed May 27, 2014).
19. Congressional Budget Office, *The Budget and Economic Outlook: 2014 to 2024*, February 2014, Appendix C, pp. 117-127, http://www.cbo.gov/sites/default/files/cbofiles/attachments/45010-Outlook2014_Feb.pdf (accessed May 21, 2014).

CHART 6

Younger Workers Lost the Most Work Hours

PERCENTAGE CHANGE IN AVERAGE WORK HOURS SINCE 2007, BY AGE GROUP



Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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TABLE 6

Overall Average Hours Worked per Week, by Age Group

Age Group	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
16-24	31.4	30.5	-0.9	-2.8%	0.003
25-54	40.6	40.1	-0.5	-1.3%	0.000
55+	38.1	38.2	0.1	0.4%	0.490

Statistically significant at the 5 percent level.

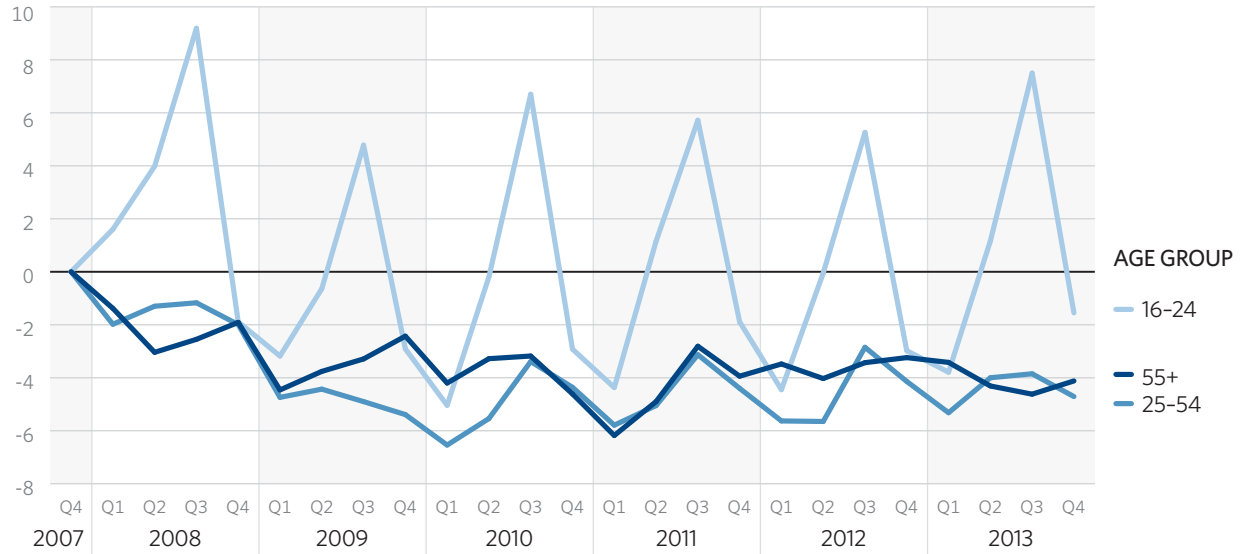
Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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CHART 7

Low-Income Workers Lost Hours, Regardless of Age Group

PERCENTAGE CHANGE IN AVERAGE WORK HOURS SINCE 2007, BOTTOM QUINTILE OF WAGE EARNERS, BY AGE GROUP



Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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TABLE 7

Average Hours Worked per Week for the Bottom Quintile of the Wage Distribution, by Age Group

Age Group	Q4 2007	Q4 2013	Hours Change	% Change	P-Value
16-24	27.2	26.7	-0.4	-1.6%	0.252
25-54	37.1	35.4	-1.8	-4.7%	0.000
55+	32.9	31.6	-1.4	-4.1%	0.011

Statistically significant at the 5 percent level.

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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Implications

Average working hours fell during the Great Recession for most Americans—far more than during the previous two recessions.²⁰ Since then, work hours have recovered for most of the population, but not for workers in the bottom quintile. The average workweek remains 3.4 percent below its pre-recession average for these employees. For low-income workers in the retail and entertainment and recreation industries, the reduced hours amount to almost an entire month less work a year. The poor economy has most hurt the very workers who need longer workweeks in order to gain both income and skills.

In the United States, workers in the lowest quintile of the wage distribution also work the fewest hours. In part, this is causal: Workers with less experience earn lower wages. Conversely, the most highly paid 20 percent of Americans work the most hours. The further decline of working hours at the bottom will make it harder for low-income workers to acquire the skills and experience necessary to get ahead. Inequality dominates the current politi-

cal discussion, but the prospect of boosting income mobility through experience and longer hours deserves attention.

Obamacare will make this situation worse. The law raises employers' cost of hiring low-wage workers full-time by an average of 18 percent. This will discourage employers from creating full-time jobs for these employees. The law also diminishes the financial benefits of full-time work for many low-income and moderate-income Americans. Under the ACA, many Americans will make as much working part-time and collecting exchange subsidies as they can make by working full-time with employer-provided health insurance. Both factors will push average workweeks down. This in turn will reduce employees' human capital accumulation and compensation growth.

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20. Steven Kroll, "The Decline in Work Hours During the 2007-09 Recession," *Monthly Labor Review*, April 2011, pp. 53-59, <http://www.bls.gov/opub/mlr/2011/04/art10full.pdf> (accessed May 12, 2014).

Appendix

Methodology

This *Backgrounder* uses the Merged Outgoing Rotation Group (MORG) data from the Current Population Survey (CPS) from October 2007 to December 2013. We used the files maintained by the National Bureau of Economic Research (NBER), which the NBER makes available publicly online.²¹

We constructed hourly wages by dividing usual weekly earnings (earnwke) by usual hours worked (uhourse). This takes into account salaried workers as well as workers paid by the hour.

We used this hourly wage variable to construct quintiles of the wage distribution for each month. The ranges for the quintiles vary over time as the nominal wage distribution shifts. In the last month of the analysis, December 2013, quintiles broke down as indicated in Appendix Table 1.

When we refer to average workweek or weekly hours, those numbers represent the “usual hours worked” variable from the CPS MORG: uhourse.

For the industry breakdown, we constructed an industry variable to replicate the North American Industry Classification System at the two-digit level. This was done by aggregating the industry variable (dind00) of the CPS MORG to the two-digit level. For occupations, the analysis is based on the occupational variable labeled docc00 in the NBER data files.

The category for different levels of education was derived from the grade92 variable that measures

APPENDIX TABLE 1

Ranges for Wage Quintiles

FOR DECEMBER 2013

Quintile	Wage Minimum	Wage Maximum	Mean Wage
Bottom	—	\$10.36	\$8.23
2nd	\$10.36	\$15.00	\$12.88
Middle	\$15.00	\$21.28	\$18.07
4th	\$21.28	\$32.00	\$26.04
Top	\$32.00	—	\$46.74

Source: Heritage Foundation calculations using data from the U.S. Census Bureau, Current Population Survey.

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which grade the respondent has completed. The variable for age groups was created similarly using the age variable from the MORG files.

A spreadsheet with the detailed outputs of the calculations and a Stata do-file with the commands necessary to replicate these results are available upon request from The Heritage Foundation’s Center for Data Analysis.

21. National Bureau of Economic Research, “Current Population Survey (CPS) Data at the NBER,” October 2007 to December 2013, <http://www.nber.org/cps/> (accessed May 21, 2014).