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## THE FUTURE OF WORK

### Trends and challenges for low-wage workers

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**M**any workers are facing uniquely tough times. Though now below its recessionary peak of 10 percent in October 2009, unemployment remains high at 8.2 percent, and job growth is slow. With around 25 million people unemployed or underemployed, it is clear that the jobs crisis did not subside with the official end of the recession. Moreover, workers are still suffering from difficulties that materialized in the decades before the Great Recession, such as deteriorating job quality and stagnant wages. The economic expansion from 2001–2007, for instance, was among the weakest on record; typical family incomes grew by less than one half of one percent between 2000 and 2007 (Bivens 2011). These economic challenges are particularly acute for workers at the bottom of the wage scale.

This paper focuses on low-wage workers—who they are, where they work, where they live, and what their future challenges may be in regards to education/skill requirements, job quality, and wages. Analysis of employment projections from the Bureau of Labor Statistics (BLS) reveals that the future of work will be shaped by much more than labor market skill demands. And in the future, rising wages will depend more on the wage growth within

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occupations than on any change in the mix of occupations.

This briefing paper begins by providing an overview of the jobs crisis facing American workers—a crisis that must be resolved if low-wage workers are to experience brighter labor market prospects. It then explores the racial/ethnic composition and education levels of the low-wage workforce. Next, the briefing paper examines which states have the highest and lowest shares of low-wage workers. Fol-

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lowing this is an analysis of which of the 22 occupation groups identified by the Bureau of Labor Statistics have the highest and lowest shares of low-wage workers, and provides an overview of how overall employment in those groups is expected to change by 2020. It then turns to a discussion of how overall education, training, and work-experience requirements of the U.S. workforce will change between 2010 and 2020. The paper concludes by explaining why any focus on increased access to good jobs for low-wage workers should be less concerned with educational attainment or changes in the skill demands of the labor market, and more concerned with a range of policy-related issues that affect job quality—namely, the stagnating value of the minimum wage, the erosion of health and retirement benefits, and the decline in bargaining power of American workers.

Key findings include:

- Female, young, and minority workers are overrepresented in the ranks of low-wage workers, when “low-wage” is defined as below the wage that a full-time, full-year worker would have to earn to live above the federally defined poverty threshold for a family of four. (In 2011, this was \$23,005 per year, or \$11.06 when adjusted to hourly wages.)
  - In 2011, only 31.5 percent of low-wage workers lived in households with a family income greater than \$50,000, indicating that low-wage workers are not predominately teenagers living with their parents or adults with low-paying jobs living with a higher-earning spouse.
  - In 2010, Mississippi and Tennessee had the largest share of workers earning wages that put them at or under the official poverty threshold for a family of four, at 33.7 percent and 32.8 percent, respectively. The District of Columbia and Alaska had the smallest share of workers in this category, at 11.6 percent and 17.5 percent, respectively.
- In 2010, food preparation and serving related occupations had the largest share of workers earning a wage at or below the poverty level (73.6 percent, or almost three-fourths).
  - An analysis of the education and training levels projected to be necessary for the labor force of 2020 shows that jobs will *not* require a significantly greater level of education or training than workers currently possess. Therefore, a simple increase in the share of workers with a college degree will not ensure that tomorrow’s economy generates better and more equitable outcomes than today’s economy.
  - Workers of the future, particularly low-wage workers, will only experience rising living standards if the policy status quo is replaced by more-progressive tax and transfer policies, increases in the real value of the minimum wage, a reversal of falling unionization rates, an expansion (and definitely not a retrenchment) of publicly financed social insurance programs, and, crucially, a real commitment to full employment.

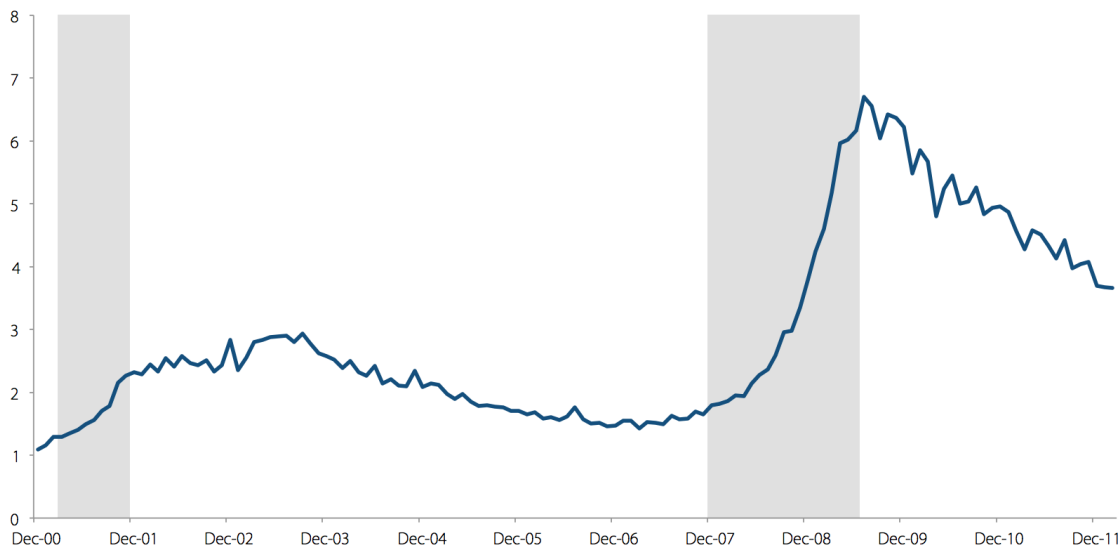
## First, a strong recovery and a return to full employment

A bright future of work for low-wage workers begins with quickly lowering the unemployment rate by solving the current jobs crisis. Though the Great Recession is technically over, for many unemployed and employed Americans it does not feel that way, largely because strong and sustained job growth has yet to occur.

The economy needs to create 9.9 million jobs just to fill the jobs deficit<sup>1</sup>—a daunting task for a nation struggling to create enough jobs to keep pace with monthly population growth (Shierholz 2012). As of March, the unemployment rate was still 8.2 percent, and 42.9 percent of unemployed workers had been unemployed for six months or longer (Shierholz 2012b). The underemployment rate, which includes workers who are unemployed, marginally attached, or involuntarily working part time,

FIGURE A

The job seekers ratio (number of unemployed workers per job opening), Dec. 2000–Feb. 2012



**Note:** Shaded areas denote recessions.

**Source:** Author's analysis of Job Openings and Labor Turnover Survey data and Current Population Survey data

is 14.5 percent (Shierholz 2012). Polling has indicated that unemployment has affected large swaths of the population. In Democracy Corps polling from June 2009 to June 2011, the share of respondents who stated that either they or a family member had experienced unemployment hovered around 40 percent (Mishel and Shierholz 2011).

One of the best ways to improve conditions for low-wage workers is to lift their pay, and one of the most effective ways to accomplish this is by generating good jobs in an economy with a tight labor market (Mishel, Bernstein, and Shierholz 2009). History shows that full employment—which is the utilization by the labor market of virtually all willing workers—lifts the living standards of working families because lower-wage workers in very tight labor markets gain the bargaining power to demand higher pay and/or better working conditions. As Bernstein and Baker (2003) write in *The Benefits of Full Employment*, the labor market of the mid- to late 1990s,

which operated at or near full employment, helped reverse a decline of real wages for many workers, benefiting even those toward the bottom of the wage scale. Measures of wage inequality, in fact, slowed their rise in the late 1990s. The 1990s also saw, for the first time in a generation, incomes of the workers at the bottom of the scale growing more quickly than incomes of workers in the middle of the income scale.

Tight labor markets that boost bargaining power at the middle and bottom of the wage scale can prompt employers to raise wages and offer better benefits to keep workers who may otherwise leave for other, possibly better-paying, jobs. The labor market in the 1990s saw a drop in the number of involuntary part-time workers (those employed part time but seeking full-time jobs) and in the number of discouraged workers (those who wanted jobs but gave up searching). In sum, the strong growth of the late 1990s increased both the demand for, and the

bargaining power of, low-wage workers. (Bernstein and Baker 2003)

Inarguably, the Great Recession and its recovery have been different from past downturns and recoveries. The job-seekers ratio (the number of unemployed workers per job opening) demonstrates just how low demand remains relative to the stock of willing workers nearly two years after the official end of the Great Recession. As **Figure A** shows, the job-seekers ratio was over 6-to-1 during much of 2009, and, at around 3.7-to-1 today, remains high. Notably, the highest this ratio ever was in the downturn of the early 2000s was 2.9-to-1. This figure shows there are still far too few job openings throughout our economy, with the job-seekers ratio in recent months still hovering around double what it was during the recession of the early 2000s.

Simply put, until the labor market is restored to good health through a real commitment to full employment, the prospects for all workers, including low-wage workers, will be dim.

## Who are low-wage workers?

Around one-fourth of all workers are in low-paying jobs, which, in this instance, is defined as jobs with a wage at or below the wage that a full-time, full-year worker would have to earn to live above the federally defined poverty threshold for a family of four. In 2011, this was \$23,005 per year, or \$11.06 when adjusted to hourly wages.<sup>2</sup> This section uses data from the Economic Policy Institute's forthcoming book, *The State of Working America, 12th Edition* (Mishel, Bivens, Gould, and Shierholz 2012), to break down the low-wage workforce by certain demographic characteristics.

Female workers hold a higher share of poverty-wage jobs than male workers. (Note that in this paper, the terms "poverty wage" and "low wage" are used interchangeably.) While females constituted less than half of the total workforce in 2011, they accounted for 55.1 percent of poverty-

wage workers. Poverty-wage workers are also more likely to be young; while workers age 18–25 made up only 15.5 percent of the total workforce in 2011, they constituted 35.5 percent of poverty-wage workers. As shown in **Figure B**, African Americans are also overrepresented in the poverty-wage workforce. While they made up 11.0 percent of the total workforce in 2011, they accounted for 14.1 percent of the poverty-wage workforce. Likewise, Hispanics made up 15.3 percent of the workforce in 2011 but constituted 23.6 percent of poverty-wage workers.<sup>3</sup> In contrast, while 66.9 percent of the total workforce in 2011 was white, only 55.9 percent of the poverty-wage workforce was white.

Some may believe that a preponderance of low-wage workers live in higher-income households (thinking, for instance, of a teenager with a menial job living with parents, or an adult with a low-wage job living with a higher-earning spouse). In fact, in 2011, only 31.5 percent of poverty-wage workers lived in households with a family income greater than \$50,000, and 31.0 percent lived in households with less than \$25,000 in family income.

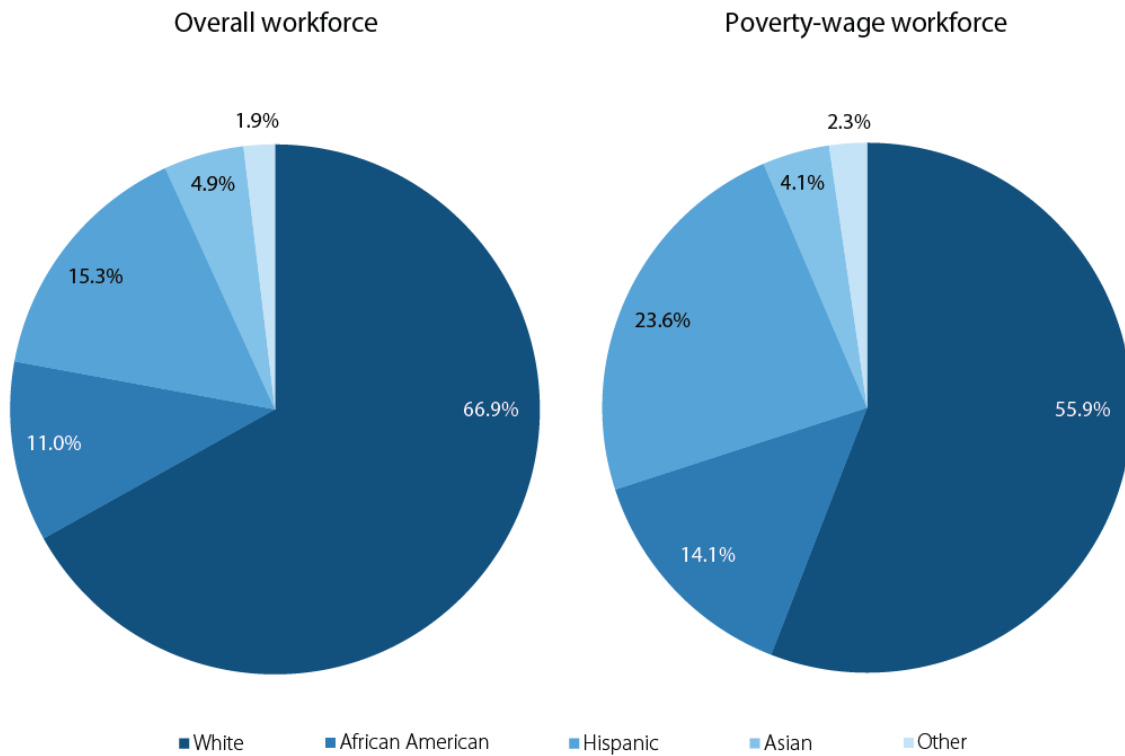
**Table 1** shows that workers with lower levels of education comprise a disproportionate share of low-wage workers. In 2011, workers with a high school diploma or less constituted 36.4 percent of the total workforce but 54.3 percent of low-wage workers. However, even workers with greater educational attainment—those with some college—made up a disproportionate share of the poverty-wage workforce. In 2011, workers with some college education constituted 19.7 percent of the total workforce but 26.4 percent of the poverty-wage workforce.

## The concentration of low-wage work by state

There is some geographic concentration of low-wage work in the United States. **Table 2** shows the share of workers in each state who fall in four poverty-wage categories: 0 percent to 100 percent of the poverty-wage threshold, >100 percent to 200 percent, >200 percent to

FIGURE B

Racial/ethnic composition of poverty-wage workforce and overall workforce, 2011



**Note:** Poverty-wage workforce refers to workers living at or below the poverty threshold for a family of four.

**Source:** Author's analysis of data from forthcoming *The State of Working America, 12th Edition*

300 percent, and above 300 percent. (The table is organized by the second column, which depicts, from highest to lowest, the share of workers earning between 0 percent and 100 percent of poverty wages in each state.) This analysis defines poverty wages at \$10.73 per hour, which is the U.S. Census Bureau's annual poverty threshold for a family of four in 2010, adjusted to an hourly rate.<sup>4</sup> Thus, workers at 0 percent to 100 percent of the poverty threshold earned from \$0–\$10.73 per hour in 2010, while workers falling in the category of >100 percent to 200 percent of the poverty threshold earned from \$10.74–\$21.46 per hour. Workers between >200 percent and 300 percent of the poverty threshold earned from \$21.47–\$32.19 per hour, while workers above 300 per-

cent of the poverty threshold earned more than \$32.19 per hour.

According to the table, in 2010, Mississippi and Tennessee had the largest share of workers earning wages that put them at or under the official poverty threshold, at 33.7 percent and 32.8 percent, respectively. The District of Columbia and Alaska had the smallest share of workers in this category, at 11.6 percent and 17.5 percent, respectively. At the other end of the spectrum, the District of Columbia and New Jersey boasted the largest share earning over 300 percent of poverty wages in 2010, at 28.7 percent and 25.1 percent, respectively. Arkansas and South Dakota had the smallest share earning over 300 percent of poverty wages, at 5.7 percent and 7.1 percent, respectively.

TABLE 1

## Share of total and poverty-wage workforce by educational attainment, 2011

Education	Share of poverty-wage workforce	Share of total workforce
<i>Less than high school</i>	18.5 percent	8.4 percent
<i>High school</i>	35.8 percent	28.0 percent
<i>Associate's degree</i>	8.6 percent	10.7 percent
<i>Some college</i>	26.4 percent	19.7 percent
<i>Bachelor's or higher</i>	10.7 percent	33.2 percent

**Note:** Poverty-wage workforce refers to workers living at or below the poverty threshold for a family of four.

**Source:** Author's analysis of Current Population Survey Outgoing Rotation Group microdata

## The concentration of low-wage work by occupation

Data also reveal a concentration of low-wage work in certain occupations. **Table 3** shows the 22 major occupation groups as identified by the BLS, and the share of workers within those groups that fell into various wage categories in 2010. (The table is organized by the second column, which depicts, from highest to lowest, the share of workers earning between 0 percent and 100 percent of poverty wages in each group.)

As the table shows, food preparation and serving related occupations had the largest share (73.6 percent, or almost three-fourths) of workers earning a wage at or below the poverty level. In contrast, less than 1 percent of workers in that sector made over 300 percent of poverty wages. The sector with the lowest share of workers earning between 0 percent and 100 percent of poverty wages in 2010 was architecture and engineering; only 3 percent of those workers earned wages at or below poverty level.

At the other end of the spectrum, workers in computer and mathematical occupations had the largest share of workers—44.5 percent—earning over 300 percent of

poverty wages. Only 3.6 percent of workers in that sector earned wages at or below poverty level.

## Trends in employment

Speculating on what the future work environment may look like and the challenges it may pose for both workers and those looking for work is a complex undertaking. However, the BLS provides some tools for assessing how occupational shares may change in the coming years. **Table 4** uses BLS employment projections by occupation to show how the share of workers in each occupation is expected to change between 2010 and 2020. (As with **Table 3**, the occupations in **Table 4** are ranked from those with the highest share of employees making at or below poverty-level wages to the lowest.)

As shown in the third column of data in **Table 4**, the BLS does not project a dramatic change in the share of workers employed in any of the major occupation groups by 2020. Personal care and service occupations are projected to experience the greatest gain in worker share relative to 2010 levels, while office and administrative support occupations are projected to see the greatest loss in worker share.

TABLE 2

## Share of employment by wage multiple of poverty wage, by state, 2010

State	0% to 100%	>100% to 200%	>200% to 300%	>300%
<i>UNITED STATES</i>	26.0%	40.8%	18.5%	14.7%
<i>Mississippi</i>	33.7%	43.3%	14.1%	8.9%
<i>Tennessee</i>	32.8%	42.8%	14.1%	10.3%
<i>Arkansas</i>	32.5%	48.4%	13.4%	5.7%
<i>Alabama</i>	32.5%	41.0%	19.2%	7.3%
<i>Texas</i>	32.4%	40.2%	16.0%	11.3%
<i>Louisiana</i>	32.3%	39.4%	16.7%	11.6%
<i>Kentucky</i>	31.2%	44.3%	16.5%	8.1%
<i>Idaho</i>	31.0%	42.3%	16.5%	10.1%
<i>Montana</i>	31.0%	44.8%	16.2%	8.0%
<i>Oklahoma</i>	30.7%	43.4%	16.6%	9.3%
<i>New Mexico</i>	29.8%	38.7%	18.5%	13.0%
<i>Indiana</i>	28.5%	43.6%	18.5%	9.4%
<i>Michigan</i>	28.3%	39.0%	19.2%	13.6%
<i>South Carolina</i>	28.3%	45.9%	16.9%	8.9%
<i>West Virginia</i>	28.2%	41.9%	18.7%	11.1%
<i>Georgia</i>	28.0%	39.0%	19.5%	13.5%
<i>North Carolina</i>	28.0%	42.7%	17.9%	11.4%
<i>Nevada</i>	27.7%	45.7%	15.9%	10.8%
<i>Ohio</i>	27.3%	43.7%	18.6%	10.4%
<i>Missouri</i>	27.2%	43.0%	18.0%	11.7%
<i>South Dakota</i>	27.2%	52.5%	13.2%	7.1%
<i>Oregon</i>	27.0%	41.6%	16.8%	14.6%
<i>Utah</i>	26.5%	44.7%	17.7%	11.1%
<i>Kansas</i>	26.4%	46.0%	15.9%	11.6%
<i>Iowa</i>	26.3%	48.5%	17.4%	7.8%
<i>Illinois</i>	26.0%	38.9%	19.7%	15.4%
<i>Florida</i>	25.4%	43.6%	18.2%	12.8%
<i>Arizona</i>	25.3%	44.0%	16.5%	14.2%
<i>Maine</i>	25.3%	46.3%	18.0%	10.5%
<i>California</i>	25.1%	37.7%	17.8%	19.4%



TABLE 2 (CONTINUED)

State	0% to 100%	>100% to 200%	>200% to 300%	>300%
<i>Nebraska</i>	25.0%	48.5%	16.5%	10.0%
<i>North Dakota</i>	24.5%	50.6%	16.4%	8.5%
<i>Rhode Island</i>	24.5%	39.0%	19.9%	16.6%
<i>New York</i>	24.1%	37.6%	20.2%	18.1%
<i>Pennsylvania</i>	23.6%	43.2%	19.6%	13.6%
<i>Hawaii</i>	23.5%	46.7%	17.5%	12.3%
<i>Wyoming</i>	23.4%	46.2%	22.2%	8.2%
<i>Virginia</i>	23.4%	36.7%	19.6%	20.2%
<i>Wisconsin</i>	23.0%	47.1%	19.4%	10.5%
<i>Delaware</i>	22.7%	40.2%	21.4%	15.7%
<i>Vermont</i>	21.9%	47.2%	20.1%	10.7%
<i>New Jersey</i>	21.8%	32.7%	20.5%	25.1%
<i>Colorado</i>	21.4%	40.1%	20.4%	18.1%
<i>Minnesota</i>	20.4%	43.1%	20.9%	15.6%
<i>Washington</i>	19.5%	39.9%	22.0%	18.7%
<i>Maryland</i>	19.3%	37.7%	20.4%	22.7%
<i>New Hampshire</i>	19.2%	42.2%	21.1%	17.6%
<i>Connecticut</i>	18.6%	35.1%	22.2%	24.0%
<i>Massachusetts</i>	17.6%	37.1%	21.6%	23.7%
<i>Alaska</i>	17.5%	44.5%	22.4%	15.6%
<i>District of Columbia</i>	11.6%	35.1%	24.6%	28.7%

**Note:** Data were calculated using poverty data for a four-person household.

**Source:** Author's analysis of Current Population Survey Outgoing Rotation Group microdata

There is also very little change projected in the share of workers in various wage categories due to occupational shifts (Table 5). An analysis of occupation shifts shows that in 2010, 28.3 percent of workers earned at or below poverty-level wages; by 2020, this is only projected to drop to 28.0 percent of workers, a small drop in the distribution. The distribution of workers in the over 300 percent of poverty wages category is only projected to

increase marginally due to occupational shifts, from 12.7 percent of workers in 2010 to 13.2 percent of workers in 2020. As Table 5 shows, the BLS data on projected occupational shifts demonstrates a very limited change in the share of workers by wage threshold between 2010 and 2020.

An often-explored aspect of future workforce needs is the education and training of American workers. Partic-



TABLE 3

### Distribution of work in major occupation groups, by wage multiple of poverty wage, 2010

Major occupation group	SHARE OF EMPLOYMENT BY WAGE MULTIPLE OF POVERTY WAGE			
	0% to 100%	>100% to 200%	>200% to 300%	>300%
<i>Food preparation and serving related occupations</i>	73.6%	23.4%	2.3%	0.8%
<i>Farming, fishing, and forestry occupations</i>	65.2%	31.6%	2.7%	0.6%
<i>Personal care and service occupations</i>	56.9%	33.8%	6.6%	2.7%
<i>Building and grounds cleaning and maintenance occupations</i>	53.7%	39.1%	5.7%	1.5%
<i>Healthcare support occupations</i>	44.8%	48.7%	5.3%	1.2%
<i>Sales and related occupations</i>	41.9%	35.5%	12.3%	10.2%
<i>Transportation and material moving occupations</i>	34.3%	49.0%	12.5%	4.2%
<i>Production occupations</i>	27.5%	53.9%	14.7%	3.9%
<i>Protective service occupations</i>	24.5%	43.2%	20.2%	12.1%
<i>Office and administrative support occupations</i>	24.4%	57.4%	14.2%	4.0%
<i>Construction and extraction occupations</i>	19.0%	49.3%	22.5%	9.3%
<i>Arts, design, entertainment, sports, and media occupations</i>	14.6%	38.4%	24.9%	22.1%
<i>Education, training, and library occupations</i>	13.8%	39.9%	26.9%	19.3%
<i>Installation, maintenance, and repair occupations</i>	13.7%	50.7%	28.2%	7.4%
<i>Community and social service occupations</i>	11.9%	47.4%	26.2%	14.4%
<i>Healthcare practitioners and technical occupations</i>	7.4%	32.9%	30.6%	29.1%
<i>Management occupations</i>	5.9%	29.2%	26.1%	38.7%
<i>Life, physical, and social science occupations</i>	5.8%	32.8%	29.7%	31.7%
<i>Business and financial operations occupations</i>	5.3%	35.9%	29.8%	29.0%
<i>Legal occupations</i>	5.2%	27.9%	26.0%	40.9%
<i>Computer and mathematical occupations</i>	3.6%	23.6%	28.3%	44.5%
<i>Architecture and engineering occupations</i>	3.0%	22.9%	33.3%	40.8%
<i>All occupations</i>	26.0%	40.8%	18.5%	14.7%

**Note:** Data were calculated using poverty data for a four-person household.

**Source:** Author's analysis of Current Population Survey Outgoing Rotation Group microdata

ularly, it is important to know if the future labor market will affect the type of education and training low-income

workers may need in order to compete in the job market. BLS data on projected education and training needs in

TABLE 4

## Projected change in share of total workers by major occupation group, 2010–2020

Major occupation group	Share of workers, 2010	Share of workers, 2020	Percentage-point change in share of workers	Share of workers making at or below poverty wages
<i>Food preparation and serving related occupations</i>	8.7%	7.5%	-1.2	73.6%
<i>Farming, fishing, and forestry occupations</i>	0.3%	0.6%	0.3	65.2%
<i>Personal care and service occupations</i>	2.7%	3.9%	1.2	56.9%
<i>Building and grounds cleaning and maintenance occupations</i>	3.3%	3.8%	0.5	53.7%
<i>Healthcare support occupations</i>	3.1%	3.4%	0.3	44.8%
<i>Sales and related occupations</i>	10.6%	10.3%	-0.3	41.9%
<i>Transportation and material moving occupations</i>	6.7%	6.3%	-0.4	34.3%
<i>Production occupations</i>	6.5%	5.5%	-1.0	27.5%
<i>Protective service occupations</i>	2.5%	2.2%	-0.3	24.5%
<i>Office and administrative support occupations</i>	16.9%	15.2%	-1.7	24.4%
<i>Construction and extraction occupations</i>	4.0%	4.7%	0.7	19.0%
<i>Arts, design, entertainment, sports, and media occupations</i>	1.4%	1.9%	0.5	14.6%
<i>Education, training, and library occupations</i>	6.7%	6.5%	-0.2	13.8%
<i>Installation, maintenance, and repair occupations</i>	3.9%	3.8%	-0.1	13.7%
<i>Community and social service occupations</i>	1.5%	1.8%	0.3	11.9%
<i>Healthcare practitioners and technical occupations</i>	5.8%	6.0%	0.2	7.4%
<i>Management occupations</i>	4.7%	5.7%	1.0	5.9%
<i>Life, physical, and social science occupations</i>	0.8%	0.9%	0.0	5.8%
<i>Business and financial operations occupations</i>	4.8%	4.9%	0.1	5.3%
<i>Legal occupations</i>	0.8%	0.8%	0.0	5.2%
<i>Computer and mathematical occupations</i>	2.6%	2.6%	0.1	3.6%
<i>Architecture and engineering occupations</i>	1.8%	1.6%	-0.2	3.0%

Source: Author's analysis of BLS data and Current Population Survey Outgoing Rotation Group microdata

TABLE 5

## Change in share of workers by wage threshold due to occupation shifts, 2010–2020

	SHARE OF EMPLOYMENT BY WAGE MULTIPLE OF POVERTY WAGE			
	0% to 100%	>100% to 200%	>200% to 300%	>300%
2010	28.3%	41.5%	17.5%	12.7%
2020	28.0%	41.2%	17.7%	13.2%
Percentage-point change	-0.3	-0.4	0.2	0.5

**Note:** Data were calculated using poverty data for a four-person household.

**Source:** Author's analysis of Current Population Survey Outgoing Rotation Group microdata

the coming years shed light on how the forecasted occupational mix is likely to affect the skill demands placed on workers in the future.

The data in **Table 6** show that in 2020, jobs will actually *not* require a significantly greater level of education or training than workers currently have. This is an important finding; far too many economic pundits take for granted that the economy of the future will demand far greater skills and credentials.

The table shows an assessment of the education and training most often needed to be employed in the major occupation groups in 2010, as well as projections for 2020. The results, similar to those found in *The State of Working America* with data from 2006–2016 (Mishel, Bernstein, and Shierholz 2009), suggest a very marginal shift from the jobs that require the least education and training to those that require the most. Jobs requiring a bachelor's degree or more, for instance, increase their employment share by 0.6 percentage point, while those requiring a high school diploma or less decrease their employment share by less than one percentage point. In fact, the workforce already provides jobs for a much larger share of workers with at least a college degree than the projections indicate are needed. In Table 6, projections suggest that more than 25 percent of jobs are for those without a high school credential, far in excess of the 8.4 percent

(see Table 1) with such education levels currently in the workforce. This directly challenges the notion that a radical increase in college completion is needed for workers to compete in tomorrow's economy. Supporting this argument is the fact that college graduates have not fared particularly well in the labor market over the past decade; real wages are no higher now for those with college degrees than they were ten years ago (Mishel and Shierholz 2011b).

Additionally, Table 6 shows that by training category, the projections for 2020 show a very slightly lower share of jobs that will require short-term, moderate-term, or long-term on-the-job training. Furthermore, the share of jobs that will require relevant work experience is not projected to change significantly. The largest change in this category is for jobs requiring no work experience in a related occupation, which is projected to increase by half a percentage point.

The projections for 2020 clearly indicate that there are no significant changes predicted in the education or training needs of workers. Access to jobs in the future does not seem dependent on a radical increase in workers' credentials. To be clear, policy initiatives that remove (mostly financial) barriers to college enrollment and completion are very welcome. However, a simple increase in the share of workers with a college degree will not ensure that

TABLE 6

## Change in education and training requirements of jobs, 2010–2020

	2010	2020	Change 2010–2020
<i>Annual earnings</i>	\$39,250	\$39,279	0.07%
	<b>Share*</b>	<b>Share*</b>	<b>Percentage-point change</b>
<b>Education level needed for entry</b>			
<i>Less than high school</i>	25.9%	25.9%	0.0
<i>High school diploma or equivalent</i>	43.4%	42.6%	-0.8
<i>Some college, no degree</i>	0.6%	0.6%	0.0
<i>Associate's degree</i>	5.6%	5.8%	0.2
<i>Bachelor's degree</i>	15.5%	15.8%	0.3
<i>Master's degree</i>	1.4%	1.5%	0.1
<i>Doctoral or professional degree</i>	3.1%	3.2%	0.2
<b>Training level needed for entry</b>			
<i>Short-term on-the-job training</i>	40.7%	40.4%	-0.3
<i>Moderate-term on-the-job training</i>	17.5%	17.3%	-0.2
<i>Long-term on-the-job training</i>	4.9%	4.8%	-0.1
<i>Apprenticeship</i>	1.8%	1.9%	0.1
<i>Internship/residency</i>	3.8%	3.8%	0.1
<i>None</i>	31.4%	31.8%	0.4
<b>Related work experience needed for entry</b>			
<i>Less than one year</i>	2.2%	2.2%	0.0
<i>One to five years</i>	12.0%	11.7%	-0.3
<i>More than five years</i>	3.2%	3.0%	-0.2
<i>None</i>	82.6%	83.1%	0.5

\* Columns show share of all jobs with the specified entry requirement in 2010 and in 2020.

**Source:** Author's analysis of BLS occupational employment projections

tomorrow's economy generates better and more equitable outcomes than today's economy.

In fact, low-wage workers are better educated currently than they were three decades ago, when wage inequality

began to rise, demonstrating that education is not necessarily the key to avoiding low-wage work. A Center for Economic and Policy Research study that defined low-wage workers as those earning \$10 per hour or less (in 2011 dollars) found that the share of low-wage workers

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with less than a high school diploma decreased by around half since 1979. At the same time, the share of low-wage workers with some college education attainment rose from 19.5 percent to 33.3 percent (Schmitt and Jones 2012).

It may thus be the case that policies need to focus on propelling an upgrade of the education and skill requirements of future jobs.

## Securing good jobs for low-wage workers

Greater educational attainment should be the focus of efforts to improve social mobility for those from disadvantaged and low-income backgrounds. However, any focus on increased access to good jobs for low-wage workers must be concerned with a range of policy-related issues that affect job quality. These include the value of the minimum wage, the erosion of health and retirement benefits, and the declining bargaining power of the typical American worker. In other words, workers' wages and well-being will be determined primarily by how much their earnings rise, the extent of their benefits (assuming such benefits exist at all), and whether workers have the power to bargain on behalf of their livelihoods. These three factors will be more important to workers' futures than increased educational attainment or any projected changes in the mix of occupations.

The past three decades have seen specific policy decisions that have negatively affected average workers. First, the purchasing power of the minimum wage has consistently and gradually eroded since the 1970s (with a brief respite in the 1990s). In 1968, the inflation-adjusted value of the minimum wage was \$8.54 (in 2009 dollars); by 2006 its value had plummeted to \$5.48 (Bivens 2011). Since 2006, raises in the minimum wage have increased its value, but significant room for improvement remains. Restoring the inflation-adjusted value of the minimum wage is a key step toward improving jobs for millions of American workers. So is reforming the tax treatment

of wages, which have been taxed at significantly higher rates than other sources of income in recent decades. In addition, wage stagnation over the last 30 years has made it nearly impossible for households to stay afloat without two earners—and has contributed to growing income inequality.

Further squeezing American workers is the erosion of health care and pension coverage. The share of workers with employer-provided health insurance has dropped significantly over the last few decades, and 2010 marked the tenth year in a row that the share of people under 65 with employer-sponsored health insurance dropped, reaching 58.6 percent (Gould 2012). Coverage for low-wage workers specifically has fallen as well; since 1979, coverage has fallen 17 percentage points for workers in the lowest fifth, 14 percentage points for workers in the second fifth, and 13 percentage points for workers in the top fifth (Schmitt 2012). Additionally, fewer workers had pension coverage in 2009 than in 1979 (SWA 2011).

Contributing to the environment in which real wages have stagnated and health and pension coverage has eroded is the fact that collective bargaining power has decreased, and remains under assault. Union coverage has fallen dramatically over the last 30 years, with the share of unionized wage and salary workers dropping 0.4 percent per year from 1979–2010 (SWA 2011b). This falling rate of unionization has led to lower wages, as illustrated by the union wage premium, which is how much unionized workers' earnings exceed those of comparable nonunion workers. In 2007, the premium was 14.1 percent (Mishel, Bernstein, and Shierholz 2009). Additionally, unions have positive effects on the livelihoods of all workers by raising wages at the bottom of the wage scale more than at the top, thereby shrinking wage inequality.

Taken together, these trends illustrate why significant policy reforms are needed to ensure that future jobs are good jobs.

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## Remaining challenges

Step one in ensuring a decent future of work is overcoming the current crisis of joblessness—and realizing that how fast this crisis ends will be determined almost entirely by policy. But even when it passes, challenges will remain for large portions of the American workforce; a return to full employment is not the sole answer for America's current and future workers. This is particularly true because the years between the 1990s boom and today have been difficult ones for workers; the real median income for working-age households dropped more than 10 percent from 2000–2010 (SWA 2011c).

What matters to workers in the near future is not only the number of jobs available, but what those jobs will look like. Whether workers in the future earn enough for their jobs to be considered good jobs depends on how earnings in their particular occupations rise, as opposed to any changes in the composition of jobs. This paper illustrates that education will not be a cure-all for workers in the labor market of the future. Low-income workers do not require significantly greater levels of education, or more training, to compete in the job market of today, nor will they in the future. Instead of facing a skills deficit, workers face a wage deficit. This is powerfully illustrated by the fact that college graduates have not seen their real wages rise in ten years.

Economic policy over the last three decades has not been focused on supporting good jobs. Wage inequality has widened, pension and health coverage has eroded, workers' bargaining power has diminished, and access to good jobs has narrowed. Policies regarding wages, benefits, health insurance, and labor standards have not been on the side of workers. Workers of the future, particularly low-wage workers, will only experience rising living standards if the policy status quo is replaced by more-progressive tax and transfer policies, increases in the real value of the minimum wage, a reversal of falling unionization rates, an expansion (and definitely not a retrenchment)

of publicly financed social insurance programs, and, crucially, a real commitment to full employment.

In short, it will take an ambitious policy agenda—much more than simply a focus on tailoring education and training to the labor market—to make sure the jobs of the future, particularly for low-wage workers, are good ones.

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## Endnotes

1. The jobs deficit refers to jobs lost as well as the number of jobs needed to keep up with population growth.
2. Author's analysis of Current Population Survey Outgoing Rotation Group data, adjusted to 2011.
3. This analysis removes persons of Hispanic ethnicity from racial categories (e.g., white, African American). In other words, people of Hispanic ethnicity are only reflected in the Hispanic category designated.
4. The Census Bureau poverty threshold in 2010 for a family of four was \$22,314 (Census 2011). To calculate the hourly poverty threshold, this number is divided by 2,080 (40 hours per week times 52 weeks), the number of annual working hours for full-time, full-year employees. Here, data from 2010 are used (as opposed to 2011 data used in the previous section) because BLS employment projections by occupation, discussed later in the paper, run from 2010–2020.

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