

The State of Working West Virginia 2012

In Depth: The Gas Boom and Coal Bust

September 2012



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Cover photo credit: Steve White.

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Introduction: What About Us?

It is not unusual in West Virginia to hear strident warnings about the state's business climate, the status of which is said to range from healthy to "hellhole." Whatever the merit of such statements, it is only fitting at least once a year to change the question and to ask instead what the climate is for West Virginia's working people.

Working people, after all, are the drivers of our economy as well as just about everything that moves in the state. They mine the coal, extract the gas, manufacture the goods, deliver the goods and provide the services, and care for the people. Their compensation, in the form of wages and benefits, provides most of the demand that drives the economy. By virtue of their labor and spending, they are arguably our real wealth and job creators.

And, unlike the gas, oil and coal that lie beneath our soil, they can and do move all by themselves, often heading for better opportunities elsewhere when these are not to be found in the Mountain State. This report will examine the most recent data on the well-being of working families and make recommendations about policy decisions that could maximize their well-being.

Still Climbing Out

This series, *The State of Working West Virginia*, was first released in early 2008 at the beginning of the Great Recession. Not surprisingly, each subsequent report has focused on the aftereffects of that economic disaster. Here are some key findings which are described at greater length in the ensuing report:

The jobs deficit

During the worst period the recession, which hit bottom in February 2010, West Virginia lost 21,300 jobs. Despite a long-term, if unsteady, upward trend, as of the summer of 2012 there were 3,200 fewer jobs than before the crash. West Virginia would have had to create 27,000 jobs to maintain pre-recession job levels given population growth.

Where the jobs are

More than half of all jobs in West Virginia are concentrated in three sectors: government; trade, transportation and utilities; and education and health services. The public sector is the largest employer, comprising over 20 percent of nonfarm employment. Given recent calls for slashing the state budget, which are due largely to tax cuts that did not pay for themselves, this sector could face a decline in employment.

How the jobs are

When viewed over several decades, job quality has declined in terms of work-related benefits. Less than half of state workers are covered by employer-provided pensions and only slightly over half receive employer-provided health insurance. Meanwhile, inflation-adjusted median wages declined between 2010 and 2011 and were over a dollar an hour below the national average, even though low-wage West Virginia workers are better educated than in the past. Moreover, what wage growth that did occur did so among higher paid workers, thus increasing inequality.

Who is missing?

One disturbing trend about West Virginia's workforce is its steady decline. Our labor force participation rate, which is the share of people 16 and older who are working or seeking work, is the lowest in the nation at 54.3 percent. Much of this drop has occurred among younger workers, aged 16 to 24, while workers 55 and older have tended to stay on the job.

What does our labor force look like?

Compared with the national average, West Virginia's labor force is older, less educated and less diverse. Nearly one in four state workers is aged 55 or older, a level exceeded by only six other states.

What are the long-term projections?

Long-term projections by West Virginia University's Bureau of Business and Economic Research highlight the urgency of making West Virginia an attractive place for people to live and work. As detailed below, our state is projected to lose residents below the age of 65 both in terms of numbers and percentage of the population, while state residents above that age will dramatically increase. The most dramatic increase is in residents above age 75. Unless we can attract and retain working families, we are headed for a demographic disaster.

Who are the unemployed?

West Virginia's unemployment rate has fluctuated in recent months but is still higher than pre-recession levels. Younger workers between the ages of 16 and 24 are especially hard hit by unemployment. Although they make up less than 15 percent of the workforce, they comprise a third of the unemployed. Unemployment rates are also higher than average for men, African-Americans of both sexes, and for those with low levels of educational attainment. Another disturbing trend is one toward long-term unemployment. About four in 10 jobless workers have been so for over six months.

Is there a mismatch?

It is frequently asserted that the structural cause of today's unemployment is a mismatch between the skills of available workers and those required by employers. While that may be a contributing factor, low levels of demand are a much greater one. By June 2012, there were nearly four jobless West Virginians for every new job opening. This, too, is a legacy of the Great Recession.

The proverbial elephant in the room

Much talk, much of it very loud, in West Virginia today centers on mining and natural gas extraction. While many political leaders attribute coal industry woes to a regulatory "war on coal," other factors such as cheap natural gas and competition from other coal markets are the driving forces, as we will argue below. Coal employment actually increased over the last decade, although there are signs of a downturn at present that is likely to continue. Projections from the U.S. Energy Information Administration are particularly grim for southern West Virginia, although northern West Virginia will likely fare better.

Meanwhile a southern coal bust is accompanied by a northern gas boom due to Marcellus Shale play. These shifting tides will provide challenges as well as opportunities. Rather than grandstanding, state leaders would do better to help West Virginians plan for an economic transition for areas of declining employment even as they must maximize the opportunities and minimize any damage created in areas of growth. State leaders should also take the steps necessary to create permanent sources of wealth from nonrenewable resources.

In sum, the economic situation for West Virginia's workers at the moment is less dire than at the depth of the Great Recession, but aftershocks remain and even more serious challenges lie ahead. Improving the well-being of West Virginia's working families is necessary for our very future—but it will not be easy nor happen without effort.

Section One

Jobs in West Virginia

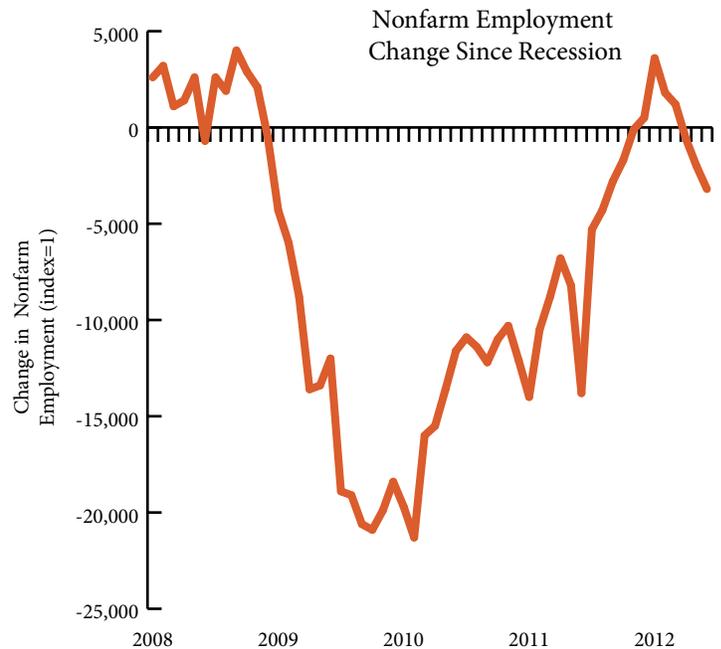
Despite making good progress in 2011, unemployment still remains high in West Virginia, and much of 2011's gains have been erased in 2012. This section looks at the jobs side of West Virginia's economy, including where jobs are growing, and the quality of those jobs.

Jobs Briefly Top Pre-Recession Level

Job growth in 2011 was strong enough to push total nonfarm employment back above its pre-recession level (Figure 1.1). Between the beginning of the recession in December 2007 to when total nonfarm employment bottomed out February 2010, West Virginia lost 21,300 jobs. It took nearly two years for the state to recover those lost jobs, as total nonfarm employment finally reached its pre-recession level in December 2011. However, in the first half of 2012, job losses have pushed total employment back below pre-recession levels, and in June 2012, West Virginia had 3,200 fewer jobs than it did before the recession.

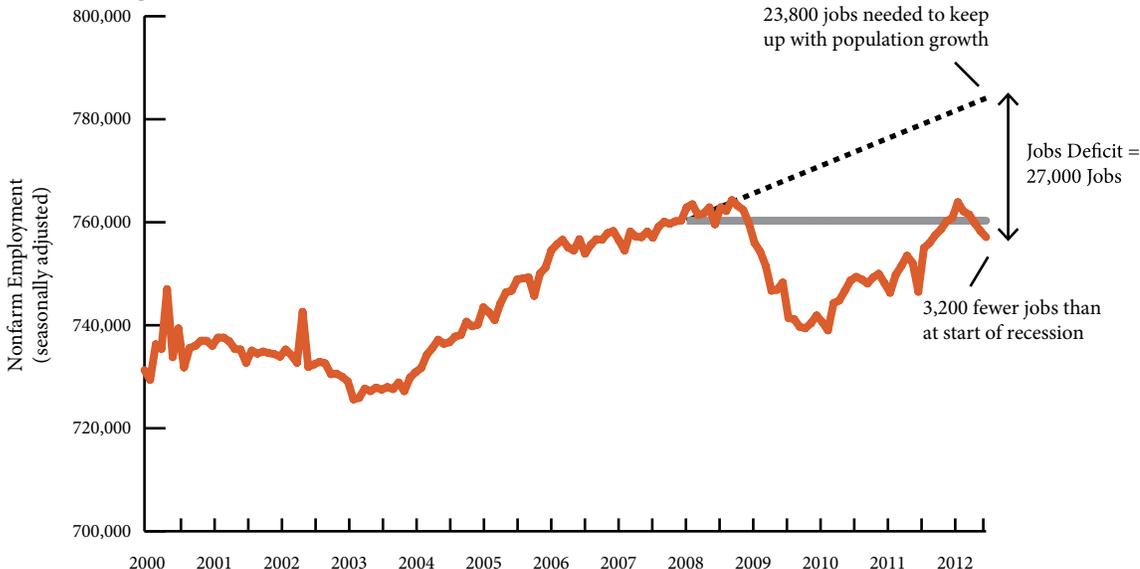
While West Virginia has gained back most of the jobs it lost during the recession, the state's growing population has made the jobs gap even bigger. West Virginia's population has grown 3.1 percent since the recession began. This means that West Virginia needs to add 27,000 jobs to reach its pre-recession level, which includes the 3,200 jobs it has yet to gain back, plus the 23,800 jobs it needs to keep up with its growing population (Figure 1.2).

FIGURE 1.1
Total Employment Back Below Pre-Recession Level



Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

FIGURE 1.2
West Virginia's Jobs Deficit



Source: Economic Policy Institute analysis of Current Employment Statistics data.

Majority of Jobs in Public and Service Sectors

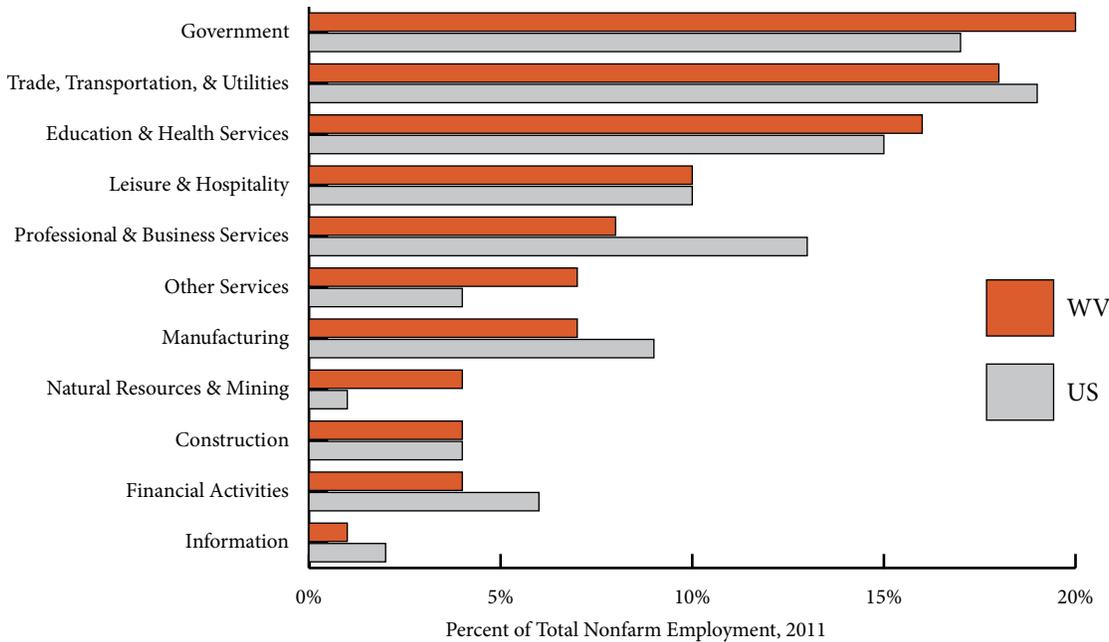
West Virginia's total nonfarm employment totaled 753,900 jobs in 2011. More than half of those jobs could be found in three employment sectors, government, trade, transportation, and utilities, and education and health services. The public sector was the state's largest employer, with 151,800, making up 20.1 percent of total nonfarm employment.

The trade, transportation, and utilities sector employed 135,200 workers in 2011, making up nearly 18 percent total nonfarm employment. 123,200 workers were employed in the education and health services sector, comprising 16.3 percent of total nonfarm employment. With the government sector, these three sectors totaled 54.4 percent

of total nonfarm employment. No other employment sector employed over 100,000 workers or made up more than 10 percent of total nonfarm employment (**Figure 1.3**).

As **Figure 1.3** shows, much more of West Virginia's jobs are in the natural resources and mining sector than the U.S., four percent to one percent, but the opposite is true for the professional and business services sector, with 13 percent of U.S. total nonfarm employment found there, compared to just eight percent in WV.

FIGURE 1.3
Most Jobs Found in Public Service Sectors

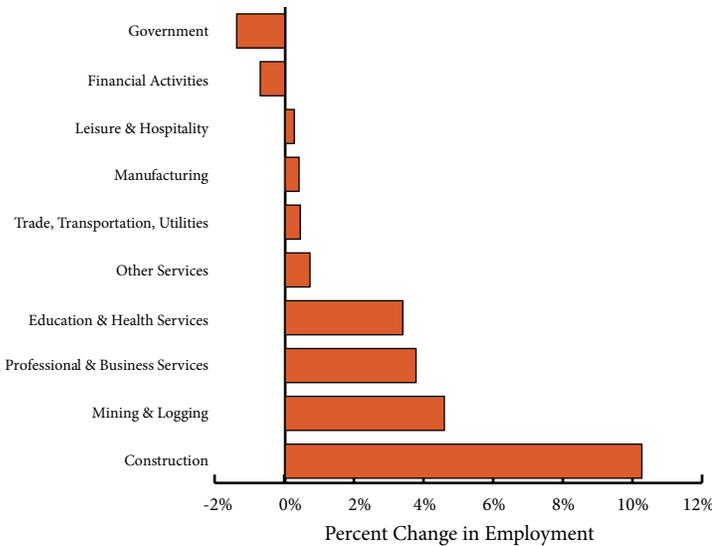


Source: Economic Policy Institute analysis of Current Employment Statistics data.

Most Sectors Experienced Some Growth in 2011

Total nonfarm employment grew by 10,000 jobs in 2011, an increase of 1.3 percent. The state's fastest growing sector was construction, which added 3,000 jobs in 2011, an increase of 10.2 percent. Mining and logging also had a strong showing in 2011, with 1,400 jobs added, for a 4.6 percent increase. Only two employment sectors saw job losses in 2011. Employment in the government sector fell by 1.4 percent, while the financial activities sector declined by 0.7 percent (Figure 1.4).

FIGURE 1.4
Employment Growth by Sector, 2011



Source: U.S. Bureau of Labor Statistics, Current Employment Statistics.

Job Quality

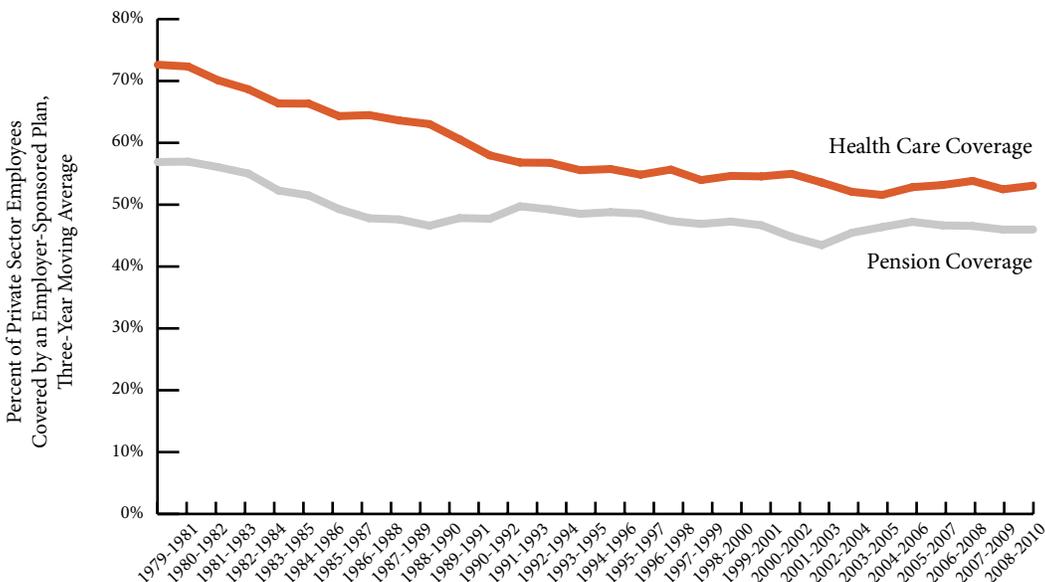
West Virginia's workforce has grown older and more educated in the past three decades. Generally, older and better educated workers have better jobs, with higher pay and better benefits. However, that is not always the case, both nationally and in West Virginia. Jobs that provide pensions, health insurance, and good wages are harder to come by today than they were in the past.

In 1979, nearly 73 percent of West Virginians working in the private sector were covered by an employer-provided health care plan. In 2010, however, only 53 percent were covered (Figure 1.5).

As employer-provided health care coverage went away, so did pension coverage. In 1979, 57 percent of West Virginians working in the private sector were covered by an employer-provided pension plan. By 2010 the percent had fallen to 45.9 percent (Figure 1.5).

As fewer jobs offer health care and pension coverage in West Virginia, the roles of federal programs like Medicare, Medicaid, and Social Security become even more important to the state's residents and economy. With that in mind, along with the state's demographics, it is no surprise that in 2010, 28 percent of the state's income came from transfer receipts, or payments from programs like Medicare and Social Security, the highest percentage of all 50 states.

FIGURE 1.5
Fewer Jobs Providing Health Care, Pension Coverage



Source: Economic Policy Institute analysis of Current Employment Statistics data.

Section Two

West Virginia's Shrinking Workforce

This section examines West Virginia's workforce, including data on demographics and participation and includes projections on what West Virginia's workforce may look like in the future.

Labor Force Still Not Recovered from Recession

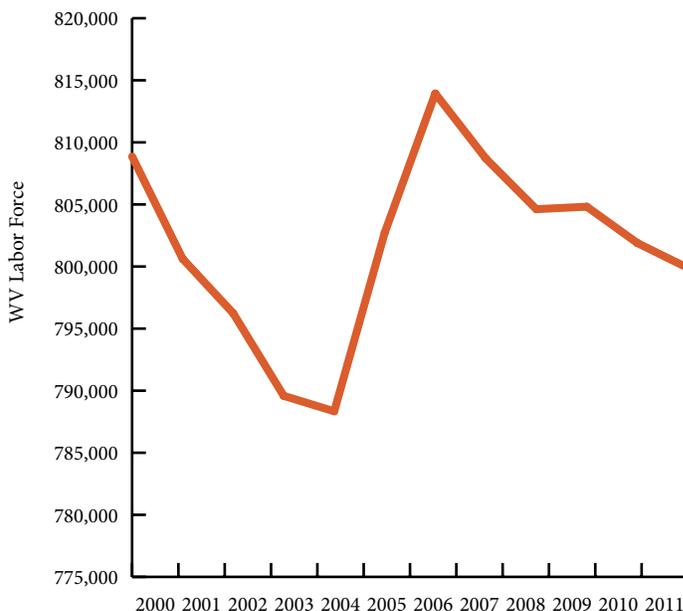
West Virginia's labor force, which includes employed workers and unemployed workers actively seeking employment, stood at 799,833 in 2011. Despite modest job growth in 2011, the state's labor force continued to shrink, and remains far below its pre-recession peak (Figure 2.1).

Labor Force Participation in Decline

Although West Virginia's job growth has rebounded since the end of the recession, this is not reflected in the state's labor force participation rate – the share of people 16 years or older working (employed) or seeking work (unemployed). The labor force participation rate is a key component of long-term economic growth and is a good barometer for how well a state's economy provides employment for those who are able to work. In 2011, West Virginia's labor force participation rate fell to 54.3 percent, the lowest since 1989 (Figure 2.2).

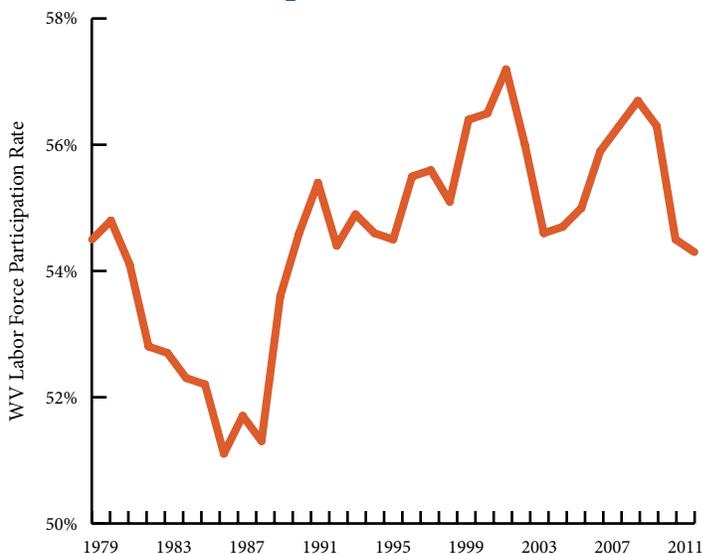
The labor force participation rate rises and falls with demographic and population shifts, changes in disability rates, and structural reasons. During an economic downturn, it usually declines because unemployed workers give up looking for work due to a lack of employment opportunities or leave the labor force to pursue more education. When more jobs are added, the rate tends to increase as people return to work or seek employment. What is unusual about the current decline in West Virginia's labor force participation rate is that it coincides with job growth in the state.

FIGURE 2.1
Size of Labor Force Continues to Fall



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

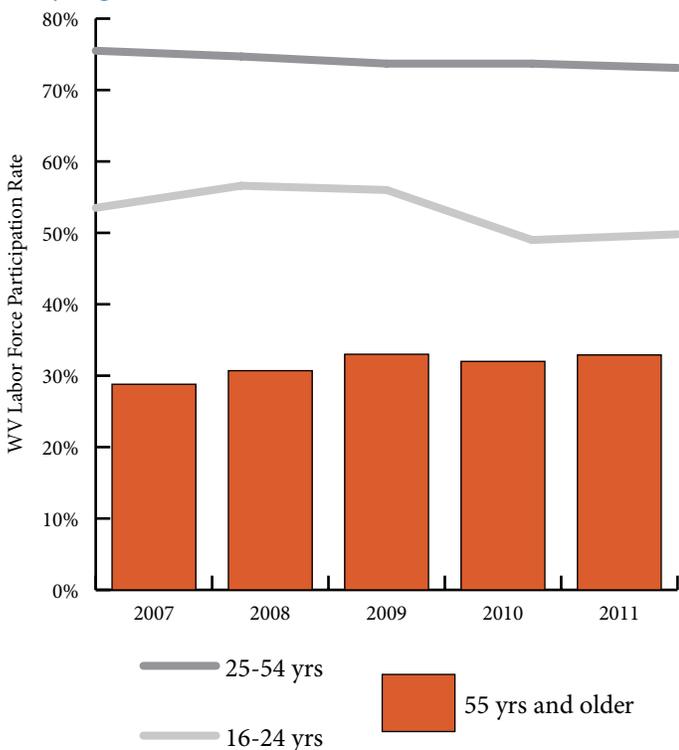
FIGURE 2.2
Labor Force Participation Rate at 22-Year Low



Source: Economic Policy Institute analysis of Current Population Survey data.

A driving force behind the drop in labor force participation is younger workers dropping out of the workforce. As **Figure 2.3** shows, the labor force participation rate for those aged 16 to 24 has dropped from 56.6 percent in 2008 to just under 50 percent in 2011. The rate of participation among prime wage workers, those between 25 and 54 years old, has also fallen – from 74.7 percent in 2008 to 73.1 percent in 2011. On the contrary, older workers, those aged 55 and older, are staying in the labor force.

FIGURE 2.3
Younger Workers Dropping Out, Older Workers Staying in Labor Force



Source: Economic Policy Institute analysis of Current Employment Statistics data.

West Virginia’s Workforce Older, Less Educated than Rest of Nation

Table 2.1 compares the composition of West Virginia’s workforce to the nation’s, in terms of gender, age, race, and educational attainment for 2011. Notable differences between West Virginia’s labor force and the national average include racial composition, age and education.

West Virginia’s labor force’s racial composition is less diverse than the nation. African-Americans only make up 3.5 percent of the state’s labor force, while making up over

11 percent nationally. Hispanics are also a smaller share of West Virginia’s labor force, less than one percent in the state compared to nearly 15 percent nationally.

West Virginia has generally lower levels of educational attainment in its workforce compared to the rest of the nation. Less than 24 percent of West Virginia’s workforce has a bachelor’s degree or higher, compared to 32 percent nationally. In 2011, West Virginia ranked 48th among the states for the share of the workforce with a college degree. In addition to having one of the least educated workforces, West Virginia also has one of the oldest. 23.2 percent of West Virginia’s workforce is aged 55 years or older, compared to 20.1 percent nationwide. Only six states had a greater share of their labor force in that age group in 2011.

TABLE 2.1
Labor Force Demographics, West Virginia and U.S., 2011

	West Virginia	United States
Gender		
Male	53.7%	53.4%
Female	46.3%	46.6%
Age		
16-24 years	13.6%	13.7%
25-54 years	63.2%	66.2%
55 years and older	23.2%	20.1%
Race/Ethnicity		
White	94.1%	67.3%
African-American	3.5%	11.1%
Hispanic	0.9%	14.9%
Education		
Less than high school	8.8%	10.3%
High school	40.1%	28.4%
Some college	27.3%	29.3%
Bachelor’s or higher	23.9%	32.0%

Source: Economic Policy Institute analysis of Current Population Survey data.
Note: Due to sample size, does not include other races/ethnicities.

West Virginia's Labor Force Participation Lowest in Country

West Virginia's labor force participation rate was once again the lowest in the country in 2011 at 54.3 percent, nearly ten percentage points below the national average (**Figure 2.4**). Across all key demographic groups of age, race, and educational attainment, West Virginia has lower labor force participation levels than the national average (**Table 2.2**).

TABLE 2.2
Labor Force Participation Rate by Demographic, West Virginia and U.S., 2011

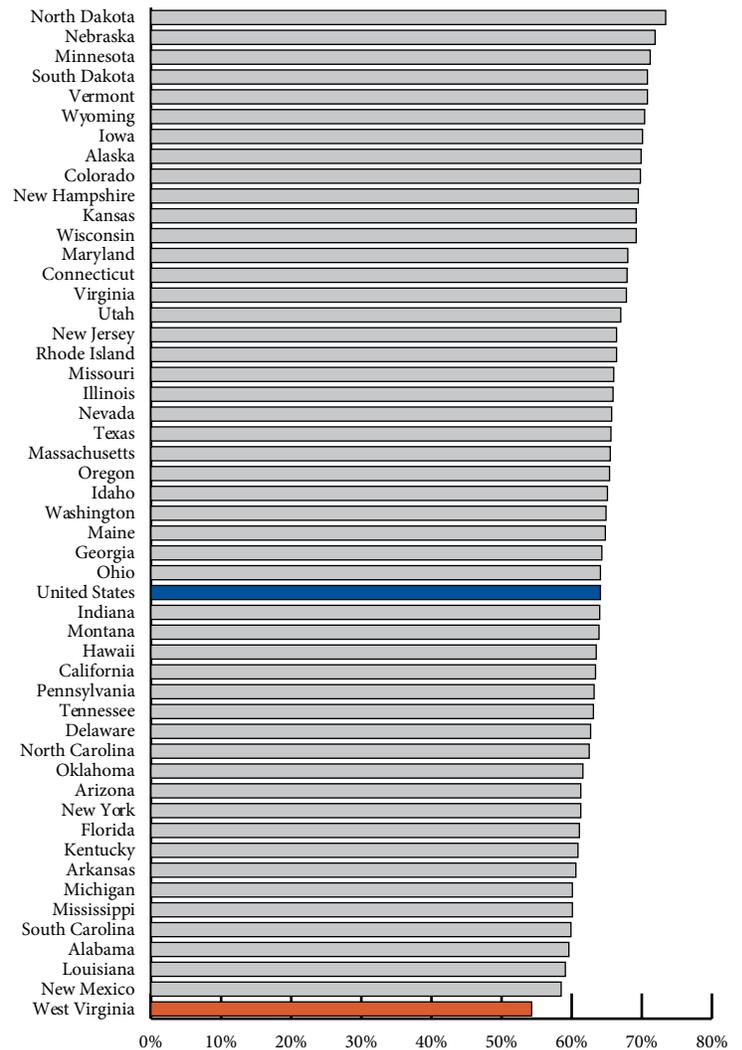
	West Virginia	United States
All	54.3%	64.1%
Gender		
Male	59.9%	70.5%
Female	48.9%	58.1%
Age		
16-24 years	49.8%	55.0%
25-54 years	73.1%	81.6%
55 years and older	32.9%	40.3%
Race/Ethnicity		
White	54.1%	64.1%
African-American	54.4%	61.3%
Hispanic	77.5%	66.5%
Education		
Less than high school	26.9%	41.0%
High school	51.6%	61.3%
Some college	65.4%	68.4%
Bachelor's or higher	74.0%	76.7%

Source: Economic Policy Institute analysis of Current Employment Statistics data.

Changing Demographics Could Further Shrink Labor Force

The Bureau of Business and Economic Research at West Virginia University projects that West Virginia's population will grow by 70,619 between 2010 and 2035, an increase of 4.6 percent. While the projected total population changes are minor, the changes in demographics are drastic. **Table 2.3** shows the projected changes by age group for West Virginia's working age population.

FIGURE 2.4
Labor Force Participation Rate, U.S. and States, 2011



Source: Economic Policy Institute analysis of Current Employment Statistics data.

TABLE 2.3
West Virginia Working Age Population Projections

Age Group	2010	2035	% Change
15 to 19	120,115	111,617	-7.1%
20 to 24	117,239	113,391	-3.3%
25 to 44	458,266	422,141	-7.9%
45 to 54	276,191	240,698	-12.9%
55 to 64	264,855	236,129	-10.8%
65 to 74	163,536	226,135	38.3%
75+	133,896	254,606	90.2%
Total	1,534,098	1,604,717	4.6%

Source: West Virginia University Bureau of Business and Economic Research.

While West Virginia's population below the age of 64 is projected to decline, the population over the age of 65 is set to explode. In fact, the population over the age of 75 is projected to nearly double by 2035. This shift in demographics will likely have a profound impact on the state's labor force.

The labor force participation rates in the older age groups in which West Virginia is gaining population are much lower than in the age groups in which the state is projected to lose population (Table 2.4). This means that even as the population grows larger, the labor force should shrink, as labor force participation declines with age. Table 2.5 demonstrates this, by applying the 2010 labor force participation rates to the population projections, to project the size of the state's future labor force.

TABLE 2.4
West Virginia Labor Force Participation Declines With Age

Age Group	Participation Rate
16 to 19	34.1%
20 to 24	66.4%
25 to 44	75.8%
45 to 54	71.2%
55 to 64	51.5%
65 to 74	16.3%
75+	3.7%

Source: 2010 American Community Survey.

TABLE 2.5
West Virginia Labor Force Projections

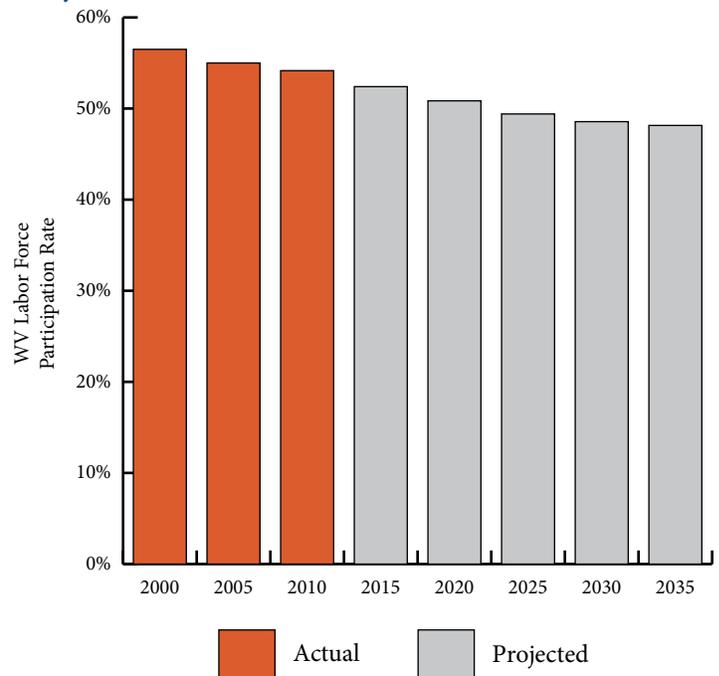
Age Group	2010	2035	% Change
15 to 19	40,959	38,061	-7.1%
20 to 24	77,847	75,292	-3.3%
25 to 44	347,366	319,983	-7.9%
45 to 54	196,648	171,377	-12.9%
55 to 64	136,400	121,606	-10.8%
65 to 74	26,656	36,860	38.3%
75+	4,954	9,420	90.1%
Total	830,830	772,599	-7.0%

Source: WVCBP analysis of West Virginia University Bureau of Business and Economic Research and American Community Survey data.

West Virginia's labor force could decline by seven percent, even as its population grows by five percent, because its population is aging. West Virginia's population is shrinking in the core working-age groups, and growing in the older, retirement-age groups. While the population over the age of 75 grows by 120,000, only 4,400 would be added to the labor force from that age group.

These changing demographics could also lower West Virginia's overall labor force participation rate. As the older age groups with lower participation rates grow, they are not replaced by younger workers. As a result, West Virginia's total labor force participation rate could fall to 48 percent by 2035, meaning less than half of the state's working age population would be in the workforce (Figure 2.5).

FIGURE 2.5
West Virginia Labor Force Participation Rate Projected to Decline



Source: WVCBP analysis of West Virginia University Bureau of Business and Economic Research and ACS data.

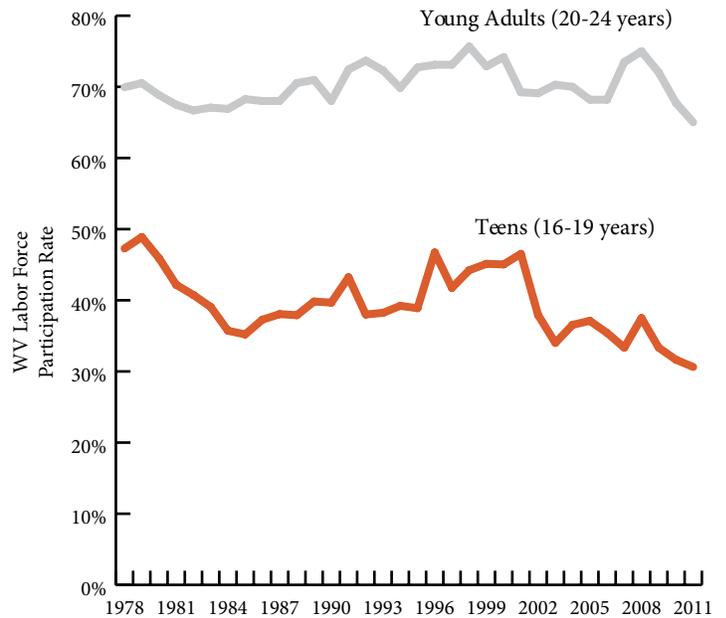
Young Workers Dropping Out of Labor Force

Today, fewer young workers in West Virginia are participating in the workforce than at any point in the last 33 years (Figure 2.6). At just 31 percent in 2011, the teen (ages 16-19) labor force participation rate is far below its peak of 47 percent in 2001 and is lower than at any time since 1978.

Young adult workers (ages 20 to 24) have also experienced a steep decline in their labor force participation rate. In 2011, approximately 65 percent of young adults were in the labor force compared to 75 percent just three years ago. This was the lowest participation rate for this age group since 1978.

If the decline in labor force participation among young adults could be explained by an increase in college enrollment, that would be a silver lining in the story. However, the college-going rate among West Virginia's recent high school graduates stagnated during the recession, rising only slightly from 50.1 percent in 2008 to 50.3 percent in 2010.¹

FIGURE 2.6
Young Labor Force Shrinks to 33-Year Low



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

Section Three

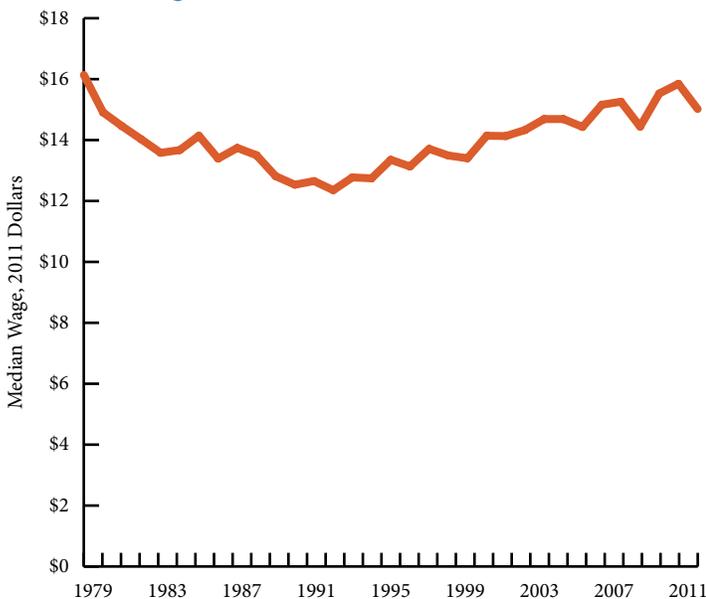
Wages in West Virginia

This section looks at what workers are earning in West Virginia. Middle-class workers in West Virginia have experienced no wage growth for over thirty years, leading to growing inequality. Today, low-wage workers in West Virginia are more educated than they have ever been in the past.

Median Wages Fall in 2011

The real median wage in West Virginia – the wage earned by the worker in the middle of the wage distribution after adjusting for inflation – fell in 2011 to \$15.02 from \$15.85 in 2010. West Virginia’s real hourly median wage remains below its 1979 level of \$16.14, meaning middle-class workers in West Virginia have gained no wage growth in over 30 years (**Figure 3.1**). This means workers have to work more hours in order to maintain the same standard of living. West Virginia’s rank among the states in regard to the median wage fell from 27th in 2010 to 36th in 2011.

FIGURE 3.1
Median Wage Remains Flat



Source: Economic Policy Institute analysis of Current Population Survey data.

Lower Wages Across Deciles and Industry

In 2011, the median-wage worker in West Virginia earned \$1.04 less per hour than the median-wage worker nationwide. Workers in West Virginia at all wage levels earned less than their counterparts at the national level. The greatest difference was for earners at the top. Workers at the 90th percentile in West Virginia earned \$6.24 less per hour than the national 90th percentile, a difference of 19 percent (**Table 3.1**).

TABLE 3.1
Wages by Deciles, West Virginia and U.S., 2011

	WV	US	Wage Gap
10th percentile	\$7.84	\$8.16	\$0.32
20th percentile	\$9.07	\$9.85	\$0.78
30th percentile	\$10.87	\$11.72	\$0.85
40th percentile	\$12.95	\$13.87	\$0.92
50th percentile (Median)	\$15.02	\$16.06	\$1.04
60th percentile	\$17.75	\$19.02	\$1.27
70th percentile	\$20.95	\$22.98	\$2.03
80th percentile	\$25.01	\$28.78	\$3.77
90th percentile	\$32.22	\$38.46	\$6.24

Source: Economic Policy Institute analysis of Current Population Survey data.

In general, wages are also lower when compared by industry to West Virginia’s neighboring states. With the exception of mining, average annual wages for most major industries are at least equal to or higher in border states than they are in West Virginia (**Table 3.2**).

TABLE 3.2

Average Annual Wages by Industry, West Virginia and Neighboring States

	KY	MD	OH	PA	VA	WV
Natural resources and mining	\$60,099	\$37,719	\$47,097	\$54,737	\$45,936	\$76,576
Construction	\$44,031	\$54,859	\$48,651	\$54,654	\$47,544	\$47,016
Manufacturing	\$51,332	\$67,192	\$55,322	\$55,243	\$52,641	\$51,729
Trade, transportation, utilities	\$35,818	\$40,787	\$37,281	\$38,704	\$37,914	\$33,509
Information	\$44,567	\$75,330	\$58,613	\$65,863	\$80,068	\$48,590
Financial activities	\$53,929	\$74,335	\$57,335	\$70,056	\$67,226	\$43,772
Professional and business services	\$42,732	\$69,315	\$53,646	\$64,964	\$77,986	\$42,220
Education and health	\$41,435	\$47,627	\$39,527	\$44,424	\$43,876	\$37,418
Leisure and hospitality	\$14,693	\$19,647	\$15,693	\$18,004	\$17,591	\$15,585
Other services	\$27,050	\$34,875	\$26,145	\$28,154	\$37,378	\$27,041

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

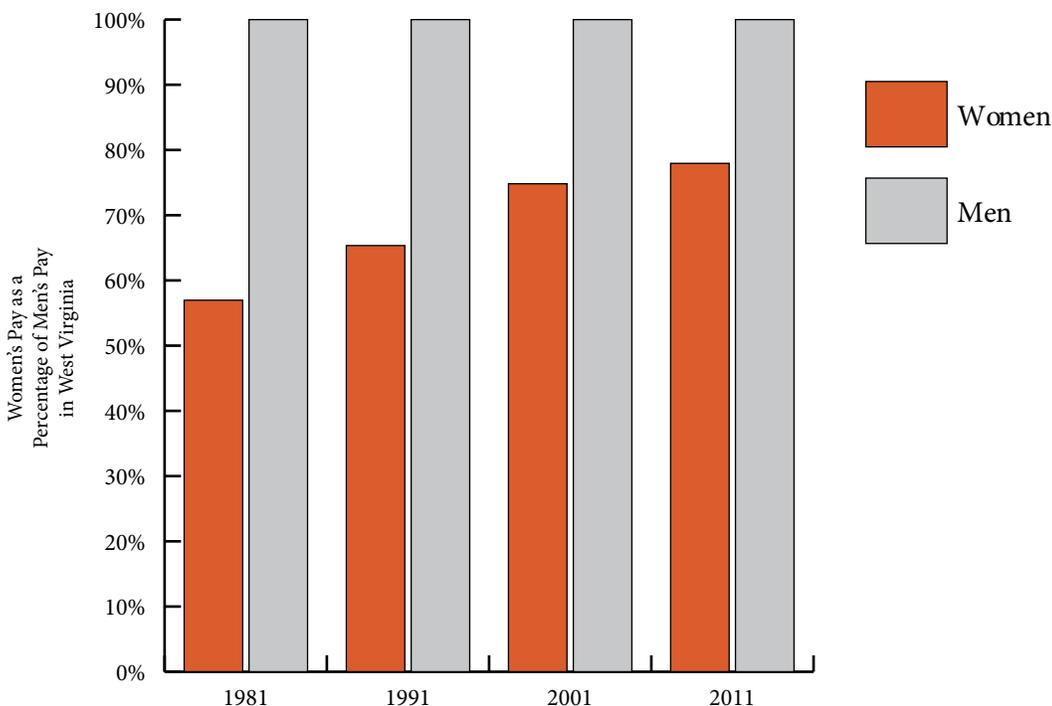
Gender Gap in Wages

West Virginia, similar to all states, suffers from a gender pay gap. In 2011, the male median hourly wage was \$16.96 compared to just under \$13.22 for women. This was approximately 22 percent below the male wage (**Figure 3.2**). Nationally, women earned about 16 percent below men in 2011. According to recent report by the Government and Accountability Office, even after adjusting for factors

that could affect pay, like age, race, education, number of children in the household and part-time status, women earn 86 cents for every \$1 earned by men.²

While the state's gender gap is high, it has shrunk dramatically over the last 30 years. In 1981, women made only 57 percent of what men earned compared to 78 percent in 2011.

FIGURE 3.2

Gender Gap in Wages Shrinking, But Remains High

Source: Economic Policy Institute analysis of Current Population Survey data.

Low-Wage Workers Are Better Educated Than Ever

All things equal, better educated workers earn more than less educated workers. More education adds to workers' skills, increasing their value to employers, and this increase in skills is usually rewarded with higher pay. However, this has not occurred for low-wage workers in West Virginia.

Today, the average low-wage worker is both older and more educated than the low-wage worker of the past. **Table 3.3** breaks down low-wage workers in West Virginia by age and education, where low wages are defined as earning \$10.00 per hour or less in 2011 dollars. The table compares averages for 1979-1981 to 2009-2011.

The share of low-wage workers with less than a high school degree fell more than half, from 36.5 percent in 1979-1981 to 15.4 percent in 2009-2011, while the share with at least some college education nearly doubled, from 15.8 percent to 29.7 percent. By 2011, 8.1 percent of low-wage workers had a four-year college degree or more, up from 2.9 in 1979.

Even if there had been no change in the cost of living over the last 30 years, there should have been an increase in the earnings of low-wage workers, simply because they are more educated today than they were in 1979, but that has not been the case. Real wages for workers in the 10th percentile have been stagnant since 1979, and, in fact, were actually lower in 2011 than they were in 1979, despite major increases in educational attainment (**Figure 3.3**).

The lack of wage growth despite increases in education for low-wage workers reflects the erosion of the minimum wage in recent decades, which is well below its historical value relative to the cost of living, average wages, and productivity. While the labor market as a whole rewards education-related skills with higher pay, the minimum wage has not recognized the improvements made by the state's low-wage workers.

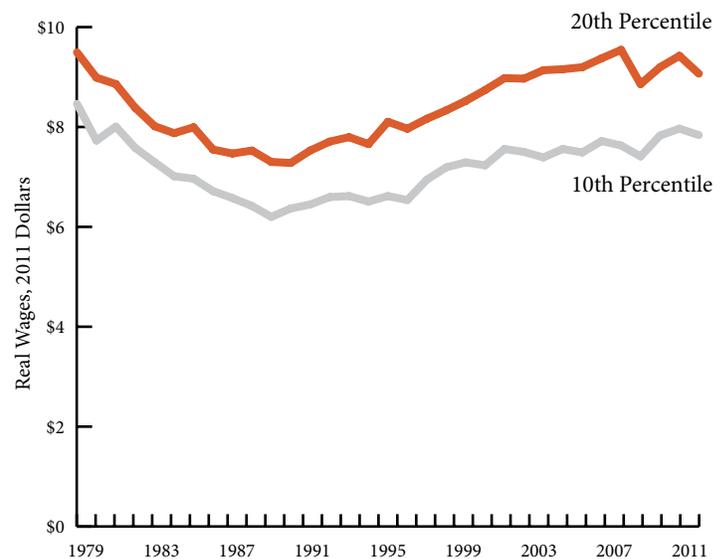
If the minimum wage were increased from \$7.25 to \$9.80 per hour by 2014, it would directly affect 141,323 West Virginian workers, including 8,761 workers with a college degree, increasing their annual pay by an average of \$772.³

TABLE 3.3
Low-Wage Workers Are More Educated Today, Percent of Workforce Earning \$10.00/hour or Less

	1979-1981	2009-2011
Less Than High School	36.5%	15.4%
High School	44.8%	46.9%
Some College	15.8%	29.7%
College and Advanced Degrees	2.9%	8.1%

Source: Center for Economic and Policy Research analysis of Current Population Survey data.

FIGURE 3.3
Stagnant Wages for Low-Wage Workers



Source: Economic Policy Institute analysis of Current Employment Statistics data.

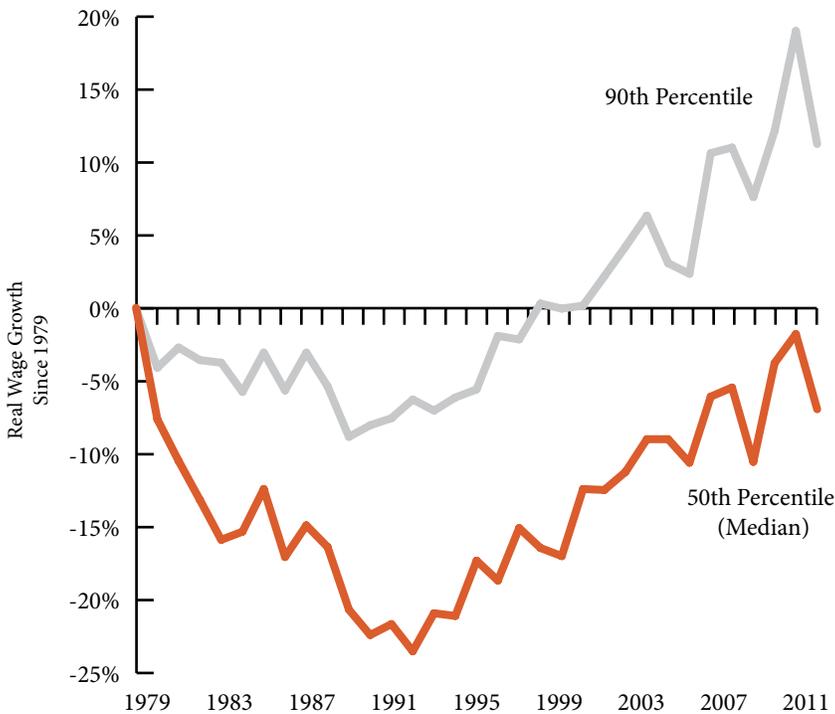
Wage Growth Disparity Leading to Inequality

While low- and median-wage earners have seen no net wage growth in over 30 years, wages at the top have grown substantially over the past decade. While the median wage has grown steadily since it fell sharply in the 1980s, it still remains seven percent lower than it was in 1979 (Figure 3.4). In comparison, wages at the 90th percentile experienced a much smaller fall during the 1980s, have since fully recovered and are now 11 percent higher than they were in 1979.

This disparity in wage growth leads to income inequality. Income inequality has been rising rapidly in the United States, particularly since the late 1970s, as much of the income growth in the nation goes to the top earners.

High-income inequality can lead to the stagnation or even decline of the economic well-being of the middle class, which is bad for the economy overall. There are other serious social problems associated with income inequality. Researchers have shown that income inequality is associated with poor physical health of a society, higher levels of violence, greater obesity, higher levels of drug abuse, and poorer education.⁴

FIGURE 3.4
Wage Growth Faster for Top Earners



Source: Economic Policy Institute analysis of Current Population Survey data.

Section Four

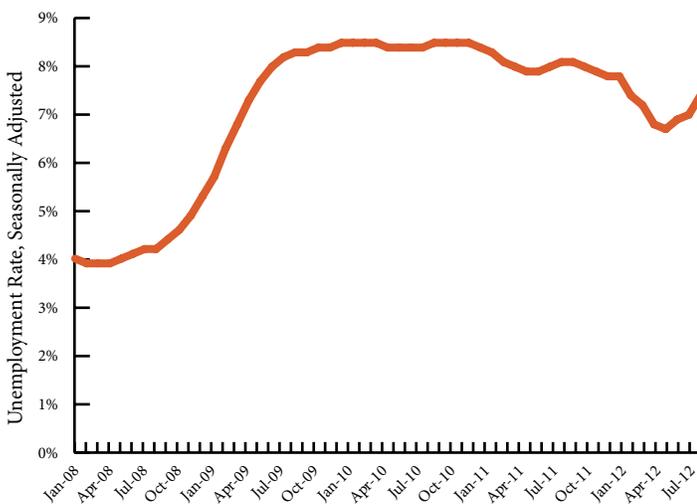
West Virginia's Unemployed

This section looks at West Virginia's workers who are without work. Despite modest job growth, West Virginia's unemployment rate remained stubbornly high in 2011, and has begun to tick back up in 2012.

Unemployment Rate Remains Elevated

After spending all of 2010 at over eight percent, West Virginia's unemployment rate inched downward during 2011 and into 2012, reaching a low of 6.7 percent in April 2012. Since then it has begun to inch back up, and as of July 2012, the state's unemployment rate stood at 7.4 percent. While the current unemployment rate is a full percentage point lower than at any point in 2010, it is still substantially higher than its pre-recession level (Figure 4.1).

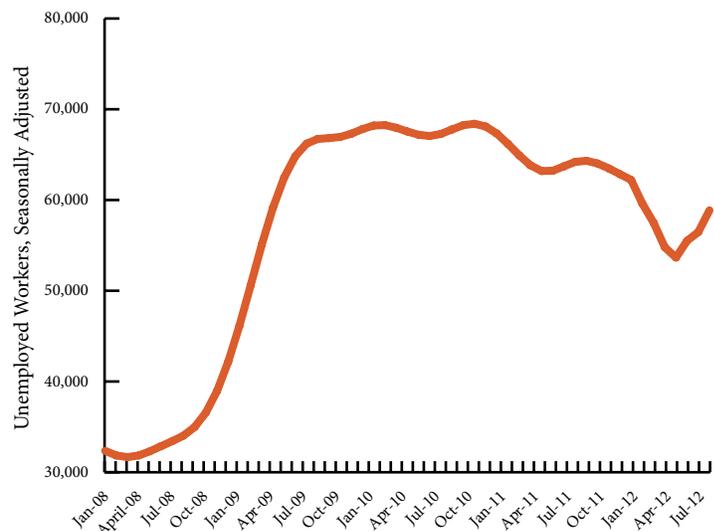
FIGURE 4.1
West Virginia Unemployment Rate Grows in 2012



Source: Economic Policy Institute analysis of Current Employment Statistics data.

As of July 2012, 58,905 workers in West Virginia were unemployed. While that number has declined from its peak of 68,478 in late 2010, there are still nearly twice as many unemployed workers in West Virginia than there were before the recession (Figure 4.2).

FIGURE 4.2
Number of West Virginia Unemployed Workers Grows in 2012



Source: Economic Policy Institute analysis of Current Employment Statistics data.

Young Workers Facing High Unemployment

Young workers ages 16 to 24 make up only 13.6 percent of West Virginia's labor force, but comprise 33 percent of unemployed workers in the state. Teens and young adults also have unemployment rates far above the state average. In 2011, the unemployment rate for young West Virginia workers was 19.8 percent compared to 8.1 percent for the state as a whole (**Table 4.1**).

Younger workers have typically faced higher unemployment and lower labor force participation rates than prime-age workers (ages 25-54). This is primarily because young workers tend to be disproportionately employed in temporary positions, have less experience, and are often the "last one hired, first one fired." During recessions, young workers are most often employed in "cyclically-sensitive" industries like retail trade and tourism, which makes them more vulnerable than other age groups to high unemployment and dropping out of the workforce.⁵

Table 4.1 also shows other demographic disparities found in West Virginia's unemployment rates. Men have a higher unemployment rate than women, 9.1 percent compared to 6.9 percent, while the unemployment rate for African-Americans is 22 percent.

Educational attainment also has a great deal of disparity. Those with a bachelor's degree or higher have an unemployment rate of only 3.1 percent, while those without a high school diploma face an unemployment rate over 23 percent.

TABLE 4.1
West Virginia Unemployment Rate by Demographic, 2011

	Unemployment Rate
All	8.1%
Gender	
Male	9.1%
Female	6.9%
Age	
16-24 years	19.8%
25-54 years	7.2%
55 years and older	3.7%
Race/Ethnicity	
White	7.5%
African-American	22.0%
Education	
Less than high school	23.7%
High school	9.0%
Some college	6.2%
Bachelor's or higher	3.1%

Source: Economic Policy Institute analysis of Current Population Survey data.

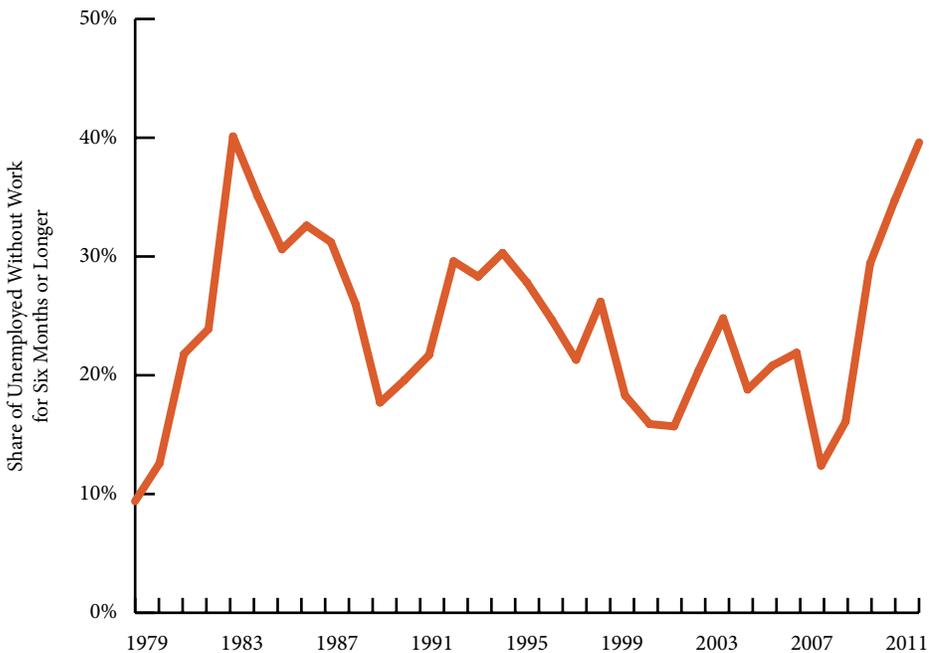
Long-Term Unemployment Rising

The challenge of long term-unemployment continued to plague West Virginia in 2011. Long-term unemployment is the share of unemployed workers who have been unemployed for more than six months. Long-term unemployment is one of the most severe forms of joblessness, creating a great deal of financial, emotional, and physical stress to those it affects.⁶

West Virginia's long-term unemployment share climbed to 39.6 percent in 2011, marking the fourth straight year it increased. Only once since 1979 has the long-term unemployment rate been higher than it was in 2011. Nearly four out of ten of the state's unemployed workers were out of work for more than six months in 2011 (**Figure 4.3**).

FIGURE 4.3

Long-Term Unemployment Continues to Rise in West Virginia



Source: Economic Policy Institute analysis of Current Population Survey data.

Is There a Structural Unemployment Problem?

While the state experienced modest jobs growth in 2011, the state's labor force participation rate remained low, while the unemployment rate remained high. Many policymakers have concluded that this means that the state is experiencing a structural unemployment problem, and that the state's workers do not have the skills to meet the demands of the current job market. This would result in higher unemployment, as workers find it harder to find jobs and employers find it harder to fill positions.

However, research suggests that the evidence for a skills mismatch creating a structural unemployment problem is mixed. Instead, it is more likely that employers are hesitant to hire due to a lack of demand for goods and services, brought on by the recession.⁷

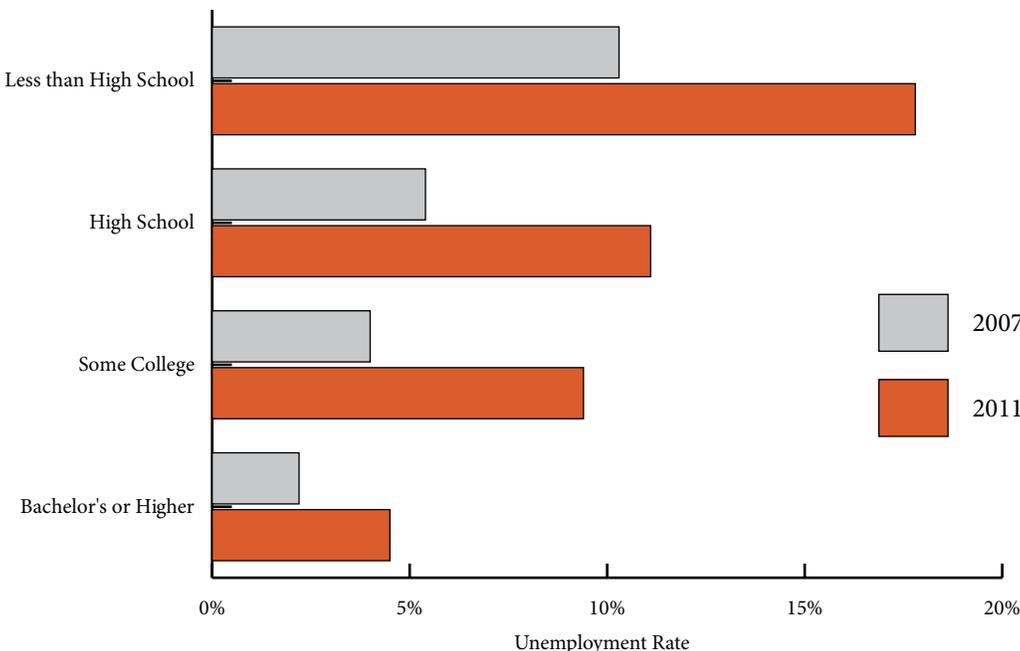
The employment numbers nationally and in West Virginia bear this out. In June 2012, there were 3.4 unemployed workers nationally for every job opening, according to the Bureau of Labor Statistics. For West Virginia there were 3.7 unemployed workers for every job opening.⁸ This suggests that the unemployment problem is caused by a job shortage, not a skills mismatch.

Another piece of evidence suggesting that a job shortage rather than a skills mismatch is causing unemployment is how workers with different education levels have been affected by the recession. By comparing national unemployment rates by education level before the recession in 2007 and in 2011, one can see that workers of all educational attainments saw their unemployment rates increase (Figure 4.4). This shows that even highly skilled workers remain affected by the recession, and that a job shortage continues to be the problem.

The recession caused a severe drop in demand for goods and services, creating a job shortage and sustained rates of high unemployment. There are plenty of willing and able workers with all levels of skill sets, but not enough jobs for them all.

Even as the economy improves and demand for goods and services increases, there are still not enough jobs for all willing and able workers. At the current pace of job growth, it may still be years before there are enough jobs for all of the available workers.

FIGURE 4.4
Unemployment Up Across All Education Levels



Source: Economic Policy Institute analysis of Current Population Survey data.

Section Five

West Virginia's Mineral Resource Economy: The Gas Boom and the Coal Bust

For more than a century, West Virginia's abundant mineral resources have played a pivotal role in the state's economy. While the coal industry has been the central driving force of the state's energy economy, natural gas, and to a lesser extent crude oil, have also contributed extensively. Since 1950, West Virginia has produced 8.6 billion tons of coal, 12 trillion cubic feet of natural gas, and 121 million barrels of crude oil.⁹ All together these industries contributed about \$9.4 billion in state economic activity in 2011 or about 14 percent of the state's gross domestic product (GDP).

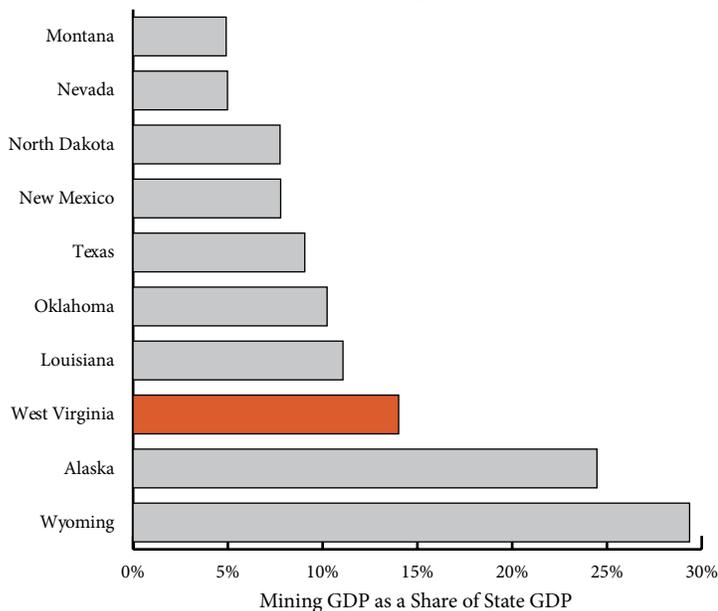
While West Virginia's mining output was higher than all but seven states in 2011, it is more reliant on its mining industries for economic output (GDP) than all but two states (**Figure 5.1**). Over the last decade West Virginia's economy has become even more reliant on mining, nearly doubling in size since the beginning of the 21st century (**Figure 5.2**).

The coal and natural gas and oil industries also contribute heavily to the state tax base. A recent study by West Virginia University and Marshall University found that the coal industry contributed \$684 million, roughly 10 percent, of

state and local tax revenue in 2008.¹⁰ A 2011 study by West Virginia University and Marshall University found that the natural gas and oil industry contributed \$198.8 million in state and local taxes in 2009.¹¹ All together tax revenues from coal, natural gas and oil comprises about 14 percent of total state and local taxes.¹²

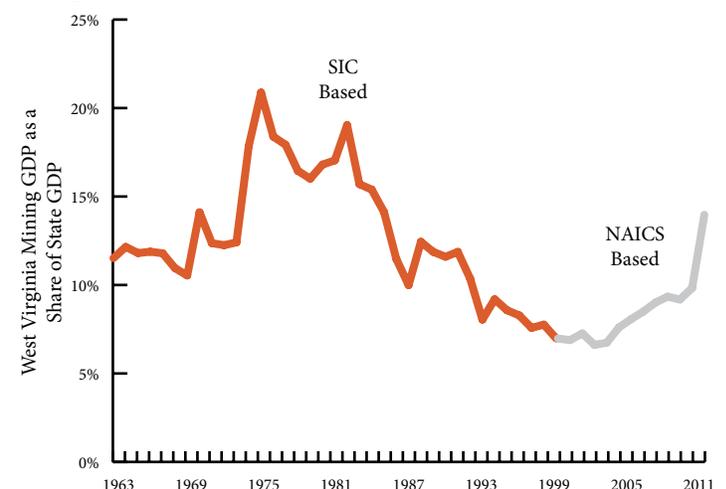
Today, however, coal has begun a steep decline while natural gas drilling associated with the Marcellus Shale has begun to boom. This chapter will explore these changes in greater detail and also provide a look at the quality and quantity of the jobs in West Virginia's natural resource economy.

FIGURE 5.1
West Virginia Relies Heavily on Mineral Resources for Economic Output



Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts.

FIGURE 5.2
Mining Larger Part of West Virginia's Economic Output



Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts.

West Virginia's Coal Economy: The Coming Bust

For more than a century, the coal industry has played a significant role in the state's economy. It has been a large supplier of jobs and wages, an important part of the state's tax base, and an iconic part of its culture. Today, however, the state's coal economy is diminishing because of market competition from cheap and abundant natural gas and Western coal, and from the exhaustion of many of the state's thicker coal seams. Future federal regulations of greenhouse gases and mercury could also play a role in reducing demand for Central Appalachian coal.

In spite of its decline, the coal industry remains an important part of the state economy, with nearly 32 billion tons in recoverable coal reserves. West Virginia also leads the nation in coal exports, shipping nearly 21 percent (28.3 million tons) of its coal out of the country in 2010.¹³ Only 15 percent of the coal produced in West Virginia is used in the state and a good portion of this amount goes to other states in the form of electricity generation.¹⁴

Coal Mining Jobs

Coal mining employment has declined significantly over the last six decades. In 1950 the coal industry employed close to 120,000 workers, accounting for more than one out of every

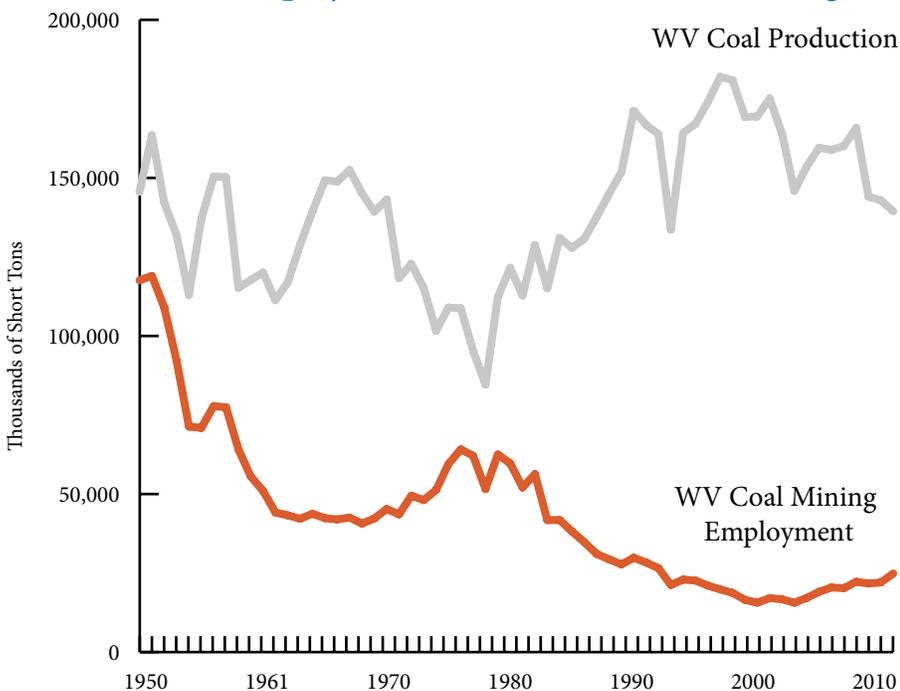
five jobs in the state (Figure 5.3). In 2011, coal-mining jobs accounted for only 3.5 percent of the state's total non-farm employment or about 25,000 jobs.

While coal mining employment is nowhere near its 1950 level, it has rebounded over the last several years. After bottoming out in 2003, coal employment has risen over the last decade. In 2011, there were close to 25,000 coal industry workers compared to just 15,700 in 2003 – an increase of nearly 60 percent or 9,200 jobs. In spite of its recent rise, coal employment is expected to shrink in 2012 due to several mass layoffs from a decrease in consumer demand and competition from cheap natural gas.¹⁵

Despite the decline in coal employment over the last 60 years, coal-mining jobs remain one of the best jobs in the state. Jobs in the coal mining industry provide above average wages, good benefits, and are more unionized than other private industry sectors. Jobs in coal mining also provide an avenue for workers without a college degree to maintain a living wage with good benefits. In West Virginia, about three quarters of those employed in coal mining have a high school degree or less, while only 20 percent have some college experience and five percent have a bachelor's degree or higher.¹⁶

FIGURE 5.3

Historical Coal Employment and Production in West Virginia

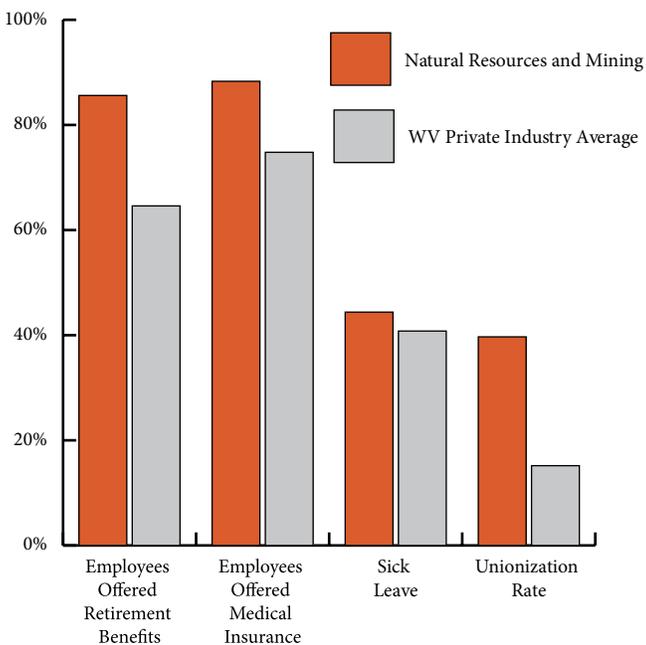


Source: Workforce West Virginia, Bureau of Labor Market Information and WV Office of Miners' Health, Safety and Training data.

In West Virginia, the coal-mining sector pays wages that are more than twice the state average. In 2011, the average annual wage of a worker employed in the coal mining industry (NAICS 2121) was \$85,053 compared to the state average of \$38,565. This means the average worker in the private sector made 55 percent less than the average worker in the coal mining industry. Workers employed in the coal-mining sector also have greater access to benefits, including retirement plans, medical insurance, and sick days (Figure 5.4). According to a 2006 survey by Workforce West Virginia, 86 percent of employees in natural resources and mining had a retirement plan at work compared to the state private sector average of about 65 percent.¹⁷ Rates for medical insurance and sick leave were also higher in the natural resources and mining sector.

Higher wages and better benefits are strongly associated with union membership.¹⁸ Union representation also provides better working conditions for workers, especially coal miners. In 2010, approximately 40 percent of coal miners in West Virginia were covered by a union contract compared to the state average of 15 percent. The above-average union participation, especially historically, is one reason why coal miners have better benefits and higher wages than those employed in other occupations.

FIGURE 5.4
Mining Sector Provides Better Benefits

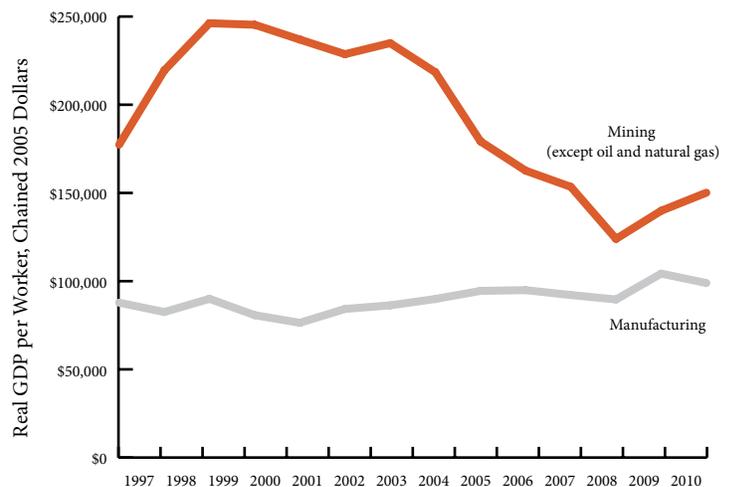


Source: Workforce West Virginia, Employee Benefits in West Virginia, 2005-2006 Private Sector.

Lower Productivity Boosting Coal Mining Employment

The recent growth in coal mining employment over the last decade is not due to a rapid rise in coal production in the state. In fact, coal production has fallen over the last decade from a high of 180.8 million tons in 1998 to just 139.4 million tons in 2011 (Figure 5.3). One reason why employment in the coal industry has grown recently is the decline in productivity or real (adjusted for inflation) coal mining GDP per worker. As Figure 5.5 shows below, coal mining output (GDP) per worker has been declining over the last twelve years. In 1999, coal mining output per worker was about \$250,000 compared to just \$150,000 in 2010. Manufacturing – which, unlike coal over this period, has been shedding jobs – has seen a growth in productivity.

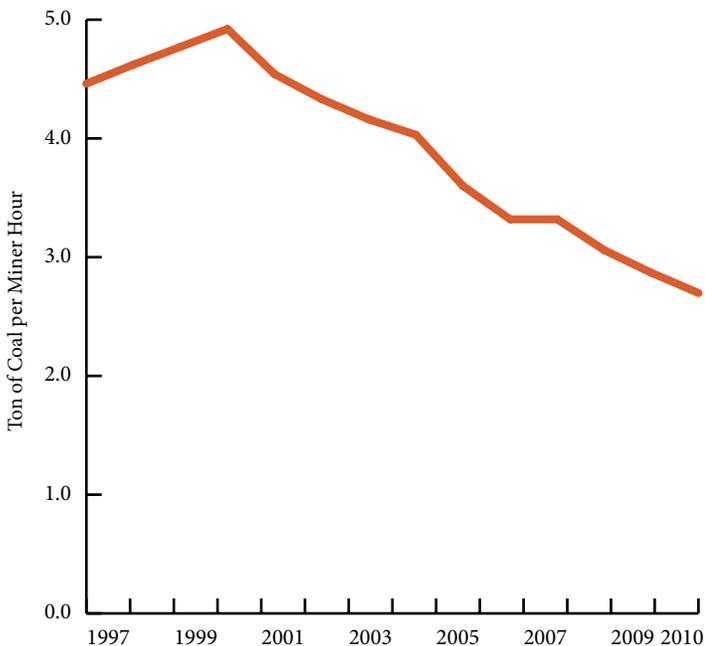
FIGURE 5.5
West Virginia Coal Mining Productivity Declining



Source: U.S. Bureau of Economic Analysis, Regional Economic Accounts.

Coal mining GDP per worker has declined because it is taking more miners to produce the same amount of coal. According to the U.S. Energy and Information Administration (EIA), coal production per miner hour fell from 4.9 tons per miner hour in 2000 to just 2.7 tons per miner hour in 2010, a decline of 45 percent. One of the central factors causing the decline in West Virginia coal production is the exhaustion of thicker, easier to mine, coal seams. As **Figure 5.3** and **Figure 5.6** indicate, the decline in productivity corresponds with the rise in coal mining employment over this period, as more miners are needed to keep up production. Over the next 25 years, EIA expects this trend to continue with coal-mining productivity falling in both the Northern and Central Appalachian regions. EIA projects that coal-mining productivity in Central Appalachia will fall from 2.7 tons per miner hour in 2010 to 0.84 by 2035, while productivity in Northern Appalachia will fall from 3.4 tons per miner hour in 2010 to 2.5 in 2035.¹⁹

FIGURE 5.6
It's Taking More Miners to Produce West Virginia Coal



Source: U.S. Energy and Information Administration, 1994-2010 Annual Coal Reports.

Coal Mining's Future in the Mountain State

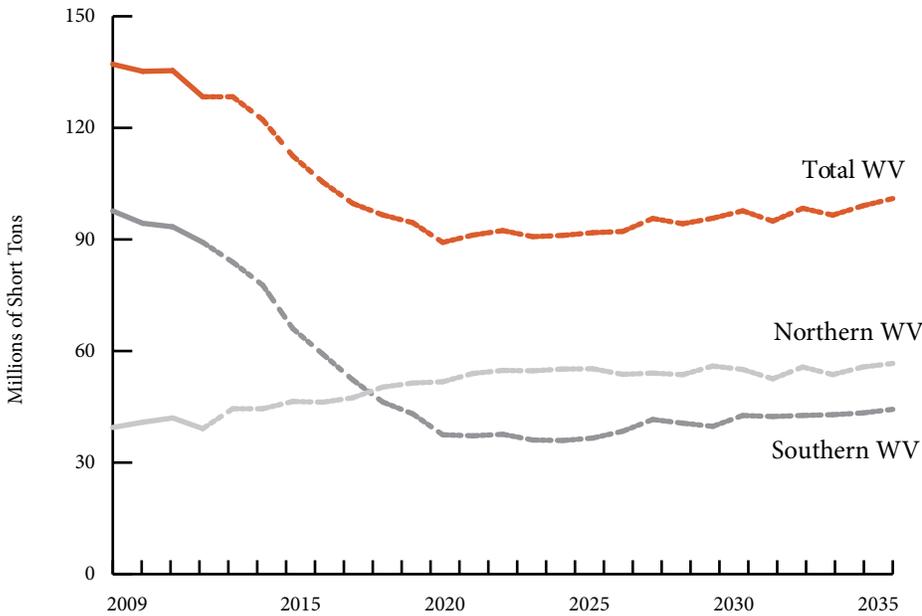
Each year, the EIA releases its Annual Energy Outlook that includes coal production projections for supply regions and coal types throughout the country. West Virginia is located in the Northern and Central Appalachian Regions. Over the next decade, EIA projects that coal production in the Central Appalachian Region will decline by 62 percent, from 196.7 million tons in 2009 to just 74.8 million tons by 2020. For the Northern Appalachian Region, EIA projects an increase of 30 percent over this same period – from 127.5 million tons in 2009 to 165.7 million tons by 2020. The combined decline in coal production for the two regions is about 26 percent.

Between 2009 and 2010, approximately 31 percent of the Northern Appalachian Region's coal production and 52 percent of the Central Appalachian Region's coal production was in West Virginia, with the rest found in Pennsylvania, Maryland, Ohio, Virginia, Eastern Kentucky and Northern Tennessee. Based on these figures, West Virginia is expected to witness a decline in coal production of about 35 percent, from 135 million tons in 2009 to less than 90 million in 2020 (**Figure 5.7**). While the northern part of the state is expected to see an increase of 31 percent in coal production over this period, the southern part of the state – which comprised about 70 percent of total state production in 2010 – could see a decline of nearly two-thirds (62%).

The decline in coal production in Central Appalachia is mostly due to a projected drop in demand for steam (bituminous) coal, which is used primary in electricity generation. This drop in demand for steam coal is the result of significant declines in mining productivity (see above) that have reduced the competitiveness of Central Appalachian coal. According to EIA, steam coal production in Central Appalachia is expected drop from 158 million tons in 2009 to just 28 million tons by 2020 – a decline of over 82 percent. Meanwhile, metallurgical coal production is expected to rise slightly over this time period.²⁰

FIGURE 5.7

Coal Production Expected to Drop



Source: WVCBP analysis of data from the U.S. Energy Information Administration, AEO2012 National Energy Modeling System.

The projected decline in Central Appalachian steam coal is the result of a number of factors, including increased competition from other coal-producing regions (Powder River and Illinois Basin), cheap and abundant natural gas, the depletion of the most accessible coal reserves, and, to a far lesser extent, environmental regulations (greenhouse gases and mercury emissions). While some have suggested that future EPA regulations will be a major factor in the future decline of coal production, projections from EIA indicate that they will have little impact on future coal production in Central Appalachia.²¹ If these projections hold true, then the economic ramifications, especially in the southern coal fields where the state’s economy is far more dependent on coal mining, could negatively impact employment in the coal industry and severely damage the state’s economy in the near future.

The Unfolding West Virginia Shale Gas Boom

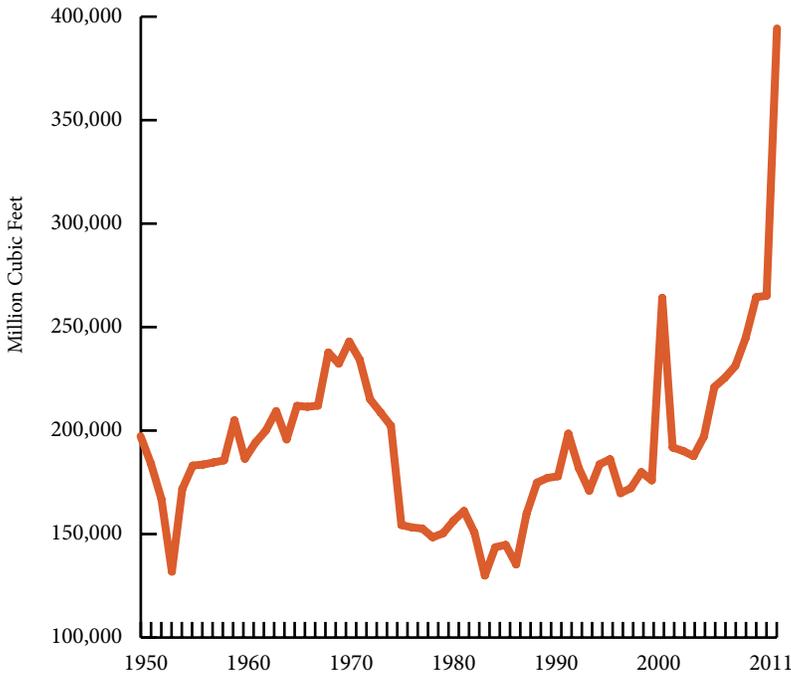
Although natural gas drilling has been a part of the state’s economy for decades, the recent discovery of the Marcellus Shale has set off a drilling boom. The Marcellus Shale is a natural gas reservoir stretching 95,000 square miles, covering most (98%) of West Virginia and including parts of Pennsylvania, Ohio, New York, and Maryland. As of

August 2012, there have been 2,688 Marcellus Shale gas permits issued in West Virginia, most of which are in the northeastern part of the state.²²

With adoption of new horizontal and “hydraulic fracturing” techniques that enable companies to extract dry and wet natural gas from this shale, West Virginia’s proved reserves have grown from 4.6 trillion cubic feet in 2005 to 7.2 trillion cubic feet in 2010.²³ West Virginia’s proved shale gas reserves have jumped from 688 billion cubic feet in 2009 to about 2.5 trillion cubic feet in 2010. The state’s “technically recoverable reserves” of Marcellus shale gas stands at 8.2 trillion cubic feet, according to EIA.²⁴ According to the W.Va. Department of Environmental Protection, 23 percent of West Virginia’s gas production is from horizontal gas wells in 2010 compared to just 2.3 percent in 2008.

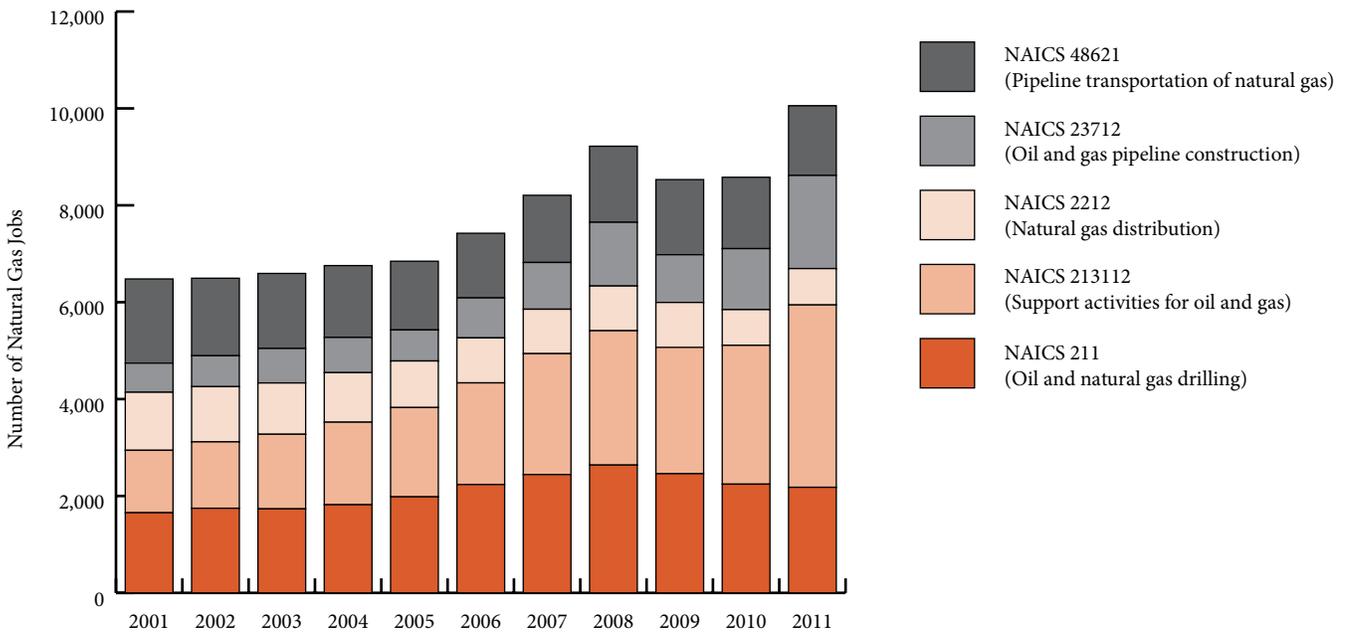
As a result of the Marcellus Shale gas play, natural gas production in West Virginia has grown dramatically in recent years. In 2011, the state produced an estimated 394 million cubic feet of natural gas compared to just 190 million cubic feet in 2003 (Figure 5.8). This was the largest amount of natural gas ever produced in the state.

FIGURE 5.8
Historical Natural Gas Production, West Virginia



Source: WV Blue Book 1948-1970 (WV State Archives), U.S. Energy Information Administration, and WV Geological and Economic Survey.
 Note: Data from 1950 to 1968 was found in the WV Blue Book, WV State Archives; data from 1969 to 2010 is from the U.S. Energy and Information Administration, and 2011 estimate was from WV Geological and Economic Survey.

FIGURE 5.9
Growing Number of Natural Gas Jobs in West Virginia



Source: Workforce West Virginia, Labor Market Information.

Over the last several years, employment in the natural gas industry has also grown. Employment in this industry includes: oil and natural gas extraction, support activities, distribution, and pipeline construction and transportation. According to Workforce West Virginia, the state had 6,480 jobs in the industry in 2001. By 2011, employment had grown to 10,054, an increase of 55 percent (**Figure 5.9**). In that same period, total employment in the state grew only 2.3 percent. While the natural gas industry witnessed a decline in employment when the economic recession hit the state, it rebounded in 2011 by gaining nearly 1,500 jobs.

Similar to the job quality in the coal industry, jobs in the natural gas industry pay much higher wages compared to the state average. The average annual wage in the natural gas industry was \$69,164 in 2011. As shown in **Figure 5.4**, for the coal industry, those employed in natural resource mining also tend to have better benefits, such as retirement plans, medical insurance, and access to sick leave.

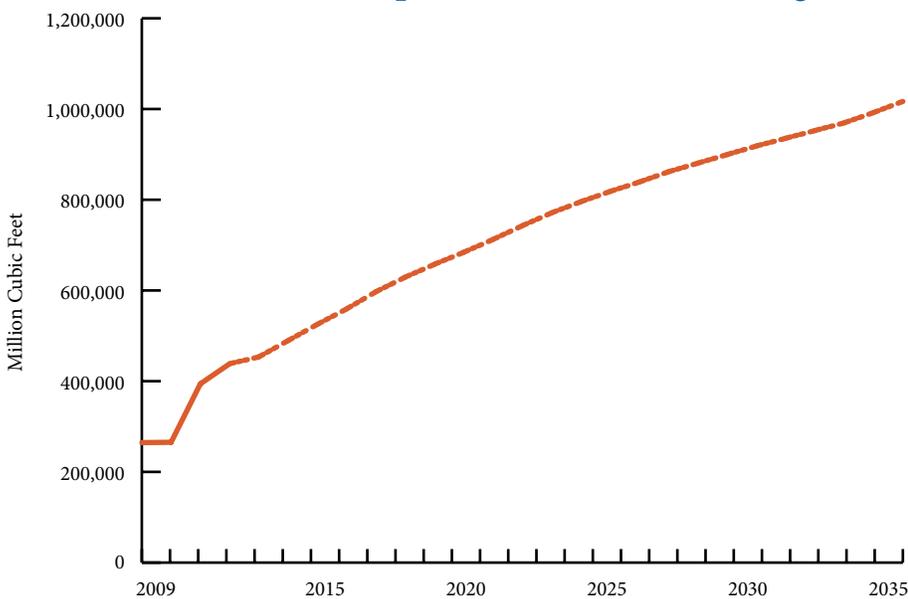
While coal production in West Virginia is projected to decline, natural gas production is projected to grow tremendously over the coming decades. According to the

EIA's 2012 Annual Energy Outlook, natural gas production in the northeast United States is expected to grow from 1.1 trillion cubic feet of natural gas in 2009 to 5.4 trillion cubic feet by 2035.²⁵ According to EIA, in 2010 West Virginia comprised approximately 18.9 percent of total northeast gas production. Based on these figures, West Virginia could expect see production grow from 394 billion cubic feet in 2011 to over 1 trillion cubic feet by 2035 (**Figure 5.10**).

Planning for the Future

While the state is experiencing a boom in natural gas production from the development of the Marcellus Shale in the northeastern part of the state, the southern part of the state is projected to witness a steep decline in coal production. To compensate for the loss of good-paying jobs in the coal industry, the state will need to transition by developing clearer economic development and diversification strategies in the southern coalfields that will build a more sustainable economy.

FIGURE 5.10
Natural Gas Production Expected to Boom in West Virginia



Source: WVCBP analysis of data from the U.S. Energy Information Administration, AEO2012 National Energy Modeling System.

Building A Stronger Working West Virginia

West Virginia's economy will be undergoing major changes in the near future with the decline of coal and the rise of natural gas. But the state also faces significant problems now in the present that it needs to address in order to grow and prosper in the future. High unemployment, an unhealthy and aging workforce, and a stagnating middle class all present challenges to the state's future prosperity. Policymakers have several options to address these challenges and be better suited to face the future.

Expand Medicaid under the Affordable Care Act

The Supreme Court's decision to uphold the Affordable Care Act was an important decision for thousands of West Virginians who are unable to secure health insurance. Fewer employers offer health coverage to their employees today than in the past, and without the expansion of Medicaid in the Affordable Care Act, the situation will continue to get worse. By accepting federal funds to expand Medicaid, West Virginia can not only cover an estimated 120,000 people currently without health insurance, but also save millions in uncompensated care. Expanding Medicaid coverage will also increase the health of the state's workforce. With increased health coverage, healthier workers become more productive, increasing hours worked, wages earned, and taxes paid.²⁶

Create a Severance Tax Future Fund

While the state's coal economy is in decline, the development of the Marcellus Shale presents an opportunity to change the legacy of natural resource extraction in the state. States like Alaska, Montana, New Mexico, North Dakota, and Wyoming have established funds from mineral severance tax collections. By following their example and setting aside part of the severance tax on nonrenewable natural resources like coal and natural gas, West Virginia can create a permanent source of sustainable wealth that can be used to invest in economic diversification and improving the state's workforce.

Adopt Work-Sharing Reforms to the Unemployment Insurance System

Work-sharing is a simple policy tool that can dampen the effects of a recession on employment. With work-sharing, employers reduce their workers' weekly hours during an economic downturn, rather than laying them off. States can

then make up some of the lost wages resulting from the reduction in hours with their unemployment funds. Work-sharing can mitigate the threat of long-term unemployment and keep workers attached to the workforce, while also allowing employers to keep their skilled employees while reducing turnover costs.

Federal incentives for states to adopt work-sharing could save West Virginia's unemployment insurance trust fund up to \$2 million, while the Department of Labor has offered the state \$500,000 in grants to implement a program.²⁷

Increase the minimum wage

The minimum wage has not kept pace with growing healthcare, childcare, and other costs faced by working families. Nor has the minimum wage increased to reflect the older, more experienced, and better educated workforce that earns the minimum wage. Raising the minimum wage from \$7.25 to \$9.80 per hour it would give an estimated 182,000 workers in West Virginia a raise while also generating approximately 800 new jobs over three years, \$300 million in additional wages, and \$200 million in state economic activity.²⁸

Issue Infrastructure Bonds

West Virginia's decaying and deficient roads, bridges, and dams continue to act as a hindrance to economic growth, increasing transportation costs for businesses and workers alike. The updating and repair of West Virginia's infrastructure represents an important economic development opportunity and a job-creation strategy.

Funding these much-needed projects through issuing new infrastructure bonds will not only create jobs in sectors like construction that have been hit the hardest by the recession, but it can save the state money over the long-term. This is because Interest rates are historically low, so the state's short-term obligations will be low as well. The state's economy will have presumably improved once the bonds mature, meaning taxpayers will get a good return on their investment and our economy will get a boost.

Restore Childcare Cuts

The exhaustion of surplus federal funds has led the state to cut back on childcare subsidies for low income working families. An estimated 800 families with 1,400 children will be affected, facing higher costs for childcare when the subsidies are cut. Low income working parents will now find it harder to secure quality childcare while working, and may instead find no other choice but to leave the workforce. This could also affect the childcare providers, who also rely on the subsidies.²⁹

By closely examining its budget and finding the resources to restore the cut subsidies, West Virginia can keep more of its workers in the workforce and off of other forms of welfare, support working families, and make the state an easier place work, do business, and raise a family.

Preparing for economic transition in the coalfields

Ultimately, the fate of southern West Virginia's coal industry is likely to be shaped by market forces such as competition with natural gas and other energy sources as well as cheaper coal from other areas. While no one knows whether projections for coal's steep decline will occur as predicted, the prudent course would be for state officials to convene a taskforce composed of economic development officials as well as representatives from business, labor, educational institutions, religious organizations and the affected communities to look for ways to ease the possible impact and search for viable economic alternatives. Deliberations of such a taskforce should be as transparent as possible and open to public observation and participation.

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Working Toward a Shared Prosperity

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