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# The State of Working Pennsylvania 2013

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The Keystone Research Center  
Harrisburg, Pennsylvania



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**Contents**

Executive Summary .....3

    Box 1. Pennsylvania – State of Opportunity .....6

Chapter 1: Jobs and Unemployment in the Recovery .....7

    Job Growth Since 2010 .....7

    Recent Job Growth Compared to Previous Two Recoveries .....11

    County Level Employment Trends.....15

    Unemployment and Labor Force Participation.....20

Chapter 2: Wages .....27

    Pennsylvania Wages Compared to U.S. Wages.....28

    Pennsylvania Wage Trends Since 1979 .....29

    Wages by Race, Ethnicity, and Gender .....30

    Wages by Age.....30

    Wages by Educational Attainment .....31

Chapter 3: Poverty-Wage Jobs.....33

    Poverty-Wage Jobs by Race, Gender, and Education .....34

    Where Are All Those Bad Jobs?.....35

Chapter 4: Growing, But Apart.....37

    Growth in Per Capita Personal Income and Gross Domestic Product.....37

    Productivity Growth in Pennsylvania.....39

    Rising CEO Pay.....40

    Top Incomes in Pennsylvania.....40

Chapter 5: Changing Policies to Lift Wages and Sustain Opportunity.....44

    Box 4. Undermining Upward Mobility in Pennsylvania.....46

    Box 4. Undermining Upward Mobility in Pennsylvania (Cont’d).....47

    Box 5 Investing in Education Will Build a Stronger Pennsylvania Economy.....48

Appendix A: Public-Sector Job Losses from December 2010 to December 2012.....49

    Box 2. Job Growth in Marcellus Shale Since 2010 .....8

    Box 2. Job Growth in Marcellus Shale Since 2010 (Cont’d).....8

    Box 3. Job Growth in Manufacturing Since December 2010 .....8

## Executive Summary

A month ago, Pennsylvania received some good economic news: a landmark new study reported that upward mobility in the Keystone State since the late 1990s exceeded that in most parts of the United States. This report, focused on more recent trends, contains some bad economic news. It shows that Pennsylvania's economy has performed poorly from the perspective of typical working families since the end of 2010. It also shows that wages have been flat for a longer period.

In the 32 months since 2010, ending July 2013, the state has experienced a gradual slowdown in job growth:

- From January 2010 to January 2011, the number of Pennsylvania jobs increased by 87,300.
- Over the next 12 months, job growth fell to 46,200, with a further decline to 35,000 in 2012.
- This year, through the month of July, Pennsylvania has created only 5,400 jobs.

Put another way, the state recorded as much job creation in the first full year after the end of the recession as it has in the subsequent two and a half years. (The trends in private sector jobs, detailed in the body of this report, are similar.)

Many states have not witnessed a slowdown in job growth since 2010. Pennsylvania ranked 46<sup>th</sup> among the 50 states for job growth since December 2010. This poor job growth performance is in line with, but slightly worse than, Pennsylvania's performance compared to the nation and other states during the equivalent 32-month period in the last two economic recoveries.

Slowing job growth has resulted in persistently high unemployment in Pennsylvania. While the state's unemployment rate was a percentage point or more below the national rate in 2009 and 2010, this Pennsylvania advantage has since disappeared.

Since 2010, Pennsylvania workers, similar to those in the United States as a whole, have also experienced a decline in their wages:

- In the bottom four-tenths of the wage distribution, Pennsylvania wages have declined by 4% to 5% since 2010.
- From the 50<sup>th</sup> to the 70<sup>th</sup> percentile wages have fallen by 2.5% to 3.8%.
- For most of the top third of the distribution (although not the 95<sup>th</sup> percentile), wages have declined by less or even increased slightly.

Since 2000, Pennsylvania workers — again similar to workers nationwide — have seen more than a decade of flat wages. Indeed, since 1979, a full third of a century, wages for median-wage Pennsylvania workers have increased (by about 10%) in only one half decade — the second half of the 1990s.

Wage stagnation has occurred despite steady productivity growth. Since 1979, according to new estimates provided by the Economic Policy Institute, Pennsylvania productivity has increased 61% — 15 times as much as the median wage.

With wages stagnating for most workers but productivity growth expanding the overall economic pie, it is no surprise that both top-end incomes have surged:

- Between 2010 and 2012, average CEO pay in the U.S. climbed by 15%. or by \$1.7 million dollars.
- The top 1% in Pennsylvania captured 84% of all income growth between 2009 and 2010. (Both national data on top 1% income and Pennsylvania data on wage stagnation since 2010 indicate that the top 1% continued to garner the lion’s share of Pennsylvania income growth since 2012.)

As a new Economic Policy Institute report underscores, recent wage trends impede the U.S. economic recovery because middle-class families do not have the means to boost their consumption.<sup>1</sup> Wage and employment trends that shrink the middle class also endanger the robust intergenerational mobility found in most Pennsylvania regions over the past half generation according to a powerful new study. (See Box 1.)

The conclusion of this report outlines a simple three-point agenda designed to increase middle-class purchasing power, accelerate Pennsylvania’s sluggish economic recovery, and revitalize upward mobility for the next generation — to revitalize the American Dream in Pennsylvania:

- Raise entry-level wages to \$15 per hour.
- Invest in education from cradle to grave, which new research shows would boost long-run productivity growth as well as increase upward mobility.
- Enact policies that would increase civic engagement and voter turnout, especially among middle- and lower-income voters, who currently have lower rates of turnout than upper-income and more educated voters.

These recommendations represent a major departure from recent Pennsylvania public policies, which have reduced K-12 and higher education funding sharply, done nothing to promote higher wages (with some legislators advocating policies that would reduce wages further), and put in place a voter ID law now tied up in the courts but likely, if implemented, to reduce voter turnout among the less economically advantaged.

Policies, of course, reflect a state’s vision for the future. Current policies envision a Pennsylvania with slower economic growth, more income polarization, less opportunity, and greater civic disengagement that will reduce the middle class’s capacity to demand changes in policy.

What kind of Pennsylvania do you want?

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The rest of Keystone Research Center’s annual checkup on the Pennsylvania economy provides a comprehensive overview of employment, unemployment, wage, poverty, and income trends since 2010

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<sup>1</sup> Lawrence Mishel and Heidi Shierholz, “A Decade of Flat Wages: The Key Barrier to Shared Prosperity and a Rising Middle Class,” Economic Policy Institute, August 21, 2013, <http://www.epi.org/publication/a-decade-of-flat-wages-the-key-barrier-to-shared-prosperity-and-a-rising-middle-class/>.

— and in many cases over longer periods, sometimes as far back as 1979. While we offer our own interpretations of the trends, the report is deliberately data rich, with complete sources on where our information comes from, so that members of the media, policymakers, and the general public can examine the facts for themselves.

## Box 1. Pennsylvania – State of Opportunity

A study published last month<sup>2</sup> by Harvard and University of California-Berkeley economists found that “Intergenerational upward mobility” in most Pennsylvania regions since the late 1990s exceeded that in most of the United States. The study relies on a sample of 6.3 million children born in the United States in 1980 and 1981, and divided into 741 “commuting zones.” Using this enormous data base, the study explores how much the income of members of this cohort at age 30 mirrored their parents’ incomes when the subjects were 15 to 19 years old (from 1996 to 2000).<sup>3</sup>

How did Pennsylvania’s regions fare?

- Pittsburgh ranked fifth among the 30 largest U.S. metro areas measured by the share of children born into low-income families growing up to earn top incomes as adults. Pittsburgh kids born into families in the lowest-income fifth (parental income below \$25,000 per year) had a 10% chance of making it into the top fifth. Philadelphia ranked 19<sup>th</sup> out of the 30 big regions, with an 8% chance.
- In all 12 Pennsylvania regions, children whose parents’ income fell in the bottom fifth had a 7.7% to 12.9% chance of reaching the top fifth. These percentages are two to three times higher in Pennsylvania regions than in the parts of the country with the least upward mobility, such as Atlanta, Georgia and Charlotte, North Carolina.<sup>4</sup>
- Five Pennsylvania regions in the study — St. Mary’s, Altoona, State College, Williamsport, and Scranton — ranked even higher on indicators of mobility than Pittsburgh. St. Mary’s, for example, has an unusually large middle class, with 70% of children growing up in families with incomes between the U.S. 25<sup>th</sup> and 75<sup>th</sup> percentiles.

Virtually all parts of three southern states, North Carolina, South Carolina, and Georgia, and most parts of two other southern states, Alabama and Mississippi, have low mobility. Across the entire country, only a few pockets in the Midwest and isolated regions in the rest of the country had as little intergenerational mobility from the bottom to the top fifth as this five-state southern region.

The economists identified four variables that correlate with upward mobility: the size and dispersion of the middle class (concentrated poverty – communities without many middle class residents – are bad news for upward mobility); the quality of K-12 schools; strong families, measured by the share of two-parent households; and civic engagement, including membership in religious and civic groups.

Since we now know what works to boost upward mobility — and what doesn’t work — Pennsylvania civic leaders and policymakers should use this powerful new study to shape state and regional policy going forward. As the conclusion of *The State of Working Pennsylvania 2013* elaborates, Pennsylvania policies currently seem peculiarly designed to under upward mobility for the next generation.

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<sup>2</sup> Raj Chetty et al., “The Economic Impacts of Tax Expenditures: Evidence from Spatial Variables Across the U.S.,” July 2013, <http://scholar.harvard.edu/hendren/publications/economic-impacts-tax-expenditures-evidence-spatial-variation-across-us>.

<sup>3</sup> Parental income is defined as the average of yearly income reported on federal tax forms from 1996-2000. Child income is defined as the average of reported 2010 and 2011 income. (All income was adjusted to 2010 dollars.)

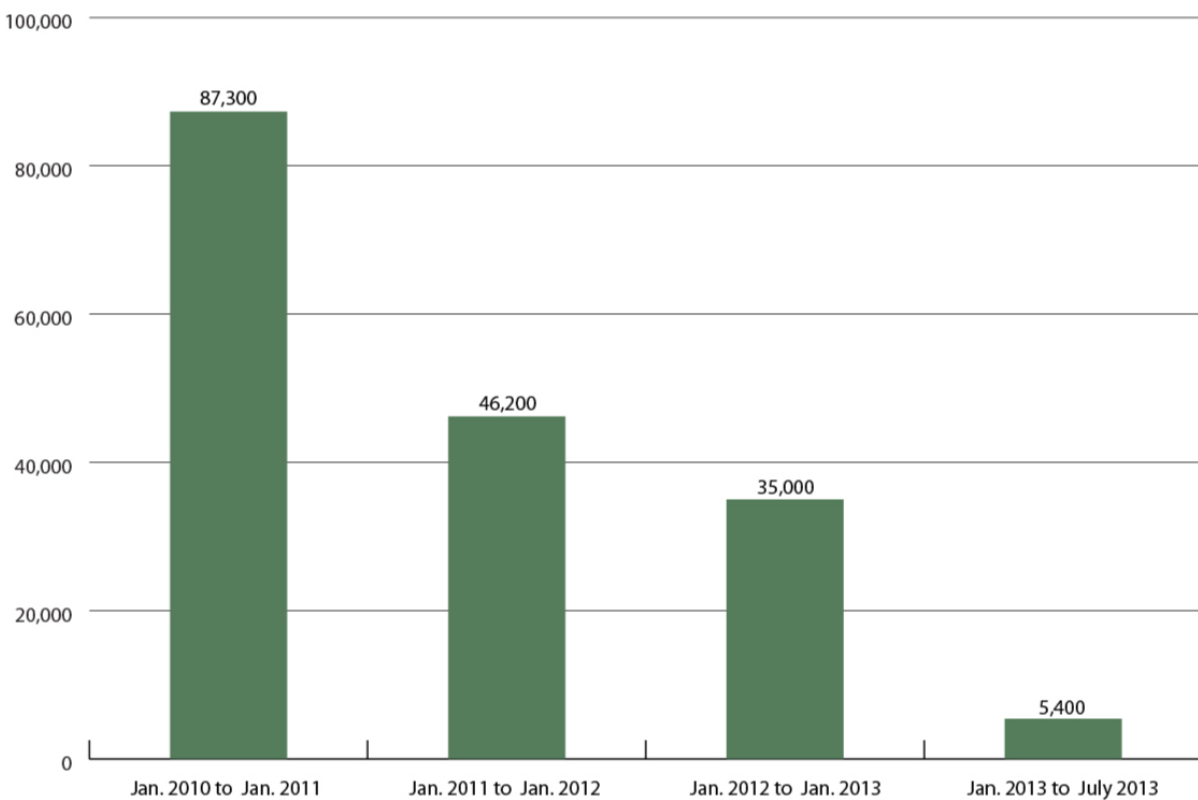
<sup>4</sup> The Keystone Research Center’s briefing paper on the Harvard-Berkeley study has tables with indicators of mobility for each of Pennsylvania’s 12 regions. See Stephen Herzenberg, “PA Regions Rank High in Study of Upward Mobility,” Keystone Research Center, July 24, 2013, <http://keystoneresearch.org/upwardmobility>.

# Chapter 1: Jobs and Unemployment in the Recovery

This chapter focuses on the employment performance of the Pennsylvania economy since 2010. It includes a review of statewide and county-level employment trends as well as an examination of job trends in Marcellus Shale-related industries and manufacturing. Finally, the chapter examines unemployment and labor force participation in the Pennsylvania economy.

## Job Growth Since 2010

**Figure 1.1 Overall Job Growth in Pennsylvania Has Slowed Down**



Source: Keystone Research Center based on Current Employment Statistics

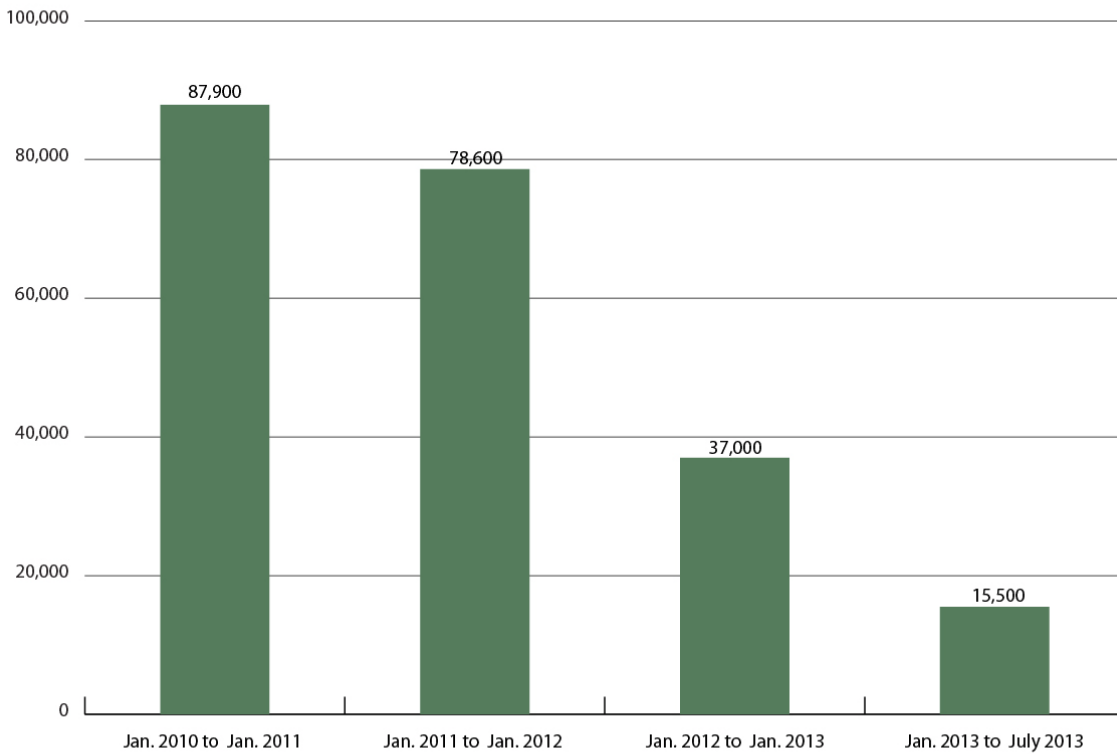
Since the start of 2011, the Pennsylvania economy has added 87,000 jobs. (See Table 1.1.) This puts job growth at 1.5% over this period, giving Pennsylvania the slowest pace of job growth among neighboring states and ranking it 46<sup>th</sup> out of 50 states in percent job growth.<sup>5</sup> Job growth since 2010 has grown increasingly sluggish in Pennsylvania. (See Figure 1.1.) So far in 2013, Pennsylvania has added just 5,400 jobs in seven months. If that pace holds up for the rest of the year, the commonwealth is on track to add

<sup>5</sup> Considering just private sector job growth, Pennsylvania ranked 45<sup>th</sup> out of 50 states with job growth of 2.7% over this period.



fewer than 11,000 jobs in 2013. Private-sector job growth in Pennsylvania has also slowed. (See Figure 1.A.) From January 2010 to January 2011, private-sector payrolls dimbed by 87,900. The next year, January 2011 to January 2012, was slightly slower at 78,600. Private-sector employers added just 37,000 jobs from January 2012 to January 2013. Since January of this year, private-sector payrolls have climbed by just 15,500.

**Figure 1.A Private Sector Job Growth in Pennsylvania Has Slowed Down**



Source: Keystone Research Center based on Current Employment Statistics

Breaking out Pennsylvania job growth by industry, Table 1.2 reveals that since January 2011 the public sector in Pennsylvania shed a total of 45,000 federal, state, and local government jobs, a decline of 0.8% measured against total employment in January 2011. This job loss is largely the result of deep budget cuts enacted by federal and Pennsylvania policymakers, which began barely a year after the return of job growth in 2010 and on the heels of the worst recession nationally since the Great Depression. To put those public-sector job losses in context, a loss of 45,000 jobs is equivalent to 20 to 25 large (2,000 worker) factories in Pennsylvania dosing down and laying off all their employees. It is also equal to about one-third of all Pennsylvania job losses in the period in and around the 2001 recession that followed the 1990s dot.com bust and the events of

***See Appendix A for a detailed breakdown of the number of Elementary and Secondary teachers and other education workers laid off in the last two years.***

9-11.<sup>6</sup>

Which sectors posted the strongest growth over this period? Table 1.2 reveals that Accommodation and Food Services<sup>7</sup> added 28,000 jobs (an increase of 6.7%), Professional, Scientific, and Technical Services<sup>8</sup> added 20,000 jobs (an increase of 6.6%), and Health Care and Social Assistance<sup>9</sup> added 35,000 jobs (an increase of 3.8%).<sup>10</sup>

Table 1.1

State	January 2011 (thousands)	July 2013 (thousands)	Change	Percent Change	Rank of Percent Change (Out of 50)
Pennsylvania	5,665	5,752	87	1.5%	46
United States	130,464	136,038	5,574	4.3%	
Delaware	418	426	8	1.8%	43
Maryland	2,532	2,607	75	3.0%	30
New Jersey	3,835	3,959	125	3.2%	24
New York	8,620	8,882	261	3.0%	28
Ohio	5,062	5,211	149	2.9%	32
West Virginia	748	771	23	3.0%	27

Source. Keystone Research Center based on Current Employment Statistics (CES) data

<sup>6</sup> From February 2001 to July 2003, the Pennsylvania economy lost 120,000 jobs, or 2% of total employment.

<sup>7</sup> For a description of this industry, see <http://www.bls.gov/iag/tgs/iag72.htm>

<sup>8</sup> For a description of this industry, see <http://www.bls.gov/iag/tgs/iag54.htm>

<sup>9</sup> For a description of this industry, see <http://www.bls.gov/iag/tgs/iag62.htm>

<sup>10</sup> Two sectors that experienced strong growth but represent a relatively small number of jobs are Management of Companies and Enterprises, which added 9,000 jobs (an increase of 7.3%), and Mining and Logging, which added 6,000 jobs (an increase of 19.9%).

Table 1.2

## Employment Growth in Pennsylvania by Industry January 2011 to July 2013

Industry	January 2011 (1000s)	July 2013 (1000s)	Change	Percent Change
Total Nonfarm	5,665	5,752	87	1.5%
Total Private	4,912	5,043	131	2.7%
Mining & Logging	30	36	6	19.9%
Construction	217	224	7	3.2%
Manufacturing	562	566	5	0.8%
Trade, Trans., & Utilities	1,089	1,094	5	0.5%
Wholesale Trade	226	225	-1	-0.3%
Retail Trade	627	628	1	0.2%
Transportation & Utilities	236	241	5	2.0%
Information	91	88	-3	-3.1%
Financial Activities	310	314	4	1.3%
Finance & Insurance	252	253	2	0.6%
Real Estate	58	61	2	3.9%
Professional & Busi. Serv.	707	739	31	4.4%
Pro., Sci., & Tech. Serv.	305	325	20	6.6%
Mgmt. of Co. & Enterprises	122	131	9	7.3%
Admin. & Sup...Waste Mgmt.	280	282	2	0.7%
Education & Health Services	1,145	1,189	44	3.8%
Educational Services	236	245	9	3.8%
Health C. & Social Assistance	910	945	35	3.8%
Leisure & Hospitality	508	538	30	5.8%
Arts, Entertainment, & Rec.	93	95	2	2.0%
Accomm. & Food Serv.	415	443	28	6.7%
Other Services	252	254	3	1.1%
Government	754	709	-45	-5.9%
Federal Government	104	96	-9	-8.4%
State Government	162	160	-3	-1.7%
Local Government	487	454	-33	-6.8%

Source: Keystone Research Center based on Current Employment Statistics (CES) data

## Recent Job Growth Compared to Previous Two Recoveries

Table 1.3 presents employment growth in Pennsylvania at comparable points in the economic recovery following the last three recessions.<sup>11</sup> Job growth in Pennsylvania since January 2011 has been slower and the state’s job growth ranking among the 50 states lower than in either of the two periods following the 1990 and 2001 recessions. It is important to note that while Pennsylvania’s job-growth ranking in the last 32 months is similar to its job-growth rankings in the recoveries following the last two recessions, the current rankings represent a sharp decline from 2010’s ranking of 7<sup>th</sup> and 12<sup>th</sup> for total nonfarm and total private job growth.

Table 1.3

Employment Growth at the Same Point in the Economic Recovery That Followed The Last Three Recessions

Recovery following the	Change (thousands)	Percent Change	Rank of Percent Change (Out of 50)	National Job Growth
1990 Recession	174	3.4%	45	7.3%
2001 Recession	104	1.9%	41	3.8%
Great Recession	87	1.5%	46	4.3%

Note. Job growth following the 1990 recession is measured from October 1992 to April 1995, job growth following the 2001 recession is measured from June 2003 to December 2005 and job growth following the Great recession was measured from January 2011 to July 2013. In each case the start of the period is 18 months after the official end of the recession as defined by the Business Cycle Dating Committee of the National Bureau of Economic Research. The 1990 recession ended in March 1991, the 2001 recession ended in November 2001 and the Great Recession ended in June 2009.

Source. Keystone Research Center based on Current Employment Statistics (CES) data

<sup>11</sup> The job growth figures in Table 1.3 for the period following the Great Recession represent employment growth beginning 18 months after the June 2009 end of the recession and spanning the period from January 2011 to July 2013. The job growth figures in Table 1.3 for the 1990 recession represent employment growth beginning 18 months after the March 1991 end of that recession and spanning the period from October 1992 to April 1995. The job growth figures in Table 1.3 for the 2001 recession represent employment growth beginning 18 months after the November 2001 end of that recession and spanning the period from June 2003 to December 2005.

Table 1.4 presents employment growth by industry in the last three recoveries. These data make clear that the sluggish overall job growth from January 2011 to July 2013 is in part driven by the loss of 45,000 public-sector jobs. From January 2010 to January 2011, Pennsylvania added 87,300 jobs and, as noted, ranked seventh in job growth in the United States. That early advantage was lost as deep cuts in federal, state, and local government spending since January 2011 forced the layoff of thousands of school teachers and other public servants. As we will see later in this chapter, these job losses contributed to high unemployment rates and stunted labor force growth for both women and college graduates.

Table 1.4

Employment Growth in Pa. by Industry During Comparable Periods Following Last Three Recessions						
Industry	1990 Recession		2001 Recession		Great Recession	
	Change	Percent Change	Change	Percent Change	Change	Percent Change
Total Nonfarm	174	3.4%	104	1.9%	87	1.5%
Total Private	155	3.5%	114	2.3%	131	2.7%
Mining & Logging	-3	-13.8%	2	11.9%	6	19.9%
Construction	8	3.9%	13	5.2%	7	3.2%
Manufacturing	1	0.1%	-40	-5.6%	5	0.8%
Trade, Trans., & Util.	44	4.4%	13	1.2%	5	0.5%
Wholesale Trade	1	0.5%	9	3.7%	-1	-0.3%
Retail Trade	28	4.7%	-6	-0.8%	1	0.2%
Trans. & Util.	15	8.1%	10	4.7%	5	2.0%
Information	6	5.9%	-12	-10.1%	-3	-3.1%
Financial Activities	1	0.2%	-2	-0.6%	4	1.3%
Finance & Insurance	0	-0.1%	-1	-0.5%	2	0.6%
Real Estate	1	1.6%	-1	-0.7%	2	3.9%
Pro. & Business Services	31	6.7%	62	10.3%	31	4.4%
Pro., Sci., & Tech. Serv.	4	1.7%	23	8.2%	20	6.6%
Mgmt. of Co. & Enterp.	3	4.9%	24	34.6%	9	7.3%
Admin...& Waste Mgmt.	24	12.9%	16	6.1%	2	0.7%
Education & Health Serv.	43	5.3%	62	6.4%	44	3.8%
Educational Serv.	14	8.2%	8	3.7%	9	3.8%
Health & Social Assit.	29	4.6%	55	7.1%	35	3.8%
Leisure & Hospitality	15	3.9%	16	3.5%	30	5.8%
Arts, Ent., & Rec.	3	4.8%	6	8.0%	2	2.0%
Acc. & Food Serv.	12	3.7%	10	2.6%	28	6.7%
Other Services	10	5.0%	-1	-0.5%	3	1.1%
Government	19	2.7%	-10	-1.3%	-45	-5.9%
Federal Government	-5	-4.3%	-2	-2.0%	-9	-8.4%
State Government	13	8.7%	-3	-2.1%	-3	-1.7%
Local Government	11	2.6%	-4	-0.9%	-33	-6.8%

Note. See note to Table 1.2

Source. Keystone Research Center based on Current Employment Statistics (CES) data

## **Box 2. Job Growth in Marcellus Shale Since 2010**

How important is the Marcellus Shale to recent job growth in Pennsylvania? Before we answer this question, it is important to note that one of the challenges in measuring the increase in employment generated by shale gas extraction is that the current system used to identify the different sectors of the American economy, the North American Industrial Classification System (NAICS), does not directly identify employment generated by shale gas extraction. While there are NAICS codes known to include employment related directly to shale gas extraction, it is not known with any precision how much of the measured employment is actually the result of unconventional shale gas extraction. Given these limitations, the best method available of gauging employment growth in shale extraction involves defining as precisely as possible those NAICS codes that include shale gas extraction activity and examining the change in total employment in those sectors over time. This provides a rough estimate of the employment impacts of shale drilling, but this method cannot distinguish between employment impacts resulting from shale gas extraction and those from conventional oil and gas extraction, which has been present in some form in Pennsylvania since the 1850s.

Presented in Table 1.5 is an estimate of employment growth in private-sector shale oil and gas extraction in Pennsylvania from December 2010 to December 2012. Over this period, this sector has added 9,700 jobs, an increase of 51%. Table 1.5, presenting employment by six-digit NAICS code, reveals that employment in one of these six-digit codes, Drilling Oil & Gas Wells, has dropped off by 36% (a decline from 5,279 to 3,356) from its 2011 peak.<sup>1</sup> Employment growth in Oil & Gas Pipeline & Related Structures Construction is still growing, albeit slower in the last year.<sup>2</sup> Roughly half of all shale-related employment growth since December 2010 was in pipeline construction.

Continued on the Next Page

## Box 2. Job Growth in Marcellus Shale Since 2010 (Cont'd)

Table 1.5

### Private Sector Shale Oil and Gas Related Employment

Industry	Dec 2010	Dec 2011	Dec 2012	Dec 2010 to Dec 2012	
				Change	Percent Change
Total Covered	5,555,783	5,599,808	5,629,826	74,043	1.3%
Shale Oil & Gas Related	19,088	28,430	28,750	9,662	51%
by Subsector					
Crude Petro. & Nat. Gas Ext.	3,854	4,340	4,926	1,072	27.8%
Nat. Gas Liquid Extract.	388	620	648	260	67.0%
Drilling Oil & Gas Wells	3,857	5,279	3,356	-501	-13.0%
Supp. Act. for Oil & Gas Ops.	6,838	10,094	10,757	3,919	57.3%
Oil & Gas Pipeline Con.	2,837	6,673	7,372	4,535	159.9%
Pipeline Transp. of Nat. Gas	1,314	1,424	1,691	377	28.7%

Source. Keystone Research Center based on Quarterly Census of Employment and Wages (QCEW) data

<sup>1</sup> Before the advent of shale drilling, about 500 people were employed on an annual basis in Drilling Oil & Gas Wells.

<sup>2</sup> Before the advent of shale drilling, about 2,000 people were employed on an annual basis in Oil & Gas Pipeline & Related Structures Construction.

## County Level Employment Trends

Tables 1.6 and 1.7 present employment data by county in Pennsylvania using the Quarterly Census of Employment and Wages (QCEW).<sup>12</sup> The QCEW provides data on employment in more counties than other employment data sources. Because QCEW data are not seasonally adjusted, we report in the same month each year, December 2010 and December 2012 (the most recent month and year available). We also report in the last column of Table 1.7 the rank of employment growth for each Pennsylvania county relative to the 319 counties in Delaware, Maryland, New Jersey, New York, Ohio, and West Virginia.

Table 1.6

The Fastest and Slowest Growing Counties Between December 2010 and December 2012

10 Fastest Growing Counties		10 Slowest Growing Counties	
Montour	7.9%	Forest	-8.4%
Greene	7.4%	Somerset	-4.3%
Fulton	7.0%	Carbon	-4.2%
Washington	5.8%	Venango	-3.9%
Northampton	5.6%	Cameron	-3.3%
Tioga	4.8%	Wayne	-3.3%
Susquehanna	4.2%	Monroe	-2.5%
Lebanon	3.7%	Northumberland	-2.4%
Lycoming	3.1%	Juniata	-2.3%
Delaware	3.0%	Perry	-2.0%

Source. Keystone Research Center based on Quarterly Census of Employment and Wages (QCEW) data

<sup>12</sup> The QCEW is a survey of employment and wages in the economy based on administrative filings completed by almost all employers — i.e., those that participate in the unemployment insurance system in Pennsylvania. The most recent employment data currently available from the QCEW is for December 2012. Current Employment Statistics (CES), the most current source for job numbers, provide data through July 2013. On an annual basis, employment counts in the CES are benchmarked to QCEW data because of the accuracy of the QCEW.



Table 1.7

## Employment Growth in Pennsylvania Counties December 2010 to December 2012

County	December 2010	December 2012	Change	Percent Change	Rank of Percent Change Out of 319 Counties
Pennsylvania	5,555,783	5,629,826	74,043	1.3%	
Adams	32,307	32,317	10	0.0%	207
Allegheny	676,308	689,662	13,354	2.0%	109
Armstrong	17,848	17,688	-160	-0.9%	246
Beaver	55,124	54,878	-246	-0.4%	227
Bedford	15,440	15,356	-84	-0.5%	230
Berks	163,975	166,342	2,367	1.4%	130
Blair	58,377	58,802	425	0.7%	172
Bradford	24,007	24,249	242	1.0%	159
Bucks	252,289	250,529	-1,760	-0.7%	239
Butler	81,092	82,935	1,843	2.3%	99
Cambria	57,180	56,489	-691	-1.2%	261
Cameron	2,164	2,092	-72	-3.3%	294
Carbon	16,916	16,205	-711	-4.2%	299
Centre	65,280	65,063	-217	-0.3%	222
Chester	238,293	238,731	438	0.2%	199
Clarion	13,665	13,551	-114	-0.8%	244
Clearfield	30,743	30,777	34	0.1%	204
Clinton	13,008	13,176	168	1.3%	137
Columbia	24,869	24,783	-86	-0.3%	223
Crawford	30,317	31,070	753	2.5%	89
Cumberland	122,664	125,656	2,992	2.4%	92
Dauphin	176,296	174,533	-1,763	-1.0%	254
Delaware	209,521	215,723	6,202	3.0%	75
Elk	14,852	15,135	283	1.9%	111
Erie	124,035	124,594	559	0.5%	182
Fayette	41,168	40,586	-582	-1.4%	266
Forest	2,253	2,063	-190	-8.4%	316
Franklin	55,268	56,165	897	1.6%	126
Fulton	4,453	4,765	312	7.0%	20
Greene	14,128	15,169	1,041	7.4%	18
Huntingdon	12,855	12,732	-123	-1.0%	250
Indiana	33,148	33,331	183	0.6%	178
Jefferson	15,562	15,411	-151	-1.0%	251
Juniata	6,139	5,995	-144	-2.3%	280

Source. Keystone Research Center based on Quarterly Census of Employment and Wages (QCEW) data

Table 1.7 (cont)

## Employment Growth in Pennsylvania Counties December 2010 to December 2012

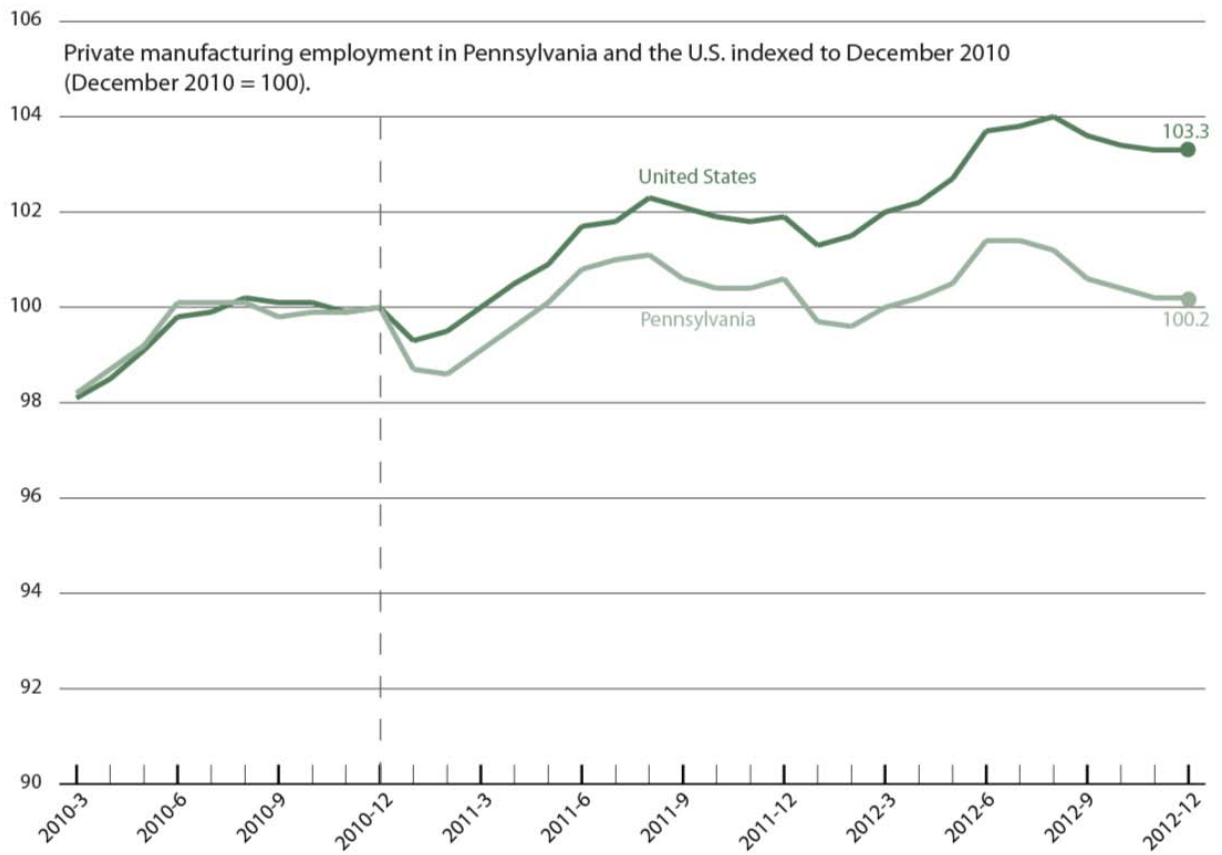
County	December 2010	December 2012	Change	Percent Change	Rank of Percent Change Out of 319 Counties
Pennsylvania	5,555,783	5,629,826	74,043	1.3%	
Lackawanna	99,037	98,118	-919	-0.9%	249
Lancaster	219,708	221,675	1,967	0.9%	161
Lawrence	29,205	29,215	10	0.0%	206
Lebanon	47,936	49,703	1,767	3.7%	61
Lehigh	175,981	177,782	1,801	1.0%	155
Luzerne	139,110	139,455	345	0.2%	195
Lycoming	52,094	53,717	1,623	3.1%	72
McKean	15,972	16,249	277	1.7%	120
Mercer	47,262	48,091	829	1.8%	118
Mifflin	15,011	15,293	282	1.9%	112
Monroe	55,929	54,526	-1,403	-2.5%	283
Montgomery	467,155	473,930	6,775	1.5%	129
Montour	15,848	17,098	1,250	7.9%	14
Northampton	99,316	104,864	5,548	5.6%	33
Northumberland	28,015	27,335	-680	-2.4%	281
Perry	7,958	7,798	-160	-2.0%	276
Philadelphia	636,075	638,028	1,953	0.3%	193
Pike	10,089	9,970	-119	-1.2%	260
Potter	5,327	5,347	20	0.4%	187
Schuylkill	50,164	50,513	349	0.7%	174
Snyder	15,229	15,247	18	0.1%	203
Somerset	25,550	24,459	-1,091	-4.3%	303
Sullivan	NA	NA			
Susquehanna	9,034	9,417	383	4.2%	54
Tioga	12,973	13,595	622	4.8%	42
Union	16,122	16,290	168	1.0%	153
Venango	20,613	19,818	-795	-3.9%	296
Warren	14,916	15,127	211	1.4%	131
Washington	81,573	86,308	4,735	5.8%	27
Wayne	14,928	14,441	-487	-3.3%	293
Westmoreland	132,146	133,760	1,614	1.2%	142
Wyoming	9,847	9,861	14	0.1%	202
York	170,806	172,593	1,787	1.0%	152

Source. Keystone Research Center based on Quarterly Census of Employment and Wages (QCEW) data

### Box 3. Job Growth in Manufacturing Since December 2010

Overall in the last two years, U.S. manufacturing employment growth is up 3.3% compared to an increase of 0.2% in Pennsylvania. (See Table 1.8 and Figure 1.2.) Job growth in traditional Pennsylvania strengths such as Primary Metal Manufacturing, Fabricated Metal Product Manufacturing, and Machinery Manufacturing offset widespread manufacturing job losses, especially in Printing, Chemical, and Nonmetallic Mineral Manufacturing.

**Figure 1.2 Manufacturing Employment in Pennsylvania Is Little Changed from Its December 2010 Levels While U.S. Manufacturing Is Up 3.3%**



Source: Keystone Research Center based on QCEW data

Continued on Next Page

### Box 3. Job Growth in Manufacturing Since December 2010 (Cont'd)

Table 1.8

#### Manufacturing Employment Change by Manufacturing Subsector

Manufacturing Subsector (Three digit NAICS)	Dec 2010	Dec 2011	Dec 2012	Dec 2010 to Dec 2012	
				Change	Percent Change
U.S. Manufacturing	11,570,589	11,788,701	11,949,982	379,393	3.3%
Pennsylvania Manufacturing	564,296	567,478	565,163	867	0.2%
Food	67,318	67,685	66,955	-363	-0.5%
Beverage & tobacco	6,690	6,354	6,625	-65	-1.0%
Textile mills	3,822	3,557	3,457	-365	-9.5%
Textile product mills	4,063	4,035	4,239	176	4.3%
Apparel	6,686	6,083	5,781	-905	-13.5%
Leather & allied	919	929	973	54	5.9%
Wood product	19,336	18,163	18,404	-932	-4.8%
Paper	24,763	24,015	23,899	-864	-3.5%
Printing & related	27,916	26,464	25,061	-2,855	-10.2%
Petroleum & coal	6,117	6,166	5,836	-281	-4.6%
Chemical	42,588	42,405	41,177	-1,411	-3.3%
Plastics & rubber	35,707	34,875	34,753	-954	-2.7%
Nonmetallic mineral	20,918	20,412	19,783	-1,135	-5.4%
Primary metal	36,995	39,317	39,550	2,555	6.9%
Fabricated metal	79,579	81,408	81,074	1,495	1.9%
Machinery	46,062	48,333	48,899	2,837	6.2%
Computer & electronic	32,096	31,976	31,595	-501	-1.6%
Electrical equip. & appl.	25,228	26,492	26,096	868	3.4%
Transportation equip.	36,613	38,200	38,881	2,268	6.2%
Furniture & related	14,615	14,633	15,356	741	5.1%
Miscellaneous	26,265	25,976	26,769	504	1.9%

Source. Keystone Research Center based on Quarterly Census of Employment and Wages (QCEW) data

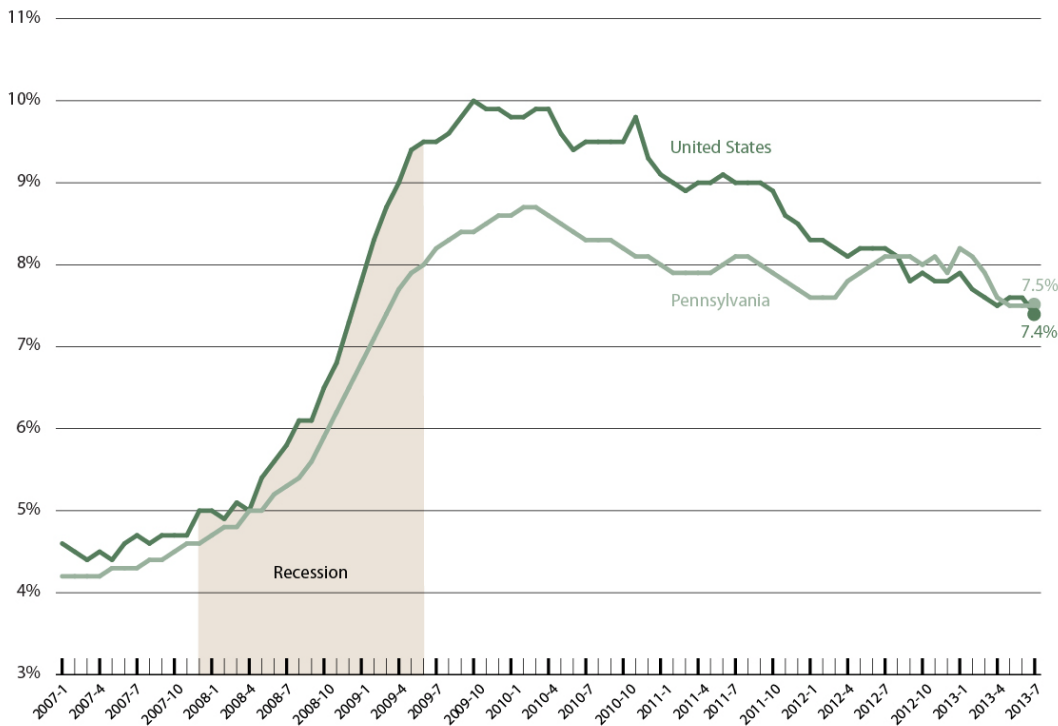
## Unemployment and Labor Force Participation

Propelled by a gain of 87,300 jobs between January 2010 and January 2011, the unemployment rate in Pennsylvania fell six-tenths of one percentage point in that 12-month period (from 8.6% to 8%). A combination of slow job growth and a rising labor force meant that in the two-and-a-half years since January 2011 the Pennsylvania unemployment rate fell only another half a percentage point, to 7.5%. (See Figure 1.) Nationally, driven by a declining labor force and healthier job growth, the U.S. unemployment rate fell by 1.7 percentage points over the same period, eliminating entirely the early advantage Pennsylvania had over the United States' jobless rate.

### Definition

**Unemployment rates** count the share of the labor force that is not currently working but is actively seeking employment. More precisely, the unemployed must meet all of the following criteria: they had no employment during a given week, they were available for work at that time, and they made specific efforts to find employment some time during the previous four-week period. Persons laid off from a job and expecting recall need not be looking for work to be counted as unemployed.

**Figure 1.3 Pennsylvania's Unemployment Rate Has Hovered Between 7.5% and 8% Since January 2011**



Source: Keystone Research Center based on Bureau of Labor Statics (BLS) data

Table 1.9, 1.10, and 1.11 present annual unemployment rates, labor force participation rates, and the ratio of employment- to- population (EPOP) by demographic group in Pennsylvania and the United States in 2010 and 2012.

In the period since 2010, the experience of men and women seeking work has diverged in Pennsylvania. The unemployment rate for men fell by 1.6 percentage points to 7.9% in 2012, while the unemployment for women remained essentially unchanged at 7.7% in 2012.<sup>13</sup>

The unemployment rate was essentially unchanged – at 4.8% in 2012 – for workers with a Bachelor’s degree or higher.<sup>14</sup> It is likely that the layoff of 45,000 teachers and other public-sector workers in Pennsylvania prevented a decline in unemployment rates for women and college graduates. (See Table 1.2 for more on public-sector layoffs.)

Although unemployment rates for workers aged 25 to 54 and workers aged 55 and older were essentially unchanged<sup>15</sup> between 2010 and 2012

in Pennsylvania, the unemployment rate for workers between 16 and 24 years of age fell by 4.1 percentage points.<sup>16</sup> Encouragingly, falling unemployment for young workers was not the result of falling labor force participation. Labor force participation for workers aged 16 to 24 climbed from 57% in 2010 to 60.9% in 2012. As illustrated in Table 1.2, a major contributor to job growth in Pennsylvania over this period was the Leisure and Hospitality Sector, which added 30,000 jobs. Not only was this

***In Pennsylvania in 2010;***

- ***43% of public sector workers had a Bachelor’s degree or higher, compared to 29% of private sector workers.***
- ***Two-thirds of the workers employed in public Elementary and Secondary schools were women.***

<sup>13</sup> Although the unemployment rate for women was one-tenth of a percentage point higher in 2012 than in 2010, this difference is not statistically significant. The labor force participation rate was higher for both men and women, but the difference between the rate in 2010 and 2012 is not statistically significant. (See Table 1.10.) Reflecting the stronger labor market performance for men, their employment-to-population (EPOP) ratio was up by 1.8 percentage points between 2010 and 2012. (See Table 1.11.) The EPOP ratio for women was higher, but again the difference between the rate in 2010 and 2012 is not significantly different than zero.

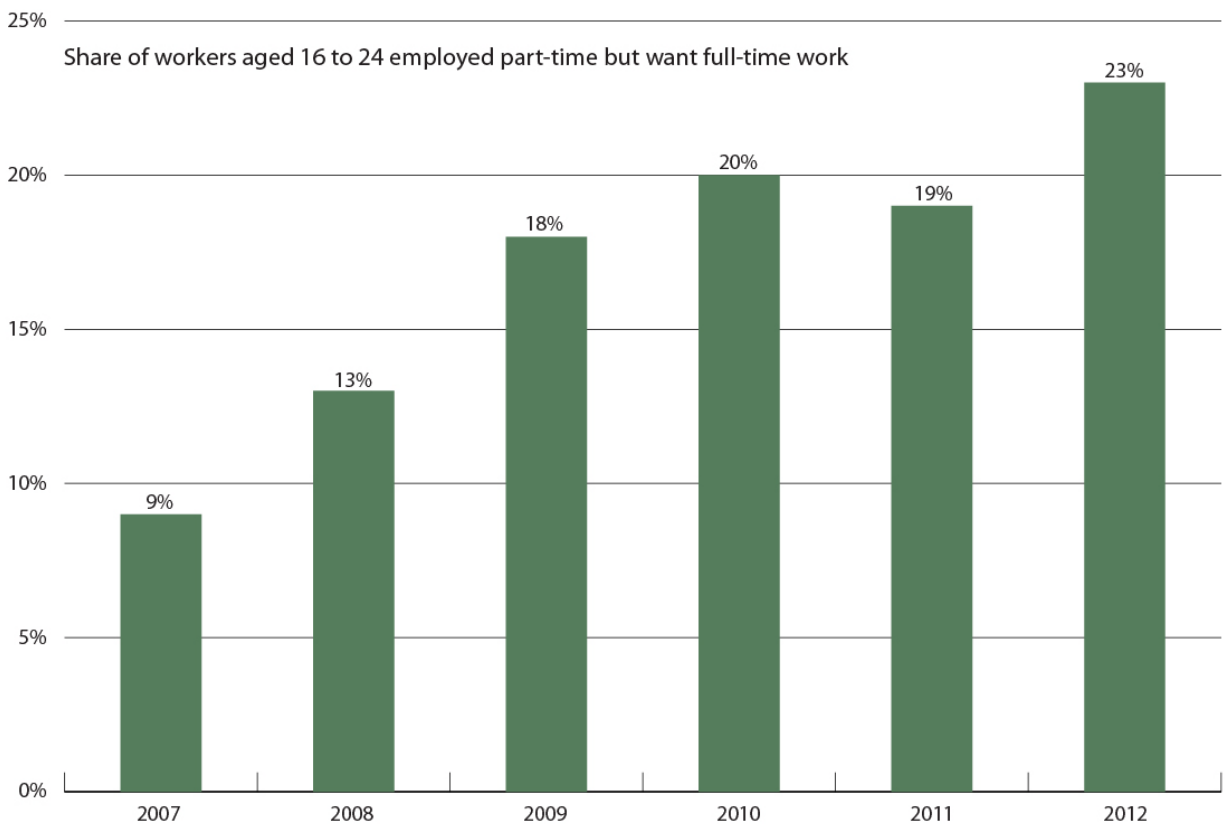
<sup>14</sup> Although the unemployment rate for workers with a Bachelor’s or higher was three-tenths of a percentage point higher in 2012 than in 2010, this difference is not statistically significant. The labor force participation rate was lower, but the difference between 2010 and 2012 is not statistically significant. (See Table 1.10.) The employment-to-population (EPOP) ratio for people with a Bachelor’s or higher was down by 1.4 percentage points between 2010 and 2012. (See Table 1.11.)

<sup>15</sup> Although the unemployment rates for both prime age and older individuals did fall by four-tenths and two-tenths of percentage point, respectively, neither difference was statistically significant. The labor force participation rate and the employment-to-population (EPOP) ratio for prime age adults and workers 55 years of age and older was essentially unchanged over the period.

<sup>16</sup> The labor force participation rate for people aged 16 to 24 was up 3.9 percentage points to 60.9% in 2012. The employment-to-population (EPOP) ratio for people aged 16 to 24 in Pennsylvania climbed from 47% in 2010 to 52.7% in 2012. Nationally, the labor force participation rate for this age group was unchanged, and the EPOP ratio was up by 1 percentage point to 46%. It is of note that the EPOP ratio in 2010 for 16 to 24 year olds reached its lowest point since 1979 both nationally and in Pennsylvania.

sector growing quickly relative to most other Pennsylvania industries, but the share of young workers in the industry workforce, which was already relatively high, increased from 34% to 39% over this period.<sup>17</sup> Another important source of employment growth for young workers was Administrative & Support Services,<sup>18</sup> a sector which didn't make a substantial contribution to overall Pennsylvania job growth but in which young workers increased their share of employment especially in four industry subcategories: Employment Services (temporary help), Investigation and Security Services, Services to Buildings and Dwellings, and Landscaping Services. As discussed in more detail in Chapter 3, these industries in which young workers have found employment tend to pay low wages and offer only part-time work. So although the quantity-of-jobs picture for Pennsylvania's young workers has improved, as Figure 1.4 illustrates, a rising share of these workers are employed part-time jobs because they cannot find full-time work.

**Figure 1.4 Young Workers in Pennsylvania Are Eager for Full-Time Work but Increasingly Are Struggling to Find It**



Source. Economic Policy Institute analysis of CPS data

<sup>17</sup> Over the same time period, the share of workers in this sector between the ages of 16 and 19 fell from 16.8% in 2010 to 15.9% in 2012.

<sup>18</sup> For a description of this industry, see <http://www.bls.gov/iag/tgs/iag561.htm>

Table 1.9

## Unemployment Rates, Pennsylvania and U.S., 2010 and 2012

Demographic	2010		2012	
	Pennsylvania	United States	Pennsylvania	United States
All	8.6%	9.6%	7.8%*	8.1%*
Gender				
Male	9.5%	10.5%	7.9%*	8.2%*
Female	7.6%	8.6%	7.7%	7.9%*
Age				
16-24 yrs	17.5%	18.4%	13.4%*	16.2%*
25-54 yrs	7.4%	8.6%	7.0%	7.0%*
55 yrs and older	6.5%	7.0%	6.3%	6.0%*
Race / ethnicity				
White	7.5%	8.0%	6.6%*	6.6%*
African-American	15.8%	15.9%	14.5%	13.9%*
Hispanic	15.5%	12.5%	12.8%	10.3%*
Asian/Pacific islander	10.2%	7.7%	10.2%	6.2%*
Education				
Less than high school	17.9%	18.8%	15.4%*	16.5%*
High school	10.0%	12.0%	9.2%	10.0%*
Some college	8.5%	9.1%	7.4%*	7.7%*
Bachelor's or higher	4.5%	4.9%	4.8%	4.2%*

\*The difference between 2012 and 2010 is significantly different from zero.

Source. Economic Policy Institute analysis of CPS data



Table 1.10

## Labor Force Participation Rate, Pennsylvania and U.S., 2010 and 2012

Demographic	2010		2012	
	Pennsylvania	United States	Pennsylvania	United States
All	63.2%	64.7%	64.0%*	63.7%*
Gender				
Male	69.9%	71.2%	70.7%	70.2%*
Female	57.1%	58.6%	57.8%	57.7%*
Age				
16-24 yrs	57.0%	55.2%	60.9%*	54.9%
25-54 yrs	82.9%	82.2%	82.6%	81.4%*
55 yrs and older	38.4%	40.2%	39.5%	40.5%*
Race / ethnicity				
White	64.0%	64.6%	64.5%	63.5%*
African-American	56.3%	62.2%	61.4%*	61.2%*
Hispanic	63.7%	67.5%	64.5%	66.4%*
Asian/Pacific islander	63.8%	64.8%	57.5%*	64.2%*
Education				
Less than high school	35.8%	41.3%	36.6%	40.4%*
High school	59.8%	62.5%	59.3%	60.5%*
Some college	70.1%	69.4%	71.3%	68.0%*
Bachelor's or higher	79.0%	77.0%	77.9%	76.2%*

\*The difference between 2012 and 2010 is significantly different from zero.

Source. Economic Policy Institute analysis of CPS data

Table 1.11

## Employment to Population Ratio, Pennsylvania and U.S., 2010 and 2012

Demographic	2010		2012	
	Pennsylvania	United States	Pennsylvania	United States
All	57.8%	58.5%	59.0%*	58.6%
Gender				
Male	63.3%	63.7%	65.1%*	64.4%*
Female	52.8%	53.6%	53.4%	53.1%*
Age				
16-24 yrs	47.0%	45.0%	52.7%*	46.0%*
25-54 yrs	76.8%	75.1%	76.8%	75.7%*
55 yrs and older	35.9%	37.4%	37.0%	38.0%*
Race / ethnicity				
White	59.2%	59.5%	60.2%*	59.4%
African-American	47.4%	52.3%	52.5%*	52.6%
Hispanic	53.8%	59.0%	56.2%	59.5%*
Asian/Pacific islander	57.4%	59.9%	51.6%*	60.2%
Education				
Less than high school	29.4%	33.6%	31.0%	33.7%
High school	53.8%	55.0%	53.8%	54.5%*
Some college	64.1%	63.1%	66.0%*	62.8%*
Bachelor's or higher	75.5%	73.2%	74.1%*	72.9%*

\*The difference between 2012 and 2010 is significantly different from zero.

Source. Economic Policy Institute analysis of CPS data

The unemployment rate is a conservative measure of what economists call the underutilization of labor. It fails to capture people who work part-time because they cannot find a full-time job and those who have stopped looking for a job because they do not believe they can find one. The broadest measure of labor market slack, which takes into account both these groups and one other, is called the underemployment rate and is defined more formally in the box to the side.

In 2012, 13.9% of Pennsylvania workers were underemployed compared to 14.7% of U.S. workers.<sup>19</sup> (See Table 1.12.) Underemployment in Pennsylvania has fallen by eight-tenths of a percentage point since 2010 compared to a decline of 2 percentage points for workers nationally.

### Definition

**Underemployment rates** include four groups: (1) the unemployed, (2) discouraged workers (those who have given up looking for work in the last year), (3) part-time workers who would prefer full-time work, and (4) those who face a substantial barrier to work, such as lack of transportation or child care (this last group tends to be very small).

<sup>19</sup> The underemployment rate in Pennsylvania was 13.9% in 2011 and 7.7% before the recession began in 2007.

Matching trends in unemployment, the underemployment rates for women (14.5%) and college graduates (8.1%) were essentially unchanged in 2012 from their 2010 levels. The underemployment rate for workers under the age of 25 was down by slightly more than 3 percentage points (to 25.3%), reflecting in large part the 4.1-percentage-point decline in the unemployment rate for this group. In 2012, it remained the case that one in four Pennsylvania workers under the age of 25 was unable to find as much paid work as they wanted.<sup>20</sup>

Table 1.12

Underemployment Rate, Pennsylvania and U.S., 2010 and 2012

Demographic	2010		2012	
	Pennsylvania	United States	Pennsylvania	United States
All	14.7%	16.7%	13.9%*	14.7%*
Gender				
Male	15.5%	17.5%	13.4%*	14.5%*
Female	13.8%	15.9%	14.5%	14.9%*
Age				
16-24 yrs	28.4%	30.4%	25.3%*	27.9%*
25-54 yrs	12.6%	15.0%	12.2%	12.8%*
55 yrs and older	11.8%	12.9%	11.3%	11.6%*
Race / ethnicity				
White	13.1%	14.0%	12.2%*	12.1%*
African-American	24.9%	24.5%	22.6%	22.6%*
Hispanic	23.9%	23.7%	23.0%	20.0%*
Asian/Pacific islander	14.3%	13.9%	12.8%	11.9%*
Education				
Less than high school	27.6%	32.0%	24.6%*	28.7%*
High school	17.3%	20.7%	16.7%	18.1%*
Some college	14.8%	15.9%	13.9%	14.2%*
Bachelor's or higher	7.8%	8.6%	8.1%	7.8%*

\*The difference between 2012 and 2010 is significantly different from zero.

Source. Economic Policy Institute analysis of CPS data

<sup>20</sup> In 2007, before the recession began, the underemployment rate for workers aged 16 to 24 was 16.2%.

## Chapter 2: Wages

As Chapter 1 demonstrated, Pennsylvania job growth has been decelerating and the labor force growing since 2010. This chapter illustrates the consequences of these trends for wage growth.

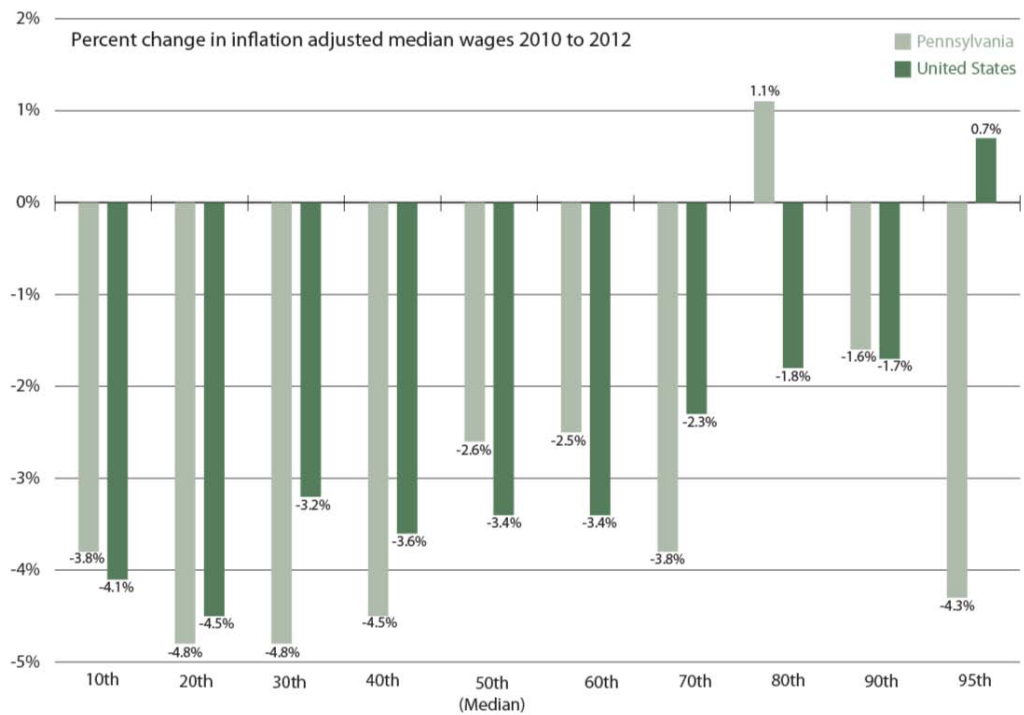
As Figure 2.1 and Tables 2.1 and 2.2 illustrate, inflation-adjusted wages for most workers in both Pennsylvania and the United States have fallen since 2010.

Pennsylvania low-wage workers at the 10<sup>th</sup> percentile saw their earnings fall by 3.8% from 2010 to 2012, or 33 cents, to \$8.37 per hour. The typical worker earning the state's median wage saw earnings fall by 2.6% to \$16.77 per hour.

Even high-wage workers in Pennsylvania saw their earnings fall over this period. For those at the 90<sup>th</sup> percentile, earnings fell by 1.6% to \$37.45 per hour, while those at the 95<sup>th</sup> percentile saw their earnings fall by 4.3% to \$48.06 per hour.

Between 2010 and 2012, wages in the bottom four deciles (the 10<sup>th</sup> to 40<sup>th</sup> deciles) fell on average by 4.5% in Pennsylvania, compared to 3.8% in the nation. In both Pennsylvania and the United States, workers in the top four deciles (the 60<sup>th</sup> to 90<sup>th</sup> deciles) experienced smaller declines in wages, on average, than workers at or below the median.<sup>21</sup> Notably, workers in the 95<sup>th</sup> percentile in Pennsylvania did much worse than their national counterparts, as their wages fell by 4.3% compared to a slight gain

**Figure 2.1 Wages For Most Pennsylvania Workers Decline as Unemployment Remains High in 2012**



Source: Keystone Research Center based on CPS data

<sup>21</sup> Between 2010 and 2012, wages in the top four deciles in Pennsylvania fell on average by 1.7% compared to a 2.6% decline at the median and an average decline of 4.5% in the bottom four deciles. In the U.S. over this period, wages in the top four deciles fell on average by 1.7% compared to 3.4% at the median and an average decline of 3.8% in the bottom four deciles.

for the 95<sup>th</sup> percentile nationally. Even taking into account this recent decline in wages, the 95<sup>th</sup> percentile in Pennsylvania has experienced more earnings growth than any other group since 2007.

## Pennsylvania Wages Compared to U.S. Wages

Table 2.1

Hourly earnings by percentile 2010 to 2012 in Pennsylvania  
(2012 dollars)

Percentile	2010	2012	Change	Percent Change
10th	\$8.70	\$8.37	-\$0.33	-3.8%
20th	\$10.56	\$10.04	-\$0.51	-4.8%
30th	\$12.62	\$12.02	-\$0.60	-4.8%
40th	\$14.91	\$14.24	-\$0.67	-4.5%
50th (Median)	\$17.23	\$16.77	-\$0.46	-2.6%
60th	\$20.04	\$19.54	-\$0.50	-2.5%
70th	\$23.99	\$23.07	-\$0.92	-3.8%
80th	\$28.59	\$28.89	\$0.30	1.1%
90th	\$38.07	\$37.45	-\$0.62	-1.6%
95th	\$50.24	\$48.06	-\$2.17	-4.3%

Source. Keystone Research Center based on CPS data

Table 2.2

Hourly earnings by percentile 2010 to 2012 in the United  
States (2012 dollars)

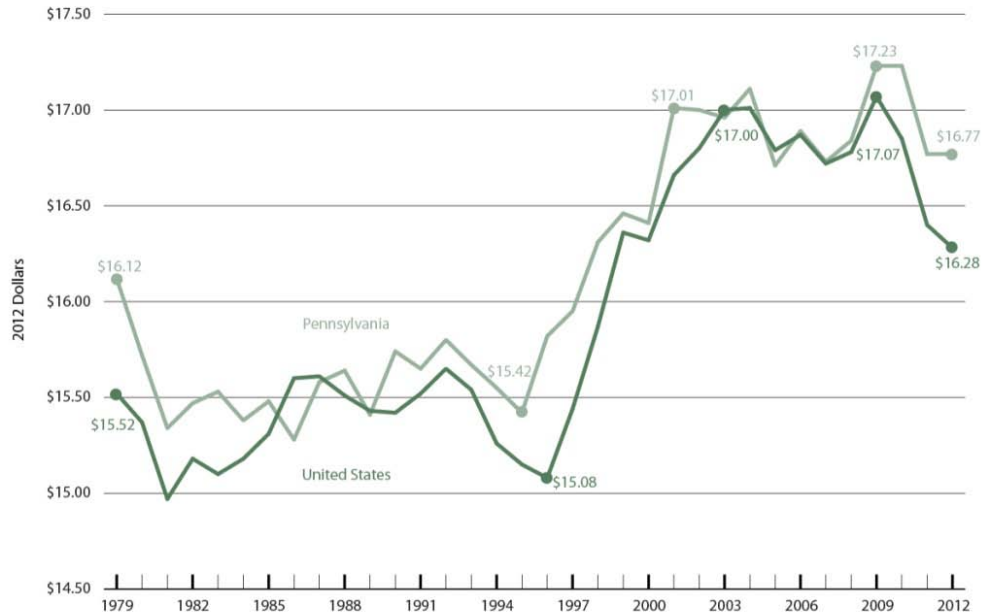
Percentile	2010	2012	Change	Percent Change
10th	\$8.54	\$8.19	-\$0.35	-4.1%
20th	\$10.35	\$9.88	-\$0.47	-4.5%
30th	\$12.22	\$11.82	-\$0.40	-3.2%
40th	\$14.50	\$13.98	-\$0.52	-3.6%
50th (Median)	\$16.85	\$16.28	-\$0.57	-3.4%
60th	\$19.93	\$19.25	-\$0.69	-3.4%
70th	\$24.00	\$23.46	-\$0.54	-2.3%
80th	\$29.65	\$29.12	-\$0.53	-1.8%
90th	\$40.24	\$39.57	-\$0.67	-1.7%
95th	\$50.82	\$51.18	\$0.36	0.7%

Source. Keystone Research Center based on CPS data

## Pennsylvania Wage Trends Since 1979

Figure 2.2 illustrates median hourly wages in Pennsylvania and the United States from 1979 to 2012. (All figures are in 2012 dollars.) Wages for the typical worker in Pennsylvania declined sharply in the early 1980s, and by 1995, the low point for wages following the 1991 recession, wages remained 4.4% below their 1979 peak.

**Figure 2.2 Median Hourly Wages, Pennsylvania U.S., 1979-2012**



Source: Keystone Research Center analysis of CPS ORG data

**Table 2.3**

Median Hourly Wages by Gender, Race, and Ethnicity in Pennsylvania, 2010 and 2012

Demographic	2010	2012	Percent Change
All	\$17.23	\$16.77	-2.6%
White	\$17.96	\$17.42	-3.0%
Black	\$14.37	\$13.77	-4.2%
Hispanic	\$12.54	\$12.07	-3.7%
Men	\$19.05	\$18.55	-2.6%
White	\$19.89	\$19.23	-3.3%
Black	\$15.27	\$13.80	-9.7%
Hispanic	\$12.84	\$12.99	1.2%
Women	\$15.55	\$14.87	-4.4%
White	\$15.86	\$15.22	-4.1%
Black	\$13.31	\$13.75	3.3%
Hispanic	\$11.64	\$10.62	-8.8%

Source: Keystone Research Center analysis of CPS ORG data

Propelled by strong job growth and low unemployment, wages between 1995 and their 2001 peak grew by 10% in Pennsylvania. A weak and short recovery following the 2001 recession meant that wages grew by just 1.3% between 2001 and 2009. High unemployment following the Great Recession has erased all wage gains earlier in the 2000s and, if it persists, risks eroding gains made in the late 1990s.

## Wages by Race, Ethnicity, and Gender

Table 2.3 breaks down recent wage trends by race, ethnicity, and gender in Pennsylvania. Since 2010, the wages of the typical man in Pennsylvania have declined by 2.6% (49 cents), to \$18.55 per hour. White men saw their wages decline by 3.3% (66 cents), to \$19.23 per hour, while black men's wages declined by almost 10% (\$1.48) to \$13.80 per hour. Hispanic men did slightly better as their pay dipped by 1.2% (15 cents) to \$12.99 per hour.<sup>22</sup>

For both white and black men, wages fell slightly less in the bottom 40% of the wage distribution between 2010 and 2012. On average, wages for white men in the 10<sup>th</sup> to 40<sup>th</sup> percentile fell by 3.1% over this period, while wages from the 60<sup>th</sup> to 90<sup>th</sup> percentile fell by 3.5%. Similarly, wages for black men fell on average by 1.4% in the 10<sup>th</sup> to 40<sup>th</sup> percentile, while black men from the 60<sup>th</sup> to 90<sup>th</sup> percentile experienced an average decline of 4% in earnings.

In the previous chapter, we showed that unemployment rates for women were essentially unchanged between 2010 and 2012. In Table 2.2, we find the median female wage falling by 3.5% (68 cents) to \$14.87 per hour over this period. Median hourly wages for white and Hispanic women fell by 4.1% and 8.8%, respectively. The median-wage black woman did better over this period, experiencing an increase in hourly earnings of 3.3% (44 cents) to \$13.75 per hour.

In contrast to the experience of men, the bottom 40% of black and white women saw their earnings decline on average by 6.4% and 4.4%, respectively. The top 40% of black women, on the other hand, saw their earnings dip 6.9%, while the top 40% of white women did not do as well in absolute terms. The earnings of white women in the top 40% fell on average by 1.2%, which was a smaller decline than among the bottom 40% of white women.

## Wages by Age

Table 2.4 breaks out wage trends by age group in Pennsylvania between 2010 and 2012. Young workers aged 16 to 24, a group that experienced significant declines in unemployment and rising labor force participation between 2010 and 2012, still saw their hourly earnings fall 1.8% (16 cents) to \$16.77 per hour in 2012. In contrast, prime age workers whose employment rate (76.8%) was unchanged between 2010 and 2012 saw their earnings fall by 3.1% (59 cents), to \$18.11 per hour in 2012. Workers 55 years of age and older saw their hourly earnings fall by 1.7% (30 cents), to \$17.87 per hour. The declines in earnings for this group are driven by falling wages for workers 65 and older; those over 55 but under 65 and thus ineligible for full Social Security benefits experienced only a slight decline of 0.1% (2 cents) in their hourly earnings.

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<sup>22</sup>Wages for Hispanic males declined in all other percentiles.

Table 2.4

Median Hourly Wages by Education in Pennsylvania, 2010 and 2012

Age Group	2010	2012	Percent Change
16 yrs and older	\$16.87	\$16.31	-3.3%
18-64 yrs*	\$17.23	\$16.77	-2.6%
16-24 yrs	\$9.05	\$8.89	-1.8%
20-24 yrs	\$9.72	\$9.56	-1.6%
25-54 yrs	\$18.69	\$18.11	-3.1%
55-64 yrs	\$19.09	\$19.07	-0.1%
55 yrs & older	\$18.18	\$17.87	-1.7%
65 yrs & older	\$13.59	\$13.12	-3.5%

\*Unless otherwise specified our analysis of wage data throughout this paper is limited to the age group 18 to 64.

Source. Keystone Research Center analysis of CPS ORG data

## Wages by Educational Attainment

Table 2.5 presents earnings by educational attainment in Pennsylvania for workers between the ages of 18 and 64. In the last two years, high school dropouts have seen their hourly earnings fall by 6.8% (73 cents) to \$10.01 per hour. Workers with only a high school diploma did not do much better, as their earnings fell 5.4%

(82 cents) to \$14.20 per hour. Workers who have taken some college courses but have not obtained a degree saw their earnings fall 12.3% (\$1.78). Among workers with an associate degree, wage trends diverged — those holding an occupational

Table 2.5

Median Hourly Wages by Education in Pennsylvania, 2010 and 2012

Age Group	2010	2012	Percent Change
All	\$17.23	\$16.77	-2.6%
Dropouts	\$10.74	\$10.01	-6.8%
High School	\$15.02	\$14.20	-5.4%
Some College	\$15.75	\$14.48	-8.1%
Some College, No Degree	\$14.53	\$12.75	-12.3%
Associate Degree	\$17.23	\$16.77	-2.6%
Occupational/Vocational	\$16.37	\$17.03	4.1%
Academic	\$17.86	\$16.99	-4.9%
Bachelor's Degree or Higher	\$25.91	\$25.76	-0.6%
Bachelor's Degree	\$24.12	\$24.24	0.5%
Advanced Degree	\$29.42	\$29.53	0.4%

Source. Keystone Research Center analysis of CPS ORG data

or vocational associate degree saw their earnings climb in the last two years by 4.1% (67 cents) to



\$17.03 per hour, while those with an academic associate degree experienced a 4.9% (88 cents) decline in earnings, to \$16.99 per hour.

As illustrated in the previous chapter, unemployment rates did not decline for workers with a college degree or more, indicating weak labor market conditions for this group. Although their employment prospects did not improve, college graduates between 2010 and 2012 experienced on average only a modest 0.6% decline in earnings (15 cents), to \$25.76 per hour.<sup>23</sup>

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<sup>23</sup> The overall wage decline for workers with a college degree or more represents a combination of declining earnings for the bottom three percentiles among workers with only a college degree and falling earnings for the top three percentiles of workers with an advanced degree.

## Chapter 3: Poverty-Wage Jobs

In this chapter, we turn our attention to the lowest-paying jobs in the state’s economy. Specifically, we look at jobs paying poverty wages — hourly wages that, even if a worker worked full-time and full-year, would generate an annual income below the federal poverty line for a family of four. As a society, we have failed to honor the commitment to work made by those performing poverty-wage jobs, who remain unable to afford a decent standard of living even when they work hard and play by the rules. (See the box on the side for the full definition of poverty-wages.)

Based on this definition, we estimate the poverty wage to equal \$11.19 per hour in 2012. That year, 26% of workers in Pennsylvania were paid wages below this amount. The share of workers in poverty-wage jobs has increased by 2.6 percentage points (i.e., by one ninth) since 2010.

### Definition: Poverty-Wage Jobs

*We define poverty-wage jobs as those paying hourly wages that would not be sufficient for a full-time (40 hours a week), year-round (52 weeks) worker to earn an income greater than the poverty line for a family of four with two children. In 2012 dollars, the poverty wage was \$11.19 per hour or less. At this wage, a worker employed full-time year-round would earn \$23,283.*

Table 3.1

#### Share of Pennsylvania Workers Earning Poverty Wages, 2010-2012

Demographic	2010	2012	Change
All	23.5%	26.0%	2.6%
By Race and Gender			
White Men	16.9%	17.9%	0.9%
Black Men	34.2%	32.1%	-2.2%
White Women	26.3%	29.6%	3.2%
Black Women	32.2%	38.1%	6.0%
By Education			
No High School Degree	53.5%	58.6%	5.1%
High School Degree	29.2%	32.7%	3.5%
Some College	27.7%	33.2%	5.5%
No Degree	34.9%	42.2%	7.3%
AA Degree	17.8%	19.9%	2.1%
Bachelor's or Higher	9.1%	7.6%	-1.4%
By Age			
16-24 yrs	68.4%	69.6%	1.2%
20-24 yrs	58.5%	61.3%	2.8%
25-54 yrs	17.4%	19.4%	2.0%
55 yrs and older	21.9%	21.6%	-0.3%
55-64 yrs	17.7%	17.7%	0.0%

Note. Poverty wages are defined here as wages less than \$11.19 per hour, 2012 dollars.

Source. Keystone Research Center analysis of CPS ORG data

## Poverty-Wage Jobs by Race, Gender, and Education

As noted in Chapter 1, there has been essentially no change over the past two years in the unemployment rate for women, even as unemployment among men has fallen. In Chapter 2, we showed that, among white and black women, those earning less than the median experienced wage declines in the last two years ranging from 4.4% to 6.4%. Facing stubbornly high unemployment and falling wages, the share of white women working in poverty-wage jobs climbed from 26.3% in 2010 to 29.6% in 2012, an increase of 3.2 percentage points. The share of black women in poverty-wage jobs climbed from 32.2% in 2010 to 38.1% in 2012, an increase of 6 percentage points.

Men did somewhat better, with the share of black men in poverty-wage jobs declining by just over 2 percentage points to 32.1%, and the share of white men in poverty wage jobs increasing by just shy of a percentage point, to 17.9%.

Table 3.1 also presents changes in the share of workers in poverty-wage jobs by education. Workers with a Bachelor's degree or higher were less likely to be employed in poverty-wage jobs in 2012 than in 2010. All other educational groups were more likely to be employed in poverty-wage jobs in 2012 than in 2010.

By age group, workers aged 20 to 24, despite seeing the largest decline in their unemployment rate between 2010 and 2012, were more likely to be employed in poverty-wage jobs in 2012 than in 2010. Prime age workers (those between 25 and 54 years of age) were also more likely to be employed in poverty-wage jobs in 2012.

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### *Poverty-Wage Jobs Are Sticky*

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The Keystone Research Center's briefing paper *Stuck on the Bottom Rung of the Wage Ladder* found that roughly 40% of Pennsylvania workers earning poverty wages in 1998 were still earning poverty wages in 2004. Given economic trends in 2004, the share of poverty-wage earners stuck at the bottom of the wage ladder today has likely grown.

<http://keystoneresearch.org/publications/research/stuck-bottom-rung-wage-ladder>

## Where Are All Those Bad Jobs?

Three features characterize most poverty-wage, or “bad,” jobs: they make up the lowest-wage jobs in the service sector, are non-union, and are often part-time. In 2012, 44% of Pennsylvania workers with poverty-wage jobs had part-time jobs, and only 5% were members of unions. Pennsylvania workers in “service and sales occupations” account for 55% of all poverty-wage jobs. 68% of poverty-wage jobs in the commonwealth are in just three industries: Leisure and Hospitality, Wholesale and Retail Trade, and Education and Health Services.

The industry category “Education and Health Services” is a combination of “Education Services” and “Health Care and Social Assistance.” Health Care and Social Assistance is a highly polarized sector, containing both high-wage jobs for physicians and nurses as well as many low-wage but fast-growing jobs, such as home health aides and child care workers.

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### The Union Advantage For Low-Wage Workers

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In *Unions and Upward Mobility for Low-Wage Workers*, John Schmitt, Margy Waller, Shawn Fremstad, and Ben Zipperer analyzed wages for 15 low-wage occupations, including child care workers and home health aides. They found that unionization raised workers' wages by just over 16% — about \$1.75 per hour — compared to those of non-union workers.

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<http://www.cepr.net/documents/publications/UnionsandUpwardMobility.pdf>

Table 3.2

## Distribution of Pennsylvania Workers by Selected Characteristics of Wage Level, 2012

Characteristics	Workers with Poverty-Wage Jobs (wage<\$11.19/hr.)	Workers with Higher-Wage Jobs (wage>\$11.19/hr.)
Part-Time	44.2%	9.3%
Union Member	5.3%	16.9%
Percent in Occupation		
Management, business, and financial occupations	3.6%	18.4%
Professional and related occupations	7.4%	26.7%
Service occupations	39.0%	9.6%
Sales and related occupations	16.3%	6.8%
Office and administrative support occupations	14.1%	13.6%
Farming, fishing, and forestry occupations	1.9%	0.4%
Construction and extraction occupations	2.4%	5.1%
Installation, maintenance, and repair occupations	0.9%	4.8%
Production occupations	6.2%	7.5%
Transportation and material moving occupations	8.0%	7.2%
Percent in Industry		
Agriculture, forestry, fishing, and hunting	2.4%	0.4%
Mining	0.3%	0.7%
Construction	2.7%	5.6%
Manufacturing	6.3%	15.4%
Wholesale and retail trade	23.0%	11.2%
Transportation and utilities	2.7%	6.8%
Information	0.9%	1.7%
Financial activities	3.3%	7.1%
Professional and business services	8.0%	10.7%
Educational and health services	21.7%	27.4%
Leisure and hospitality	22.4%	4.1%
Other services	4.0%	3.2%
Public administration	2.4%	5.5%

Source. Keystone Research Center analysis of CPS data

## Chapter 4: Growing, But Apart

In this chapter, we shift our attention to economic growth and the distribution of income in Pennsylvania.

The recovery from the Great Recession began officially in June 2009. Between 2009 and 2010, a period including the first part of the recovery, inflation-adjusted per capita personal income in Pennsylvania grew by 1.5%, a bit more than the 1.3% nationwide. (Recall that per capita income is a measure of “average” income per person, and so it takes into account the impact of increases in income at the very top of the distribution. Thus, it is possible for per capita income to rise while incomes for most families do not rise.)

### Growth in Per Capita Personal Income and Gross Domestic Product

Table 4.1

Per Capita Income Growth, Pennsylvania, U.S., And Peer States (2012 dollars)

State	1979	2010	2012	1979 to 2012		2010 to 2012	
				Change	Percent Change	Change	Percent Change
Pennsylvania	\$26,685	\$42,591	\$43,616	\$16,931	60%	\$1,025	2.4%
United States	\$26,624	\$41,904	\$42,693	\$16,069	57%	\$789	1.9%
Delaware	\$27,855	\$41,518	\$41,940	\$14,085	49%	\$422	1.0%
Maryland	\$29,166	\$51,202	\$51,971	\$22,805	76%	\$769	1.5%
New Jersey	\$30,228	\$53,105	\$53,628	\$23,400	76%	\$523	1.0%
New York	\$28,836	\$51,727	\$52,095	\$23,259	79%	\$368	0.7%
Ohio	\$26,753	\$37,839	\$39,289	\$12,536	41%	\$1,450	3.8%
West Virginia	\$21,534	\$33,495	\$34,477	\$12,943	56%	\$982	2.9%

Source. Keystone Research Center based on Bureau of Economic Analysis (BEA) data

As Table 4.1 illustrates, per capita personal income in Pennsylvania in the two years since 2010 has grown by 2.4% , or by 1.2% per year. In the United States, per capita personal income grew by 1.9% in two years, or just shy of 1% a year.

As with the growth in personal income, the growth in inflation-adjusted Gross Domestic Product (GDP) was stronger from 2009 to 2010 than it has been on average since then.<sup>24</sup> From 2009 to 2010, GDP grew by 2.3% in Pennsylvania. Since 2010, it has grown on average by 1.8% per year — 3.6% in total. (See Table 4.2.)<sup>25</sup> Table 4.2 also breaks down GDP by industry in Pennsylvania and reveals patterns consistent with jobs data summarized in Chapter 1: the public sector and non-durable manufacturing saw output decline by \$1.13 billion and \$1.65 billion, respectively, from GDP growth between 2010 and 2012. The

<sup>24</sup> GDP is adjusted for inflation using the “chained CPI” and expressed in 2005 dollars.

<sup>25</sup> U.S. GDP grew by 2.4% from 2009 to 2010 and has grown on average in the two years since by 2.1% a year.

Pennsylvania agriculture, forestry, fishing, and hunting sector also declined, by \$463 million, or 16.8%, over this period. Mining posted strong growth, increasing by 15.4%, as did durable goods manufacturing (15.9% increase), leisure and hospitality (10.2% increase), and professional and business services (6.7% increase).

Table 4.2

Pennsylvania Gross Domestic Product by Industry (millions of 2005 dollars)

Sector	2010		2012		2010 to 2012	
	millions	Percent of total	millions	Percent of total	Change	Percent Change
All industry total	\$493,530	100%	\$511,345	100%	\$17,815	3.6%
Private industries	\$445,561	90.3%	\$464,644	90.9%	\$19,083	4.3%
Ag., forestry, fishing, & hunting	\$2,760	0.6%	\$2,297	0.4%	-\$463	-16.8%
Mining	\$5,018	1.0%	\$5,793	1.1%	\$775	15.4%
Utilities	\$9,512	1.9%	\$9,907	1.9%	\$395	4.2%
Construction	\$16,769	3.4%	\$17,447	3.4%	\$678	4.0%
Manufacturing	\$57,907	11.7%	\$60,718	11.9%	\$2,811	4.9%
Durable goods	\$31,127	6.3%	\$36,080	7.1%	\$4,953	15.9%
Nondurable goods	\$26,783	5.4%	\$25,129	4.9%	-\$1,654	-6.2%
Wholesale trade	\$28,145	5.7%	\$30,176	5.9%	\$2,031	7.2%
Retail trade	\$31,404	6.4%	\$31,979	6.3%	\$575	1.8%
Transportation & warehousing	\$15,240	3.1%	\$15,835	3.1%	\$595	3.9%
Information	\$24,006	4.9%	\$25,297	4.9%	\$1,291	5.4%
Finance & insurance	\$37,751	7.6%	\$39,253	7.7%	\$1,502	4.0%
Real estate & rental & leasing	\$64,358	13.0%	\$65,669	12.8%	\$1,311	2.0%
Professional & business services	\$64,986	13.2%	\$69,349	13.6%	\$4,363	6.7%
Pro., sci., & tech.	\$38,166	7.7%	\$40,310	7.9%	\$2,144	5.6%
Mgmt. of co. & ent.	\$13,857	2.8%	\$15,111	3.0%	\$1,254	9.0%
Admin. & waste mgmt.	\$12,904	2.6%	\$13,802	2.7%	\$898	7.0%
Education & health services	\$59,119	12.0%	\$60,333	11.8%	\$1,214	2.1%
Educational services	\$9,768	2.0%	\$9,689	1.9%	-\$79	-0.8%
Health care & social assistance	\$49,403	10.0%	\$50,740	9.9%	\$1,337	2.7%
Leisure & hospitality	\$16,934	3.4%	\$18,667	3.7%	\$1,733	10.2%
Arts, entertainment, & recreation	\$5,636	1.1%	\$6,241	1.2%	\$605	10.7%
Accommodation & food services	\$11,323	2.3%	\$12,454	2.4%	\$1,131	10.0%
Other services, except government	\$11,730	2.4%	\$11,851	2.3%	\$121	1.0%
Government	\$47,956	9.7%	\$46,835	9.2%	-\$1,121	-2.3%

Source. Keystone Research Center based on BEA data

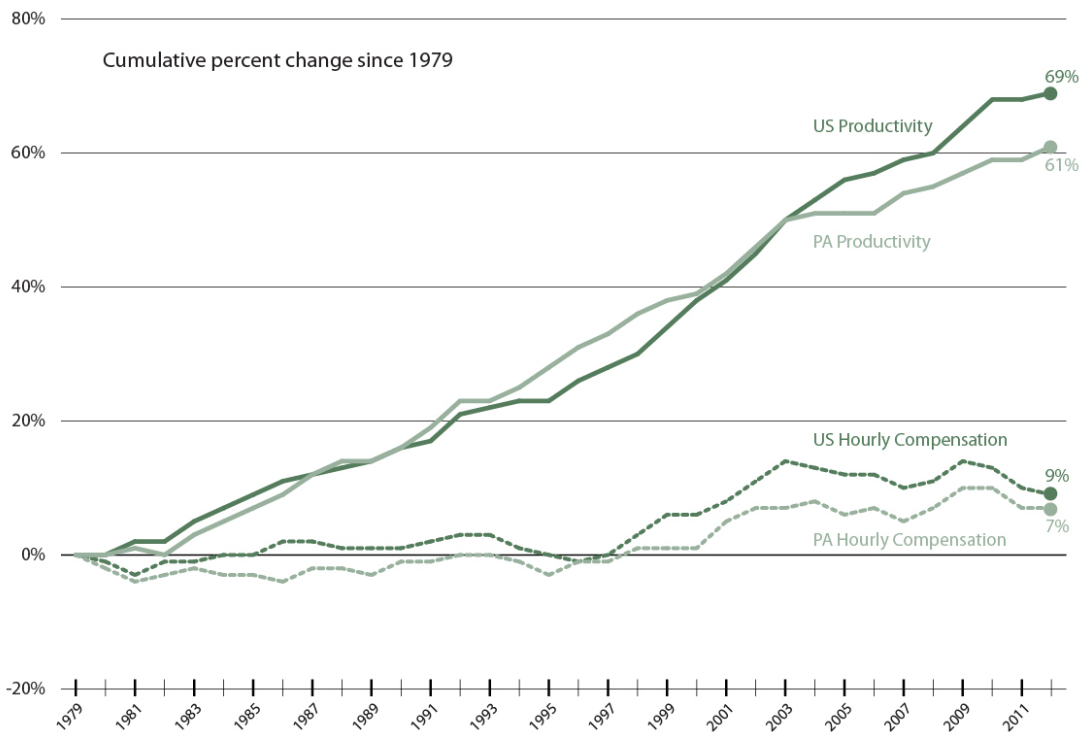
## Productivity Growth in Pennsylvania

The capacity of the economy to generate output and income growth is a function of how much output it can produce per hour of work, a concept commonly referred to as productivity. Using data from the Bureau of Labor Statistics, Labor Productivity and Costs Program, Larry Mishel and David Cooper of the Economic Policy Institute have developed a measure of the change in output per hour in Pennsylvania.

From 2010 to 2012, productivity rose in Pennsylvania by 1.3%, while median compensation fell 2.7%. Nationwide, productivity increased 0.72% and median hourly compensation declined 3.3%.

Figure 4.1 presents the cumulative growth of productivity in Pennsylvania since 1979 alongside a measure of the cumulative growth in median hourly total compensation. As the figure illustrates, productivity is up in Pennsylvania by 61% over this whole period, 15 times as much as median compensation, which grew by just 7%. As a result of these trends, only about one-ninth of the rise in productivity showed up in the paychecks of workers.

**Figure 4.1 Growth of Real Hourly Median Compensation for Production/Nonsupervisory Workers and Productivity, 1979-2011**



Source: Economic Policy Institute analysis of unpublished total economy data from Bureau of Labor Statistics, Labor Productivity and costs program; employment data from Bureau of Labor Statistics, Local Area Unemployment Statistics; and Bureau of Economic Analysis, State/National Income and Product Accounts public data series



## Rising CEO Pay

While the growth in earnings has been weak for most workers in the United States, CEO compensation has grown by 15% since 2010, an average increase of \$1.7 million to bring compensation for each CEO to an average of \$14.1 million in 2012. (See Table 4.3.) Since 1978, average CEO pay in the United States, adjusted for inflation, has risen \$12.6 million, or 876%. On average in 1978, CEOs made 29 times the average pay for private-sector production and nonsupervisory workers; in 2012, average CEOs made 273 times the compensation of average workers.

Because CEO pay tends to pull up compensation of other executives and managers in the economy it is considered an important driver of the growth in top incomes, the subject of the next section.

## Top Incomes in Pennsylvania

Surveys of households like the Current Population Survey (CPS) provide a good estimate of wage trends for most workers. However, household surveys do not allow us to examine with precision trends in income among the wealthiest households who tend to represent a tiny fraction of the population. Examining trends in top incomes requires us instead to rely upon tax data from the Internal Revenue Service (IRS) and the Pennsylvania Department of Revenue. These data are available only with a long lag. For example, the Pennsylvania Department of Revenue is still processing tax data for the 2011 tax year.

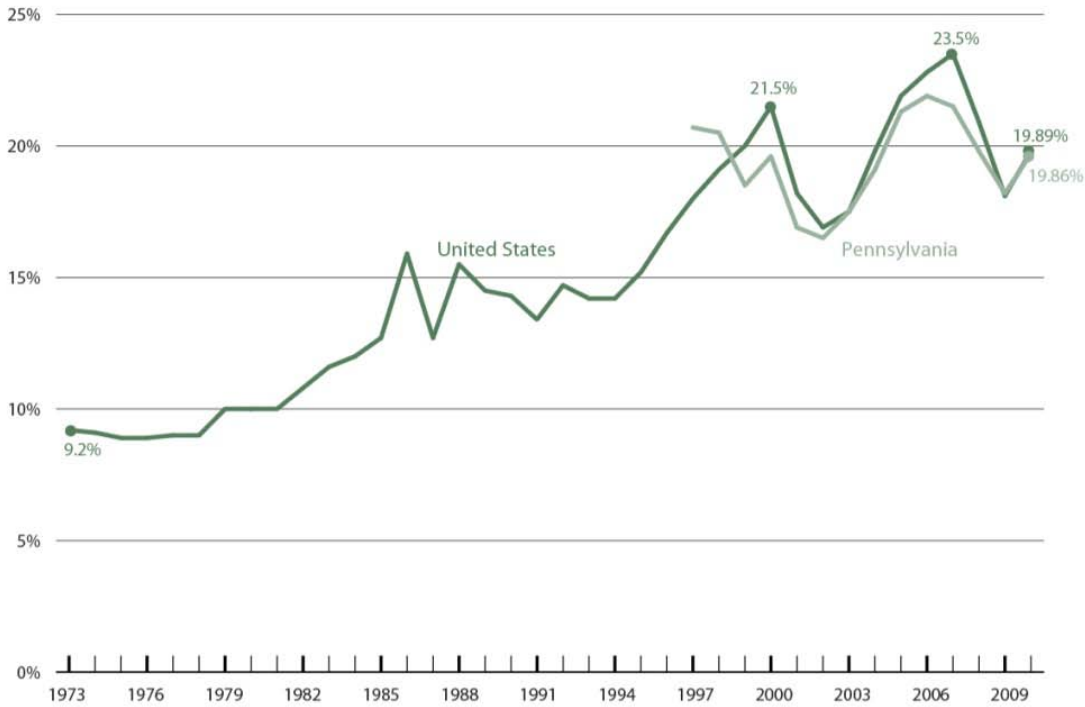
Table 4.3  
CEO compensation, CEO-to-worker compensation ratio, 2010-2012 in the U.S. (2012 dollars)

Year		CEO annual compensation	CEO-to-worker compensation ratio
	1978	\$1,442,000	29
	2010	\$12,286,000	228
	2012	\$14,074,000	273
2010 to 2012	Change	\$1,788,000	
	Percent Change	15%	
1978 to 2012	Change	\$12,632,000	
	Percent Change	876%	

Notes. CEO annual compensation includes the value of exercised stock options.

Source. See Table 1 of Lawrence Mishel and Natalie Sabadish, *CEO Pay in 2012 Was Extraordinarily High Relative to Typical Workers and Other Higher Earners*, Economic Policy Institute, Issue Brief #367

**Figure 4.2 The Share of Income Earned by the Top 1% Pennsylvania and U.S., 1973-2010**



Source: Keystone Research Center based on data from the Pennsylvania Department of Revenue, Internal Revenue Service, and Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118 (1), 2003. Updated estimates available online at <http://elsa.berkeley.edu/~saez/TabFig2010.xls>.

According to Pennsylvania Department of Revenue data, there were 61,000 Pennsylvania taxpayers in the top 1% in 2010.<sup>26</sup> This group experienced rapid growth in incomes as the economy grew from 2002 to 2007 (Table 4.4). During that time period, while average incomes grew by 15.4%, the incomes of the top 1% grew by 50%. As a result, the top 1% in Pennsylvania captured 54% of all income growth during this period.

As the financial sector crashed during the Great Recession, the top 1% in Pennsylvania experienced a 27% decline in their incomes from 2007 to 2009 — a reflection of the concentration of 1% wealth in stocks. As all incomes declined, the top 1% absorbed 44% of all the income losses during the Great Recession.

<sup>26</sup> In the 2012 State of Working Pennsylvania, we presented a preliminary estimate of top income figures in Pennsylvania based on Internal Revenue Service data. The estimates presented here for 2010 represent the final figures for top incomes in 2010, as published by the Pennsylvania Department of Revenue (DOR). Our preliminary estimate from last year was that the top 1% in Pennsylvania earned 19.7% of all income in 2010. According to the final numbers from DOR, the top 1% share of all income was 19.9%.

Table 4.4

## Inflation Adjusted Income Growth in Pennsylvania, 2000-2010

	Average Income Growth	Top 1% Incomes Growth	Bottom 99% Incomes Growth	Fraction of total growth (or loss) captured by top 1%
2001 Recession 2000-2002	-9.4%	-23.9%	-5.8%	50%
Expansion 2002-2007	15.4%	50.4%	8.5%	54%
Great Recession 2007-2009	-13.1%	-26.5%	-9.4%	44%
Recovery 2009-2010	2.7%	12.4%	0.5%	84%

Source. Keystone Research Center based on Pennsylvania Department of Revenue, Internal Revenue Service, and Piketty & Saez (2003) data

The beginning of the recovery marked a startling return to the pre-recession pattern of uneven income growth that has favored the 1% at the expense of the 99%. While all incomes grew on average by 2.7% in Pennsylvania in 2010, the income of the top 1% grew by 12.4%. As a result, the top 1% captured 84% of all income growth in the first full year of the economic recovery.<sup>27</sup> In the United States, the top 1% captured 93% of all income growth in 2010.<sup>28</sup> In the first two years of the economic recovery

Table 4.5

## Percent Change in Income by Income Group 2009 to 2010

Pennsylvania			
Income Group	2009	2010	Percent Change
Bottom 99%	\$41,281	\$41,502	0.5%
The 1%	\$907,932	\$1,020,199	12.4%
Bottom 90%	\$28,803	\$28,770	-0.1%
90-95%	\$128,536	\$129,299	0.6%
95-99%	\$212,971	\$218,229	2.5%
99.99.5%	\$426,184	\$447,536	5.0%
99.5-99.9%	\$770,245	\$831,901	8.0%
99.9-99.99%	\$2,439,322	\$2,777,081	13.8%
99.99-100%	\$16,731,881	\$21,387,875	27.8%
United States			
Income Group	2009	2010	Percent Change
Bottom 99%	\$41,696	\$41,777	0.2%
The 1%	\$913,451	\$1,019,089	11.6%
Bottom 90%	\$29,967	\$29,840	-0.4%
90-95%	\$124,916	\$125,627	0.6%
95-99%	\$201,580	\$205,529	2.0%
99.99.5%	\$399,985	\$418,378	4.6%
99.5-99.9%	\$738,187	\$798,120	8.1%
99.9-99.99%	\$2,465,244	\$2,802,020	13.7%
99.99-100%	\$19,631,207	\$23,846,950	21.5%

Source. Keystone Research center based on Pennsylvania Department of Revenue, U.S. Internal Revenue Service and Piketty & Saez (2003) data

<sup>27</sup> Our preliminary estimate for 2010 was that the top 1% captured 76% of all income growth in the first year of the recovery.

<sup>28</sup> Emmanuel Saez, *Striking it Richer: The Evolution of Top Incomes in the United States*, Unpublished Working Paper, March 2012 available online at <http://elsa.berkeley.edu/~saez/saez-UStopincomes-2010.pdf>.

nationally, from 2009 to 2011, the top 1% captured 121% of the increase in income.<sup>29</sup> That is, the bottom 99% experienced a decline in average income, while the top 1% gained all of the total national increase in income plus an additional one-fifth as much income redistributed from the 99% to the top 1%.

Income inequality in the United States reached a peak in 2007 not seen since 1928, as the share of income earned by the top 1% reached 23.5% (Figure 5.1).<sup>30</sup> Here in Pennsylvania, the share of income earned by the top 1% peaked at just shy of 22% in 2006 before following the national pattern and declining to 18% in 2009.<sup>31</sup> In 2010, the first full year of the recovery, top incomes were once again surging in Pennsylvania, driving the 1%'s share of all income to 19.9%.

In 2010, the average income of the bottom 99% of Pennsylvania taxpayers grew by 0.5%, while the average income of the top 1% grew by 12.4%. (See Table 4.4.)

Table 4.5 (on page 43) presents top fractile income levels for 2009 and 2010 in Pennsylvania and the United States. In 2010, the average income of Pennsylvania's top 1% grew by over \$112,000 to \$1,019,089. Over the same period, the average income of Pennsylvania's bottom 99% grew by just over \$200 to \$41,502. The highly uneven growth in incomes is even more apparent when you examine the change in average incomes for the roughly 605 Pennsylvania taxpayers who make up the 0.01% (99.99-100% in Table 4.5). Their average income grew by \$4.6 million to \$21,387,875 in 2010.<sup>32</sup> Nationally, this group of taxpayers experienced an increase in their incomes in 2010 of 21.5%, or more than \$4.2 million.

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<sup>29</sup> Emmanuel Saez, "Striking It Richer: The Evolution of Top Incomes in the United States (updated with 2011 estimates)," January 23, 2011, online at <http://elsa.berkeley.edu/~saez/saez-UStopincomes-2011.pdf>

<sup>30</sup> Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118 (1), 2003. Updated estimates available online at <http://elsa.berkeley.edu/~saez/TabFig2010.xls>.

<sup>31</sup> Previously, when calculating income shares, we followed Estelle Sommeiller, *Regional Income Inequality in the United States, 1913-2003*, PhD dissertation, University of Delaware (2006), and used personal income data from the Bureau of Economic Analysis (BEA). Because personal income data also contain the dollar value of transfers and health benefits, it is generally greater than total taxable income. As a result, dividing the total taxable income held by the 1% by personal income understates their share of all income. With this year's report, we calculate top fractile income shares in the following way: First we calculate Pennsylvania's share of U.S. Adjusted Gross Income for each year between 1997 and 2008 (online at <http://www.irs.gov/taxstats/article/0,,id=171535,00.html>). This figure is then used to derive income for Pennsylvania from U.S. income, including capital gains found in column 6 of Table A0 in <http://elsa.berkeley.edu/~saez/TabFig2008.xls>. We then combine this figure with estimates of the average income for each top income fractile provided by the Pennsylvania Department of Revenue to estimate the share of income earned by each top income fractile for each year from 1997 to 2009.

<sup>32</sup> In our preliminary estimate for 2010 we had projected that the income of the top .01% would grow by \$1.7 million.

## Chapter 5: Changing Policies to Lift Wages and Sustain Opportunity

Last month provided a rare dose of good news for Pennsylvania on the economic front. Relative to the rest of the country, most Pennsylvania regions enjoyed greater intergenerational upward mobility over the roughly one dozen years ending 2010-11.

Unfortunately, *The State of Working Pennsylvania 2013* does not provide good news on what has happened since 2010. Pennsylvania job growth has ground nearly to a halt, with only as many jobs created in the last 32 months as created in 2010 alone. Wages virtually across-the-board have declined since 2010. The share of Pennsylvanian workers in “poverty-wage jobs” – that pay so little that even a full-time, full-year worker does not reach the poverty line for a family of four – has risen by 10% since 2010. As a new Economic Policy Institute report underscores, recent wage trends impede the U.S. economic recovery because middle-class families do not have the means to boost their consumption.<sup>33</sup>

As well as bringing other negative impacts associated with a shrinking middle class, recent Pennsylvania economic trends could reverse last month’s good news about upward mobility. With wages flat or falling, and the number of middle-class jobs shrinking, especially in low-income neighborhoods, children from low-income families will find it more difficult to rise above the economic station of their birth.

Recent wage trends are not an unavoidable result of technology or globalization or economic restructuring which expands some industries and shrinks others. These trends reflect policy choices at both the federal and state level. We focus most on state policy choices since this report aims at a state-level audience.

Most obviously, cuts in state as well as federal spending in 2011 led directly to public-sector layoffs that, in turn, slowed down private job growth and stymied the overall recovery.

Several other policy choices are also being debated in Harrisburg that could further reduce the number of middle-class jobs and depress wages, even if that is not the justification used for these proposals or their only impact. Examples include the proposed privatization of state wine and spirits stores, several proposals to weaken the state’s prevailing wage requirement on state-funded construction projects, and proposed changes to public-sector pensions, most of which would reduce the retirement income of at least some former public servants.<sup>34</sup> (One proposal currently on the docket would strengthen the economy and increase the number of middle-class jobs, and should be enacted for this and other reasons: a transportation infrastructure investment proposal.)

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<sup>33</sup> Lawrence Mishel and Heidi Shierholz, *A Decade of Flat Wages: The Key Barrier to Shared Prosperity and a Rising Middle Class* (Washington D.C., Economic Policy Institute, August 21, 2013), online at <http://www.epi.org/publication/a-decade-of-flat-wages-the-key-barrier-to-shared-prosperity-and-a-rising-middle-class/>.

<sup>34</sup> Another policy already implemented, the expansion of charter schools, also tends to reduce job quality because teachers and other employees in charter schools, although not necessarily principals, tend to learn less on average in the private sector than in the public sector.

The most damaging proposal introduced in Harrisburg that could further lower wages is a so-called “right-to-work” law that would weaken unions and thus workers’ bargaining power.<sup>35</sup> As Box 4 explains, state education policies and a new law that could increase citizen disengagement also threaten mobility as do policies that shrink wages and the number of middle-class jobs.

Instead of taking further steps to erode wages and eliminate good jobs, Pennsylvania needs policies that will lift wages and the rate of job creation. One proposal from fast food workers in a wave of strikes spreading across the country is a \$15 per hour entry-level wage.<sup>36</sup> This same wage level has also been proposed by workers seeking to organize a union at the University of Pittsburgh Medical Center (UPMC), the state’s largest health-care employer.

A dramatic increase in wages at the lower end of the scale could substantially increase middle-class purchasing power, accelerate economic growth in the short run and the long run, and boost upward mobility for the next generation. As part of a comprehensive package to revitalize opportunity, the state should also reverse course when it comes to education policies and policies that impact citizen engagement. (See Box 4.)

These recommendations represent a major departure from recent Pennsylvania public policies. Policies, of course, reflect a state’s vision for the future. If your vision includes upholding the American Dream, investing in education as a foundation for opportunity and economic growth, and encouraging voter participation and citizen engagement so that citizens can successfully demand policies that benefit the majority and the commonwealth as a whole, then Pennsylvania needs a sharp change in policy direction.

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<sup>35</sup> These laws lower wages for union and non-union workers by an estimated \$1,500 a year and decrease the likelihood employees will get health insurance or pensions through their jobs. See Gordon Lafer, “‘Right to Work:’ The Wrong Answer for Michigan’s Economy,” Economic Policy Institute, September 15 2011. For one media report on the effort to promote a Pennsylvania right-to-work law, see “ALEC-inspired Right-to-Work Bill Back Again in Pennsylvania,”

<sup>36</sup> See, for example, Victor Luckerson, “Fast Food Strikes Go Viral: Workers Expected to Protest Low Wages in 35 Cities Thursday,” online at <http://business.time.com/2013/08/27/fast-food-strikes-go-viral-workers-expected-to-protest-low-wages-in-35-cities-thursday/?iid=biz-main-lead>. See also Josh Sanburn, “Fast Food Strikes: Unable to Unionize, Workers Borrow Tactics From ‘Occupy’” online at <http://business.time.com/2013/07/30/fast-food-strikes-unable-to-unionize-workers-borrow-tactics-from-occupy/#ixzz2dCh5COMM>

## Box 4. Undermining Upward Mobility in Pennsylvania

Box 1 at the end of the Executive Summary provided an overview of the new study by Harvard and Berkeley economists documenting that all of Pennsylvania's 12 regions have moderate to high levels of upward mobility compared to most other U.S. regions. The study also identified four variables that correlate with upward mobility: the size and dispersion of the middle class; the quality of K-12 schools; civic engagement, including membership in religious and civic groups; and strong families, measured by the share of two-parent households.

Of these variables, this report focuses on the middle class. It highlights the danger that recent trends that shrink the middle class – and proposed policies that would further shrink it – pose to upward mobility. This box notes two other Pennsylvania policies that appear designed to erode Pennsylvania's high level of upward mobility.

*Funding Cuts that Threaten the Quality of K-12 Schools.* Pennsylvania has implemented deep cuts to education spending in recent years. Urban districts with large shares of minority students and concentrated poverty have suffered disproportionately from these cuts in school funding. For example, the city of Philadelphia experienced the largest per-pupil cut out of 500 school districts, the city of Pittsburgh the fourth largest, and the city of Reading the 17<sup>th</sup> largest.<sup>37</sup> When low-income children are locked in neighborhoods without access to good jobs and schools, their odds of economic success as adults sharply diminish.

*Voter Suppression.* A third policy variable that impacts mobility is civic engagement. One of the most direct measures of civic engagement is voter turnout. In this policy area, Pennsylvania in 2011 passed a voter ID bill that, while tied up in the courts currently, could, if implemented, disproportionately reduce voter turnout among lower income and minority populations.<sup>38</sup>

<sup>37</sup> Many of the districts that received the smallest cuts are affluent suburban areas such as Radnor Township (fourth-smallest cut) and Lower Merion (fifth-smallest). For rankings and per pupil cuts, see [http://pennbpc.org/sites/pennbpc.org/files/Cuts-Per-Student-Top-Bottom-20\\_1.pdf](http://pennbpc.org/sites/pennbpc.org/files/Cuts-Per-Student-Top-Bottom-20_1.pdf)

<sup>38</sup> A national survey conducted by the Brennan Center for Justice found that disproportionate numbers of low-income and minority individuals do not have government-issue photo IDs. See Brennan Center, *Citizens Without Proof* (New York, Brennan Center for Social Justice, November 2006), online at [http://www.brennancenter.org/sites/default/files/legacy/d/download\\_file\\_39242.pdf](http://www.brennancenter.org/sites/default/files/legacy/d/download_file_39242.pdf). In Pennsylvania, a county-by-county breakdown shows that the estimated percentage of registered voters who lack photo identification issued by the Pennsylvania Department of Transportation – and thus potentially at heightened risk of not voting with implementation of Pennsylvania's voter ID bill – is correlated with the minority share of the population in the county. The correlation coefficient between non-white population share and share of registered voters who lack a photo ID is 0.42. The correlation coefficient between the African-American population share and the share of registered voters who lack a photo ID is 0.42. Calculated based on demographic data by County provided by the Center for Rural Pennsylvania based on the American Community Survey and PA Department of State data on registered voters who lack photo identification, on line at <http://pennbpc.org/new-data-suggest-hundreds-thousands-could-be-disenfranchised-pennsylvania%E2%80%99s-voter-id-law>. (While a subsequent expert for the American Civil Liberties Union (ACLU) estimated that a lower number of registered voters lack voter ID (to 511,415 rather than the Department of State's 691,909) (online at <https://www.aclu.org/blog/voting-rights/voter-id-trial-day-9-commonwealths-response-plaintiffs-statistician>), a lower total number is unlikely to impact the correlation of the number without ID with the minority population.)

#### **Box 4. Undermining Upward Mobility in Pennsylvania (Cont'd)**

Combined with policies that shrink the middle class, such as spending cuts that slash job growth and proposed “right-to-work” laws, recent Pennsylvania education funding and voter ID policies move the state towards the “southern strategy” in place in five southern states that make up the largest concentrated low-mobility region in the nation.

A comprehensive effort to revitalize opportunity should, as well as raise wages and grow the middle class, reverse course when it comes to education policies and citizen engagement.

- The state should invest in education from cradle to grave, which new research shows would boost long-run productivity growth and living standards, as well as increase upward mobility. (See Box 5.)
- And the state should enact policies (such as same-day registration or allowing internet voting) that would increase voter turnout, especially among middle- and lower-income voters who currently have lower rates of turnout than upper income voters)



## **Box 5 Investing in Education Will Build a Stronger Pennsylvania Economy**

The best way for Pennsylvania to grow its economy is by investing in a well-educated workforce, according to a new study from the Economic Analysis and Research Network (EARN), a network of 61 state/local and 25 national economic thinkers.

This new report finds a strong link between the educational attainment of a state's workforce and both productivity and workers' pay. The report, *Education Investment Is Key to State Prosperity*, was authored by Noah Berger, president of the Massachusetts Budget and Policy Center, and Peter Fisher, research director at the Iowa Policy Project.<sup>39</sup>

At the heart of the paper is evidence that states with larger increases in college-degree share from 1979 to 2012 enjoyed faster productivity and pay growth:

- For example, the top 10 states (measured by change in education levels) increased their share of adults (25 years of age and older) with a bachelors' degree by an average of 18 percentage points, twice as much as the 9 percentage points in the bottom 10 states.
- The top 10 states also experienced productivity growth nearly twice as large: 82% versus 44% in the bottom 10 states.

Investment in education by a state is also associated with higher living standards for typical workers. The top 10 states (measured by the increase in college-degree share) saw median compensation (pay plus benefits) rise by about 20% compared with barely any increase in the bottom 10 states (4%).

Investing in education is thus not only good for upward mobility but also for economic growth and overall living standards. Despite this, however, as noted in Box 4, recent trends in Pennsylvania go in exactly the wrong direction, with large cuts on education funding.

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<sup>39</sup> The EARN study is available online at <http://www.epi.org/publication/states-education-productivity-growth-foundations/>.

## Appendix A: Public-Sector Job Losses from December 2010 to December 2012

The Quarterly Census of Employment and Wages (QCEW) provides less timely but more detailed and ultimately more accurate data on changes in employment by industry. In this Appendix, we compare changes in public-sector employment as measured by Current Employment Statistics (CES) with data from the QCEW. As we detailed in Table 1.2 of this report, the CES reports public-sector employment overall is down by 45,000 jobs between January 2011 and July 2013, with 9,000 of those losses occurring in the federal government, 3,000 in state government, and 33,000 in local government.

Table A1.1 breaks down Pennsylvania's employment growth by sector from the QCEW between December 2010 and December 2012.<sup>40</sup> According to the QCEW, public-sector employment between December 2010 and December 2012 fell by 39,000 jobs, with 5,000 of those losses in federal employment, 4,700 in state employment, and 29,000 losses in local employment. Tables A1.2 and A1.3 break down the state and local job losses further. State colleges and universities have shed 1,240 jobs since December 2010. As of December 2012, roughly 90% of the job losses in local governments in Pennsylvania have been concentrated in Elementary and Secondary schools.

Table A1.1

Employment change December 2010 to December 2012 by Sector in Pennsylvania				
Sector	December 2010	December 2012	Change	Percent Change
Total Covered	5,555,783	5,629,826	74,043	1.3%
Private	4,813,921	4,926,752	112,831	2.3%
Public	741,862	703,074	-38,788	-5.2%
Federal	104,525	99,302	-5,223	-5.0%
State	140,146	135,506	-4,640	-3.3%
Local	497,191	468,266	-28,925	-5.8%

Source. Keystone Research Center based on QCEW data

<sup>40</sup> The most current data available from the QCEW are for December 2012 as opposed to the CES, which has data for July 2013. Furthermore, because QCEW data are not seasonally adjusted, we must compare the same month in each year.

Table A1.2

## Employment change December 2010 to December 2012 For State Government

Subsector of State Government	December 2010	December 2012	Change	Percent Change
State Government Total	140,146	135,506	-4,640	-3.3%
Animal production & aquaculture	131	122	-9	-6.9%
Heavy & civil engineering construction	6,441	6,287	-154	-2.4%
Food & beverage stores	4,780	4,714	-66	-1.4%
Professional & technical services	4,392	4,387	-5	-0.1%
Administrative & support services	1,728	1,373	-355	-20.5%
Educational services	37,854	36,614	-1,240	-3.3%
Colleges & universities	37,550	36,320	-1,230	-3.3%
Ambulatory health care services	704	674	-30	-4.3%
Hospitals	4,557	3,944	-613	-13.5%
Nursing & residential care facilities	6,887	6,406	-481	-7.0%
Social assistance	7,811	7,299	-512	-6.6%
Museums, historical sites, zoos, & parks	216	209	-7	-3.2%
Amusements, gambling, & recreation	238	216	-22	-9.2%
Executive, legislative & general gov.	9,624	8,860	-764	-7.9%
Justice, public order, & safety activities	24,734	24,288	-446	-1.8%
Courts	1,022	1,014	-8	-0.8%
Police protection	6,051	6,058	7	0.1%
Legal counsel & prosecution	733	695	-38	-5.2%
Correctional institutions	15,649	15,142	-507	-3.2%
Parole offices & probation offices	1,063	1,138	75	7.1%
Admin. of human resource prog.	6,233	5,967	-266	-4.3%
Admin. of environmental prog.	5,511	5,566	55	1.0%
Admin. of economic prog.	4,897	4,853	-44	-0.9%

Note. As a result of non-disclosure of data by the Bureau of Labor Statistics the sum of data by subsector will not sum to equal the state total.

Source. Keystone Research Center based on QCEW data

Table A1.3

## Employment change December 2010 to December 2012 For Local Government

Subsector of Local Government in Pennsylvania	December 2010	December 2012	Change	Percent Change
Local Government Total	497,191	468,266	-28,925	-5.8%
Utilities	10,113	10,352	239	2.4%
Heavy & civil engineering construction	2,855	2,636	-219	-7.7%
Transit & ground passenger transportation	7,712	8,247	535	6.9%
Support activities for transportation	1,485	1,425	-60	-4.0%
Other information services	2,204	2,066	-138	-6.3%
Professional & technical services	21	28	7	33.3%
Administrative & support services	1,648	2,116	468	28.4%
Waste management & remediation services	435	463	28	6.4%
Educational services	314,248	287,095	-27,153	-8.6%
Elementary & secondary schools	296,966	270,694	-26,272	-8.8%
Junior colleges	17,111	16,218	-893	-5.2%
Nursing & residential care facilities	10,763	10,361	-402	-3.7%
Social assistance	2,209	2,845	636	28.8%
Performing arts & spectator sports	436	395	-41	-9.4%
Museums, historical sites, zoos, & parks	112	92	-20	-17.9%
Amusements, gambling, & recreation	557	791	234	42.0%
Food services & drinking places	932	1,002	70	7.5%
Personal & laundry services	1,358	1,321	-37	-2.7%
Executive, legislative & general government	102,694	99,752	-2,942	-2.9%
Justice, public order, & safety activities	25,132	25,444	312	1.2%
Courts	3,987	4,050	63	1.6%
Police protection	9,766	9,728	-38	-0.4%
Legal counsel & prosecution	1,043	1,026	-17	-1.6%
Correctional institutions	6,046	6,083	37	0.6%
Parole offices & probation offices	597	611	14	2.3%
Fire protection	3,583	3,838	255	7.1%
Admin.of environmental prog.	1,442	1,440	-2	-0.1%
Community & housing prog. admin.	5,132	4,848	-284	-5.5%
Admin. of economic prog.	1,103	1,109	6	0.5%

Note. As a result of non-disclosure of data by the Bureau of Labor Statistics the sum of data by subsector will not sum to equal the local total.

Source. Keystone Research Center based on QCEW data