

# The State of Working Pennsylvania 2007

Mark Price



The Keystone Research Center  
Harrisburg, Pennsylvania



# The Keystone Research Center

The Keystone Research Center (KRC) was founded in 1996 to broaden public discussion on strategies to achieve a more prosperous and equitable Pennsylvania economy. Since its creation, KRC has become a leading source of independent analysis of Pennsylvania's economy and public policy. The Keystone Research Center is located at 412 North Third Street, Harrisburg, Pennsylvania 17101-1346. Most of KRC's original research is available from the KRC website at <[www.keystoneresearch.org](http://www.keystoneresearch.org)>. KRC welcomes questions or other inquiries about its work at 717-255-7181, or toll free at 888-618-2055.

## About the Author

Mark Price is a labor economist at KRC and holds a PhD in economics from the University of Utah. His dissertation, *State Prevailing Wage Laws and Construction Labor Markets*, was recognized in January 2007 with an Honorable Mention in the 2006 Thomas A. Kochan and Stephen R. Sleigh Best Dissertation Awards Competition sponsored by the Labor and Employment Relations Association. He is the coauthor of *Losing Ground in Early Childhood Education*, published in September 2005 by the Economic Policy Institute (in partnership with KRC and the Foundation for Child Development), as well as numerous KRC publications.

## Acknowledgments

The author thanks Keystone Research interns Brian Cox of Howard University, Natalie Sabadish of the University of Delaware, and Anton Stoyanov of Dickinson College for their valuable research assistance. The analysis of trends in inequality also could not have been completed without the dissertation work of Estelle Sommeiller at the University of Delaware. The author thanks the Research Bureau of the Pennsylvania Department of Revenue and its staff for providing unpublished Pennsylvania data, for copies of the Department's past publications, and for answering numerous questions and requests for assistance. Thanks to Liana Fox of the Economic Policy Institute (EPI) for providing technical assistance with the Current Population Survey. Thanks to Michael Ettlinger of EPI for his helpful comments on our analysis of income inequality. Stephen Herzenberg, Ellen Roberts, Sharon Ward, and Peter Wiley edited the document. Andrea Wilkinson proofread the report. Arbour Media designed the report.

## Support KRC

The work of the Keystone Research Center is supported by research contracts with various organizations including local, state, and federal governments; grants from charitable foundations and non-profit organizations; and contributions from organizations and individuals who share KRC's vision of building broadly shared prosperity in Pennsylvania.

To learn how you or your organization can support the Keystone Research Center, please visit the Keystone Research Center website, or call 717-255-7181.

The IRS has designated KRC as a federal tax exempt, nonprofit, 501(c)(3) corporation. KRC is also registered as a charitable organization with the PA Department of State's Bureau of Charitable Organizations. The official registration and financial information of Keystone Research Center may be obtained from the PA Department of State by calling toll free, within Pennsylvania, 1-800-732-0999. Registration does not imply endorsement.

# Contents

<b>Overview</b> .....	<b>1</b>
<b>Wage, Productivity, Profit, and Employment Trends</b> .....	<b>3</b>
Wages Higher at the Low End.....	3
Wages Still Stagnant Overall.....	5
Productivity and Profits Higher.....	6
Falling Unemployment and Rising Employment.....	6
Slow Job Growth Compared to Earlier Business Cycles .....	8
Storm Clouds on the National Economic Horizon?.....	10
<b>Income Inequality in Pennsylvania</b> .....	<b>11</b>
PA Inequality in 2004 Mirrors That Nationally .....	11
Box 1. The Prescription For Prosperity	
An Economic Agenda For Pennsylvania’s Future.....	14
PA Growth in Inequality Also Follows National Trends .....	17
<b>Conclusion</b> .....	<b>22</b>
<b>Appendix</b> .....	<b>23</b>

## Overview

Over the past year, the economic news has focused heavily on what is happening to people at both the very top and the very bottom of the income scale.

At the top, the billions of dollars paid to hedge fund managers have brought renewed attention to the extraordinary incomes of America's highest earners.

At the bottom, a long-awaited increase in the Pennsylvania minimum hourly wage in January 2007, and the passage of a national minimum wage increase six months later (in July), have put the spotlight on the struggle of low-wage earners.

*The State of Working Pennsylvania 2007* brings fresh and penetrating data to the discussion of trends at these two extremes of the economic spectrum.

Using official data, some of it previously unavailable (and some of it allowing a more detailed look at the highest incomes than any previous U.S. state or national data source), the report asks the following questions:

- Are income gaps in the state of Pennsylvania very large today, as they are nationally, and have these gaps grown in a similar fashion over time?
- In its first months, what impact has Pennsylvania's minimum wage increase had on the earnings of low-wage workers?

The data reviewed here reveal that income gaps in Pennsylvania are very large and have grown dramatically over time:

- The 580 highest-earning Pennsylvania taxpayers (1 out of every 10,000 taxpayers) earned an average of \$15.9 million dollars in 2004 (the most recent year these data are available).
- While the personal income of the bottom 90% of Pennsylvanians increased by just 12% between 1973 and 2004, that of the top 0.01% rose *23 times as fast* (by an estimated 278%).
- One out of every 632 taxpayers, or 9,186 Pennsylvanians, has an annual income that exceeds one million dollars.

The newest data also reveal that the increases in Pennsylvania's minimum hourly wage from \$5.15 to \$6.25 in January 2007, and then to \$7.15 in July 2007, *have* gone along with increased earnings at the low end of the spectrum:

- In the 12-month period ending June 2007, inflation-adjusted hourly earnings for low-paid Pennsylvania workers increased by 5.5% compared to the previous 12 months.
- This represents the largest year-over-year gain in real wages for this group of workers since at least the late 1970s.

- This minimum hourly wage increase appears to have had at least a small positive impact on the earnings of up to roughly one fifth of Pennsylvania earners—about 1 million workers.

Important, if unsurprising, limitations do exist in how much the recent minimum hourly wage increase has improved the well-being of Pennsylvania workers:

- The impact of the increase did not reach the middle of the Pennsylvania earnings distribution. Earnings of workers in the middle of Pennsylvania's wage curve grew by just 1% in the 12 months ending June 2007. *Pennsylvania's median wage was lower in this period than it was five years earlier.*
- The increase in the minimum wage has barely begun to attenuate the overall rise in inequality over the past three decades. Even at the state's current minimum wage of \$7.15 per hour, the 580 highest-paid Pennsylvanians earn as much every two working hours as full-time, minimum-wage workers do in an entire year.

Recent trends at the top and bottom of the economic spectrum underscore two equally unsurprising, but too-often-ignored, points for public policy:

- First, the positive impact of the minimum wage increase reminds us that public policy can make a difference. Policymakers are not powerless—in the face of impersonal market forces or economic globalization—to improve the economic well-being of the majority of their constituents.
- But, second, the minimum wage by itself is not a powerful enough instrument to ensure that a rising economic tide lifts all (or most) boats.

To achieve more broadly shared prosperity in today's new and global economy, Pennsylvania would need to implement a more comprehensive economic plan. Keystone Research Center has elsewhere outlined elements of such a plan (see Box 1).<sup>1</sup> Since we are on record already with recommendations for improving the economic situation, the focus of this document will be on “just the facts.”

In this report, we make one new recommendation—that the Departments of Revenue and Labor & Industry cooperate to research and publish a more comprehensive report on the growth of income inequality in Pennsylvania. This trend is sufficiently important—and threatening—to the fabric of Pennsylvania that it deserves much closer attention than it has received. Moreover, most of the estimates in this report are methodologically conservative, meaning that they tend to understate economic inequality and its growth over time.

For example, because it raises technical challenges, we ordinarily leave capital gains out of our estimates of income changes over time. This primarily lowers the top incomes and may do so more in recent years. To take a second example, the method used to transform data on taxpayer income into estimates for shares of personal income somewhat overstates the incomes of the bottom 90% while understating incomes at the top.<sup>2</sup>

---

<sup>1</sup>See the *Prescription for Prosperity: An Economic Agenda for Pennsylvania's Future*, summarized in Box 1 and online at [www.keystoneresearch.org/agenda](http://www.keystoneresearch.org/agenda) and see also the detailed background paper to this agenda accessible at the same URL. For complementary economic agendas that aim, respectively, to promote greater prosperity for rural Pennsylvanians and for low-income working families, see <http://www.keystoneresearch.org/ruralpa> and <http://www.pathwayspa.org/pdf/InvestingPAFamily-FINAL.pdf>.

<sup>2</sup>A third reason these estimates are likely conservative is that the methodology used appears to underestimate the highest incomes. (This

By fully utilizing the data and research capacity at the two key state-level departments that collect official Pennsylvania economic statistics, policymakers and the public could gain a full and detailed picture of inequality trends, which would be one step towards generating the political will to reverse the growth of inequality.

The *State of Working Pennsylvania 2007* report focuses more narrowly than did our previous annual reports on its main themes—1) inequality and the incomes of the highest earners, and 2) the impact of the minimum wage. We nonetheless include a brief update on some other economic trends, including productivity growth, corporate profits, job growth, unemployment, and a first look at whether or not the collapse of the housing bubble portends an economic slowdown in Pennsylvania.

## Wage, Productivity, Profit, and Employment Trends

### Wages Higher at the Low End

On July 9, 2006, Governor Edward Rendell signed into law the first increase in the Pennsylvania minimum hourly wage in more than a decade. Under the law, the minimum wage increased from \$5.15 per hour to \$6.25 per hour in January 2007 and then to \$7.15 per hour in July.<sup>3</sup>

Examining wage data from July 2006 to June 2007 allows us to take a first look at the impact of the initial Pennsylvania minimum hourly wage increase.<sup>4</sup> We find that, adjusted for inflation, typical low-wage earners (defined as those at the 10th percentile in Figure 1) earned \$7.81 per hour in the year ended June 2007, 5.5% more than in the previous 12 months (see also Table 1). (In the previous 12 months, the actual dollar (nominal) wage of these low-wage earners was right around \$7.15 per hour.)

This represents the largest wage increase for low-wage earners in a 12-month (July to June) period since at least the late 1970s (the earliest period for which we have data). The next largest increase in wages for these workers coincided with an increase in the federal minimum hourly wage in September of 1997.<sup>5</sup> In the United States as a whole, within which the federal minimum wage remained at \$5.15 from July 2006 to June 2007, the hourly earnings of low-wage workers increased by only 2% from the last fiscal year.

Inflation-adjusted earnings at the 20<sup>th</sup> percentile in Pennsylvania were \$9.48 per hour in 2006–2007, or 2.5% higher than in the previous 12 months, well above the 0.6% increase for the same class of workers nationally. This suggests that workers with hourly earnings up to \$1 or \$2 above the new minimum wage—a total of about a million workers—also got a raise when the minimum hourly wage in Pennsylvania was increased. Workers paid within a couple of dollars above the new minimum wage are also likely to receive a wage increase even though

---

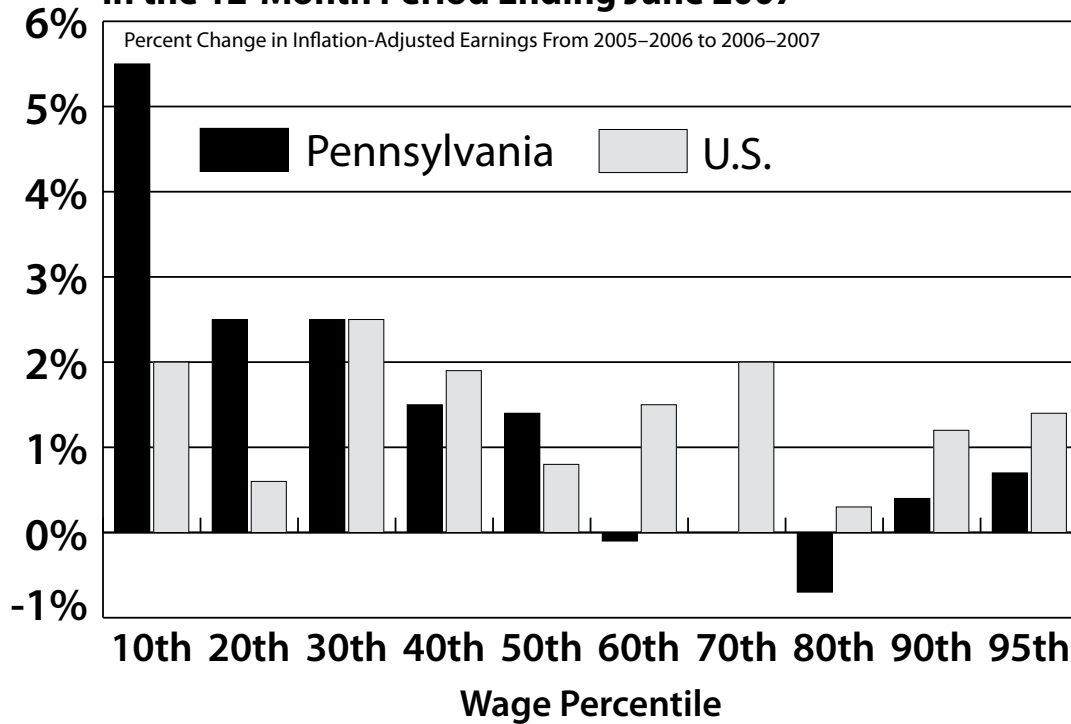
conclusion is based on comparing estimates with actual top-end incomes in the one year for which we have actual data at the very top.) This underestimation will be higher in more recent years because the incomes that must be estimated are further above the actual data available.

<sup>3</sup> The law included a provision allowing Pennsylvania employers with 10 or fewer employees to continue to pay a minimum hourly wage of \$5.15 until July 1, 2007, and then to pay at least \$5.65 per hour starting July 1, 2007. The minimum hourly wage for these employees of very small businesses will rise to \$7.15 on July 1, 2008. The federal minimum wage increased to \$5.85 per hour on July 27th of this year and will increase again, to \$6.55 per hour, in July 2008, then finally to \$7.25 per hour in July 2009.

<sup>4</sup> When comparing wages of earlier periods with the period July 2006 to June 2007, we also use 12-month periods that start in July and end in June of the next year.

<sup>5</sup> The federal minimum wage was increased from \$4.25 in October 1996 and again to \$5.15 in September 1997.

**Figure 1. The Inflation-Adjusted Hourly Earnings of the Lowest Paid Pennsylvania Workers Increased by 5.5% in the 12-Month Period Ending June 2007**



Note. Wage estimates compare inflation-adjusted hourly earnings in the 12-month period ending in June 2006 (2005–2006) to the same 12-month period ending in June 2007 (2006–2007).

Source. Keystone Research Center (KRC) analysis of Current Population Survey (CPS) data

Percentiles	Inflation-Adjusted Wage (2006–2007 Dollars)					
	United States			Pennsylvania		
	2005-2006	2006-2007	% Change	2005-2006	2006-2007	% Change
10th	\$7.48	\$7.63	2.0%	\$7.40	\$7.81	5.5%
20th	\$9.17	\$9.22	0.6%	\$9.25	\$9.48	2.5%
30th	\$10.58	\$10.85	2.5%	\$10.76	\$11.03	2.5%
40th	\$12.52	\$12.75	1.9%	\$12.65	\$12.84	1.5%
<b>50th</b>	<b>\$14.85</b>	<b>\$14.96</b>	<b>0.8%</b>	<b>\$14.65</b>	<b>\$14.85</b>	<b>1.4%</b>
60th	\$17.36	\$17.61	1.5%	\$17.19	\$17.18	-0.1%
70th	\$20.45	\$20.86	2.0%	\$20.03	\$20.04	0.0%
80th	\$25.42	\$25.49	0.3%	\$24.40	\$24.22	-0.7%
90th	\$34.02	\$34.43	1.2%	\$31.74	\$31.87	0.4%
95th	\$43.47	\$44.07	1.4%	\$40.53	\$40.81	0.7%

Source. KRC analysis of CPS data

this is not mandated by law, because their employers want to attract and retain higher-quality workers than do employers who pay at or close to the legal minimum.

## Wages Still Stagnant Overall

The inflation-adjusted hourly wages of Pennsylvania's workers in the 30<sup>th</sup>, 40<sup>th</sup>, and 50<sup>th</sup> percentiles (the 50<sup>th</sup> percentile also known as the "median wage") also increased (by 1.4 to 2.5%) in the 12 months ending June 2007. However, unlike the increases for the lowest two deciles, these wage gains for Pennsylvania workers were similar to those received by the same groups of U.S. workers.

Inflation-adjusted hourly earnings for workers from the 50<sup>th</sup> percentile (the median) to the 95<sup>th</sup> percentile grew faster in the United States than in Pennsylvania over the 12 months ending June 2007.

Overall, the Pennsylvania wage distribution compressed slightly as workers at and below the median gained ground against those in the upper half of the wage distribution.<sup>6</sup> This contrasts with the dominant pattern of wage growth over the past quarter century, during which period workers at or below the median have ordinarily lost ground to workers in the upper half of the wage distribution.

Despite recent growth, inflation-adjusted hourly wages across the entire wage distribution in Pennsylvania remain below their peak levels (reached in most wage percentiles in 2001–2002). **At \$14.85, today's median hourly wages are 16¢ lower than their level five years ago** (Table 2). (Median wages are up slightly nationally—by 6¢ per hour—over the same period.)

Percentiles	Inflation-Adjusted Wage (2006–2007 Dollars)					
	United States		% Change	Pennsylvania		% Change
	2001-2002	2006-2007		2001-2002	2006-2007	
10th	\$7.80	\$7.63	-2.1%	\$7.86	\$7.81	-0.7%
20th	\$9.35	\$9.22	-1.3%	\$9.50	\$9.48	-0.1%
30th	\$11.18	\$10.85	-3.0%	\$11.23	\$11.03	-1.8%
40th	\$12.78	\$12.75	-0.2%	\$12.92	\$12.84	-0.7%
<b>50th</b>	<b>\$14.91</b>	<b>\$14.96</b>	<b>0.3%</b>	<b>\$15.01</b>	<b>\$14.85</b>	<b>-1.1%</b>
60th	\$17.37	\$17.61	1.4%	\$17.31	\$17.18	-0.8%
70th	\$20.78	\$20.86	0.4%	\$20.40	\$20.04	-1.7%
80th	\$25.22	\$25.49	1.1%	\$24.61	\$24.22	-1.6%
90th	\$33.39	\$34.43	3.1%	\$33.02	\$31.87	-3.5%
95th	\$42.93	\$44.07	2.6%	\$40.85	\$40.81	-0.1%

Source. KRC analysis of CPS data

<sup>6</sup> It is possible that wages above the 95th percentile grew as fast or faster in the 12 months ending June 2007 than those in the bottom half of the distribution. The data source used for wage data does not permit reliable estimation above the 95th percentile.



Over the five-year period from 2001–2002 to 2006–2007 (see Table 2), Pennsylvania earnings of low-wage (10th percentile) workers declined less than earnings of medium-wage earners (by only a nickel from their peak of \$7.86), possibly because of the minimum wage increase at the end of this five-year period. Stunningly, earnings at every point in the wage distribution shown, all the way up to the 95<sup>th</sup> percentile, are lower now than they were five years ago, 2001–02. At the 95<sup>th</sup> percentile in Pennsylvania, inflation-adjusted hourly earnings are down 4¢ over the past five years, to \$40.81. Nationally, the wages of workers in the 95<sup>th</sup> percentile are up by \$1.14 to \$44.07, from \$42.93 per hour in 2001–2002. (As is the case nationally, wages in Pennsylvania may have grown above the 95<sup>th</sup> percentile, but that can not be reliably estimated with the wage data we have available.)

## Productivity and Profits Higher

Over the past five years, while the wages for most workers in Pennsylvania have lost ground against inflation, productivity has continued to grow (Figure 2).

Previous KRC reports have relied on national data on productivity because state-level figures have not been as readily available. Comparing these national figures with either national or Pennsylvania wage data reveals the existence of a “broken link between wages and productivity growth.” This year, for the first time, we present Pennsylvania-specific estimates of productivity.

Between 2001–2005 in Pennsylvania, labor productivity as measured by the source displayed in Figure 2 increased by 6%.<sup>7</sup> A second source estimates a 12% increase in Pennsylvania’s productivity between 2001 and 2004, more in line with recent U.S. labor productivity growth.<sup>8</sup> (We show the more conservative source in Figure 2 because that source is available all the way through 2005.) Nationally, as well as in Pennsylvania, estimates show that productivity growth has leveled off in the last two years, following a period of the fastest productivity growth since the 1950s.

Turning to profits, U.S. inflation-adjusted corporate profits (as reported by the Bureau of Economic Analysis) rose 70% between 2001–2002 and 2006–2007.<sup>9</sup>

## Falling Unemployment and Rising Employment

After peaking at 5.8% in 2002–2003, Pennsylvania’s unemployment rate declined steadily to an average of 4.3% over the 12-month period ending in June 2007 (Figure 3).

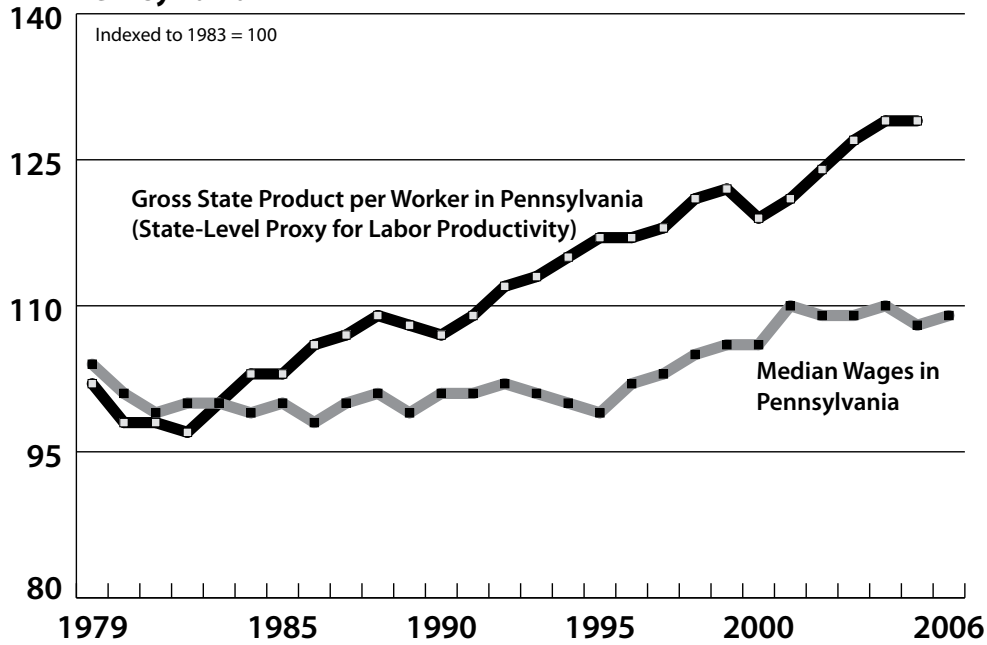
---

<sup>7</sup> The Bureau of Labor Statistics (BLS) does not publish data on labor productivity (nonfarm business output per hour) at the state level. Figure 2 therefore relies on a proxy for labor productivity—Pennsylvania Gross Domestic Product (GDP) per worker calculated by the Economic Policy Institute (EPI).

<sup>8</sup> Paul W. Bauer and Yoonsoo Lee, *Estimating GSP and Labor Productivity by State*, Federal Reserve Bank of Cleveland, Policy Discussion Papers, Number 16, March 2006.

<sup>9</sup> Corporate profit data are not available at the state level. One statistic that is available annually at the state level, and could be considered a proxy for state-level profits, is gross operating surplus, which the BEA defines as the “value derived as a residual for most industries after subtracting total intermediate inputs, compensation of employees, and taxes on production and imports less subsidies from total industry output. Gross operating surplus includes consumption of fixed capital (CFC), proprietors’ income, corporate profits, and business current transfer payments (net).” At the national level since the late 1970s, gross operating surplus and corporate profits have grown by similar magnitudes. The year-to-year growth of the two variables can vary very widely, with gross operating surplus trailing corporate profits especially during periods of expansion. (In the current expansion, gross operating surplus nationally has grown roughly 30%, while corporate profits have grown 70%.) Thus, the growth in state-level gross operating surplus since 2001 might be considered a lower bound for profit growth. In Pennsylvania since 2001, gross operating surplus has grown 11%. While far below 70%, 11% still exceeds the flat or negative growth of wages.

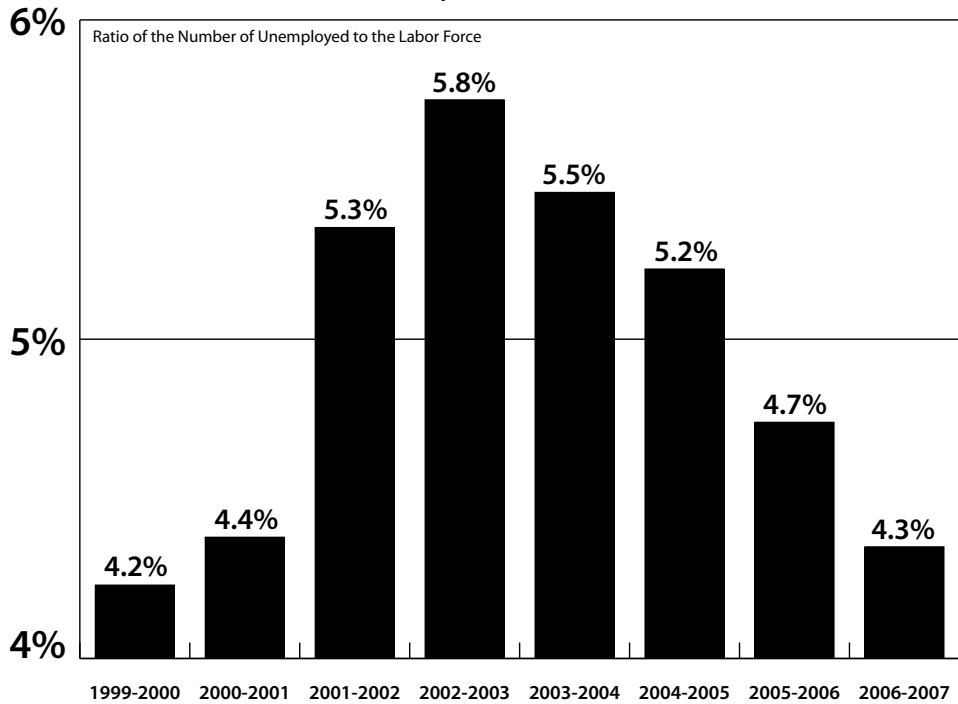
**Figure 2. Wage Growth Continues to Trail Productivity Growth in Pennsylvania**



Note. For additional details about the state-level productivity series, see Footnotes 7-8.

Source. Economic Policy Institute (EPI) analysis of data from the Bureau of Economic Analysis (BEA)

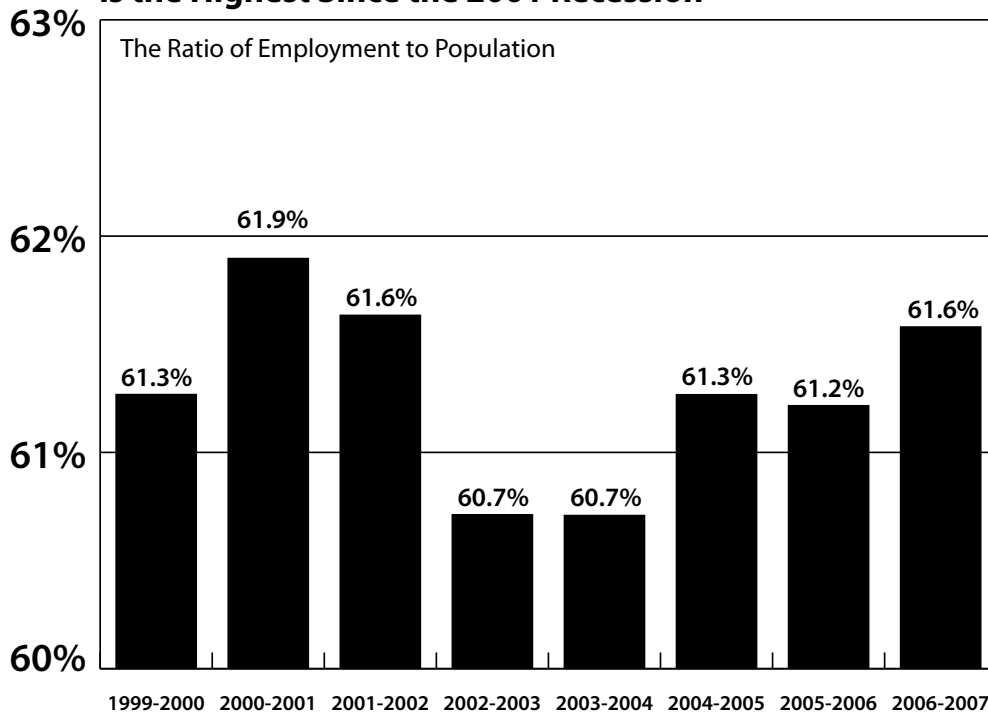
**Figure 3. While the Unemployment Rate Has Steadily Declined Since the Last Recession, It Remains Above Pre-Recession Levels**



Source. KRC analysis of CPS data

While the unemployment rate has fallen, it is an imperfect indicator of labor market slack, because it does not count some “discouraged” workers who have stopped looking for work. To get a fuller picture of the job market, it is also valuable to examine the employment rate, defined as the percent of the population (over age 15) employed. Employment rates since 2002–03 show the same steady improvement as do unemployment rates (Figure 4).

**Figure 4. The Employment Rate From July 2006 to June 2007 Is the Highest Since the 2001 Recession**



*Note.* The employment rate is defined as the ratio of total employment to the population for all people in the civilian, noninstitutionalized population over the age of 15.

*Source.* KRC analysis of CPS data

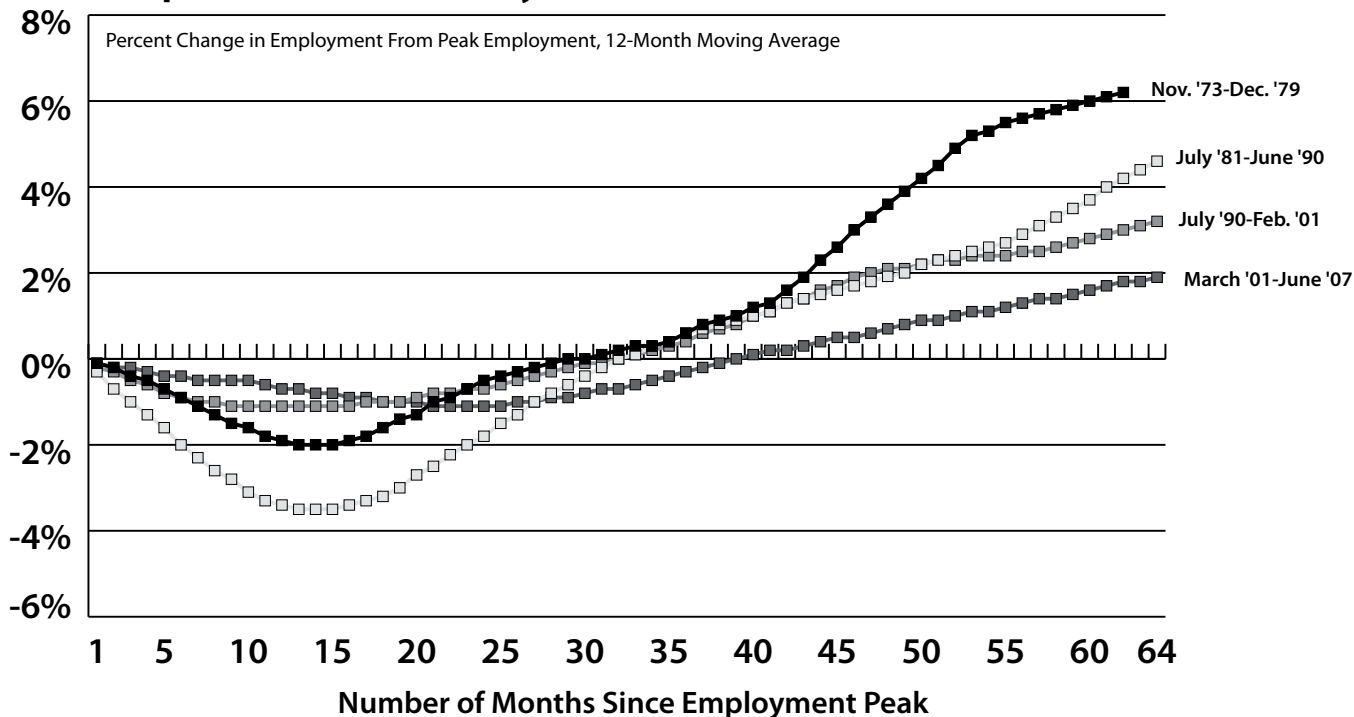
## Slow Job Growth Compared to Earlier Business Cycles

While Pennsylvania’s employment situation has improved gradually since the recession of 2001, employment growth has trailed that in previous economic expansions. In fact, job growth in the current business cycle has lagged behind that in every comparable period in the post-World War II period (Figures 5 and 6).

In many of the earlier business cycles, job loss early in the cycle exceeded that in the current one, reflecting the mildness of the March–November 2001 recession. Once the 2001 recession ended, however, job growth was much slower in the current recovery than in previous ones. (While Figures 5 and 6 show only the four most recent economic recoveries that lasted longer than 18 months, job growth was also slower in the current recovery than during all other economic recoveries since World War II that are not shown.)

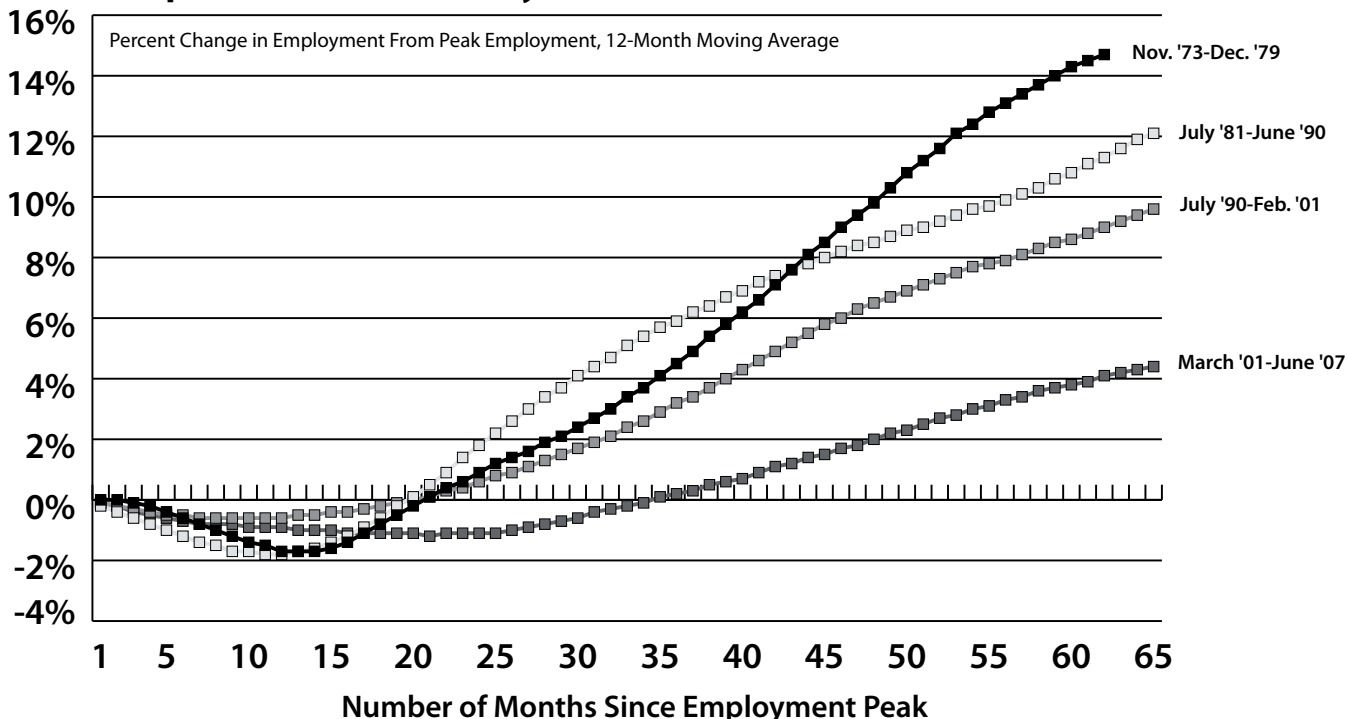
The fact that job growth has been slower than in previous expansions helps explain why wages today *still* have not recovered to their previous peak, despite close to six years of economic growth.

**Figure 5. Pennsylvania Job Growth in the Current Business Cycle Compared With Previous Cycles**



Source. KRC analysis of BLS Current Employment Statistics (CES)

**Figure 6. United States Job Growth in the Current Business Cycle Compared With Previous Cycles**



Source. KRC analysis of BLS CES

## Storm Clouds on the National Economic Horizon?

As this report goes to press in September 2007, there is mounting evidence that the collapse of the housing bubble has begun to harm other sectors of the economy, particularly through a tightening of credit markets. This tightening constrains the capacity of firms and households to borrow money for investment and consumption, which in turn threatens to further restrict job growth. Signs of a slowdown are especially troubling because they come at a time when inflation-adjusted wages remain below their levels of five years ago. If a slowdown did take place, it could mean that an extended economic expansion took place without any sharing of the gains with almost all workers in the form of higher wages.

The evidence of a slowdown in Pennsylvania economic growth remains ambiguous, even within the most recent six months of data. From January to June 2007, using the household survey (the Current Population Survey), which we relied on in our earlier year-to-year analysis of employment and unemployment, Pennsylvania's unemployment rate has remained at a postrecession low of 4.3%. The employment rate is higher from January to June 2007 than it was over the same six-month period in 2006.<sup>10</sup>

A second source, however, the so-called Establishment Survey, gathers job numbers from businesses, as opposed to individuals. This second source shows that total nonfarm employment, after growing in the first quarter of 2007, has shed 2,200 jobs since March—a decline of .04%.

The weakness in Pennsylvania's economy comes from two durable goods sectors, manufacturing and construction, which together have shed nearly 12,000 jobs since March. During the same period, the service sector continued to grow, adding almost 10,000 jobs. Nationally, the manufacturing and construction industries lost a combined 78,000 jobs since March.

Weakness in the construction employment sector is related to the trouble in the housing sector. Job loss in manufacturing is not a new phenomenon but rather a continuation of trends over the past decade.

It is worth noting that the two sectors accounting for the recent job slowdown pay relatively high hourly wages, with few workers earning at or near the minimum wage. Thus, the increase in the minimum wage would not play a significant role in job loss in these sectors.

Looking forward, any credible and comprehensive analysis of the impact of the recent Pennsylvania minimum wage increase on employment must take into account national trends in employment and must separate the impact of these from any Pennsylvania-specific impacts due to a higher minimum wage. Any claims about the higher minimum wage causing job loss that do not control for national economic trends would not be credible.

---

<sup>10</sup> Seasonally adjusted data on employment rates by state are not published by the BLS; thus, comparisons of periods of less than a year must be made to the same period a year ago to prevent seasonal patterns in employment from biasing estimates. From January to June of 2006, the not-seasonally-adjusted employment rate in Pennsylvania was 60.9% compared to 61.3% in the same six-month period in 2007.

## Income Inequality in Pennsylvania

Since last summer, increasing attention has been paid to the rise in income inequality in the United States, fueled in part by publicity surrounding the billion dollar salaries of hedge fund managers.

As Figure 7 illustrates, income inequality in the United States now approaches levels not seen since the first third of the 20th century. (Note: The share of income going to the top 10% would be even higher in Figure 7 if it did not exclude capital gains.)

Much of the growth in U.S. income inequality observed in Figure 7 is driven by changes in earnings among the top 1% of families. Economists Thomas Piketty and Emmanuel Saez estimate that the income<sup>11</sup> of the top 1% of tax units<sup>12</sup> increased by 130% between 1973 and 2005.<sup>13</sup> Meanwhile, the income of the bottom 90% of tax units decreased by 8%.

This section of *The State of Working Pennsylvania 2007* presents fresh data and estimates to address two questions: Are income gaps in the state of Pennsylvania as high as they are nationally? And, have income gaps grown in Pennsylvania over time in the same way as they have nationally?

Our analysis relies on Personal Income Tax statistics published by the Pennsylvania Department of Revenue (DOR) since 1973 and also on previously unpublished DOR data that look in more detail at the very top-end incomes in 2004.<sup>14</sup> To our knowledge, the 2004 Pennsylvania data discussed below have more detail on the very highest incomes than any other state-level or U.S. data source previously examined.

### PA Inequality in 2004 Mirrors That Nationally

To see if Pennsylvania income trends follow the national pattern, we first examine 2004 data on taxable incomes for seven subgroups sorted from the lowest incomes to the highest incomes (Figure 8). (Note that these 2004 Pennsylvania data *do include* capital gains.)

Note that Pennsylvania taxable income<sup>15</sup> does not capture all sources of income. For example, it does not include income from government transfers such as social security payments or income from private pensions. These missing sources of personal income are a smaller share of total income for taxpayers in the top 10% than in the bottom 90%. For this reason, comparisons of inequality using taxable income data overstate the differences in personal income between these groups. Figure 8 is the only place in this report where our estimates are not conservative.

<sup>11</sup> Estimates exclude capital gains income

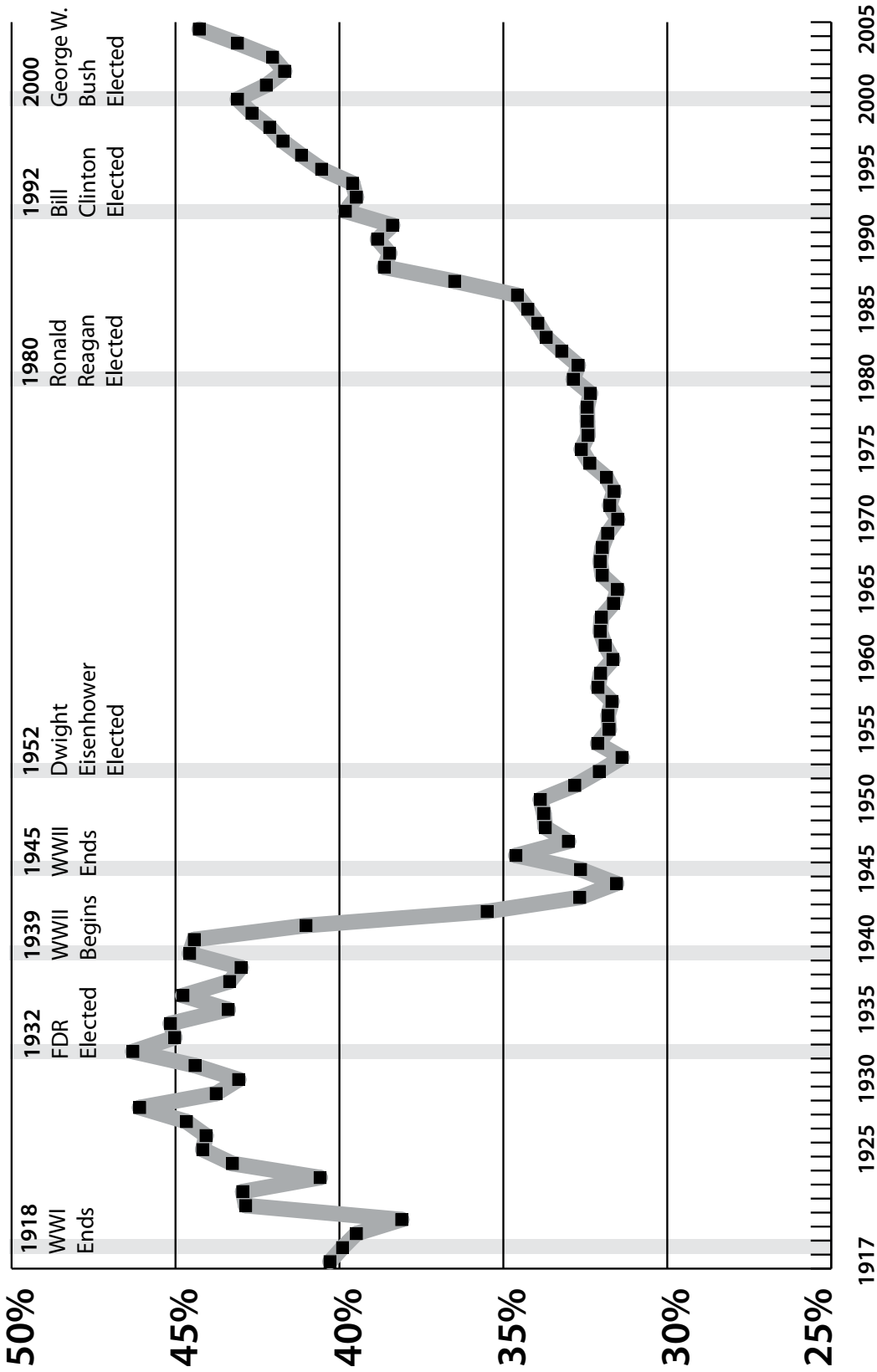
<sup>12</sup> Piketty and Saez define a tax unit as “a married couple living together (with dependents) or a single adult (with dependents), as in the current tax law.” Thomas Piketty and Emmanuel Saez, “Income Inequality in the United States, 1913-1998,” *Quarterly Journal of Economics*, 118(1), 2003.

<sup>13</sup> As this report went to press, the most recent year of taxable income data available from the Pennsylvania Department of Revenue was for the 2004 tax year. Federal data on taxable incomes reported by Piketty and Saez are current through 2005. When comparing Pennsylvania to the United States, we restrict our analysis to the same year, 2004. When discussing U.S. trends alone, we present data through 2005.

<sup>14</sup> All figures in this section of the report were adjusted for inflation using the CPI-U.

<sup>15</sup> Under Pennsylvania tax law, anyone with Pennsylvania gross taxable income greater than \$33 must file a tax return.

**Figure 7. Share of Total U.S. Income, Excluding Capital Gains, of the Top 10% of Tax Units**



Source: Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118(1), 2003. Updated estimates available at <http://elsa.berkeley.edu/~saez/TabFig2005prel.xls>, Table A1, col. P90-100

In 2004, 90% (or 5.8 million) Pennsylvania taxpayers had taxable incomes less than \$95,050, with an average Pennsylvania taxable income of \$26,975. The next highest 5% of taxpayers, those with taxable incomes greater than \$95,050 but less than \$132,463, had an average taxable income in 2004 of \$110,741.

Skipping to the very top of the income distribution, in 2004 just over 5,000 Pennsylvania taxpayers had annual taxable incomes greater than \$1.3 million but less than \$6.3 million, placing them between the 99.9<sup>th</sup> and 99.99<sup>th</sup> percentiles. These taxpayers had an average taxable income of \$2,476,476.

The wealthiest 0.01% had taxable incomes greater than \$6.3 million in 2004. The average income for these 580 taxpayers was \$15,932,806. In 2004, one out of every 632 taxpayers, or 9,186 Pennsylvanians, had a taxable income in that one year of more than \$1 million.

Next we calculate the share of total Pennsylvania income for different sub-groups within the highest-income 10% of Pennsylvania taxpayers. In doing this, we shift from talking about each group's taxable income to talking about each group's share of total Pennsylvania *personal income*. (The methodology we use to estimate shares of personal income from taxable income data follows that of Piketty and Saez. For reasons explained in the next footnote, this methodology underestimates the personal income of the top 10% of taxpayers and overestimates that of the bottom 90%. Therefore, by extension, this methodology underestimates levels of income inequality.<sup>16</sup>)

Considered as a group, the top 1% of the Pennsylvanians (58,000 taxpayers with annual taxable incomes greater than \$317,165) claimed an estimated 13¢ of every dollar of personal income in 2004 (Figure 9).

The next 4% of earners, those falling between the 95<sup>th</sup> and 99<sup>th</sup> percentiles, some 232,000 taxpayers, claimed 11¢ of every dollar of personal income in the state. The next 5% of earners, those falling between the 90<sup>th</sup> and 95<sup>th</sup> percentiles claimed 8¢ of every dollar of personal income in the state. The remaining 5.8 million taxpayers, the bottom 90%, claimed the remaining 67¢.

Figure 10 presents Pennsylvania data on incomes in 2004 alongside estimates of incomes (including capital gains as does our 2004 Pennsylvania data) by Piketty and Saez for the entire United States. In part because levels of inequality are ordinarily higher in larger geographical units (e.g. a state than a county, a nation than one state), the key question in this comparison of Pennsylvania vs. U.S. inequality is *not* what the exact level of inequality

---

<sup>16</sup> For subgroups within the highest-earning 10% of taxpayers, share of personal income is estimated as the subgroup's taxable income divided by total Pennsylvania personal income in Pennsylvania economy reported by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). For the bottom 90%, income is calculated as total personal income in Pennsylvania minus total taxable income for the top 10%. (Dividing this income by total personal income produces an estimate of the income share of the bottom 90%.) This method guarantees that the total share of personal income of all groups adds to 100%. Total personal income is greater than total taxable income in part because personal income also includes social security, pension income, and the dollar value of transfers and health benefits. In Pennsylvania in 2004, total taxable income was 61% of total personal income.

Since this method allocates *all* of the difference between total personal income and total taxable income to the bottom 90% of the distribution, it represents a conservative way of estimating the shares of income of groups in the top 10%. In reality, of course, high-income taxpayers obtain transfers, such as social security and private pensions, and these and any other source of income not considered taxable (which are also included in the BEA Personal Income data) would be allocated to the bottom 90% of taxpayers. Considering just taxable income as reported by the Pennsylvania DOR, average income equaled \$26,975 in 2004. Average personal income for the bottom 90% of taxpayers, using the Piketty and Saez method, equals \$51,707.



**BOX 1.**

**THE PRESCRIPTION FOR PROSPERITY:  
AN ECONOMIC AGENDA FOR PENNSYLVANIA'S FUTURE**

The wage stagnation and income inequality documented in *The State of Working Pennsylvania 2007* are not inevitable. The apparent success of Pennsylvania's new minimum wage in boosting incomes at the bottom of the wage distribution reminds us that public policy choices can encourage better economic outcomes.

In February 2007, more than 20 major Pennsylvania organizations endorsed a comprehensive economic agenda—The Prescription for Prosperity—outlining a number of public policy choices that Pennsylvania could make to directly address the economic imperatives now facing the state's workers. (The text below is a simplified summary of this economic agenda. For the full agenda and a background report that fleshes out how to implement these practical, research-based ideas, visit [www.keystoneresearch.org/agenda](http://www.keystoneresearch.org/agenda) or call 717-255-7181.)

***First, Pennsylvania must ensure that individuals and businesses are equipped to compete in the new, global economy by***

- improving education at all levels and making early childhood education and post-secondary education more affordable and available;
- investing in improving and upgrading the skills of Pennsylvania workers and young people for the good jobs and industries of tomorrow, and investing in the strengthening of businesses and the expansion of business opportunities;
- building on the manufacturing strengths of each region of the Commonwealth to stabilize and expand our manufacturing base;
- strengthening key and emerging Pennsylvania industries (including renewable energy) by investing in collaborations of groups of firms on technology, marketing, and innovation. (In a global "network" economy, the economic success of regions hinges on the success of their "industry clusters," so state economic development investments must go to groups of firms, not individual companies.)

***Second, Pennsylvania must secure long-term economic security for all workers by***

- reducing health care costs to employers and employees, lowering administrative costs, and maintaining high-quality health benefits for working families;
- building on the existing "Cover All Kids" program to provide universal health coverage for all adults;
- bringing more Pennsylvanians into the middle class by indexing the minimum wage to inflation;

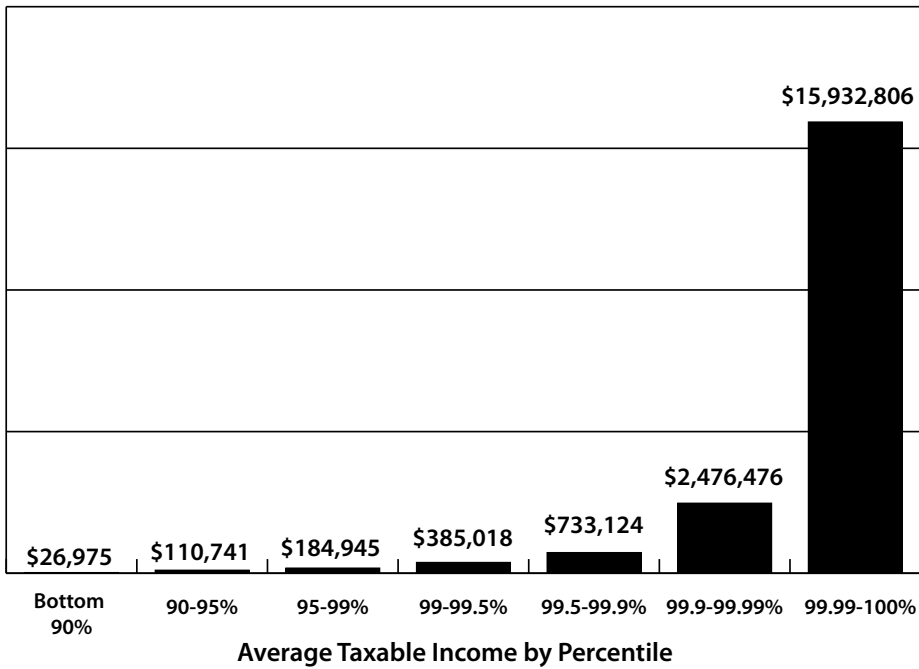
- enacting wage laws to ensure that all jobs created with public funds pay enough to support a family;
- developing job-quality improvement strategies in low-wage industries that receive substantial state funds (e.g., long-term care, tourism, agriculture);
- joining with 19 other states to establish a refundable tax credit for low-income families;
- ensuring that all workers get paid sick leave for themselves or for the care of a sick child or other family member;
- helping low-income workers take the necessary steps to better jobs—into careers that will support families.

***Third, Pennsylvania must reform its antiquated tax laws by***

- reducing state and local taxes on the middle class by changing the law to allow higher tax rates on upper income taxpayers, and by introducing personal exemptions to eliminate taxes on the first part of income;
- setting a higher state tax rate on dividends and capital gains than on wage income;
- closing tax loopholes that allow corporations to artificially lower reported profits;
- expanding the sales tax to include all tobacco and other goods and services not currently taxed, except for necessities;
- taxing businesses that do not provide health care to their employees.

Finally, Pennsylvania must create a commission to develop a business plan for the state that would deliver growth **and** opportunity. Successful modern businesses are guided by a business plan that clearly outlines marketplace pressures and spells out how the company plans to compete. In response to dramatic changes in the global competitive environment, the Commonwealth of Pennsylvania should do the same.

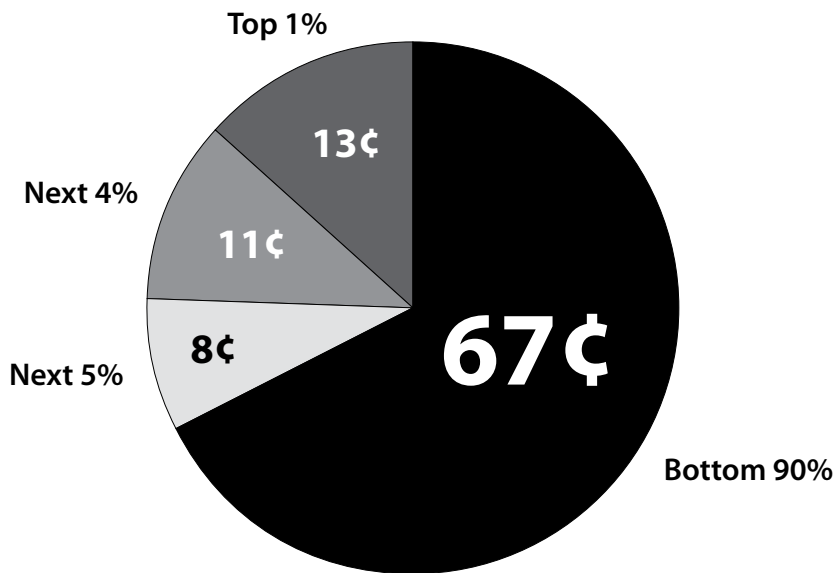
**Figure 8. In 2004, the Richest 0.01% of Pennsylvanians Earned 591 Times the Average Taxable Income of the Poorest 90%**



*Note.* As these are data on taxable incomes, they do not capture important sources of income such as social security benefits and income from pensions.

*Source.* Pennsylvania Department of Revenue (PA DOR)

**Figure 9. In 2004, 13¢ of Every Dollar of Personal Income Was Claimed by the Top 1% of Pennsylvanians**



*Note.* Figures do not sum to one due to rounding.

*Source.* KRC analysis of PA DOR data

in Pennsylvania is versus that of the United States as a whole.<sup>17</sup> The key question, instead, is whether the general shape of the income distribution is the same in Pennsylvania as it is in the United States. Another reason to focus on the general shape of the two distributions is that while we have actual data for the highest income groups from Pennsylvania, the income of these groups had to be estimated (by Piketty and Saez) for the United States from publicly available Internal Revenue Service (IRS) data that do not go all the way up to the highest income levels. As explained in the next footnote, there is reason to believe that the Piketty and Saez method substantially underestimates the highest income levels, especially in recent years.<sup>18</sup>

As Figure 10 shows, Pennsylvania incomes for the three highest-income groups are lower than estimates for the same three groups in the United States. As a result, the top 10% of earners in the U.S. takes home an estimated 46¢ out of every dollar, versus 33¢ for Pennsylvania (Figure 11). The general shape of the curve is the same nationally as in Pennsylvania. Incomes at the very top are sharply higher than those slightly lower in the distribution.

### PA Growth in Inequality Also Follows National Trends

Our second question was whether income gaps have grown in Pennsylvania over time, as they have nationally. The short answer is yes; in the state, as in the nation, a large share of the increase in income since 1973 has accrued to the highest income groups. (In this analysis, we go back to excluding capital gains because this avoids complications regarding how to treat capital gains over time.<sup>19</sup> This makes our estimates of the concentration of income gains at the very top conservative.)

Figure 12 presents the percent change in average incomes, excluding capital gains, for seven groups of taxpayers. Between 1973 and 2004, the top 0.01% of tax units in Pennsylvania saw their incomes increase by 278%.<sup>20</sup> By

<sup>17</sup> Even if inequality within each separate county of a state (or state of a country) is identical, if the income level or price level varies across counties (or across states), inequality will be higher in the larger unit. To appreciate this intuitively, think of two counties of Pennsylvania, one affluent and with higher price levels (e.g., Montgomery) and the second lower-income and with lower price levels (especially for housing) (e.g., Fayette or Greene Counties). When you look at the state as a whole, more of the top earners will come from Montgomery and more of the bottom earners will come from Fayette and Greene; moreover, the gap between these top and bottom earners will exceed the gap within any of the counties considered alone.

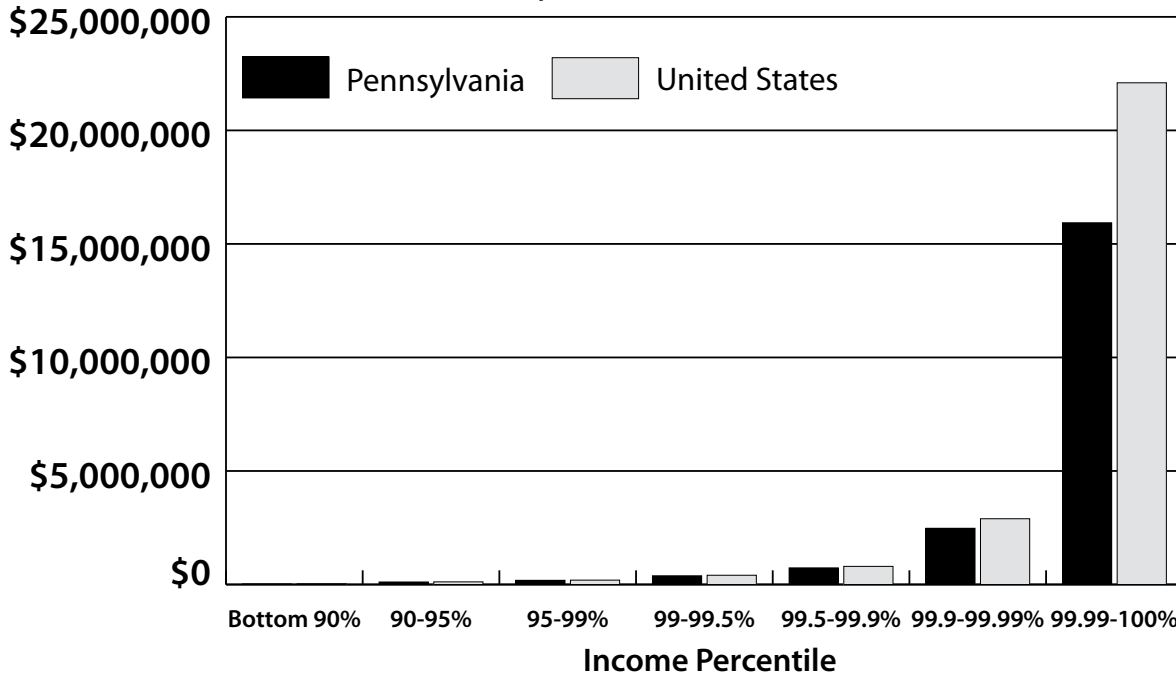
<sup>18</sup> For Pennsylvania in 2004, we can gauge the accuracy of the Piketty and Saez method against actual data because we have the actual data all the way to the thinnest income slice at the top. When we applied the Piketty and Saez method to actual Pennsylvania DOR data, the 99.99th percentile was 68% of the actual figure of \$6,362,766. The accuracy of the method improved at lower incomes. Our estimate of the 99.9th percentile was 83% percent of the actual figure of \$1,369,117. Our estimates of the 99.5th, 99th, 95th, and 90th percentiles ranged from 89% to 94% of the values derived from a database of actual returns.

<sup>19</sup> Comparisons of income data derived from tax returns is complicated by the inconsistent treatment of capital gains as taxable income, where prior to 1986 only a fraction of capital gains income was included in adjusted gross income on federal tax returns. Following Estelle Sommeiller (*Regional Income Inequality in the United States, 1913-2003*, PhD dissertation, University of Delaware, 2006), we estimate income thresholds and average incomes by applying the same adjustments to Pennsylvania income tax data that Piketty and Saez apply to national data to remove capital gains income from their estimates. The main effect of these adjustments is to lower incomes at the top of the income distribution.

<sup>20</sup> Even though we have actual data for Pennsylvania in 2004 (reported on earlier) for the top group, the 1973 to 2004 increase in the income of the top group reported in the text (i.e., the increase of 278%) is based on comparing estimates of incomes for 1973 and 2004 that were derived in a consistent way (using the Piketty and Saez method) from the more limited publicly reported PA DOR data. Not using the best data we actually have for 2004 is necessary for consistency because we don't have the actual data for 1973.

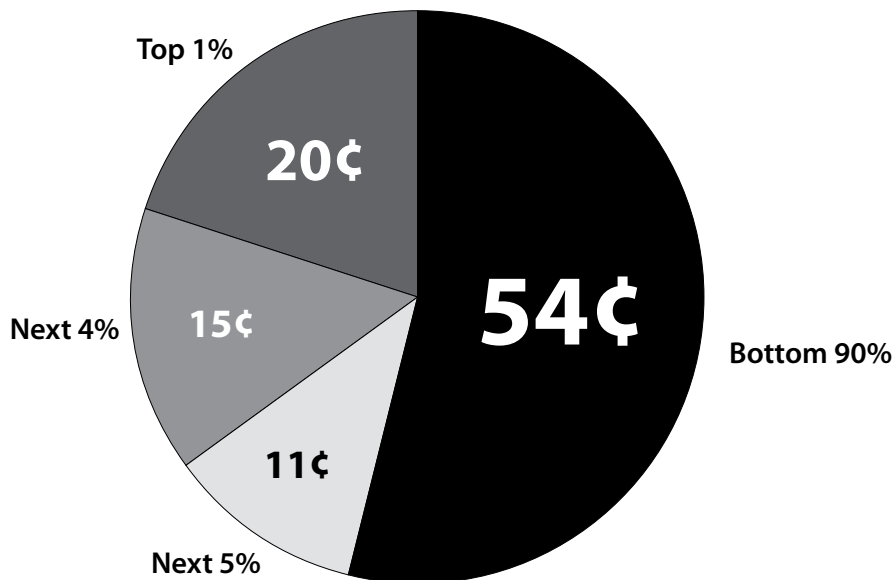
As noted earlier (see Footnote 18), we know that our estimates of income at the top in 2004 are lower than actual incomes. Moreover, it is likely that our estimates of top incomes in 1973 are more accurate (less of an underestimate) than our estimates of top incomes in 2004. (Estimates of top incomes in 1973 are likely to be less underestimated than similar estimates for 2004, because top incomes

**Figure 10. Average Incomes by Income Group in Pennsylvania and the United States, 2004**



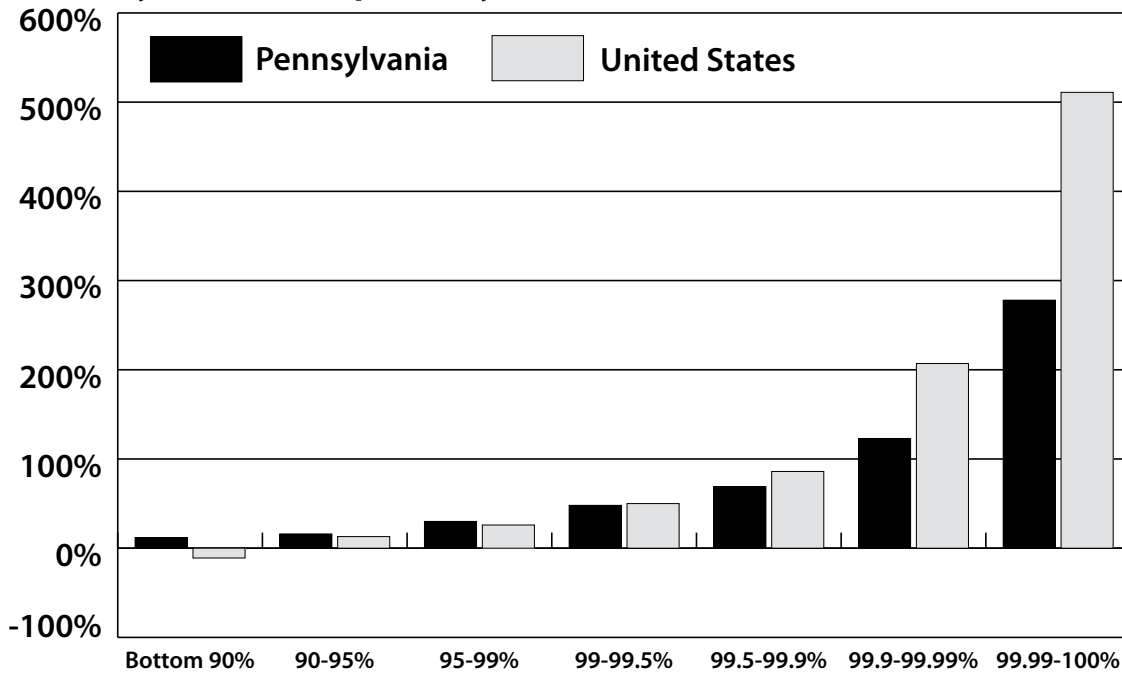
Source. PA DOR. Data for the United States estimated by Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118(1), 2003. Updated estimates available at <http://elsa.berkeley.edu/~saez/TabFig2005prel.xls>, Table A6

**Figure 11. In 2004, 20¢ of Every Dollar of Personal Income Was Claimed by the Top 1% of Tax Units in the United States**



Source. Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118(1), 2003. Updated estimates available at <http://elsa.berkeley.edu/~saez/TabFig2005prel.xls>, Table A6

**Figure 12. Percent Change in Average Income, Excluding Capital Gains, by Income Group, Pennsylvania and United States, 1973–2004**



Source: KRC analysis of PA DOR data. Data for the United States estimated by Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *Quarterly Journal of Economics*, 118(1), 2003. Updated estimates available at <http://elsa.berkeley.edu/~saez/TabFig2005prel.xls>, Table A4

contrast, the bottom 90% of tax units experienced an increase of just 12%, which over 32 years represents an increase in income of less than 0.4% per year.

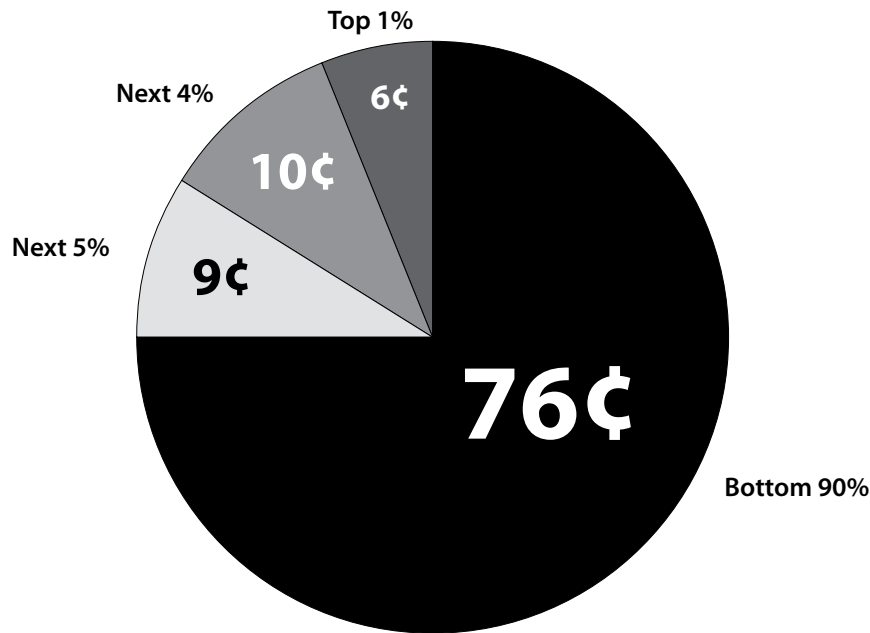
As a result of the faster increase in incomes at the top, high-income Pennsylvanians received a larger share of the *increase* in total income between 1973 and 2004 than they received of total income in 1973. Specifically, in 1973, 6¢ of every dollar income earned in Pennsylvania was claimed by the top 1% of Pennsylvanians (Figure 13). Further, between 1973 and 2004, two-and-a-half times as much (15¢) of every *additional* dollar of income was claimed by the top 1% of Pennsylvanians (Figure 14).

Data on taxable income from the Pennsylvania Department of Revenue is only available since the early 1970s, when the state first implemented an income tax. The Internal Revenue Service has published data on taxable income in the state of Pennsylvania since 1917. Using these data, Estelle Sommeiller, a recent graduate of the University of Delaware department of economics, estimated the share of personal income, excluding capital gains, held by the top 10% of Pennsylvania taxpayers since 1917. Figure 15 presents Sommeiller's data alongside our own estimates based on Pennsylvania Department of Revenue data and reveals the following trends:

- The share of personal income held by the top 10% peaked at 35% in 1921.

in 1973 were not as far above the top income ranges publicly reported by DOR.) If 2004 estimates of top incomes are lower relative to actual incomes than 1973 estimates of top incomes, then we have underestimated the growth of top incomes and the growth of inequality.

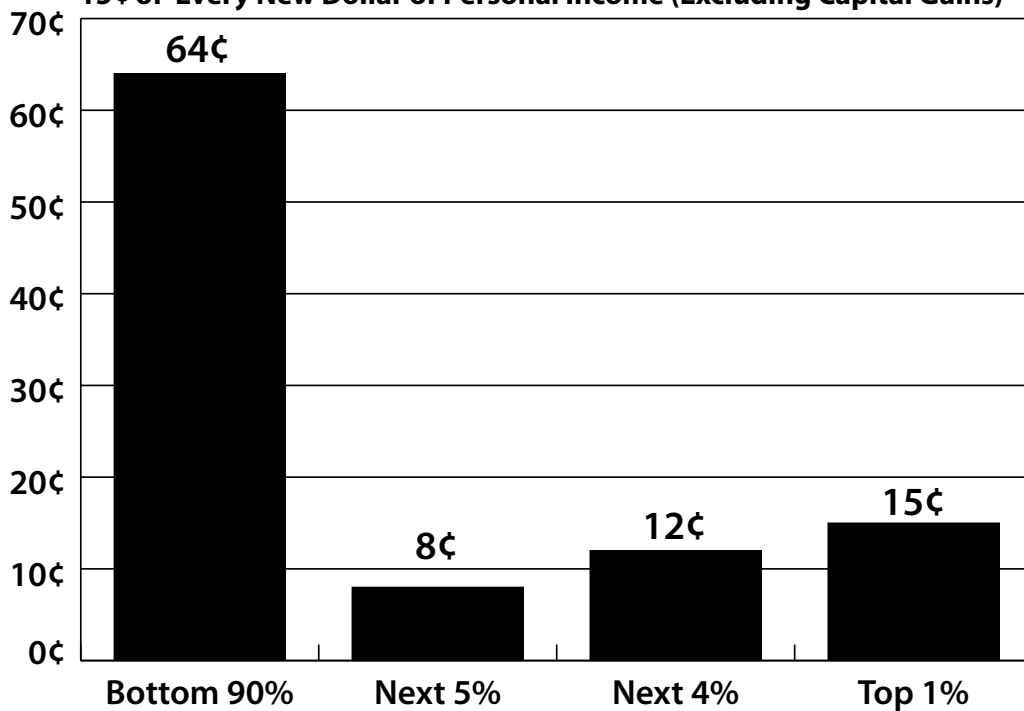
**Figure 13. In 1973, 6¢ of Every Dollar of Personal Income (Excluding Capital Gains) Was Claimed by the Top 1% of Pennsylvanians**



Note. Figures sum to more than one due to rounding.

Source. KRC estimates based on PA DOR data

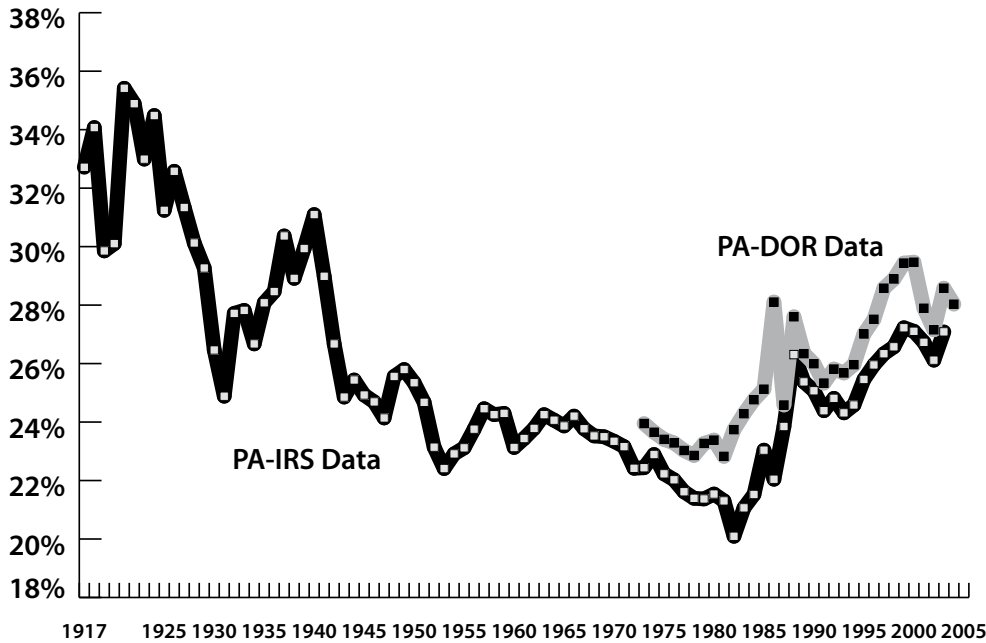
**Figure 14. Between 1973 and 2004, the Top 1% of Pennsylvanians Claimed 15¢ of Every New Dollar of Personal Income (Excluding Capital Gains)**



Note. Figures do not add up to one due to rounding.

Source. KRC estimates based on PA DOR data

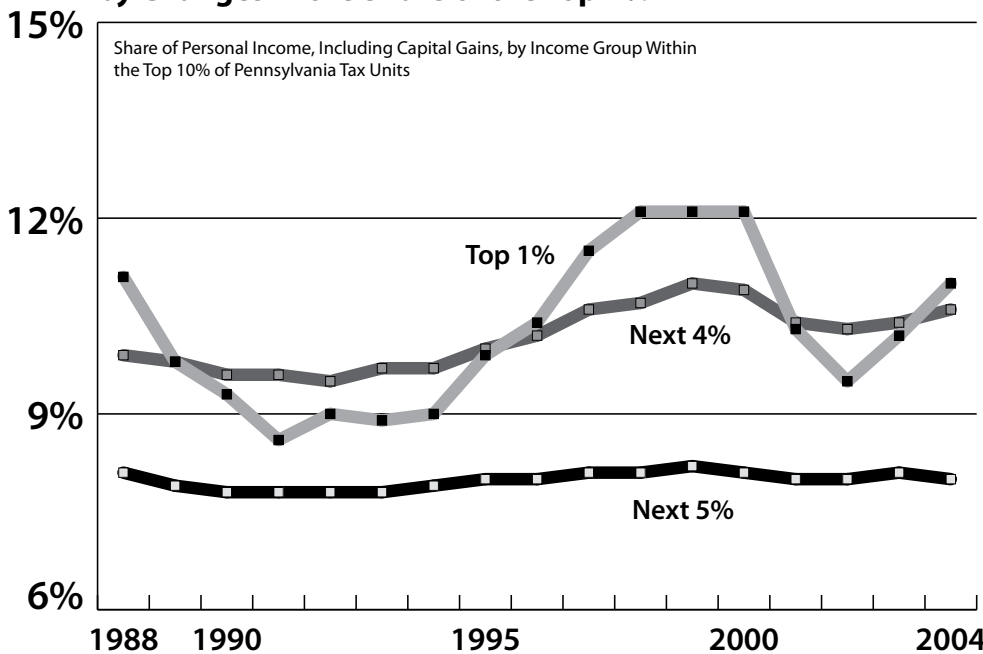
**Figure 15. At Around 28%, Income Held by the Top 10% Recently Is as High as It's Been Since the 1940s**



Note. The difference in levels between the PA-DOR shares and the PA-IRS shares, which averages 2% from 1973 to 2004 is the result of calculating the PA-DOR shares after reducing total Personal Income in Pennsylvania to reflect the subtraction of capital gains income. Failing to make this subtraction allocates income to the bottom 90% that would otherwise accrue largely to the top 10% of taxpayers.

Source. KRC estimates based on PA DOR data. Analysis of Internal Revenue Service (IRS) statistics on income for Pennsylvania from Sommeiller, E. (2006). *Regional income inequality in the United States, 1913–2003*.

**Figure 16. In Pennsylvania, as in the Nation, Changes in the Share of Personal Income Held by the Top 10% Are Largely Driven by Changes in the Share of the Top 1%**



Note. The Top 1% includes all incomes above the 99th percentile. The Next 4% includes incomes falling between the 95th and 99th percentile. The Next 5% includes incomes falling between the 90th and the 95th percentile.

Source. KRC estimates based on PA DOR data



- This share declined in the 1920s before recovering somewhat to 31% in 1940.
- At around 28%, the share of the top 10% in the last several years is higher than it has been, with the exception of 1987, since the 1940s.

In Figure 16, we examine changes in the share of all personal income, including capital gains, since 1988. (Throughout this period, all capital gains are considered part of taxable income, thereby simplifying the inclusion of this income in estimates in a consistent way.) We find, similar to national trends, that the increases in income in the top 10% are largely driven by changes in income for the Top 1% of tax units (Figure 16).

## Conclusion

Recent trends at the top and bottom of the economic spectrum underscore two unsurprising but too-often-ignored points for public policy:

- First, the rising wages that were observed for low-wage Pennsylvanians following the Pennsylvania minimum wage increase suggest that public policy can make a difference to the economic status of ordinary Pennsylvanians.
- Longer-term trends, both the five-year stagnation of wages overall and the three-decade rise in economic inequality, make clear that much more must be done in Pennsylvania to achieve a new era of broadly shared prosperity.

Since Keystone Research Center has elsewhere outlined comprehensive economic recommendations that aim to achieve broadly shared prosperity, we will not reiterate those recommendations here (see Box 1). Instead, we make only one new recommendation, aimed at getting a definitive handle on the economic facts and on the growth of inequality over time.

This report takes a first crack at generating insights from fresh data and innovative statistical methodologies that allow closer examination of Pennsylvania incomes at the very top of the economic spectrum. As noted, however, we have been quite conservative in several places, leading to a likely underestimate of top incomes in some cases and also to an underestimate of the growth of inequality.

Building on this beginning, we recommend that the Commonwealth of Pennsylvania, through collaboration between the Department of Labor & Industry and the Department of Revenue, conduct a more comprehensive analysis of income inequality over time.

For too long, as income inequality has returned to the levels of the Gilded Age, public attention and public policy have looked the other way. At some point, however, particularly if transmitted intergenerationally by the multiple advantages enjoyed by the children of the most affluent, inequality begins to tear at the fabric of American society. Basic values, such as equal opportunity, become threatened.

So, let Pennsylvania be the first state to take the most definitive look possible at the economic realities generated by current economic restructuring.

The first step to reversing the growth of inequality, after all, is to look long, hard, and honestly at the scope of the problem.

# Appendix

**Table A1. Income Thresholds and Average Incomes, All Returns, Pennsylvania 2004**

Percentile of taxpayers by income level	90%		95%		99%		99.50%		99.90%		99.99%	
	Count	\$95,050	Count	\$132,463	Count	\$317,165	Count	\$483,771	Count	\$1,369,117	Count	\$6,362,766
Minimum income for group												
Percentile of taxpayers by income level		90-100%		95-100%		99-100%		99.5-100%		99.9-100%		99.99-100%
Cumulative percentage of tax units		10%		5%		1%		0.50%		0.10%		0.01%
Average income of taxpayers in each group range	580,842	\$216,124	290,420	\$321,507	58,083	\$867,765	29,041	\$1,350,529	5,808	\$3,820,255	580	\$15,932,806
Percentile of taxpayers by income level	Count	90-95%	Count	95-99%	Count	99-99.5%	Count	99.5-99.9%	Count	99.9-99.99%	Count	99.99-100%
Percentage of taxpayers within each group interval		5%		4%		0.50%		0.40%		0.09%		0.01%
Average income of taxpayers in each interval	290,422	\$110,741	232,337	\$184,945	29,042	\$385,018	23,233	\$733,124	5,228	\$2,476,476	580	\$15,932,806

Note: These results are slightly different than the original 2004 PIT Booklet due to difference in the overall data population used. The PIT Booklet excludes returns that are suspended at the time of the creation of the booklet.

Source: PA DOR





The Keystone Research Center  
412 North Third Street  
Harrisburg, PA 17101  
[www.keystoneresearch.org](http://www.keystoneresearch.org)