

# **Pennsylvania's Best Investment: The Social and Economic Benefits of Public Education**

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## **Section II. Education and Employment & Section III. Education and Crime**

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## Abstract

Public education is a worthy investment for state government, with immense social and economic benefits. Research shows that individuals who graduate and have access to quality education throughout primary and secondary school are more likely to find gainful employment, have stable families, and be active and productive citizens. They are also less likely to commit serious crimes, less likely to place high demands on the public health care system, and less likely to be enrolled in welfare assistance programs. A good education provides substantial benefits to individuals and, as individual benefits are aggregated throughout a community, creates broad social and economic benefits. Investing in public education is thus far more cost-effective for the state than paying for the social and economic consequences of under-funded, low quality schools.

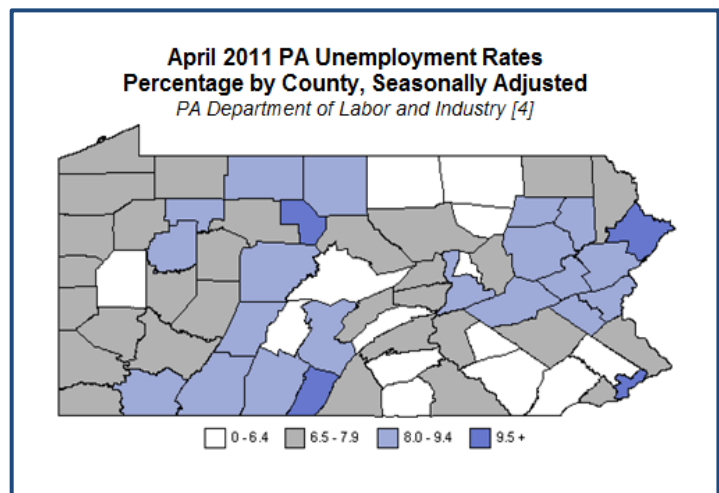
For example:

- High school dropouts are more than twice as likely to be unemployed and three times more likely to receive welfare assistance, costing billions of dollars nationally each year for government funded assistance programs.
- Decreasing the number of high school dropouts by half would nationally produce \$45 billion per year in net economic benefit to society.
- Improved education and more stable employment greatly increase tax revenue, such as a return of at least 7 dollars for every dollar invested in pre-kindergarten education.
- 41% of all prisoners have not completed high school, compared to 18 percent of the general adult population. The annual cost of incarcerating an individual is about \$32,000, while the annual cost of a quality public education is about \$11,000.
- A 5% increase in the male graduate rate would save \$5 billion in crime-related expenses.
- Mortality decreases for every additional year in schooling by 7.2% for men and 6% for women; and the chances of optimum health is up to 8 times higher for citizens with eighteen years of education versus only seven.
- Graduating from high school improves the quality of health, reduces dependence on public health programs by 60 percent, and cuts by six times the rate of alcohol abuse.
- National savings in public health costs would exceed \$40 billion if every high school dropout in just a single year would graduate. Average annual public health costs are \$2,700 per dropout, \$1,000 per high school graduate, and \$170 per college graduate.
- A 1-year increase in median education level is associated with a more than 13% jump in political primary turnout.

## II. Education and Employment

The recent economic recession demonstrated in unfortunate and powerful ways the connection between education and employment. The recession had the greatest impact on individuals with lower levels of education attainment [113]. In 2009, the unemployment rate was much lower and average earnings were higher for individuals who did not drop out of high school and had achieved some level of college education.

During the recession, the educational disparities in employment and earnings were greatest for African Americans and Latinos [114]. For all Americans who dropped out of high school, the average unemployment rate increased from 9 percent in 2008 to nearly 15 percent in 2009. But for African American dropouts, the unemployment rate in 2009 exceeded 21 percent. And the unemployment rate rose to 14 percent even for high school graduates who were African American and to over 10 percent for Latinos. As noted in *The Washington Post*, “the lowering tide” of our economy “is not sinking all boats in the same way” [115]. The gaps in employment and earnings have increased during the recession based on race and level of educational attainment.



When *The New York Times* reported on these trends for metropolitan areas in different states, it found that a “social multiplier” greatly exacerbated the impact of education levels on unemployment for communities with high concentrations of less educated individuals. Unemployment rates were 80 percent higher on average than expected in cities with low levels of high school and college graduates. The Harvard University professor conducting this analysis concluded, “The fact that education has mattered so much during this recession only reminds us that America’s future depends on its human capital” [116].

Research over many decades has documented the benefits of education for employment [32-36] and economic growth [36-40]. In fact, the expansion of universal high school education in the United States between 1915 and the late 1950s explains beyond any other “factor ... the economic dominance of the United States in the 20<sup>th</sup> century” relative to other nations [39].

<b>Unemployment Rate (%) during the “Great Recession”</b>			
<b>State</b>	<b>Dec. 2007</b>	<b>June 2009</b>	<b>Net change</b>
Delaware	3.9	8.1	4.2
Maryland	3.6	7.3	3.7
New Jersey	4.5	9.3	4.8
New York	4.7	8.6	3.9
Ohio	5.7	10.4	4.7
Pennsylvania	4.5	8.2	3.7
West Virginia	4.1	8.1	4.0
United States	4.7	9.5	4.8
<i>Data from U.S. Dept. of Labor, Bureau of Labor Statistics (seasonally adjusted) [2]</i>			

Educational achievement has dramatic economic benefits for individuals. Graduating from high school has historically been an important indicator for employers that a person is ready to hold a job. Even today, high school dropouts are more than twice as likely to be unemployed than people who have attended college [119,141].

Receiving a quality K-12 education has also become increasingly important for college preparation. In recent years, college education beyond high school has become essential as higher level knowledge and skills are required by 21st century jobs in an international economy. The relative economic value of a high school diploma by itself – without higher education – has actually decreased over time as more people have access to and complete college [32,39].

The issue of quality education has therefore become a societal *human resources* issue. This operates on the individual level in terms of preparing youth for higher education and employment. The private, personal benefits of having a good, stable job then combine to create broader social and economic benefits.

For example, employment is linked to better health because most Americans gain access to health insurance through their employer. The health benefits of education also occur because better educated people tend to have more stable employment, which reduces life stressors and risk factors that negatively affect health. More stable employment is linked to reduced likelihood of committing crime and reduced need for public assistance programs supported by tax revenue [26,70]. Because dropouts have so many fewer employment opportunities, the ripple effect of their disadvantage costs the nation billions of dollars in lost tax revenue and in welfare, unemployment, and crime prevention programs [111].

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Government support for public education is thus crucial for individual employment, the broad creation of human capital, and overall economic growth [23,26,41,74,128]. Policies that boost government investment in education can help reduce income inequality while expanding economic opportunity [26]. States that invest more in public education eventually reduce levels of income inequality between residents [42]. One report predicts that economic growth will continue to be uneven in Pennsylvania because of local differences in educational opportunity [43].

Reduced government expenditures for welfare programs are a powerful example of the significant employment and economic benefits of quality education. Participation in cash assistance programs is highest among individuals with the lowest levels of education [120-122]. In 1992, high school dropouts were three times more likely to receive income from public assistance than high school graduates who did not go on to college – 17 percent versus 6 percent [121]. Between 1972 and 1992, both high school dropouts and graduates who did not go on to college were more likely to receive public assistance [121].

Graduating from high school and improved employment opportunities have significant positive effects, even in normally at-risk populations. For example, single mothers with a high school diploma

are 24 to 55 percent less likely to receive public assistance than single mothers who drop out. Helping all single mothers to graduate from high school would result in an annual national savings of \$1.5 to \$3.5 billion in public assistance alone [122].

The savings in government expenditures are even greater when other low-income assistance programs are considered. Improving education outcomes could result in national savings between \$7.9 and \$10.8 billion annually in public assistance, food stamps, and housing assistance [122]. Just lowering class size for African American males in elementary school would save taxpayers \$22,000 per individual in reduced enrollment in welfare programs over time. And quality pre-kindergarten programs save taxpayers an additional \$20,000 for each participant that graduates from high school [60,123].

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Society also benefits from improved education outcomes when individuals are employed with higher earnings and the government collects greater tax revenue [57]. According to the Pennsylvania Department of Education, “investments in quality pre-kindergarten programming conservatively yield a return of \$7 for every taxpayer dollar invested.” And when the benefits of increased tax revenue are combined with reduced welfare spending, investment in quality pre-kindergarten programs return up to \$17 for every dollar spent [60,123].

From a national perspective, “[d]ecreasing the number of high school dropouts by half would produce \$45 billion per year in net economic benefit to society” [124]. This kind of return on investment has a precedent in the impact of the G.I. Bill after World War II. The G.I. Bill provided 10 million American war veterans with a fully funded college tuition and living stipend. The G.I. Bill cost the federal government roughly \$50 billion in today’s dollars. This investment ultimately returned \$350 billion to the government over time in the form of tax revenue from the enhanced wages veterans earned with their degrees [127].

### III. Education and Crime

The public bears a huge financial burden from crime and its related costs to society. The overall “price tag” for crime includes tangible and intangible costs to victims, court costs associated with the prosecution of crime, the costs of incarceration (infrastructure, staff, housing and food, counseling, prisoner education programs), the indirect economic costs associated with productivity and wages lost to both victims and offenders, and the decreased opportunities available to those with a prison record [48,49]. The National Institute of Justice estimates that these costs total \$450 billion annually, or \$1,800 for each U.S. resident (using data for the period between 1987 and 1990) [44].

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**FastFact:** *Public education provides one of the best opportunities to reduce crime and its cost to society, by helping children to gain knowledge, skills and character.*

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Public education provides one of the best opportunities to reduce crime and its cost to society by helping children to gain knowledge, skills, and character that help them avoid criminal activity. The following data demonstrates the strong correlation between the lack of educational achievement and crime:

- Roughly 41 percent of all federal, state, and local prisoners in 1997 and 31 percent of probationers had not completed high school or received a GED, while that was true of only 18% of the general population age 18 or older [59].
- Black and white males in prison and 20 to 39 years of age (Two-thirds of all state inmates in 1997) were half as likely to have a high school degree as the same group in the general population [59].
- In 1999, Caucasian men aged 30-34 who had not completed high school were four times more likely to have a prison record than Caucasian men of the same age who had completed high school; African American male drop outs aged 30-34 were two times as likely as those with a high school degree to have a prison record [46].

The main reasons that well-educated people are less likely to engage in criminal activity are related to their employment status and their perception of their own employability [47,48]. Crime is more attractive to individuals who are unemployed or under-employed, or who consider their prospects for permanent, purposeful employment to be limited [48,49]. Generally, studies show that the more formal education a person receives, the less likely he or she is to engage in crime, especially violent crime. Levels of criminal activity within a community are generally lower when the average level of education is higher [29,50].

The public system of education is therefore an important buffer between an individual and the likelihood they will commit a crime because it is the first and most comprehensive employment and life preparation program available to all residents of the state. Quality schools improve personal and collective intelligence by improving individual problem solving skills, social perspective and ability, and employability [16,17,27]. The lack of quality education or incomplete education is a major contributor to unemployment, crime, and incarceration [49,57].

Some have argued that the correlation between increased levels of education and decreased likelihood of incarceration is related to opportunity – the more time someone spends in school, the fewer opportunities to commit crime. This argument may have some validity because youth attending school are in structured and supervised settings rather than on the street. But this reasoning is incomplete because it ignores the fact that children actually spend relatively little time in school compared to their time outside of school. By the time students are 18 years old, they have spent only one-tenth of their life's time (including sleep time) in school settings [51].



In addition, several major studies provide compelling evidence that educational programs play a *causal* role in the reduction of crime [50]. A 2004 evaluation of nationally representative data sets from different sources (the National Longitudinal Survey of Youth and FBI Uniform Crime Reports) explored the relationship between education and crime. The study found significant connections between graduation rates and the reduction of violent crime and found, “When arrests are separately analyzed by crime, the greatest impacts of graduation are associated with [reduced arrests for] murder, assault, and motor vehicle theft” [52]. Other studies have found that participation in early education programs reduces juvenile and violent arrests among participants [53-58]. Fifteen years after participating in a federally funded pre-kindergarten program in Chicago, there were fewer juvenile arrests (16.9 percent versus 25.1 percent), multiple arrests (9.5 percent versus 12.8 percent), and violent arrests (9 percent versus 15.3 percent) among the cohort of mostly African American graduates of the program compared to a cohort who had not attended the program. African Americans who attended Head Start programs as children are also less likely to be booked or charged for a crime as adults [56].

The strong relationship between higher levels of education and lower levels of crime make public expenditures for quality schools a sound investment. By one estimate, “the social benefits of a 1 percent

### **Pennsylvania Crime Statistics**

*The level of incarceration and its cost are very high in Pennsylvania [4,45,112].*

- One out of every 28 Pennsylvania residents are incarcerated or on probation, the 13<sup>th</sup> highest rate in the country and almost double the rate in New York.
- State and local spending on Pennsylvania prisons and jails is about \$2.6 billion.
- The cost of incarcerating an individual is \$32,000 per year.
- The average annual education cost per student in a PA public school is \$9,500.
- Pennsylvania’s incarceration rate has risen from 50 prisoners per 100,000 residents in 1970 to 372 per 100,000 in 2008, requiring the construction of 18 new prisons since 1980. Specific policy decisions – the war on drugs and mandatory minimum sentencing – are primarily responsible for this large growth, not crime rates or civilian population changes. The general population in Pennsylvania during this same time period remained mostly stable [around 12 million].
- The Alliance for Excellent Education calculates that Pennsylvania would benefit by \$288 million annually from total savings related to crime if graduation rates among males could be increased by only 5 percent. Nearly two-thirds of this amount is related to government savings from less crime prosecution and incarceration, with the remainder related to improved wages and productivity.

increase in male U.S. high school graduation rates (from reduced crime alone) would have amounted to \$1.4 billion” [52]. An average savings of \$26,600 related to criminal justice would be realized over the lifetime of each additional high school graduate [125]. Authors of a study examining the long-term effects of the Perry Pre-School program in Michigan estimate that the program’s effectiveness in reducing crime, as well as participation in welfare and other social programs, produced the equivalent of \$17 in savings to taxpayers for every one dollar spent (including \$11 in crime costs alone) [60].

The nation currently spends on average over \$13,000 more annually per inmate than per student. In 2004 the United States spent almost \$50 billion in incarceration costs [45]. Investing in public education in the short term should result in increased graduation rates over the long term and less need to spend public resources on crime prevention and incarceration.

