

## ISSUE: The High Cost of Low Educational Attainment

The high costs of not completing high school affect both the individual and society as a whole. In general, the costs of low educational attainment to individuals and their families are well understood. In recent years researchers have begun to focus on the broader costs to society in order to better highlight the issue and to clarify the potential returns to society of new investments that increase graduation rates. The information here is taken from recent research on the fiscal and economic consequences of high school dropouts. The research is discussed at the end of this *Issue Insight*.

### Summary

- In the U.S., the 2004-2005 mean annual value of payments from government to adults (16-64) without a high school diploma (\$4,843) exceeds the value to those with a high school diploma (\$2,967) by more than 60%<sup>1</sup>.
  - In Virginia, payments and in-kind costs average \$5,358 for dropouts and \$2,339 for high school graduates<sup>1</sup>.
- The mean annual tax payments in the U.S. of adults with a high school diploma (\$8,865) are more than 70 percent higher than those of adults without a high school diploma (\$5,519)<sup>1</sup>.
  - In Virginia, annual tax payments from high school graduates averaged \$9,867 and payments of adults with no high school diploma averaged \$5,720<sup>1</sup>.
- The average high school dropout in the U.S. generates a lifetime net fiscal burden of \$33,000, while the average high school graduate produces a 'surplus' of almost \$268,000 more in taxes than he/she imposes in direct costs<sup>1</sup>.
  - In Virginia, an adult high school dropout generates a fiscal 'surplus' of \$17,690 compared to the \$368,870 average surplus generated by a high school graduate<sup>1</sup>.
- The average net present value of lifetime savings in criminal justice system expenditures per additional high school graduate in the U.S. is estimated to be \$26,600<sup>2</sup>.
  - Virginia's economy would see a combination of \$179 million in reduced crime spending and increased earnings each year if the male high school graduation rate increased by just five percent<sup>3</sup>.
- The average net present value of lifetime public health care expenditure savings per additional high school graduate is estimated to be \$40,500<sup>2</sup>.

Virginia would save about \$397 million in health care costs over the course of the lifetimes of each class of dropouts had they earned their diplomas<sup>3</sup>

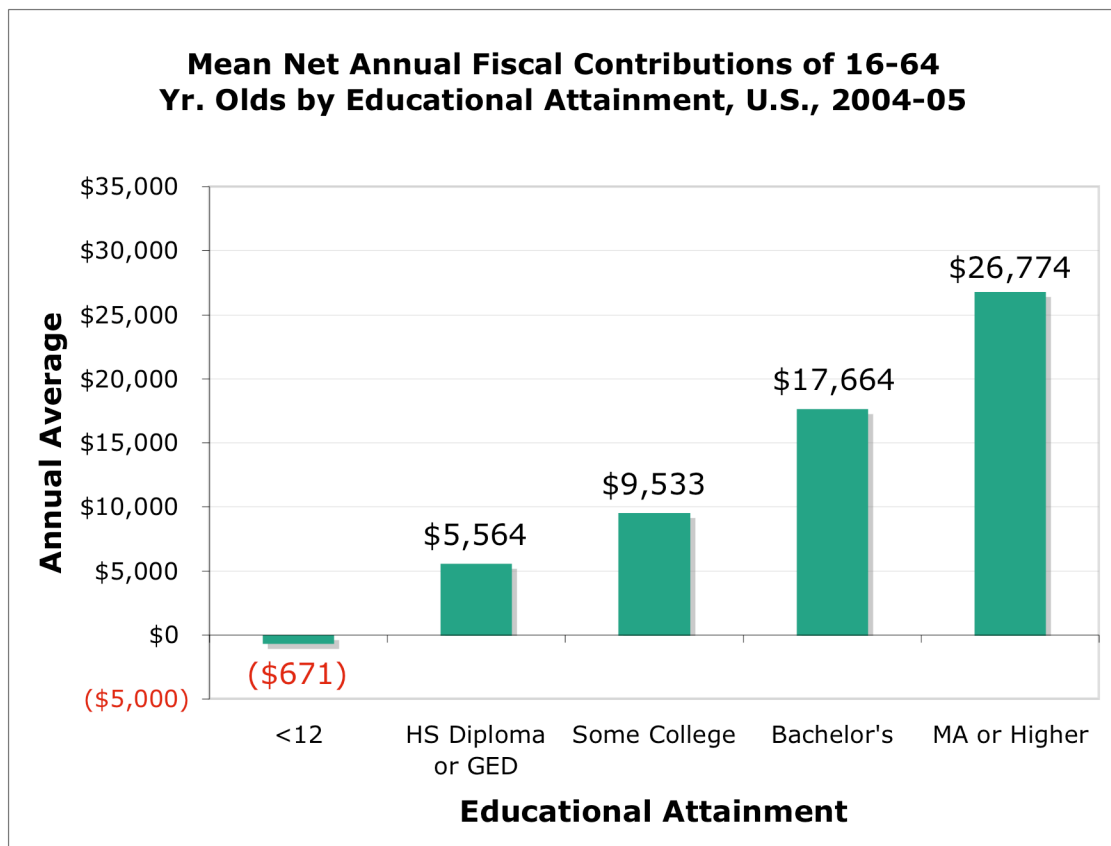


## Fiscal Consequences for the U.S.

Chart 1 demonstrates a clear link between educational attainment and average fiscal contributions<sup>1</sup>.

- The mean annual value of cash and in-kind transfers from government to adults (16-64) without a high school diploma (\$4,843) exceeds the value to those with a high school diploma (\$2,967) by more than 60%. The rate of payment to those without a high school diploma is more than three times the value to those adults with a Bachelor's degree (\$1,195).
- The mean annual tax payments of 16-64 adults with a high school diploma (\$8,865) are more than 70 percent higher than those of adults without a high school diploma (\$5,519). The mean tax payments from adults with Bachelor's degrees (\$18,904) were three times higher than the payments made by adults without a high school diploma or GED.
- The average high school dropout produces a lifetime net fiscal burden of \$33,000 while the average high school graduate generates a 'surplus' of almost \$268,000 more in taxes than he/she would impose in transfer costs and institutionalization costs. For those with Bachelor's degrees the lifetime net contribution is \$865,536.

Chart 1

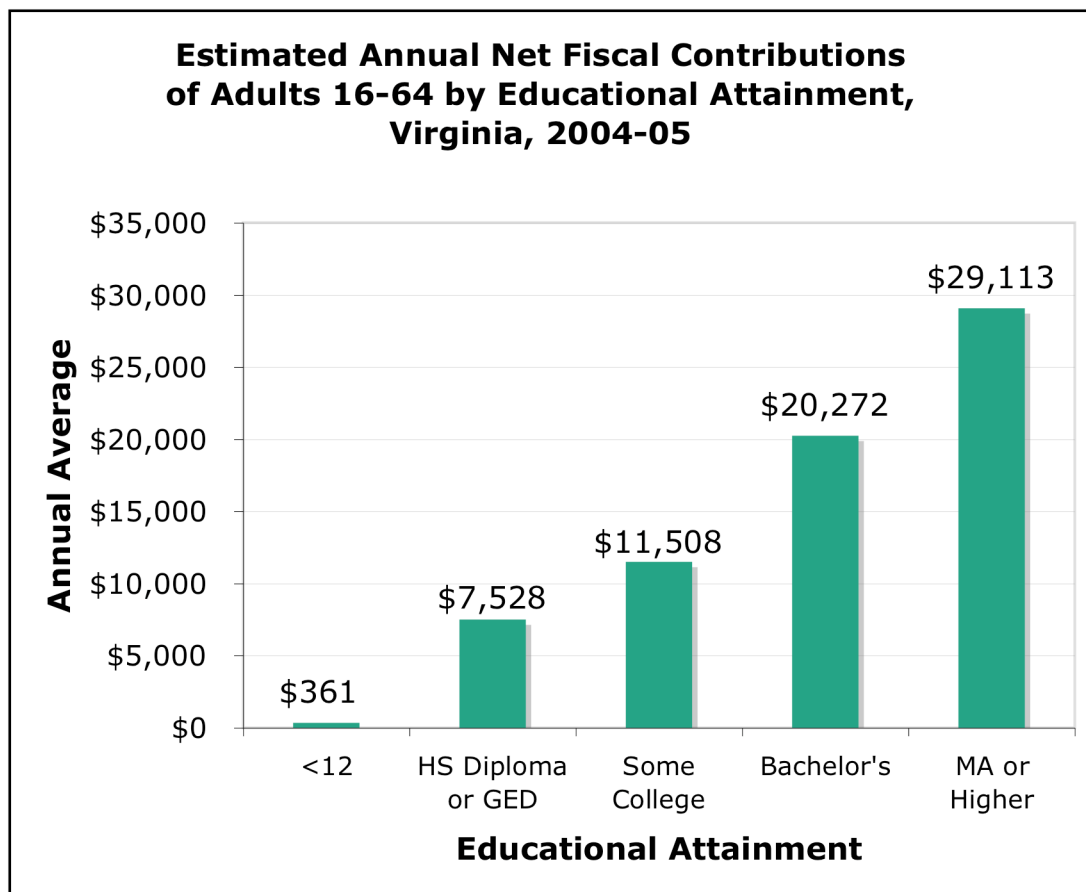




The report also includes estimates for Virginia<sup>1</sup>:

- The mean annual value of cash and in-kind transfers from government to adults (16-64) in Virginia without a high school diploma (\$5,358) is more than twice the value to those with a high school diploma (\$2,339). The rate of payment to those without a high school diploma is more than six times the value to those adults with a Bachelor's degree (\$895).
- The mean annual tax payments of 16-64 adults with a high school diploma (\$9,867) is more than 72 percent higher than those of adults without a high school diploma (\$5,720). The mean tax payments from adults with Bachelor's degrees (\$21,125) were more than three times higher than the payments made by adults without a high school diploma or GED.
- The average high school dropout in Virginia produces a lifetime net fiscal 'surplus' of \$17,690 while the average high school graduate generates a 'surplus' of about \$368,870 more in taxes than he/she would impose in transfer costs and institutionalization costs. For those with Bachelor's degrees the lifetime net contribution is \$993,330.

Chart 2





A number of studies also examine the public health, crime, and welfare consequences of low educational attainment. In fact, one report estimates the total present value of lifetime economic benefit per expected high school graduate to exceed \$209,000<sup>2</sup>.

## Crime

Crime research generally finds that higher educational attainment reduces crime both by juveniles and adults. One study<sup>2</sup> reported that while dropouts constitute less than 20 percent of the overall population, they make up over 50 percent of the state prison inmate population. Another study<sup>4</sup> reported that more than two-thirds of the inmates in the nation's state and federal prisons and local jails are dropouts<sup>5</sup>.

- The criminal activity per 1,000 high school dropouts would be reduced by 10-20% if they received their high school diplomas. Rates of reduction include 19.6 percent for violent crimes, 10.4 percent for property crime, and 11.5 percent for drug offenses<sup>2</sup>.
- A one-year increase in average years of schooling for dropouts would reduce murder and assault by almost 30 percent, motor vehicle theft by 20 percent, arson by 13 percent, and burglary and larceny by about six percent<sup>3</sup>.
- A dropout is more than eight times more likely to be in jail or prison as a high school graduate and nearly twenty times as likely as a college graduate. Each year, the United States spends \$9,644 per student compared to \$22,600 per prison inmate<sup>4</sup>.
- The average discounted value of extra lifetime criminal justice system expenditure savings per additional high school graduate would total \$26,600<sup>2</sup>.
- Increasing the high school completion rate by just one percent for all men ages 20-60 would save the U.S. up to \$1.4 billion per year in reduced costs from crime<sup>3</sup>.
- Increasing the graduation and college matriculation rate of male students by only five percent a year could lead to combined crime-related savings and increased revenue of almost \$8 billion each year<sup>4</sup>.
- Virginia's economy would see a combination of about \$179 million in reduced crime spending and increased earnings each year if the male high school graduation rate increased by just five percent<sup>5</sup>.

## Public Health

There is a strong relationship between health and educational attainment. For instance, those who graduate from high school live over nine years longer than high school dropouts.

- In 2003, health care expenses surpassed education as the largest item in states' budgets. In fiscal year 2006, Medicaid alone is estimated to account for about 22 percent of total state spending. In addition, public health care costs continue to rise<sup>6</sup>.
- Less educated workers are less likely to be covered by health insurance and more likely to suffer from heart conditions, strokes, hypertension, high cholesterol, as well as a range of behaviors that contribute to ill health, such as smoking<sup>6</sup>.



- A 65-year old person with a high school diploma typically enjoys better health status than a 45-year old who dropped out in the 10th grade<sup>3</sup>.
- High school graduates are more likely to raise healthier, better-educated children who are far more likely to graduate from high school than those of parents without a high school degree<sup>8</sup>.
- More than 22 percent of adults (16-64) without a high school diploma/GED were dependent on Medicare or Medicaid for their health insurance coverage while 11.6 percent of high school graduates and 3.1 percent of college graduates relied on Medicare or Medicaid<sup>1</sup>.
- A white female dropout will receive \$60,800 in Medicaid and Medicare payments or services over their lifetime up to age 65. A high school graduate will receive \$23,200 and a college graduate \$3,600<sup>2</sup>.
- The average discounted present value of extra lifetime public health expenditure savings in the U.S. per additional high school graduate would total \$40,500<sup>2</sup>.
- The total lifetime savings for Medicaid and uninsured medical coverage costs per additional high school graduate in Virginia is estimated to average about \$15,520<sup>6</sup>.
- The total lifetime savings for Medicaid and uninsured medical coverage costs in Virginia if all students of the class of 2005-2006 graduated from high school would exceed \$396 million<sup>6</sup>.

### Notes on the Research

The data in this *Issue Insight* are pulled from eight reports focused on the costs to society of low educational attainment. Reports and documents are listed on the next page. The last reference is to a summary of costs related to high school dropouts in North Carolina.

The information in the reports is more credible when referring to averages for different kinds of revenues and expenses by level of educational attainment. These are usually based on relatively reliable source data from the Census Bureau and other public organizations. The projections of savings from an entire cohort of dropouts graduating are more problematic.

In many cases, the projected increases in revenues and decreases in expenses seem to be based on simple extrapolations of averages (e.g., annual average savings per graduate times the total number of dropouts times the expected lifetime work period). The research doesn't take into account the impact that a large number of additional high school graduates would have on labor markets or the additional costs of a significant increase in the demand for college education. In addition, the costs of trying to graduate an entire cohort of students, if it were possible, would be very high.

The research, because it relies on averages, cannot account for differences in behaviors – and projected future costs – of, say, the 1,000 students most likely to graduate based on increased government investment and the 1,000 least likely. It is reasonable to assume that those two cohorts are different and that the 1,000 students most likely to graduate would also be more likely to hold jobs, enjoy better health, and so forth even without a diploma. It is clear that the 1,000 new graduates would be better off on average, but it is uncertain whether they would benefit more or less than the overall average that includes the 1,000 least likely to graduate.



Therefore, total benefits from the graduation of all dropouts should be treated as rough approximations.

## References

1. Ishwar Khatiwada, Joseph McLaughlin, Andrew Sum with Sheila Palma. (December 2007). *The Fiscal Consequences of Adult Educational Attainment*. Center for Labor Market Studies, Northeastern University. Sponsored by the National Commission on Adult Literacy.
2. Henry Levin, Clive Belfield, Peter Muennig, Cecilia Rouse. (January 2007). *The Costs and Benefits of an Excellent Education for All of America's Children*. Teachers College, Columbia University. Sponsored by Lilo and Gerry Leeds.
3. Henry Levin. (2005). *The Social Costs of Inadequate Education*. The Campaign for Educational Equity, Teachers College, Columbia University. Sponsored by the Laurie M. Tisch Foundation.
4. *Improving Education Leads to Huge Savings for American Taxpayers*. (2008). Strong American Schools: ED in '08, a project of the Rockefeller Philanthropy Advisors with support from the Eli and Edythe Broad Foundation and the Bill & Melinda Gates Foundation.
5. *Saving Futures, Saving Dollars: The Impact of Education on Crime Reduction and Earnings*. (August 2006). Issue Brief, Alliance for Excellent Education.
6. *Healthier and Wealthier: Decreasing Health Care Costs by Increasing Educational Attainment*. (November 2006). Issue Brief, Alliance for Excellent Education.
7. *Potential Economic Impact of Improved Education on Virginia*. (October 2007). StateInformation, Alliance for Excellent Education.
8. *The High Cost of High School Dropouts: What the Nation Pays for Inadequate High Schools*. (October 2007). Issue Brief, Alliance for Excellent Education.
9. Brian J. Gottlob. *The High Cost of Low Graduation Rates in North Carolina*. (October 2007). Study released jointly by the Milton and Rose D. Friedman Foundation and Parents for Educational Freedom in North Carolina.