

The Fiscal Consequences of Dropping Out of High School in Rhode Island

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Introduction

The passage of the Rhode Island Dropout Prevention Act in 2007 clearly signals the level of concern among the state's policy makers and their constituents about the high numbers of high school dropouts in the state, particularly in the state's urban school districts that serve a majority of the state's poor and economically disadvantaged children. Indeed five of the state's schools were categorized as dropout factories in a research report by researchers from Johns Hopkins University's Center for Research on the Education of Students Placed at Risk (CRESPAR).¹ Representative Joseph McNamara, who sponsored the dropout prevention legislation, said, "Even as we see an upswing in performance test scores around the state, we are still losing the battle with a lot of our children allowed to walk away from an education that could make their lives so much better in the future."² The legislation aims to reduce the dropout rates in Rhode Island through targeted dropout prevention programs, changes to the steps students must take to drop out of school, and promoting a "fast track to college" program that enables students to earn a high school diploma while earning college credits.³

Estimates of the number and the rate of dropouts in the state of Rhode Island vary somewhat based on the specific measure that is employed. Although more systematic efforts have been undertaken by states to define and measure dropouts, not all states employ the same methods and even within states the estimation of the number and rate of dropouts is not consistent across school districts. Despite continued national efforts to develop improved measures of high school retention and separation, no single measure of dropout or graduation rates has been adopted as a standard. The National Governor's Association organized a task force that developed a measure of graduation rate called the "adjusted cohort graduation rate" that could be adopted by every state including those

¹ Robert Balfanz and Nettie Legters, *Locating the Dropout Crisis: Which High School Produce the Nation's Dropouts? Where are they located? Who attends them?* Report 70, Center for Research on the Education of Students Placed At Risk, Johns Hopkins University, September 2004.

² Rhode Island General Assembly, Press Releases, *McNamara/Diaz Bill Hopes to Lower RI's School Dropout Rate*, February 6, 2007.

³ 2007 Rhode Island KIDS COUNT Legislative Wrap-Up, Providence, Rhode Island, September 2007. (<http://www.kidscount.org/kcnetwork/issues/documents/2007LegislativeWrapUpFinal.pdf>)

who have yet to develop student unit record data warehouses.⁴ The National Center for Education Statistics organized a task force during 2004-05 to make recommendations for standard measures of graduation and dropouts across states and communities.

Indeed, as part of its national education reform support work, the Data Quality Campaign (DQC) is working with states to develop uniform student unit record systems. These systems have the capacity to track individual students across school districts within a state that would, among other things provide more accurate and consistent information about both student retention and separation from a state's public school system.⁵ A total of 42 states now report that they have the necessary elements to calculate the National Governors Association longitudinal or four-year adjusted cohort graduation rate once they have collected at least five years of student-level data. All states except one will report the rate by 2010–11.⁶ Rhode Island is expected to have 4-years of longitudinal data to compute the NGA cohort graduation rate for the 2007-08 school year.⁷ The state is expected to release graduation rates for the 2007-08 school year in June 2009.⁸

Estimates of the size of the dropout problem in Rhode Island can differ considerably on the basis of the both the data used and the measure employed to produce these estimates. For example, the Rhode Island Department of Elementary and Secondary Education estimated a graduation rate (using non-cohort methodology) of 89.2 percent for the 2006-07 school year, yielding a dropout rate of just under 11 percent. In 2003, Jay

⁴ The National Governor's Association longitudinal graduation rate is computed as:

Graduation rate = [on-time graduates in year x] ÷ [(first-time entering ninth graders in year x – 4) + (transfers in) – (transfers out)]. See: Task Force of the National Governor's Association on State High School Graduation Data, *Graduation Counts*, National Governor's Association, Washington, D.C, 2005.

⁵ DQC is a project of the Gates, Casey and Lumina Foundation that is managed by the National Center for Educational Accountability. 49 States in the nation have met at least one of the ten data standards developed as part of the DQC.

⁶ (1) *Measuring What Matters: Creating a Longitudinal Data Systems to Improve Student Achievement, Phase 1 Three-Year Report*, Data Quality Campaign, Washington, DC, 2008

(http://www.dataqualitycampaign.org/files/DQC_measuring_what_matters08.pdf)

(2) *The 10 Essential Elements of a State Longitudinal Data System*, Data Quality Campaign, Washington, D.C. (http://www.dataqualitycampaign.org/survey_results/elements.cfm).

⁷ For a summary for the responses of all states regarding their progress on gathering student-level graduation data, see: http://www.dataqualitycampaign.org/files/element8_survey_responses.pdf.

⁸ Graduation rates for the 2007-08 school year will be reported in the 2009 Edition of Information Works! that is expected to be released in June 2009. Information Works! is a publication developed through a partnership between the Rhode Island Department of Elementary and Secondary Education and the National Center on Public Education and Social Policy, at the University of Rhode Island and it includes a wide variety of data on public education at the school, district, and state level including graduation rates. (See: <http://www.infoworks.ride.uri.edu/2009/default.asp>).

Greene and Greg Foster of the Manhattan Institute estimated Rhode Island's graduation rate at 71 percent.⁹ Utilizing the Cumulative Promotion Index (CPI) methodology developed by Christopher Swanson of the Editorial Projects in Education, in June 2008 Education Week reported a graduation rate for Rhode Island (for the class of 2005) that was considerably closer to the estimates by Greene and Foster—71.1 percent, yielding a dropout rate of 29 percent.¹⁰ The official graduation rate reported by the state for the Class of 2005 was 85 percent yielding a dropout rate of 15 percent. In fact, a comparison of the official graduation rate reported by states with those computed using the CPI methodology found that in all but one state, the states' officially reported graduation rates were higher than those computed with the CPI methodology. Most states use a leaver-rate calculation to estimate their official graduation rate. The leaver rate represents the number of students with a standard high school diploma during a given school year, expressed as a proportion of all those with a diploma or other completion credential or those who had dropped out. The leaver rate is likely to overestimate graduation rates because of the underestimation of the number of dropouts.

Different methodologies yield different estimates of graduation rates. For the state of Rhode Island, estimates of graduation rates range from 71 percent to 89 percent, yielding a range of dropout estimates from 29 percent to 11 percent. Two out of three estimates have measured a 30 percent dropout rate for the state. These estimates point to a dropout crisis in the state. Far too many youth in Rhode Island quit school without earning a diploma.

The Financial Consequences of Dropping Out of High School

Dropping out of high school has several serious consequences that are borne by the individual who has dropped out as well as the community in which he or she resides. High school dropouts are considerably less likely to be employed than their better-educated counterparts. Furthermore, when they do find employment, high school dropouts are more likely to work in lower skill jobs that pay lower wages. Over their

⁹ Jay Greene and Greg Foster, *Public High School Graduation and College Readiness Rates in the United States*, Manhattan Institute for Public Policy, New York, Education Working Paper Number 3, September 2003.

¹⁰ <http://www.edweek.org/media/ew/dc/2008/40sgb.ri.h27.pdf>

entire working lifetime, these employment and earnings disadvantages of poorly educated persons are known to accumulate into sizable lifetime employment and earnings deficits among high school dropouts.

We have estimated some of the most important financial consequences of high school dropouts to the local, state, and federal governments. These financial consequences are estimated for all 18- to 64-year old adults (18-64) in Rhode Island and for educational subgroups.¹¹ The financial consequences are measured as net fiscal impacts that represent the difference between quantifiable revenues in the form of taxes paid by each adult resident of Rhode Island and the quantifiable costs or expenditures in the form of cash transfer payments, monetary value of non-cash transfers, and incarceration costs of each adult resident of the state.

Our measure of quantifiable revenues includes the following six tax payments: federal income tax, social security retirement payroll taxes, federal government retirement contributions, state income tax, state sales tax, and property taxes. Quantifiable costs or expenditures include cash as well as non-cash transfer payments and incarceration costs. Dollar values of nine cash transfer payments and estimated market values of six non-cash or in-kind transfers were estimated for adult (18-64) residents of the state. The nine cash transfer payments include unemployed compensation, worker's compensation, social security income, public assistance income, veteran's income, survivor's income, disability income, earned income tax credit, and supplemental security income. Included in the non-cash transfer category are estimated market values of food stamps, energy assistance, housing subsidies, Medicare, and Medicaid. Another component of the quantifiable costs used in our computation of net fiscal impacts is the cost of incarceration. Our methodology of computing incarceration costs involves the use

¹¹ The five educational groups include the following:

- Less than 12 or 12 years of school, no high school diploma or GED certificate
- High school diploma or GED, no completed years of post-secondary schooling
- One to three years of college, including Associate degree holders
- Bachelor's degree holders
- Master's or higher degree holders

High school students and college students under the age of 25 are excluded from the analysis. The monthly CPS survey collects data on the school enrollment status of persons 16-24 years of age.

of rate of institutionalization among residents of the state and the institutionalization cost per inmate in the state to estimate the incarceration costs per adult resident in the state.

We have produced the mean annual estimates of quantifiable revenues and costs and net fiscal impacts for each educational subgroup of residents and extrapolated over their working lifetimes to obtain estimates of the expected lifetime revenues, lifetime costs, and lifetime net fiscal impacts of achieving a given level of educational attainment in Rhode Island.¹²

Educational Attainment and Expected Lifetime Earnings

Tax payments and reliance on income transfers are closely associated with income. Individuals with higher incomes are likely to pay more taxes and receive fewer transfer payments. A large part of the incomes of most people is derived from earnings in the labor market. Therefore, we begin with an analysis of the earnings of the adult residents of Rhode Island. Annual earnings are among the most comprehensive measures of labor market success. Access to employment, the intensity of employment (annual hours of employment), and the rate of pay per hour of work together determine the annual earnings of a worker. In fact, the annual earnings of an individual is the product of their annual hours of work and their hourly wage rate.

There is a strong positive relationship between educational attainment and the access to employment, the intensity of employment and the hourly rate of pay. Our analysis of the relationship between these labor market outcomes and education has found that as the level of educational attainment increased, the likelihood that an individual would work over the course of a year, the number of hours that they worked, and their hourly wages rose substantially. High school dropouts have fared quite poorly

¹² Our estimates of lifetime tax contributions and lifetime costs (transfers and incarceration costs) are derived by multiplying the annual estimates of tax payments and costs by the total number of years in the work life of each educational group. The work life of each educational subgroup was based on assumptions about the age at which they would begin their work life—which is the age when they are typically earn their educational credentials. We have assumed that a high school graduates would receive a diploma at age 18, a bachelor’s degree would be earned at age 22, and a master’s degree at age 24. The work life span—the number of years between the age at which they complete their education and age 64 -- was thus computed as 47 year period for high school dropouts, 45 years for high school, 43 years for those with some college, 41 years for Bachelor degree holders, and 38 years for those with a Master’s or higher degree.

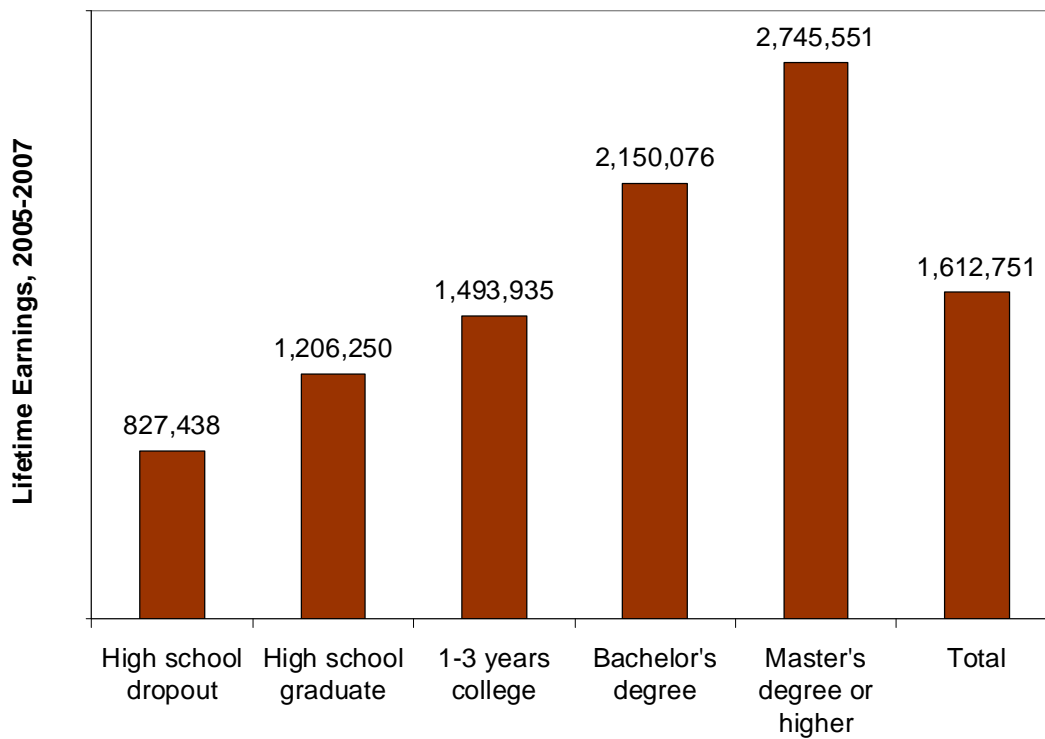
on each of these three fundamental measures of labor market outcomes relative to those with higher levels of education. Even worse, over time the labor market outcomes of high school dropouts have sharply deteriorated. And the labor market disadvantages associated with a failure to complete high school persist over the working lifetime of high school dropouts.

To illustrate the potential lifetime impact of the labor market deficits associated with dropping out of high school, we have calculated the expected lifetime earnings of residents of Rhode Island by the level of their educational attainment. In order to produce these lifetime earnings estimates, we have constructed age-earnings profiles that examine the mean annual earnings of the state's residents for single age groups between the ages of 18 and 64. These mean annual earnings estimates for the 47 single-age groups are then aggregated to produce the expected mean lifetime earnings of the state's residents in each educational subgroup over their 47-year working life between the ages of 18 and 64. These cross-sectional lifetime earnings estimates assume that the current age-earnings profiles of individuals will remain unchanged in the future. However, this assumption is somewhat optimistic from the perspective of dropouts in the state since the labor market outcomes of dropouts have sharply and steadily deteriorated since the end of the 1970s.

The mean lifetime earnings of Rhode Island residents by education are presented in Chart 1. Findings presented in the chart indicate that adult residents of Rhode Island can expect to have lifetime earnings of \$1.613 million. There were sizable gaps in the expected lifetime earnings of residents by educational attainment. At the upper end, Rhode Island residents with a master's or a higher academic degree are expected to earn \$2.746 million over their working lifetimes. In sharp contrast, the lifetime earnings of high school dropouts in the state are expected to be just \$827,000. Simply completing high school without any postsecondary education is expected to result in a sizable increase in lifetime earnings. With a lifetime earnings of \$1.206 million, high school graduates (without any postsecondary education) in the state are expected to have cumulative earnings over their working lives that exceed the lifetime earnings of high school dropouts by \$380,000 or 46 percent.

The completion of some post secondary schooling below the bachelor’s degree level is also associated with higher lifetime earnings. Rhode Islanders who have completed between one and three years of college education have estimated lifetime earnings of \$1.494 million, representing a level of lifetime earnings that is nearly \$290,000 or 24 percent higher than that of high school graduates (with no college education), and \$666,000 or 55 percent higher than the lifetime earnings of high school

Chart 1:
Expected Lifetime Earnings of the 18 to 64 year Old Rhode Island Residents, by Educational Attainment 2005-2007 (In 2007 dollars)



Note: 18 to 22 year old students are excluded from the analysis.

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

dropouts. Completing a bachelor’s or a master’s or a higher academic degree is associated with a sizable increase in lifetime earnings. The lifetime earnings of a state resident is estimated at \$2.150 million among bachelor’s degree holders and \$2.745 million among those with a master’s or a higher academic degree. The lifetime earnings premium of a bachelor’s degree is estimated to be 44 percent relative those with some

college education, 78 percent relative to high school graduates (without any postsecondary education), and 160 percent relative to high school dropouts.

The best educated residents of the state, those with a master's or a higher degree, are expected to secure very large earning premiums over their working lifetimes. A comparison of their lifetime earnings to those of Rhode Islanders with a bachelor's degree, with some post secondary education, high school graduates (with no postsecondary education), and high school dropouts found earnings premiums of 28 percent, 84 percent, 128 percent and 232 percent, respectively.

The earnings deficits of high school dropouts in Rhode Island are quite sizable relative to their better-educated counterparts. For every \$1 of the lifetime earnings of high school dropouts in Rhode Island, a high school graduate (with no postsecondary education) is expected to earn \$1.46, and college educated residents are expected to earn \$1.81 if they have completed one to three years of college, \$2.60 if they have earned a bachelor's degree, and \$3.32 if they have earned a master's or a higher academic degree.

Lifetime earnings differences of this magnitude suggest fundamentally different life experiences for residents of the state based at least in part on their ability to succeed in high school and postsecondary education. Educational attainment exerts an extraordinary influence on the expected lifetime earnings of adults in the state.

Educational Attainment and Expected Lifetime Tax Payments

The level of earnings and incomes of individuals determine the likelihood that they would pay taxes as well as the size of their tax payments. The discussion above clearly illustrates a strong and positive association between lifetime earnings and education. In this section, we present findings from our analysis of the lifetime tax payments of Rhode Island residents and the variation of these tax payments by educational attainment. We have included six types of taxes in our computation of the total tax payments of Rhode Island residents: the federal income tax, state income tax, social security payroll tax, federal retirement tax, property tax, and sales tax. The federal income tax and the Rhode Island state income tax are progressive taxes, while the social security payroll tax (FICA) is a proportional tax with a partial earnings cap. The amount

of tax payment for each one of these taxes increases with income and earnings. Property tax payments are directly associated with property ownership and the value of the owned property. The incidence of property ownership rises sharply with income. Higher income individuals are more likely to own higher value properties. Sales tax payments increase with increases in the purchase of goods and services subject to the sales tax that, in turn, rises with the level of income and earnings.

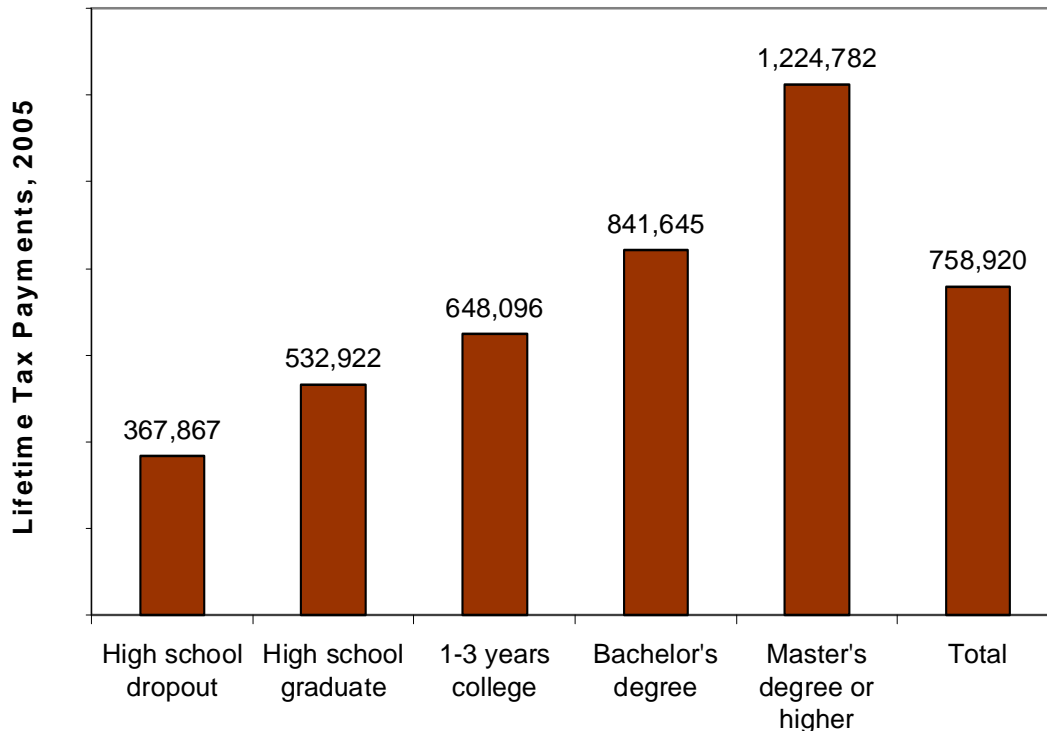
Given the strong positive relationship between each of the tax payments included in our analysis and the level of earnings and incomes, we expect the size of tax payments of the state's residents to increase sharply with an increase in their earnings. Analysis of the lifetime earnings of Rhode Islanders presented above clearly demonstrates the sharp increases in lifetime earnings that can be expected with gains in the level of educational attainment. Therefore, the size of the tax payments as well as the incidence of tax payments should be higher among better-educated residents of the state.

The differences in the expected lifetime tax payments of Rhode Island residents by educational attainment closely reflect the differences in their lifetime earnings. On average over their working lifetime between the ages of 18 and 64, an adult resident in the state is expected to make a total \$759,000 in tax payments within the six tax categories listed above. The size of the mean expected tax payments of the state's residents increases sharply with educational attainment. The mean lifetime tax payment of a high school dropout is only half of the mean lifetime tax payment of all state residents (\$368,000 versus \$769,000). Completing high school (with no college education) is expected to result in an additional \$165,000 in lifetime tax payments representing tax payments that are 45 percent higher relative to those of high school dropouts. Lifetime tax payments rise steadily among state residents with postsecondary education increasing from \$648,000 among residents with one to three years of college, \$842,000 among those with a bachelor's degree, and \$1.225 million among the best-educated residents who have a master's or a higher academic degree.

Clearly, the benefits of education are not just confined to individuals in the form of higher earnings and a higher standard of living. Rather, a large part of the benefit spills

over to the economy in the form of higher lifetime tax payments, that are used to finance a variety of programs thought to yield an array of social benefits. For every \$1 of

Chart 2:
Expected Lifetime Tax Payments of the 18 to 64 year Old Rhode Island
Residents, by Educational Attainment (in 2007 Dollars)



Notes: (i) Property tax payment is estimated from 2005-2007 ACS data files (ii) sales taxes data estimated from 2005-2007 ACS data files using IRS tax sales tax exemption (iii) federal, state, payroll, and retirement taxes are estimated from CPS March Supplements 2005, 2006, 2007, and 2008 (iv) 18-24 year old students are excluded from the analysis.

Sources: (i) U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, (ii) March Supplement to the Current Population Survey, 2005, 2006, 2007. Tabulations by the Center for Labor Market Studies, Northeastern University.

lifetime tax payment by a high school dropout in Rhode Island, high school graduates are expected to pay \$1.45, college educated residents without a bachelor's degree are expected to pay \$1.76, whereas those with a bachelor's degree and master's or a higher academic degree are expected to make lifetime tax payments of \$2.29 and \$3.33, respectively.

Educational Attainment and Expected Lifetime Transfer Costs and Incarceration Costs

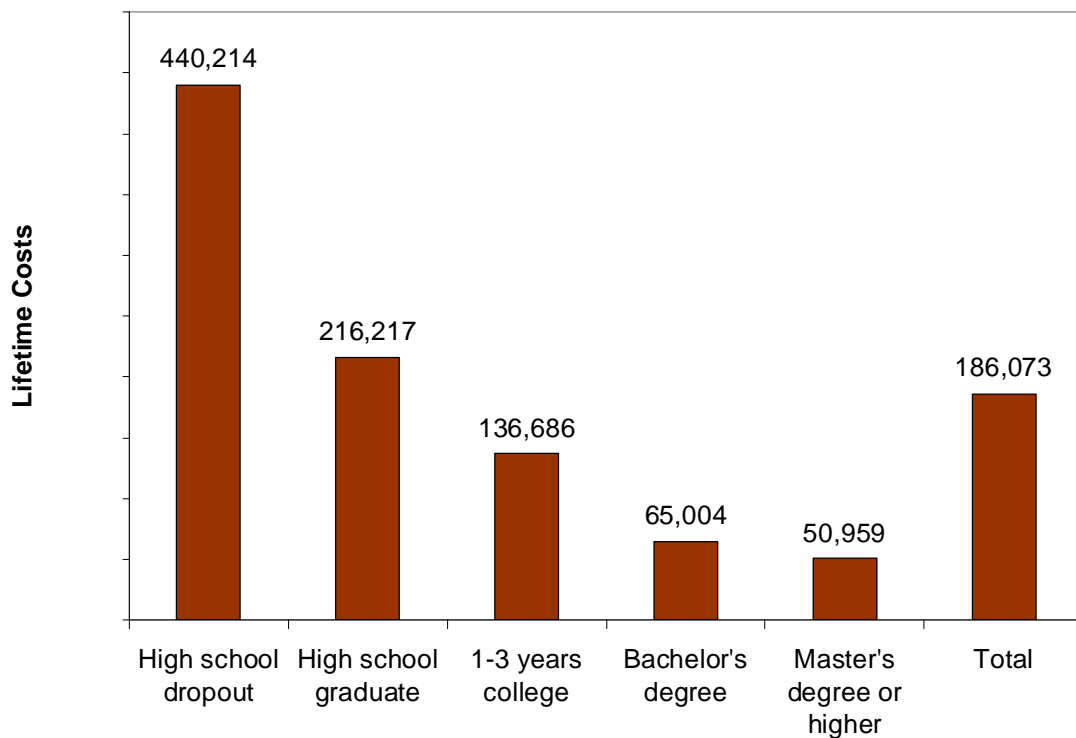
Better educated citizens also make positive contributions on the cost side of the fiscal ledger by collecting fewer cash and non-cash or in-kind transfer payments and collecting smaller amounts of these transfers over their working lives. We have made estimates of the lifetime transfer receipts among all Rhode Island residents (aged 16 to 64) and among educational subgroups of these residents. Included in our estimate of transfer receipts are nine types of cash transfer benefits and the estimated market values of five types of in-kind transfer benefits. The following cash transfers are included in this analysis: unemployed compensation, worker's compensation, social security income, public assistance income, veteran's income, survivor's income, disability income, earned income tax credit, and supplemental security income. Included in the non-cash transfer category are the market values of food stamps, energy assistance, housing subsidies, Medicare, and Medicaid.

Another component on the cost side of the fiscal ledger is the cost of incarceration. Engagement in criminal activities and incarceration rates are much higher among high school dropouts and decline sharply with increases in education. Incarceration imposes considerable costs on society in the form of monetary costs of building and operating prisons and jails as well as human costs in the form of forgone wages of those who are institutionalized, reduced future opportunities for inmates after release, and add many different types of social costs that are difficult to quantify, but nonetheless impose real costs on society.

Institutionalization is more likely to be concentrated among poorly educated individuals, particularly high school dropouts. A large majority of the nation's inmates lack a high school diploma. According to the Bureau of Justice Statistics in 1997, 41 percent of the nation's inmates in federal and state prisons and local jails did not have a high school diploma and another 24 percent had obtained only a GED. Thus, nearly two-thirds of the nation's inmates did not earn a regular high school diploma. This concentration of high school dropouts among inmates is considerably larger than the

share (18 percent) of high school dropouts in the general population age 18 or older.¹³ Using the rate of institutionalization among educational subgroups of Rhode Island's residents and the per inmate institutionalization cost in the state, we have computed the institutionalization cost per state resident in each of the five educational subgroups.

Chart 3:
Expected Lifetime Cash and In-Kind Transfer Costs and Incarceration Costs of Rhode Island Residents by Level of Educational Attainment, in 2007 Dollars



Notes: (i) Cash and in-kind transfers are estimated from CPS March Supplements 2005, 2006, 2007, and 2008 (ii) Jail/prison cost data are estimated for 18-60 year old from Bureau of Justice Statistics (BJS) for 2001 adjusted for inflation in 2007 and 2005-2007 American Community Survey data files (iii) 18-24 year old students are excluded from the analysis.

Sources: (i) U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, (ii) March Supplement to the Current Population Survey, 2005, 2006, 2007. Tabulations by the Center for Labor Market Studies, Northeastern University.

¹³ Caroline Wolf Harlow, *Education and Correctional Populations*, Bureau of Justice Statistics, Special Report, January 2003, NCJ 195670.

Our estimates show that the costs imposed on society from incarceration and from cash and non-cash transfers are the highest among high school dropouts in the state and drop sharply as education levels increase. An average high school dropout is expected to impose (working) lifetime costs of \$440,000 from cash and in-kind transfers and from institutionalization. These costs drop to one half (\$216,000) among high school graduates (with no postsecondary education), and less than one-third (\$137,000) among the state's residents with one to three years of college. Lifetime transfer receipts and institutionalization costs are only \$65,000 among college graduates with a bachelor's degree and \$51,000 among those with a master's or a higher academic degree.

Educational Attainment and Lifetime Net Fiscal Impacts

A comparison of the lifetime tax contributions with lifetime costs indicates that high school dropouts are the only group that takes more out of the public coffers than they put in. Column C in Table 1 represents the ratio of the lifetime tax contributions and lifetime costs for each educational subgroup of Rhode Island residents. These ratios

Table 1:
Expected Lifetime Cash and In-Kind Transfer Costs and Incarceration Costs of Rhode Island Residents by Level of Educational Attainment, in 2007 Dollars

| Educational Attainment | Lifetime Tax Payments | Lifetime Transfers and Incarceration Costs | Ratio of Lifetime Tax Payments to Costs |
|---------------------------|-----------------------|--|---|
| High school dropout | 367,867 | 440,214 | \$0.84 |
| High school graduate | 532,922 | 216,217 | \$2.46 |
| 1-3 years college | 648,096 | 136,686 | \$4.74 |
| Bachelor's degree | 841,645 | 65,004 | \$12.95 |
| Master's degree or higher | 1,224,782 | 50,959 | \$24.03 |
| Total | 758,920 | 186,073 | \$4.08 |

Notes: (i) Property tax payment is estimated from 2005-2007 ACS data files (ii) sales taxes data estimated from 2005-2007 ACS data files using IRS tax sales tax exemption;(iii) federal, state, payroll, and retirement taxes and cash and non-cash transfers are estimated from CPS March Supplements 2005, 2006, 2007, and 2008 (iv) Jail/prison cost data are estimated for 18-60 year old from Bureau of Justice Statistics (BJS) for 2001 adjusted for inflation in 2007 and 2005-2007 American Community Survey data files (v) 18-24 year old students are excluded from the analysis.

Sources: (i) U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, (ii) March Supplement to the Current Population Survey, 2005, 2006, 2007. Tabulations by the Center for Labor Market Studies, Northeastern University.

indicate that only one group—high school dropouts—imposed transfer and incarceration costs that were higher than their tax contributions. Adult Rhode Island residents who were high school dropouts are expected to pay only \$0.84 in taxes for every \$1 of the cost that they impose on the government from cash or non-cash transfers and incarceration between the ages of 16 and 64.

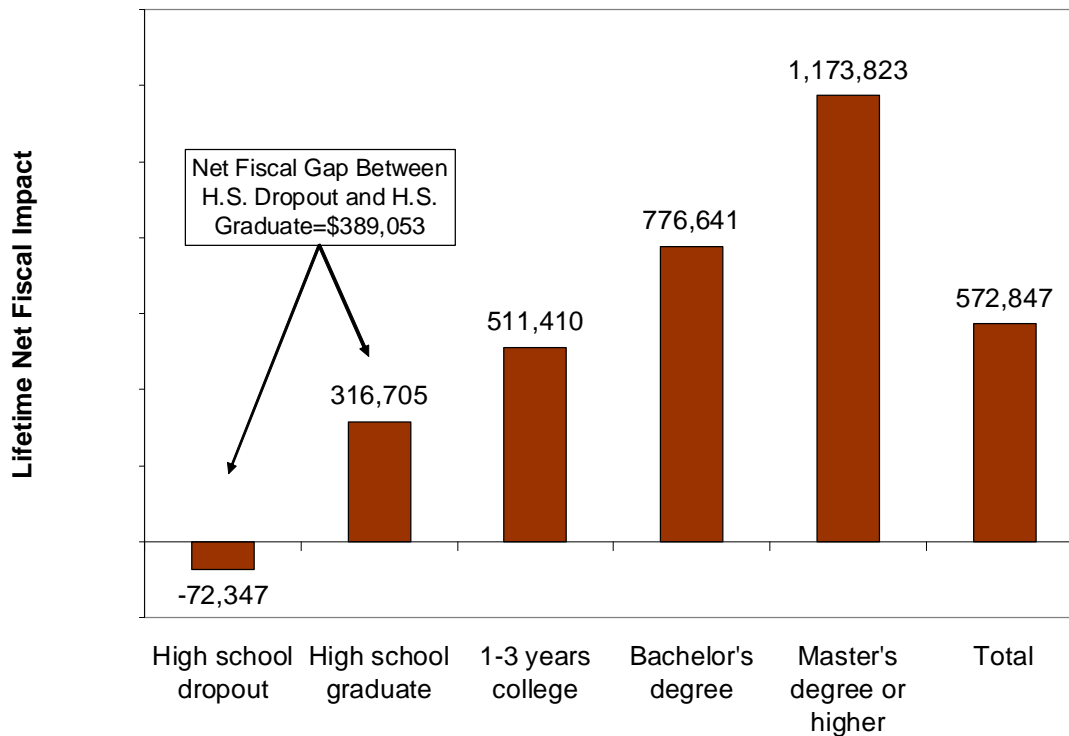
The remaining four education groups contribute more in taxes than the costs that they impose from transfers and incarceration, albeit at different rates. For every \$1 of transfer payments and incarceration costs, high school graduates pay \$2.46 in taxes and those with some college pay \$4.74. In sharp contrast, Rhode Island residents with a bachelor's degree and those with a master's or a higher academic degree are expected to pay, respectively, \$13 and \$24 in tax payments for every \$1 of cost that they impose in the form of transfer payments and incarceration costs.

The difference between the lifetime tax payments and the lifetime transfer and incarceration costs represents the net lifetime fiscal impact associated with each education level. It represents the cumulative impact, over the working lifetimes of each educational subgroup of Rhode Island residents, of the discrepancies between their annual tax payments and annual transfer receipts and incarceration costs. Findings presented in Chart 4 reveal that the cumulative amounts of the fiscal impacts over the entire work life of each adult resident of the state are sizable.

The lifetime net contributions of adults rose steadily and strongly with their education, especially with the years of postsecondary education. The lifetime net fiscal contribution is positive for four out of five educational subgroups of the state's residents. The only group with a negative net fiscal impact is high school dropouts. The negative annual fiscal contribution of adults who failed to complete high school is expected to accumulate into a net fiscal impact of negative \$72,000 per adult over their working lives. In contrast, a high school graduate (without any college education) is estimated to contribute a net positive amount of \$317,000 to the budgets of the federal, state, and local governments. The mean lifetime net fiscal contributions of adults with some college, with a bachelor's degree, and with a master's or a higher academic degree are estimated, respectively, at \$511,000, \$777,000, and \$1.174 million.

What would be the total impact of assisting a high school dropout to return to school and complete high school? If a resident completes high school and is removed from the dropout category and added to the high school graduate category, the fiscal impact is twofold: the removal of the negative net fiscal contribution of the high school dropout and the addition of the positive net fiscal impact of a high school graduate. Each high school dropout in Rhode Island is estimated to impose a lifetime cost (net fiscal impact) of \$72,000 due to their smaller tax payments and higher government transfers and institutionalization costs. Each high school graduate (without any college education) is expected to make a net positive fiscal contribution of \$317,000 over their working lives.

Chart 4:
The Lifetime Net Fiscal Contributions of Adults (18-64) in Rhode Island
by Educational Attainment, (In 2007 Dollars)



Notes: (i) Property tax payment is estimated from 2005-2007 ACS data files (ii) sales taxes data estimated from 2005-2007 ACS data files using IRS tax sales tax exemption;(iii) federal, state, payroll, and retirement taxes and cash and non-cash transfers are estimated from CPS March Supplements 2005, 2006, 2007, and 2008 (iv) Jail/prison cost data are estimated for 18-60 year old from Bureau of Justice Statistics (BJS) for 2001 adjusted for inflation in 2007 and 2005-2007 American Community Survey data files (v) 18-24 year old students are excluded from the analysis.

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Reducing the number of high school dropouts by one in Rhode Island would save the local, state, and federal governments \$72,000 in net lifetime costs. Converting this high school dropout to a high school graduate would increase Rhode Island's high school graduates by one and result in a lifetime contribution of \$317,000. The sum of the two (a saving of \$72,000 plus an additional contribution of \$317,000) is \$389,000 and it represents the potential gain to the federal, state, and local governments for each successful graduation from a Rhode Island high school of a student who would have otherwise dropped out of high school.

Clearly, working age adults who fail to complete high school impose very high costs upon the public coffers in the form of low tax payments, high rates and amounts of receipt of government transfer costs and high institutionalization costs. These external costs are in addition to the sizable personal costs of dropping out of high school that are borne by the individuals themselves. The large gap between the lifetime net fiscal contributions of high school dropouts and their counterparts with just a high school education indicate that the monetary benefit of each successful high school graduation to the public coffers is indeed very large. Although the components in the net fiscal contributions estimated in this report encompass a wide array of taxes and transfers and costs, these estimates are still very conservative since they do not include non-quantifiable personal costs, health costs, and social costs of high school dropouts and the transmission of these costs to future generations through diminished resources available to their children.