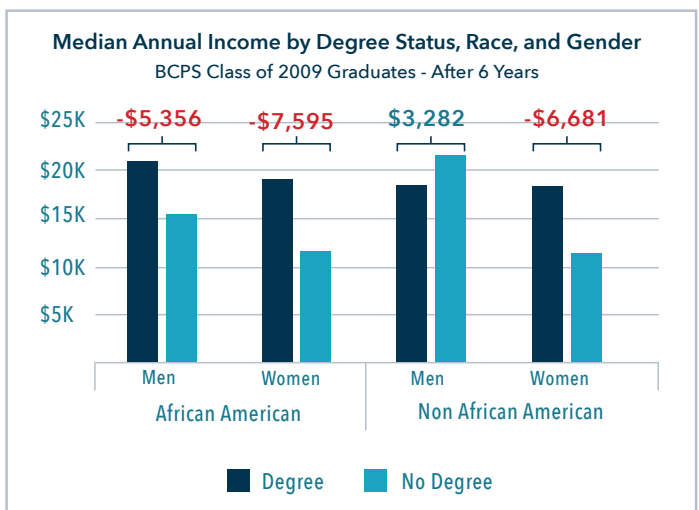


Gaining Traction After High School Graduation: Understanding the Post-Secondary Pathways for Baltimore's Youth

This brief examines differences in outcomes after six years among 2009 graduates of the Baltimore City Public Schools based on whether recent graduates immediately enrolled in higher education, joined the workforce, or did neither and were therefore "disconnected" from formal economic and educational opportunities. The analysis also assesses differences in educational attainment and earnings after six years across selected demographic attributes including race and gender.

Summary of Findings

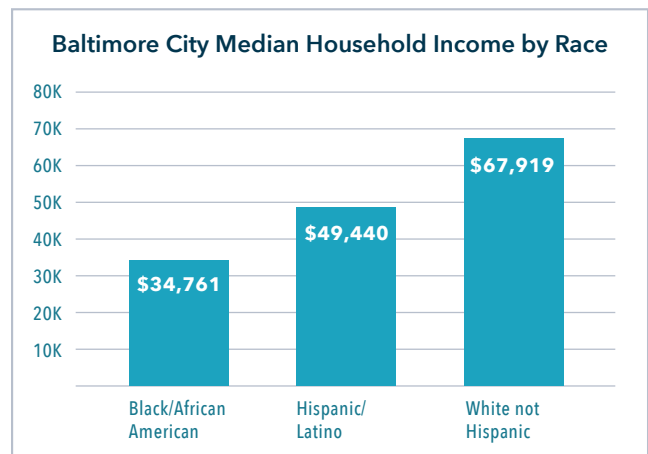
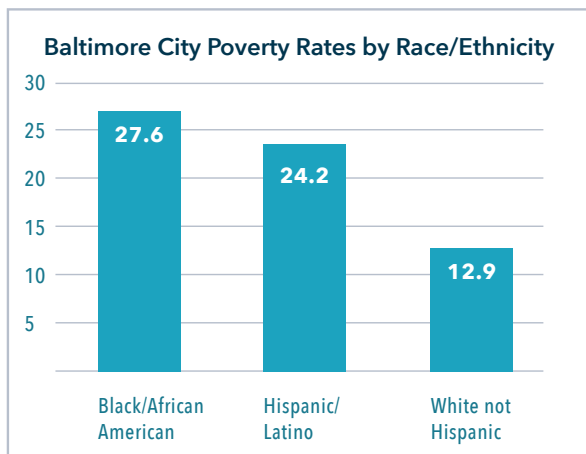
- Analysis conducted in 2017 reveals that, six years after graduation, more than one in four Baltimore City Public School (BCPS) graduates in the class of 2009 were *opportunity youth*, high school graduates who neither enrolled in higher education nor entered the workforce in the fall after graduation.
- Career pathways and long-term earnings potential for the more than 1,000 *opportunity youth* from the class of 2009 were limited. After six years, disengaged youth earned approximately half the median annual income of their peers who completed degrees.
- Overall, for the class of 2009, rates of post-secondary degree attainment are low with fewer than 12 percent earning any type of degree. African-American men completed college degrees at a rate 18 percentage points lower than their non-African American peers and African-American women earned degrees at a rate 20 percentage points lower than their peers.
- Completing a 2- or 4-year degree boosted income significantly for most groups, but six years after graduation, the majority of BCPS graduates did not earn an annual income equivalent to a full-time living wage, regardless of college degree attainment.
- Women from the class of 2009 who never enrolled in college, regardless of race or ethnicity, earned significantly less than men who never enrolled in college; that group of women had a median annual income of approximately \$11,500. The income gap for women with and without college degrees was larger than the income gap between men with and without degrees.



The role of the educational system is to prepare children for productive and meaningful lives. Children who face the challenges of poverty, economic inequality and discrimination must overcome additional barriers to economic and educational opportunities. Every year, a number of students, frequently from disadvantaged backgrounds, persist through high school graduation but subsequently fail to enter post-secondary education or obtain employment. These young people are referred to as *opportunity youth*. Without meaningful interventions that offer further education or training, there is no clear pathway for these young people toward employment opportunities that offer family supporting wages, potential for wage progression, or critical benefits such as health insurance and paid sick leave.

Poverty and Segregation: A Challenging Backdrop for Baltimore City’s Students

A third of Baltimore’s children come from families whose income is below the federal poverty line – in 2016, less than \$24,339 per year for a sample household of two adults and two children; and 18 percent of Baltimore’s families live in deep poverty surviving on incomes that are less than half of the federal poverty line. The poverty rate for African-American and Hispanic families in Baltimore is more than twice the rate of white families.¹ About 80 percent of poor families in Baltimore live in areas characterized as a *poverty area* where more than 20 percent of residents live below the federal poverty line. Half of Baltimore’s neighborhoods are *poverty areas*, and four neighborhoods are areas of *concentrated poverty* in which more than 40 percent of families live below the poverty line.²



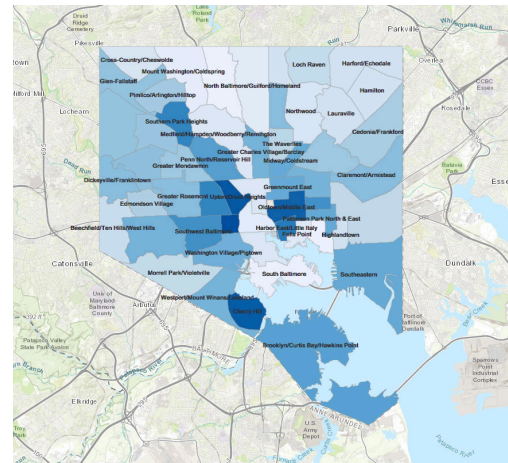
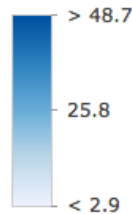
¹ Estimates of children in poverty are from the U.S. Census Bureau American Community Survey 2012-2016 5-Year estimates, Table S1703. The percent of children in poverty is the percent of children under the age of 18 with family incomes below the federal poverty level. Children living in extreme poverty are the percent of children under the age of 18 whose family income is less than half the federal poverty level.

² Measures of median household income are in 2016 inflation-adjusted dollars from U.S. Census Bureau ACS 2012-2016 5-Year Estimates, Table S1903. Measure of families living in poverty areas is from the U.S. Census, compiled in History, Public Policy, and the Geography of Poverty: Understanding Challenges Facing Baltimore City and Maryland, Department of Legislative Services, 2016 accessed online at <http://mga-leg.maryland.gov/pubs/budgetfiscal/2016-geography-of-poverty.pdf>. Neighborhood-level measures are from BNIA Vital Signs 15 report and are aggregated from the U.S. Census ACS 2011-2015 5-Year Estimates, accessed online on January 5, 2017 at https://bniajfi.org/vital_signs/.

These demographics are reflected within the Baltimore City Public Schools, where the vast majority of students face economic hardship. The number of students receiving Free and Reduced Priced Meals approaches 100 percent in many Baltimore City schools.³ And the system primarily serves children of color, with ethnic and racial minority groups over-represented in the school system relative to the racial makeup of the city's youth population.⁴

Poverty Rates in Baltimore Neighborhoods

Percent of Households with Income Below the Federal Poverty Line



BNIA Vital Signs 15, aggregation of data from U.S. Census ACS 5-Year Estimates, 2011-2015.

High School Graduation, Post-Secondary Matriculation, and Workforce Participation

The four-year graduation rate for BCPS students in 2009 was 62.7 percent.⁵ Researchers from the Baltimore Education Research Consortium compiled data on the class of approximately 4,280 regular diploma graduates that year, using the Maryland Longitudinal Data System to track their post-graduation pathways and assess their outcomes six years later.⁶

In the fall of 2009, 29 percent of high school graduates from that spring entered a 4-year college, and 23 percent entered a 2-year college. Another 22 percent entered the workforce immediately after graduation and did not enroll in college. Finally, for 26 percent of graduates that fall, there was no record they had enrolled in any institution of higher education nationwide or in the formal Maryland labor market (as evidenced through a lack of wage records).⁷ These young adults who are neither in college or working are characterized as *opportunity youth*.

Demographic Comparison: Baltimore City Public Schools (BCPS) and Baltimore City

	BCPS enrollment	Baltimore City Youth
Black/African American	80.1%	71.2%
Hispanic/Latino	10.4	7.3
White not Hispanic	8.7	16.7

³ Maryland State Department of Education Free and Reduced-Price Meal Statistics, SY 2016-2017, Detail by County, last accessed 1/13/2018 at <http://www.marylandpublicschools.org/programs/Pages/School-Community-Nutrition/FreeReducedPriceMealStatistics.aspx>.

⁴ Youth population from U.S. Census Bureau American Community Survey 2012-2016 5-Year Estimates, Table S0901.

⁵ Graduation rates from Maryland State Department of Education, available for download at <http://reportcard.msde.maryland.gov/downloadindex.aspx>.

⁶ Estimates are rounded to the nearest whole number.

⁷ Analysis of post-secondary outcomes conducted by BEREC researchers included data from the Maryland Longitudinal Data System, which includes enrollment data from U.S. universities and wage records from the state of Maryland, excluding federal and military employment, self-employment, informal sector employment, and employment outside of the state.

Launching into Adulthood: Post-High School Paths for Baltimore City Schools' Graduates



The high school class of 2009 had 4,280 graduates.

29%

enrolled in a
4-year college

23%

enrolled in a
2-year college

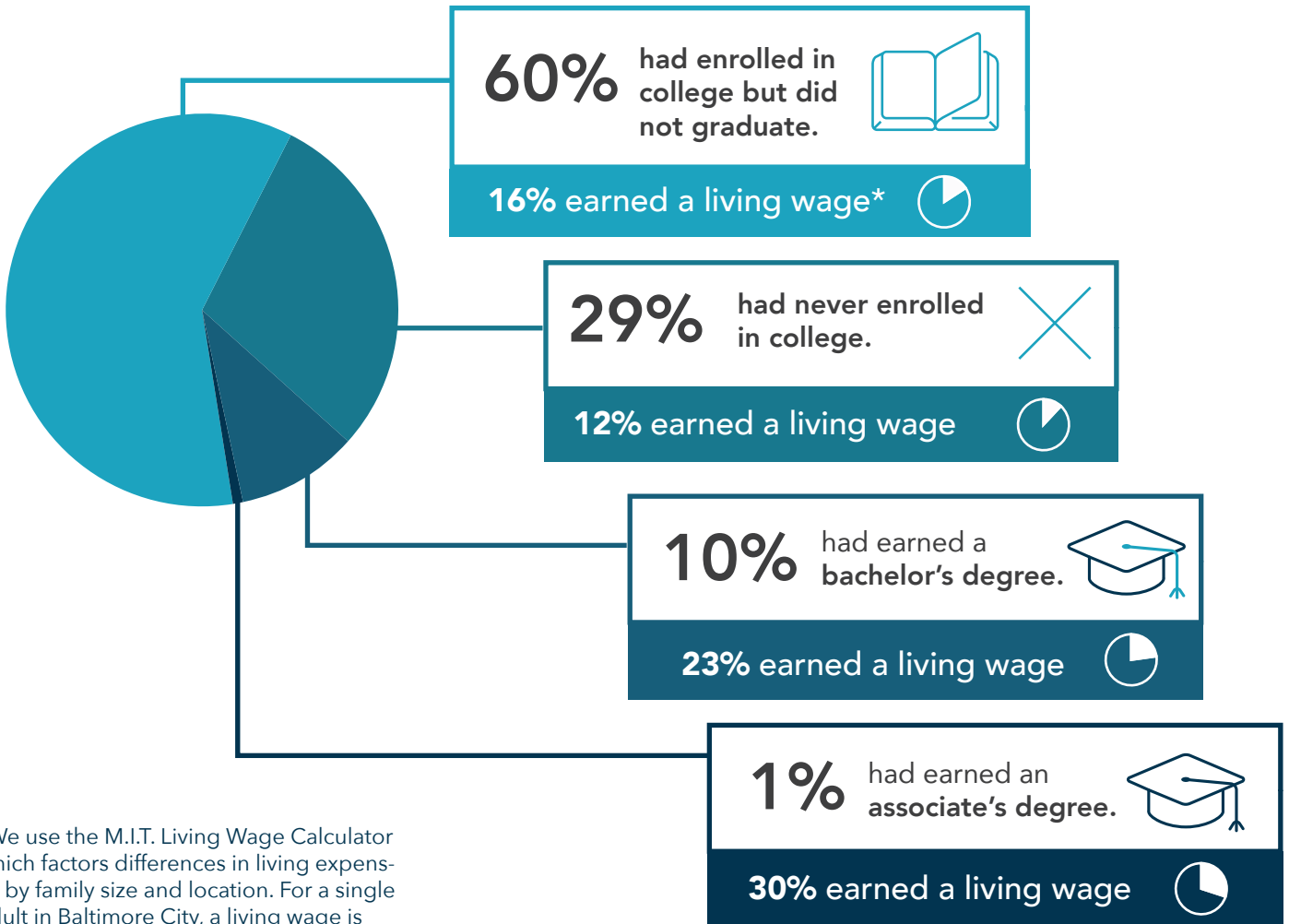
22%

went directly into
the workforce

26%

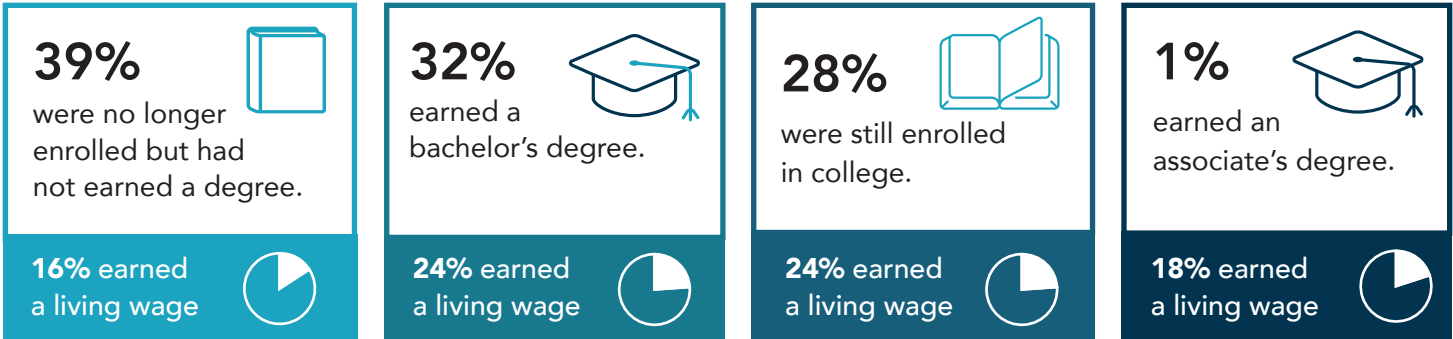
did not enroll in college
and did not appear to be
in the Maryland workforce

After 6 years...



*We use the M.I.T. Living Wage Calculator which factors differences in living expenses by family size and location. For a single adult in Baltimore City, a living wage is estimated to be \$13.28 per hour.

Of those enrolled in a 4-year college after high school, 6 years later:

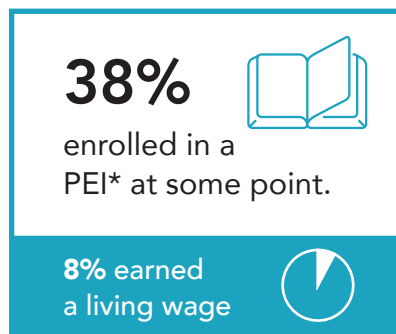


88% of 4-year enrollees worked while in college.



Only 1 out of 3 students who enrolled in 4-year college after high school earned a bachelor's degree within six years.

Of those who did not enroll in college nor enter the workforce, 6 years later:



15% of those who did not work nor go to college after high school were still disconnected from work or school six years later.

*Professional Education Institute

Outcomes Six Years After Graduation

Analysis suggests that college attendance and degree attainment boosted the likelihood of earning a living wage, but in large part, BCPS graduates were struggling financially six years after graduation. The *opportunity youth* of the class of 2009 – those who failed to find a foothold in work or education after graduation – were worse off than their peers, six years after graduation.

College graduation rates were low for the class of 2009. In all, 71 percent of the class entered post-secondary education at some point between graduation and 2015, but only 10 percent earned a 4-year degree – a rate that is well below national averages. Twenty-nine percent never enrolled in college. There were significant differences in rates of college degree attainment by race and gender. African Americans in the class of 2009 graduated from 2- or 4-year colleges at rates of only 8 percent and 12 percent for men and women, respectively. In contrast, 26 percent of non-black men and 32 percent of non-black women in the class completed a 2- or 4-year degree.

After six years, the median annual income for students who earned a 2-year or 4-year degree was \$19,332 as opposed to \$13,374 among the 29 percent of 2009 graduates who never enrolled in college. Many graduates of the class of 2009 aspired to obtain a college degree but were ultimately unsuccessful. Sixty percent of 2009 graduates attended some college but earned no degree during the six years after graduation; six years after graduation, the median annual income for this group was \$15,604. Among degree-earners, only 23 percent earned a living wage six years after high school graduation. That rate is low, but it is nearly double the 12 percent of their peers who never enrolled in college who were earning a living wage six years after graduation. For most groups, completing some form of degree boosts income significantly. But among all groups, the median incomes six years after high school graduation were still below what is considered a living wage.

It should be noted that, in the short term, the relationship between degree attainment and earnings is not uniform across groups, as the highest-earning group after six years is non-black male graduates who never enrolled in college with a median annual income of \$21,656. By contrast, women of any racial or ethnic background who did not enroll in college at any point earned a median annual income slightly under \$11,500. This is likely attributable in part to less than full-time employment among recent college graduates. While a longer-term analysis would undoubtedly reveal adjustments, for the class of 2009, there appear to be inequities in payoffs to education and labor market decisions on the basis of race and gender.

6-year Outcomes for Class of 2009 Graduates by Demographics

Among the 4,280 high school graduates in the class of 2009, the data show differences in their paths toward college and work six years after graduation.



	Enrolled but did not earn a degree		Never enrolled in college		Earned a 2- or 4-year degree	
	%	% earning a living wage	%	% earning a living wage	%	% earning a living wage
All 4,280 graduates	60%	16%	29%	12%	12%	23%
Male African American Grads	58%	18%	35%	18%	8%	26%
Female African American Grads	63%	15%	25%	8%	12%	22%
Non-African American Male Grads	45%	17%	29%	15%	26%	25%
Non-African American Female Grads	45%	24%	22%	4%	32%	23%
Graduates Received Special Ed Services	48%	10%	49%	9%	3%	14%
Graduates Eligible for Subsidized Meals	61%	16%	29%	11%	10%	23%

6-year Outcomes for Class of 2009 Graduates by Graduating High School Type



	Enrolled but did not earn a degree		Never enrolled in college		Earned a 2- or 4-year degree	
	%	% earning a living wage	%	% earning a living wage	%	% earning a living wage
Traditional	59%	14%	36%	12%	5%	27%
Entrance Criteria	59%	21%	9%	16%	32%	24%
Selective CTE	63%	19%	30%	19%	7%	18%
Charter or Transformation	67%	21%	24%	15%	9%	5%
Alternative	<50%	8%	57%	6%	--%	--%



Among all **African-American male** graduates from the class of 2009 who had a degree after six years, 50 percent attended **Entrance Criteria** high schools – the highest rate. Similarly, 62 percent of **African-American female** college graduates attended Entrance Criteria schools.



Entrance Criteria high schools had the highest rate of subsidized meals-eligible graduates completing a degree – 48 percent of those completers.



Traditional high schools had the highest number of **Special Education graduates completing a degree**.

Traditional – High schools that do not use selection criteria for enrollment. Examples include Frederick Douglass High School.

Entrance Criteria – Schools that have admissions criteria based on grades and attendance. Examples include Baltimore City College, Poly and Dunbar.

Selective Career-Technical Education (CTE) – Schools that use admissions criteria that are less rigorous than "entrance criteria" schools. Examples include Carver Vocational and Mervo.

Charter or Transformation – These schools do not have entrance criteria; in some cases students enter a lottery to attend these schools. Examples include City Neighbors High School.

Alternative – Non-traditional schools for special student populations. Examples include Francis M. Wood Alternative High School.

Following Up with the Opportunity Youth

The more than 1,000 *opportunity youth* from the class of 2009, graduates who neither enrolled in postsecondary education nor entered the workforce by the fall of 2009, did not fare well after six years. Thirty-eight percent eventually enrolled in some form of higher education, and 79 percent entered the labor force at some point. Findings suggest that the path toward a living wage was impeded for most of these students. Whether they matriculated into higher education or went to work at some point, six years after graduation, these young adults were earning a median annual income of approximately \$11,000, and only about 9 percent were earning a living wage.

Comparing Outcomes by High School Type

The graduating class of 2009 attended five types of high schools and it's instructive to examine variations in how these four groups of graduates fared. The city's elite academic high schools – referred to here as *entrance criteria* schools – admit students who meet the most selective criteria, a combination of academic and attendance measures. A second group of schools, *selective CTE* schools, have a slightly lower set of entrance criteria. Students may also select *traditional* high schools or participate in the lottery to attend *charter* and *transformation* high schools.

This sorting process affects the academic composition of peers in schools and may help define students' social networks. Students enrolled in the more selective academic schools engage with youth from families with more resources and are educated alongside high-achieving peers. Research has long linked the benefits that accrue to students in this way,⁸ and it may result in very different high school experiences according to where students enroll.

Overall, students who graduated from the most selective schools – the entrance criteria schools – were far more likely to graduate from college in six years. Thirty-two percent of students from those schools had graduated, compared to 9 percent from charter or transformation schools, 7 percent from selective CTE schools and 5 percent from traditional schools.

Economic and Social Costs of Opportunity Youth

After six years, 15 percent of the 2009 cohort's *opportunity youth*, 4 percent of the entire class, could not be located in education or employment data.⁹ When young people do not participate in the economy for a number of years, society incurs social and economic costs. For example, income tax revenue is forfeited as a result of lost wages and sales tax revenue is forfeited as a result of diminished income. Furthermore, state costs go up through increased social assistance payments.

⁸ Hanushek, E. A., Kain, J. F., Markman, J. M., & Rivkin, S. G. (2003). Does peer ability affect student achievement? *Journal of Applied Econometrics*, 18(5), 527-544; Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. *Whither Opportunity*, 91-116; Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553-1623. Chicago.

⁹ Analysis of lifetime economic costs of disengaged youth based on analysis conducted for Baltimore's Promise by Al Passarella of the Johns Hopkins School of Education Institute for Education Policy. MLDS wage data includes employment in Maryland and excludes military and federal employment, self-employment, and informal employment.

For the 200 graduates from the class of 2009 who remained disengaged from the labor force across all six years, assuming full time employment earning minimum wage instead, society misses out on approximately \$3.4 million in uncaptured tax revenue that could be reinvested in education and other public services.

Consider, for example, a scenario in which a long-term disengaged youth had been working for six years, earning a minimum wage of \$8.25 in 2015 inflation-adjusted dollars. The annual salary would be \$17,160, assuming full-time employment. Such employment would result in \$2,866 in annual income tax revenue.¹⁰ Multiplied by the approximately 200 graduates from the class of 2009 who remained disengaged from the labor force across the six years in which they have been disengaged, society misses out on approximately \$3.4 million in uncaptured tax revenue.

When students do not have the tools or access to opportunities needed to invest in themselves or contribute through the workforce, educational expenditures yield no return on investment. The grim scenario in which a young person who cannot gain traction in the workplace or postsecondary education ends up incarcerated poses an especially high cost to society. A year of incarceration costs \$44,601 per inmate (2015 dollars), or \$272,606 over six years.¹¹

Society bears additional costs when children are born into economically disadvantaged circumstances, and poverty perpetuates in families across generations. Those include hard-to-calculate costs such as harm to families and unrealized social and human capital when people are systematically excluded from participating in the economy over a lifetime and across generations.

A Major Need: Engaging Opportunity Youth

When BCPS graduates go off track, many are unable to navigate back to a career pathway leading to opportunities that are sustainable, offer family-supporting wages, and provide benefits such as health insurance and paid leave. Labor market and educational outcomes for youth who disengage immediately after high school are significantly worse than those of graduates who pursue opportunities immediately upon graduating. And, the consequences of disengagement after graduation are worse for women and African Americans.

¹⁰ The calculation assumes \$660 in federal taxes at an effective rate of 3.85 percent, \$1,313 in FICA taxes at an effective rate of 7.65 percent, \$512 in state taxes at an effective rate of 2.98 percent and \$381 in local taxes at an effective rate of 2.22 percent.

¹¹ Calculations based on data and information from Vera Institute of Justice interactive report, "The Price of Prisons: Examining State Spending Trends 2010-2015," May 2017, accessed online at <https://www.vera.org/publications/price-of-prisons-2015-state-spending-trends>.



A significant portion of *opportunity youth* remain disengaged over the long term, indicating that it may become more difficult to re-engage as years pass. Programs that identify students at risk of disengagement from the workforce and higher education can help prevent disengagement after graduation. Programs that connect *opportunity youth* to education and training opportunities can limit the time of disengagement, reduce losses to the individual and society as a whole, and disrupt or end intergenerational cycles of poverty for youth who are successfully connected to viable career pathways.

About this Brief

This brief is based on research and analysis conducted for Baltimore’s Promise by the Baltimore Education Research Consortium and the Johns Hopkins School of Education Institute for Education Policy. Special thanks to researchers Rachel E. Durham and Faith Connolly, Baltimore Education Research Consortium, and Al Passarella, Johns Hopkins School of Education Institute for Education Policy.

This brief uses data from the Maryland Longitudinal Data System. These data report enrollments and degrees completed at colleges and universities across the United States, as well as data that include quarterly wage records for all businesses in Maryland, including work study opportunities in college. We examined the data over six years, from 2009 through 2015.¹² The class of 2009 is like other graduating classes, but was chosen because it is the most recent class for whom outcomes at around ages 24 or 25 are known.

Design: The Hatcher Group

¹² This research was conducted using data from the Maryland Longitudinal Data System (MLDS) and with the technical support of the MLDS Center Staff. The conclusions of this research do not reflect the opinion of the State of Maryland, MLDS Center, the MLDS Governing Board, or its partner agencies. Data were prepared September 2017. College enrollment data in the MLDS come from the National Student Clearinghouse and the Maryland Higher Education Commission. MLDS receives labor force and earnings data from Maryland’s Department of Labor and Licensing Regulations. Labor force and earnings data do not include military or federal employment, self-employment, informal labor, or employment outside Maryland.

BALTIMORE'S PROMISE

Village of Cross Keys,
Village Square 1, Suite 177
Baltimore, MD 21210

info@baltimorespromise.org

(443) 873-6000

Baltimore's Promise is a city-wide collaborative composed of public, business, higher education, nonprofit, community, and philanthropic leaders. We serve as a catalyst for organizing efforts and resources around a shared vision: all Baltimore City youth will travel a safe, healthy, and successful educational path from cradle to career.