# The Economics of Investing in Opportunity Youth

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## Patterns

In the U.S. today there are 6.7 million 'Opportunity Youth' – persons aged 16-24 who are neither working nor in school or college. This is one-in-six of the nation's entire youth population. Opportunity youth have varied characteristics: about half of them have had effectively no schooling beyond age 16 and very limited work experience during the years up to age 25. Many are in poverty and some are involved in criminal activities; a significant fraction is institutionalized for at least some period during their youth. Without greater family, public, and community support, these youth will experience substantially diminished opportunities over their lifetimes.

The last decade has seen conditions dramatically worsen for opportunity youth: the decade is not only a 'lost decade' but a 'depleted decade' as the outlook for youth has worsened rather than remained stable. This deterioration is not a result of more delinquent behavior by youth. Rather, it is predominantly a function of current economic conditions. Labor market opportunities for opportunity youth have sharply diminished as the cost of higher education has risen substantially. Over the past decade, the youth poverty rate has risen by more than one-quarter: 26% of youth are now in poverty. With fewer prospects, these youth now face a heavier burden if they seek to improve their skills through post-secondary education.

Future trends for opportunity youth are likely to continue to be adverse. The present Great Recession has had an especially detrimental impact on youth – even more than recessions typically do. Broad occupational and labor market trends – as well as demographic patterns – favor skilled workers and the labor market for low-skilled workers is collapsing. Fiscal trends – the rising costs of incarceration and health care – further increase the pressure to invest in opportunity youth.

The challenge is national in scale. Opportunity youth are spread across all states, but they are concentrated in particular communities. There is strong economic

'hysteresis' – youth inherit the economic conditions faced by older workers. In communities where older adults are economically disadvantaged, the youth in those communities also face the greatest challenges. Youth also inherit the disadvantages of mass incarceration. Offenders return to their local communities, perpetuating economic and social disadvantage for future generations.

The economic impact of opportunity youth is felt by the youth themselves, by taxpayers and across all society. Opportunity youth are less likely to be employed and more likely to rely on government supports. They are in worse health and are more likely to be involved in criminal activity. Purely from an economic perspective – leaving aside important questions of social equity – opportunity is being lost on a large scale.

## Economic Perspectives

The aggregate economic losses associated with opportunity youth are enormous. There are immediate losses during youth and there are long-term losses as these youth fail to prosper. These losses can be calculated from various perspectives: for the taxpayer and for society; by youth subgroups; by level of government; and for individual communities.

On average, the taxpayer loss per opportunity youth is $13,890 each year for each opportunity youth during the youth years from age 16 to 24. Successfully assisting each opportunity youth to transition into adulthood along a similar path to other youth would therefore reduce taxpayer losses by $13,890 annually.

But of course many opportunity youth experience diminished prospects for many years during their youth and in adulthood. The full cost is far more than this single annual amount. For a youth who is an opportunity youth for five years and then experiences an adult (after age 25) profile typical of an opportunity youth the total lifetime the fiscal loss is much higher, at $235,680. This is a present value lump sum amount. It is expressed when the youth is aged 20 but is paid back over the youth's lifetime.

There are broader social losses too and these are much greater than the taxpayer losses. We calculate the social loss per opportunity youth at $37,450 annually. The corresponding lifetime lump sum social loss is $704,020.

**LOST POTENTIAL PER OPPORTUNITY YOUTH:**

**FISCAL CONSEQUENCE**

Each Year
of Youth
$13,890

Lifetime
Lump Sum
at Age 20
$235, 680

**SOCIAL CONSEQUENCE**

Each Year
of Youth
$37,450

Lifetime
Lump Sum
at Age 20
$704,020
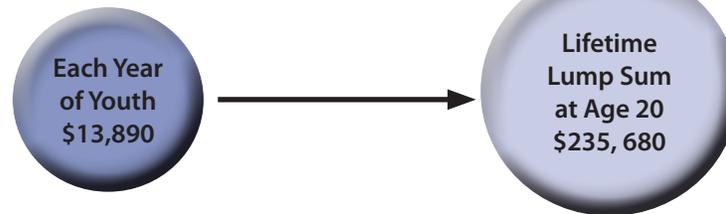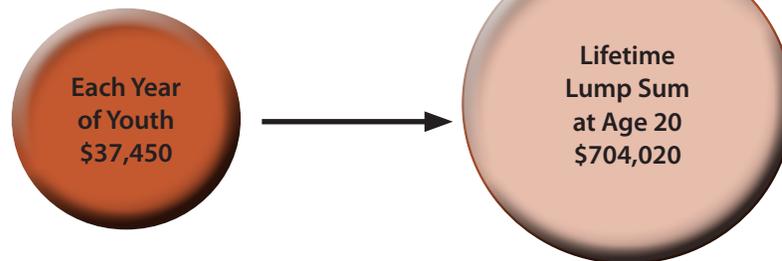
Across the full cohort of 6.7 million youth, the aggregate fiscal burden is $1. 6 trillion and the aggregate social burden is $4.8 trillion. These amounts are lump sums – equivalent to certificates of deposit – from failing to adequately invest in opportunity youth.

All subgroups of youth face these losses, although the timing and sources differ. During youth, the annual loss per male opportunity youth is twice that per female opportunity youth – primarily because of the higher crime rate by male youth. However, the lifetime losses are comparable – the biggest economic consequence for opportunity youth is the loss in future adult economic well-being through lost wages. These consequences are similar for both males and females and so the overall economic effect of failing to invest in opportunity youth is almost equal. A similar pattern is evident across racial subgroups. Lost potential is large across all subgroups – the timing of these losses differ, as do the sources of loss – but the overall losses remain substantial because they are so important in adulthood. Thus, all opportunity youth have enormous economic potential, albeit in different ways.

No single agency bears all these losses – they are spread across levels of government and departments. Here too there is a difference between short run and long run effects. During the youth years, state and local governments bear the larger burden: whereas the federal government losses are $4,840 and the state/local government

**LOST POTENTIAL PER OPPORTUNITY YOUTH: FISCAL CONSEQUENCES:**

**MALE**

**Each Year
of Youth
$18,400**

**Over Lifetime
$247,940
Lump Sum at Age 20**

**FEMALE**

**Each Year
of Youth
$9,040**

**Over Lifetime
$222,290
Lump Sum at Age 20**
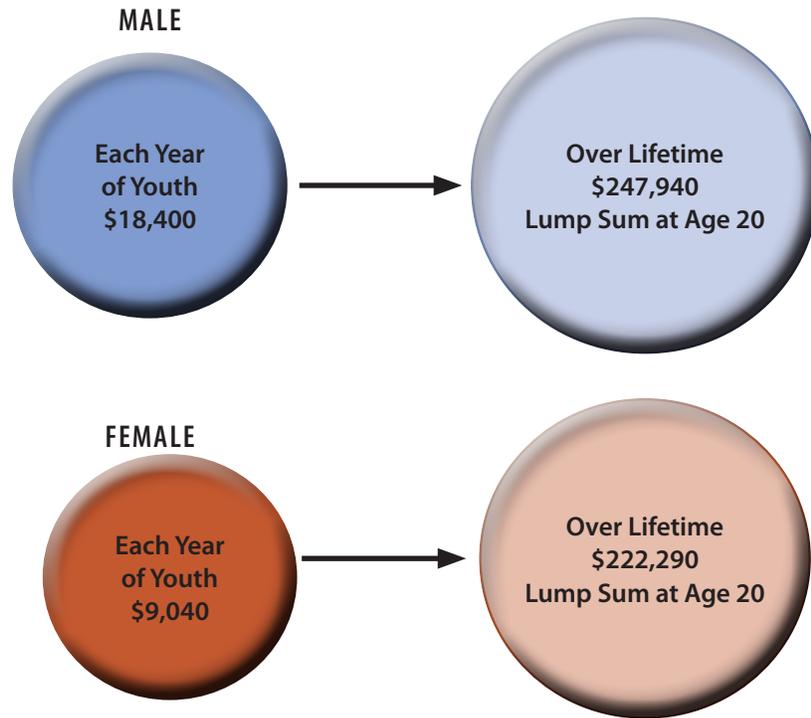
losses are double, at $9,600. Across all 6.7 million opportunity youth, the immediate annual loss to the federal government is $32 billion and the annual loss to state/local government is $61 billion. Over the longer term, as youth fully enter the labor market, the federal government losses accumulate. Over a lifetime, the federal government losses amount to $138,290; this is 50% more than the state/local losses at $91,470.

We also find substantial variation in the economic potential of opportunity youth across states and local communities. These variations reflect differences in rates of opportunity youth; population sizes; local labor market conditions; and access to education. Even small communities (e.g. Flagstaff, AZ) may face a substantial local loss from having high rates of opportunity youth. For mid-sized communities (e.g. Toledo, OH), the fiscal consequences are in the hundreds of millions. For a large city, such as Washington, DC, the annual fiscal consequences are $0.6 billion dollars and the social consequences easily exceed $1 billion.

**LOST POTENTIAL PER OPPORTUNITY YOUTH: FISCAL CONSEQUENCES:**

**FEDERAL**

Each Year
of Youth
$4,840

Over Lifetime
$138,290
Lump Sum at Age 20

**STATE/LOCAL**

Each Year
of Youth
$9,600

Over Lifetime
$91,470
Lump Sum at Age 20
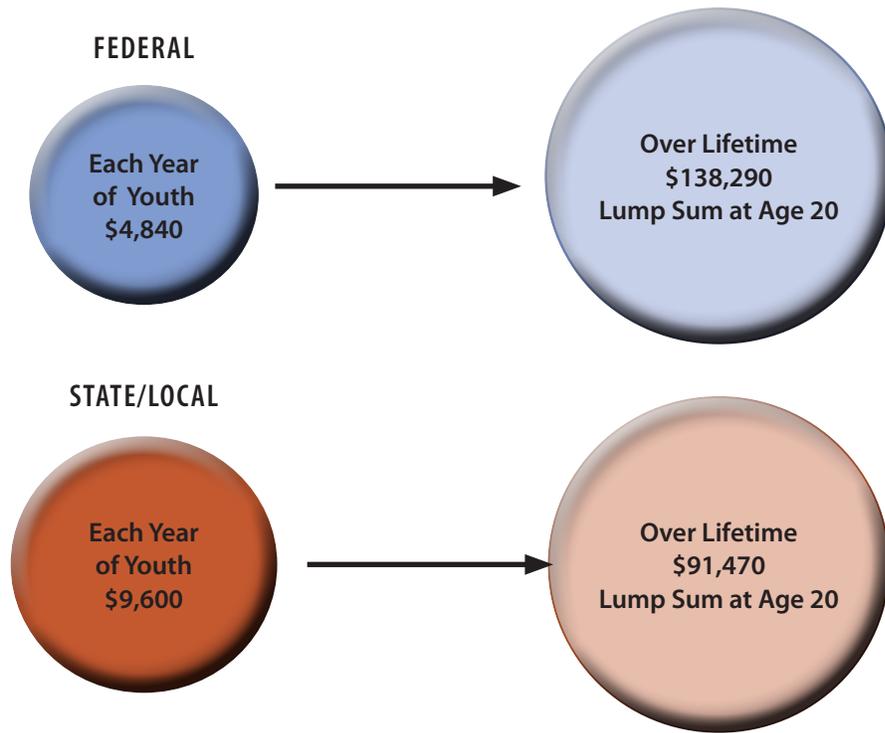
## Policies

To avoid perpetuating these losses over current and future cohorts it is critical to understand the policy context for opportunity youth.

We find a large disparity between the benefits of investment in opportunity youth and how much is currently being invested across all levels of government. On a generous accounting we estimate that the federal government currently invests at most $600 per opportunity youth per year on programs to directly alleviate the challenges these youth face. State/local governments invest $750 per opportunity youth annually. These investments – totaling $9 billion annually – are approximately one-tenth of the fiscal losses each year.

As part of a comprehensive investment in youth, we propose public support in three areas: job growth; educational access programs at the high school and college level; and social support programs. We identify specific programs within each area that have demonstrated or shown promise of effectiveness in helping disadvantaged youth.

Most programs cost far less than the annual losses per opportunity youth; some have already established that the benefits of investment exceed the costs. However, many are very modest in scale, covering only a few thousand of the 6.7 million youth, and modest in scope, with limited resources and short durations. Greater investment in job growth programs, educational access and supports, and social supports is therefore possible.

We identify possible funding mechanisms for each area, drawing on existing government funding. Approximately, public investments by the federal government should be matched by state and local government. However, we emphasize that funding and support should include many sectors of the economy – philanthropic, corporate, and other social agencies. A multi-sector approach is needed to address a challenge that is national and has many dimensions.

As an attempt to realize the potential of opportunity youth, we propose an additional investment of $7 billion annually. This amount could be invested in job growth programs ($2 billion), improved access to postsecondary education ($2.5 billion), and expanded social supports ($2.5 billion). These social supports would be targeted to subgroups of opportunity youth who face particular challenges and would include effective programs identified by the Office for Adolescent Health and the Office of Juvenile Justice and Delinquency Prevention, as well as other programs with demonstrated effectiveness and efficiency such as National Guard Youth ChalleNGe and Job Corps. Under this proposal total government spending would rise from $9 billion to $16 billion. As large as this $7 billion cost appears, it is only a fraction of the opportunity cost of continuing with current policies even if only a very short-term perspective is adopted.

Using a return on investment framework, programs that are effective for at least ten percent of their participants are expected to yield a positive rate of return. If intensive programs are effective for only half of the participants (and have no effect on other opportunity youth) the return on the $7 billion investment would be approximately $32 billion for taxpayers alone. The return on investment would therefore be almost five-fold. Given the social benefits are much larger than the taxpayer benefits, programs would only have to be modestly effective to generate a positive rate of return from a social perspective.

# 1. Introduction

Investments in youth are critical to the nation's economic future. Increasingly, the circumstances of many of the nation's youth – low incomes, limited skills, poor prospects, and economic insecurity – are being recognized as an important economic and social concern.[1] In our earlier study, 'The Economic Value of Opportunity Youth', we identified 6.7 million youth aged 16 to 24 who needed the most support – a group we labeled 'opportunity youth'. These youth, who represent 17% of their age group, are neither in work nor accumulating job skills in school or college. As well as being immediately disadvantaged, many of these opportunity youth are jeopardizing their economic futures; and the taxpayer and the nation pays and will pay a heavy price for failing to prepare these youth to be productive in adulthood. Our earlier study estimated the taxpayer loss at $13,890 per year during the youth period and an additional $170,740 expressed as a lump sum loss after the youth becomes 25.[2] The national loss is even greater, at $37,450 per year in youth and $529,030 as a lump sum from age 25. These losses are very large; they represent our failure to efficiently invest in the nation's future.

This companion study extends our analysis of opportunity youth in several ways. First, we describe the opportunity youth population, highlight key economic issues, and report on recent trends in the prevalence of such youth; we also look forward to how youth prospects might change over the next decade. Second, we calculate the losses associated with our failure to invest in opportunity youth from different vantage points. These perspectives include level of government, opportunity youth characteristics, and consequences for individual communities. These detailed analyses help us explain where the losses occur; they also explain why solutions to this problem are so challenging. Finally, we consider policies for investments in opportunity youth: we describe current funding; propose a series of policy solutions; and outline how these should be funded.

These specific calculations help illustrate the range of challenges facing youth and policymakers seeking to harness their potential. Youth do not follow simple paths through early adulthood. There are many determinants of youth behavior, and these fluctuate over time: teenage mothers will have family responsibilities but may transition back into the workforce by age 24, for example; youth may engage in early substance abuse but later enroll in college. For policymakers, investments to assist opportunity youth in one domain may be undermined by adversity these youth face or outside circumstances: employment and training programs, for example, are unlikely to be effective if the labor market is weak; and college subsidies may be counter-productive if youth are unprepared for higher education. In this study, we link these issues – youth circumstances and policy context – together.

Our study is an economic one. It looks at only at the resource loss associated with failing to make good investments and establishes that the return on investment is likely to be high. It

does not address the much broader implications of a lack of opportunity, not just for families but also for society as a whole. Addressing these social and moral issues requires a much broader debate, but one that becomes vital in light of the economic cost of failure both now and in future generations.

# 2. Opportunity Youth: Demography, Economy, and Society

## 2.1 Opportunity Youth across the U.S.

Currently, there are 38.9 million youth between the ages of 16 and 24 in the U.S. Most of these youth are in school until 18; three-fifths of these graduates then go straight to college and one-quarter of them are employed in the labor market. But many – the majority of youth – don't follow a straight and direct path through early adulthood. Even with a high school dropout rate of 20-25%, many of the high school graduates fail to graduate on schedule. Even for those in college, one-quarter are enrolled part-time and only slightly more than half will eventually graduate within six years. For those youth aged 16-19 who enter the labor market, one-in-ten will be unemployed. Overall, youth unemployment (ages 16-24) is almost 20% and this figure is far below the true rate because many youth enroll in school or college because they cannot find work.[3] Looked at either in educational or labor market terms, the potential of many of the nation's youth is not being fully realized.

Opportunity youth – those who are neither in work nor in school or college – includes youth in many different circumstances. There are several ways to count their numbers (as discussed by Belfield et al., 2012; and CRS, 2009, Table A-1). Our approach looks at opportunity youth from an economic perspective.

Summary estimates are given in Table 1. Our baseline estimate is of 6.7 million opportunity youth each year, which is 17% of the relevant population. Using longitudinal data, we estimate

**Table 1.** Opportunity Youth in the US in 2012

| Count and Measure | Percent of Age Group | Opportunity Youth (millions) |
|---|---|---|
| All Opportunity Youth | 17.3 | 6.74 |
| Chronic Opportunity Youth | 8.9 | 3.46 |
| Weakly attached Opportunity Youth | 8.4 | 3.28 |
| Poverty (ages 18-24) | 26.0 | 7.88 |
| Criminal status (ever arrested 16-24) | 18.0 | 7.03 |
| Criminal status (arrested per year) | 6.3 | 2.45 |
| Disability | 5.8 | 2.26 |
| Substance abuse | 2.9 | 1.13 |
| Poverty level (as household head) | 2.4 | 0.93 |
| Family care-giver responsibilities | 2.0 | 0.77 |
| Institutional residence | 2.0 | 0.76 |
| Incarcerated | 0.8 | 0.31 |
| Total youth population ages 16-24 | 100% | 38.94 |

*Sources:* Belfield et al. (2012, Tables 1 and 2). Total youth population Puzzanchera et al. (2010).

that these opportunity youth are split almost evenly into 'chronic' and 'weakly attached' opportunity youth. Chronic opportunity youth are those who have no employment or post-secondary educational experiences (and many have not completed high school). Weakly attached opportunity youth are those with some intermittent work history or post-secondary schooling but where those experiences are far from adequate either for immediate or future economic independence. We suspect that even these estimates are too low. Using monthly data on students' work and education, and so accounting for slow and indirect paths into productive adulthood, we find opportunity youth incidences of over 30% of the entire youth population. Unquestionably, we identify a high proportion of youth with significant economic potential. By inadequately investing in these youth, this potential is being lost.

Table 1 also shows opportunity youth in terms of behaviors and circumstances. Some youth face multiple disadvantages; others have actively chosen alternatives to education or employment (such as child-rearing). Youth crime rates are extremely high: over their youth years, 18% of opportunity youth will have been arrested; during each year of youth, 6% are arrested; and almost 1% is incarcerated (with an additional 1% residing in other institutional settings). Poverty levels, substance abuse and disability rates are also significant risk factors during the youth years. Critically, these tabulations do not show the cumulative and compound risks for opportunity youth: risks are cumulative in that more than one is likely to increase the gravity of criminal involvement for each youth; and they are cumulative in that each youth faces these risks each year – the proportion 'ever-arrested' is three times the annual arrest rate, for example. But these risks are also compounded further in that crime, poor health, and economic insecurity interact with each other. Recent evidence shows, for example, a very strong association between adolescent depression and low labor market participation.[4]

Opportunity youth status is evenly divided between males and females. Slightly more than half of all opportunity youth are male, but slightly more than half of the youth population is male too. Female opportunity youth are more likely to have family responsibilities; male opportunity youth are more likely to be involved in crime. Higher proportions of minorities are opportunity youth. Finally, opportunity youth status increases with age. Rates are lower for youth aged 16-18 (school years). They then jump to a stable rate for those aged 18-24, although the reasons for opportunity youth status differ with age. Thus, across these behaviors, and with gender, age, and race all playing a role, there are many different patterns of opportunity youth.

## 2.2 Recent Trends in Opportunity Youth

There is no data on how numbers and patterns of opportunity youth have evolved within recent years across the U.S. No consistent study has been undertaken for this group over time (unlike in the United Kingdom, Australia, and other countries). To illustrate how opportunity youth patterns may have developed over recent years, we look at associated risk factors. Our analysis

here indicates how, over the past decade, some risk factors have increased and others have decreased. But factors outside the control of youth have not improved.

Table 2 shows trends in a set of relevant risk factors since 1999. One clear positive trend has been the decline in teenage pregnancy rates, by over 20% in the last decade. The high school dropout rate is stable or has fallen slightly.[5] Juvenile crime has stayed relatively stable, as has illicit drug use; and juvenile detention rates have fallen. We also note youth health status is not deteriorating. With the exception of the obesity epidemic, trends in youth health are modestly encouraging: across 27 measures in the Critical National Health Objectives, outcomes improved in 15 and worsened in 5 over the last decades.[6] Overall, youth behavior does not appear to have worsened.

**Table 2.** **Opportunity Youth Trends over Last Decade**

|  | 1999 | 2003 | 2006 | 2009-11 | Trend ( ↑ better, ↓ worse) |
|---|---|---|---|---|---|
| Teen pregnancy rate | 8.6% | 7.2% | 7.0% | 6.8% | ↑ |
| High school dropout rate | 11.2% | 9.9% | 9.3% | 8.1% | ↑ |
| Persons in juvenile detention and correctional facilities | 356 | 307 | 295 | — | ↑ |
| Arrest rate | — | 2.1% | 1.7% | 1.6% | ↑ |
| Illicit drug use other than marijuana | — | 8% | 8% | — | — |
| Unemployed (% of all persons) | — | 7.7% | 6.4% | 9.5% | ↓ |
| Unemployment rate | 9.3% | — | 10.5% | 17.3% | ↓ |
| Labor force participation rate | 65.8% | — | 59.4% | 55.0% | ↓ |
| Median earnings: high school dropouts | — | $23,700 | $22,800 | $21,000 | ↓ |
| Tuition, room and board at college | $13,300 | $14,900 | $16,300 | $17,500 | ↓ |
| Persons in poverty | 20% | 21% | 22% | 26% | ↓ |

*Sources:* See Appendix 1: Sources for Table 2. Amounts in 2009 dollars.

Instead, the economic conditions these youth face have deteriorated, with the Great Recession that began in 2007 accelerating these trends.  These conditions are shown in the bottom part of Table 2. Two economic trends are especially strong because they directly influence the incentive for youth to be engaged and they are outside their control. The first is the widespread and dramatic deterioration in the labor market. Looking at the youth proportion unemployed, it has risen from 7.7% to 9.5%, i.e. by almost one-quarter. The unemployment rate, which adjusts for persons not in the labor force, has also spiked: at 17%, it is almost double the rate ten years prior. Another illustration of this deterioration is the decline in the labor force participation rate of 12 percentage points, with most of this decline since 2007. At the same time, the real earnings for high school dropouts – the labor market most opportunity youth are in – are almost 10%

lower now than at the start of the decade. The labor market pay-off to opportunity youth (both the hours of work they can find and the wages they are paid for that work) are therefore much lower. Increasing college enrollments have probably cushioned these changes, with students enrolling in college because they cannot find jobs. However, the second trend – the rising price of college – then compounds the first. Over the last decade the price of college has risen by almost one-third in real terms. Financial aid has increased slightly, but not sufficiently to offset declines in state aid, particularly at the community college level. Thus, the cost to opportunity youth of accumulating skills is much higher.

Demographic trends are compounding this situation. Substantial and increasing cohorts of youth are clustered in low quality inner-city schools and often come from families with weaker human and social capital (Kirsch, 2007; Tienda and Alon, 2007). Perhaps the statistic that best encapsulates all these trends is the growing youth poverty rate; as shown in Table 2, this rate is up from one-fifth to over one-quarter of all youth in the last ten years.

## 2.3 State-level Variation in Opportunity Youth

Besides demography, states vary in many ways that might influence their numbers of opportunity youth. Important influences might be: the strength and structure of their youth labor markets; their public support for education; their tax systems; and their ability to access federal support programs. Opportunity youth rates may also vary with population density, although the association is complex. Typically, urban areas have poorer quality education systems such that youth are not prepared for work or college. They also have higher crime rates. However, urban areas may offer more employment opportunities for youth, albeit in low-level jobs, as well as greater accessibility to post-compulsory education.

To illustrate some of this variation, we analyze data from the 5% Public-Use Microdata Sample of the American Community Survey (ACS-PUMS), pooled across the years 2006 through 2010. These data contain information on over 12 million individuals across 2,069 areas of the country (these areas – Public-Use Microdata Areas or PUMAs – contain at least 100,000 persons and follow county, city or state boundaries).[7] Using the individual-level data we identify opportunity youth as those youth aged 16-24 who are not in school or college and not working. In comparison with other datasets, our earlier report found that the ACS almost certainly undercounts the proportion of opportunity youth. However, our interest here is geographical variation across the nation, so we can analyze relative variations by state and by community.

There are very large differences in opportunity youth rates by state. Figure 1 shows the variation across states, with darker shading indicating higher rates of opportunity youth.[8] Opportunity youth rates are higher in the south east and south west and northward through Ohio, West Virginia, and Michigan. In addition, we calculate the opportunity youth rate controlling for

**Figure 1.** Pct. Opportunity Youth (ACS-PUMS 2006-2010)
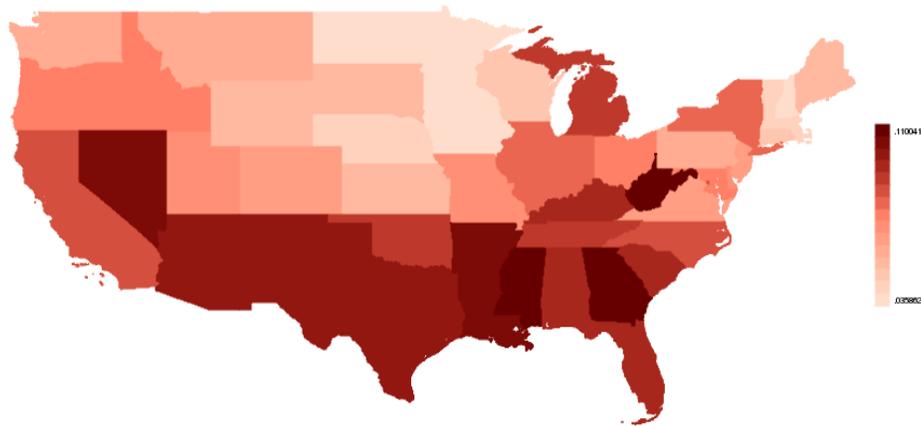


demographic variables. Substantial differences remain beyond demographics, some of which can be explained by labor market and educational policies within those states.

To better understand this geographic variation, we use the ACS-PUMS to look at how adult opportunities influence youth opportunities. Specifically, we calculate the proportion of the adult population aged 25-44 that is college-educated, minority status, geographically mobile, or not in the labor force. These variables capture the economic circumstances for adults within a given community, i.e. they represent the future for current cohorts of opportunity youth. We perform regression analysis to estimate the correlation between the current rate of opportunity youth per PUMA area with the economic conditions they will face in the future.

**Table 3.** Opportunity Youth Rate per Area (PUMA)

|  | Effect on opportunity youth rate if adult characteristic increases by 20% |
|---|---|
| *Adult (age 25-44) characteristic:* | |
| Geographical mobility rate | +2% |
| Percent minority status | +4% |
| Percent not in labor force | +13% |
| Percent college educated | −20% |
| Number of PUMAs | *2,069* |

*Sources:* Analysis of 5% ACS-PUMS individual-level collapsed by PUMA. Estimates from OLS regression including state fixed effects.

Table 3 shows how adult characteristics and the opportunity youth rate are strongly correlated. Areas with higher mobility, more minority populations, and higher proportions out of the labor force have much higher rates of opportunity youth. So, when the percentage of adults not in the labor force is 20% higher than average, the opportunity youth rate in that community is

13% higher. In contrast, areas where the college-educated population is higher have much lower rates of opportunity youth. The labor force association is strong: if the adult percent not in the labor force goes up by 20%, the local opportunity youth rate goes up by 13%. The college education association is even stronger than the labor market effect and effectively proportionate: if the adult college-educated population in a community is 20% higher than average, the opportunity youth rate in that community is 20% lower than average.

Table 3 clearly shows 'hysteresis' – how economic conditions for one generation influence economic conditions for the next generation. In this case, the opportunities for youth are strongly correlated with the opportunities for adults. Areas with fewer prospects for adults are also those where the options for opportunity youth are constrained. Opportunities for youth in a given community are very similar to those faced by prior generations. Communities should expect that the challenge of high rates of opportunity youth will not fade over time.

## 2.4 The Economic Value of Opportunity Youth

The economic value of opportunity youth can be looked at both as an immediate and a long-run economic concern. The individual youth experiences a loss in income, as well as poorer health status and more involvement in the criminal justice and welfare systems. The taxpayer also loses out: tax revenues are lower and government expenditures are higher. Finally, the nation loses out: economic output is lower and society is burdened with more crime and poverty. These losses are immediate, as these individuals are either effectively idle or receiving government supports. But there are also later losses as these youth do not have the skills necessary to be productive in adulthood (after age 25).

In our earlier study, we calculated the economic potential of opportunity youth both in the immediate period and over the lifetime. We applied a conventional method used in numerous other studies.[9] The method calculates detailed youth and life-course patterns for earnings, crime, health status and health expenditures, welfare, and education; the patterns for opportunity youth are then compared with those for other youth. The method uses data from national databases, the Census, and academic research; and these data reflect current conditions. Taxpayer and social losses are calculated separately, as are the immediate and adult losses. The basic formulae are given in Appendix Note 2, with further details in our earlier study.

The economic and social prospects for opportunity youth are considerably below those of other youth across several domains:

- **Earnings.** Few opportunity youth have jobs, and if they do, their work is often intermittent or in low-wage and temporary jobs with few benefits. Thus, one of the main burdens of opportunity youth is the immediate loss in earnings. Many youth who are in school and college earn more than opportunity youth; and these differences grow even larger over time

when the former group enters the labor market fully and with more skills. The gaps in skills and experience of opportunity youth have a persistent effect on their employment prospects. Plus, as the workforce becomes more educated, there are positive effects across the labor force as workers help train each other and overall productivity levels increase; firm training may also increase. Workers with more education foster productivity in others. Differences in earnings and labor force productivity then translate into differences in tax payments.[10]

- **Crime.** Opportunity youth are more likely to be involved in crimes, particularly drug use, gun violence, and alcohol/drug abuse. In fact, the years 16-24 cover the peak years of offending and over 7 million youth have had some involvement in the criminal justice system. National data shows that opportunity youth commit crime at four times the rate of other youth. Also, because recidivism rates are so high, early youth crime begets later youth and adult crime. Taxpayers bear the expenditures for the criminal justice system (policing and sentencing), corrections, and expenditures on crime prevention agencies. Communities face a greater burden, as the victim costs of crime are far in excess of the taxpayer expenditures.[11]

- **Health.** Opportunity youth have lower health status and are more likely to have spent time in a mental hospital or received substance abuse treatment. They are less likely to have health insurance, and they draw upon Medicaid at six times the rate of other youth. The fiscal consequences are increased spending on public health care (e.g. Medicare, Medicaid, CHIP, and state programs). Critically, the youth themselves pay the heaviest price for being in poor health. These health disadvantages are mostly latent in youth but they become much larger during adulthood. Thus, the future health losses are the biggest concern. This does not mean these losses are far away though: disparities in health status are substantial even before these persons reach 30 years old.[12]

- **Welfare.** Opportunity youth are more likely to receive welfare, such as TANF (Temporary Assistance for Needy Families), housing assistance, food stamps and, for females, WIC (Women, Infants, and Children) grants. These youth also rely on support programs, e.g. Job Corps and YouthBuild; indeed, absent these programs the economic losses of opportunity youth would be even greater. As with earnings, welfare receipt also has a persistent effect: early reliance on government programs leads to later reliance. Although many welfare programs are time-limited, many recipients move across programs to access different safety nets.[13]

- **Education.** Opportunity youth are are less committed to enrollment in school or college, and their overall lifetime levels of education are extremely low. They are one-third less likely to graduate from high school and only 1% of opportunity youth obtain a four-year degree by age 28 (compared to 36% of the general youth population). This lack of schooling is a short-run saving to the taxpayer, albeit with negative economic effects over the long run. But there is also an efficiency loss to the education system. When opportunity youth do enroll in

school or college, their cost of education is much higher: high dropout rates; grade repetition; and the provision of remediation assistance in college all put upward pressure on education system costs. Also, these youth may often complete programs of study with fewer productive skills and earn credentials with weaker labor market value such as the GED.[14]

There are several ways to represent the economic potential of opportunity youth across these five domains. The losses can be expressed generally: in youth the losses are primarily driven by lower incomes and higher crime rates; in subsequent adulthood, they are primarily determined by lower productivity and worse health status. Expressed as annual amounts, the losses for each year of opportunity youth are $13,890 from the taxpayer perspective and $37,450 from the social perspective. By comparison, median household income in the U.S. is $49,500; the social burden per opportunity youth is therefore 75% of what the median household earns each year. However, the full potential can only be seen by looking over the lifetime and combining both the immediate and future adult losses.

**Table 4.** The Economic Loss across all Opportunity Youth

|  | 20-year-old youth | Per cohort ($ billions) |
|---|:---:|:---:|
| Fiscal Loss: |  |  |
| Immediate loss | $64,940 | $438 |
| Future adult loss | $170,740 | $1,151 |
| *Total* | $235,680 | $1,589 |
| Social Loss: |  |  |
| Immediate loss | $174,980 | $1,179 |
| Future adult loss | $529,030 | $3,566 |
| *Total* | $704,020 | $4,745 |

*Notes:* Opportunity Youth is 6.74 million individuals. 2011 dollars. Immediate burdens reflect five years of youth burden (discounted).
Belfield, Levin and Rosen (2012, Tables 1, 7 and 8).

Table 4 shows the total lifetime economic loss per opportunity youth in present value terms, i.e., in lump sum amounts in today's dollars. These amounts are for a youth who is aged 20 and so has five years as an opportunity youth before entering adulthood. The fiscal or taxpayer loss is $64,940 during youth and then $170,740 over the adult life. Thus, the economic value per 20-year old opportunity youth is $235,680. Across the cohort of opportunity youth that represents $1.6 trillion in economic value. The social loss – counting all the lost opportunities regardless of who pays for them – is even greater. During youth, this loss is $174,980. As each youth enters adulthood, the lifetime losses total as a lump-sum $529,030. Overall, the economic loss per opportunity youth at age 20 is $704,020. That is the amount that – when that 20-year old is an opportunity youth – society is losing. Across the entire cohort's lifetimes, the

capitalized sum is $4.7 trillion (conservatively estimated). This is the aggregate economic value of opportunity youth.

Emphatically, the future burden of opportunity youth is far greater – three times greater – than the immediate burden. Even as society is jeopardising potential, the big economic loss from opportunity youth is that these individuals will not progress through adulthood to be economically independent.

## 2.5 The Societal Value of Opportunity Youth

An economic analysis only measures the tangible, money losses from failing to invest in opportunity youth. Many losses cannot be easily expressed in money terms. When these are taken into account, they strengthen the case for investment in opportunity youth.[15]

First, there are health and psychological costs to the opportunity youth. Our economic model above only counts the fiscal consequences of poor health status; it does not put a value on poor health status from the person's perspective nor does it count any of the private expenditures these individuals must make to ameliorate any health insults. From society's perspective, however, improved health is valuable and, given the very poor health status of opportunity youth, such improvements are likely to be extremely valuable.[16] This value is not counted in the above calculation. Similarly, no value is attached to the avoidance of incarceration: the psychological costs of being imprisoned are not factored into the economic calculations; only the direct taxpayer costs are counted.

Second, there are costs to families from opportunity youth behaviors. Families must provide residence and care for youth who are not economically independent.  They will also most likely incur direct expenditures, particularly on health care, and may be constrained in their own participation in the labor market. For incarcerated youth, other family members – both parents and siblings – face a social and economic burden. These family repercussions may be long-lasting if disadvantage is passed through generations; teenage mothers, for example, may be unable to commit sufficient resources for their own children's development. Opportunity youth may also transfer health disadvantages to their children: this association has been found to be strong for obesity, for example (e.g. Lee et al., 2009). A lack of economic opportunity perpetuates disadvantage through generations and communities.

Third, there are costs for local communities, especially where opportunity youth commit more crime. Community residents must live with the presence of crime: incurring costs to avoid being victims; having lower property values; and paying more for goods and services. These community losses are extremely high and they persist across generations: disadvantaged neighborhoods produce more offenders and after incarceration these ex-offenders return to their local neighborhoods (Sampson and Loeffler, 2010).

Finally, there may be broader costs to society. Citizens may lose faith in a society with entrenched inequality, low economic mobility, and civic disengagement, as well as one with a criminal justice system that has yielded 'mass incarceration'. In recent decades, trends in the U.S. on all these dimensions are not promising (Stiglitz, 2012).

## 2.6 The Future for Opportunity Youth

Future trends for opportunity youth will depend fundamentally on developments in the labor market and the recent Great Recession has made the situation even more precarious (see Table 2 above). Both labor force participation and employment rates declined; and research on scarring shows that these declines have permanent impacts. Thus, even if labor market opportunities improve, the productivity of today's opportunity youth – and indeed all youth – are projected to be lower for years into the future. Moreover, these youth will be most vulnerable to any subsequent labor market downturns: with lower skills and experience, they are more likely to be laid off and less likely to be hired. If state subsidies for higher education erode further, youth will find it increasingly difficult to gain new skills in response to changes in structural unemployment.

Most likely, trends will continue to be unfavorable. Both demographic and structural factors will play a role in shaping the youth labor market of the future. Demographically, the population is aging. This will slow the rate of growth of the labor force, potentially opening up more jobs. However, these jobs will likely be taken by older workers, those whose skills are closest to those of the new retirees.  In terms of occupational structure, the demand for labor is changing. Greater automation will continue to reduce the demand for routine, unskilled jobs. There is predicted to be zero growth in the number of basic production jobs between 2010 and 2020, even as the number of such jobs has already fallen by 20% over the past five years. More offshore outsourcing will further reduce the need for U.S. workers with low skill levels. Organizational or work restructuring may also play a role, with firms hiring workers who need less internal monitoring and instead are monitored based on their credentials. Overall, of the ten occupations with the largest percentage declines in jobs over the next decade, the typical education needed is either a high school diploma or less. Also important is the link between these demographic and occupational trends – as the population ages, this changes the demand for particular products and services. The strongest area of job growth is in health-related services: all nursing jobs require some postsecondary education, license, or credential; other related jobs, such as personal care or home health aides, currently do not need these qualifications but these jobs are more likely to be filled by older workers.[17]

From the fiscal perspective, there are two other important factors: the rise in the near term of criminal justice system costs; and over a longer horizon the upward trend of health expenditures. These factors can be broken down into two parts: first, changes in criminal activity

and health status; second, the economic consequences of these changes. Developments are similar for both domains. As shown above, youth criminal activity is broadly stable. However, the taxpayer expenditures on youth crime are escalating. Detention settings, which are often used, are very expensive; and states are increasingly required to provide health care for prisoners, many of whom have chronic illnesses.[18] Similarly, with the exception of the sharp increase in obesity rates, youth health – interpreted broadly to include teenage pregnancy and substance abuse – is not worsening. However, the costs of health care treatments are increasing, with pressures on both demand and supply. In the medium terms, these costs will depend on implementation of the Affordable Care Act.[19]  Most likely, the additional demand for healthcare will cause prices to rise even further.

Critically, these factors are important because their unit costs to deliver are rising – not because youth are drawing on them more intensively by increased 'dysfunctional' behavior.

# 3. Understanding the Economic Value of Opportunity Youth

## 3.1 Valuation from Different Perspectives

The aggregate analysis shows the full value of opportunity youth; it illustrates how individual circumstances have broad fiscal and social consequences. In this Section, we provide disaggregated estimates of this economic value from a range of perspectives.

A more detailed picture is needed for two reasons. First, we know that the economic value varies significantly – there are very few 'typical' opportunity youth. Fundamentally, the economic value varies with the incidence of opportunity youth and the economic consequences of being an opportunity youth. In the most disadvantaged communities both factors reinforce each other and the economic consequences are profound and long-lasting. Second, no single entity bears the entire loss associated with opportunity youth: the loss is spread across different levels of government and groups of citizens. The incentive to invest in the future for youth is therefore undermined by its dilution across so many different constitutencies. By looking narrowly at the losses for separate groups, the implications for action –as well as the challenges to action – become clearer.

There are many possible perspectives from which to analyze economic value. Each perspective yields a different calculus for decision-making. For example, school districts might look at suspended students or those on the margin of dropping out; health authorities might look at the consequences of substance abuse. Local residents might be most concerned about the consequences in terms of disorderly or criminal behavior.

We begin by looking across the characteristics of youth themselves, distinguishing weakly-attached opportunity youth and those with no history of work or education after age 16. However, in looking across youth characteristics we emphasize – as shown in Tables 2 and 3 – the deteriorating labor market and college options for youth. Many of these youth face weak incentives to participate in the labor market and to invest in their education and these incentives are outside their control. For 'chronic' opportunity youth we note that greater supports may be needed for these individuals but data on the availability of these supports is typically not available. Next, we look at the value of opportunity youth by level of government. These perspectives are important because of the large fiscal implications and the need for governments to invest in programs that support youth, as well as the different responsibilities across federal, state, and local agencies. Finally, we look at the losses for a set of selected communities. Each community faces economic consequences that affect both taxpayers and local residents. By looking at selected communities, we can illustrate the full consequences for local residents.

These calculations – different ways of looking at the economic consequences of opportunity youth – extend our aggregate figures summarized in Section 2.4. They are extensions in that they look in more detail at each economic consequence. They also include additional cost items to capture more precisely the economic implications for each group, as well as transfers across groups. For each perspective we report two economic measures at the individual-level and the aggregate level. First, we report the annual economic consequences for each opportunity youth aged between 16 and 24. This is the amount that is lost each year for each opportunity youth. Second, we report the total lifetime loss for a youth who is an opportunity youth at aged 20 and remains so until age 24. This youth not only faces an economic loss during those five years, but will also face one during his or her later adulthood. We count up both the immediate loss and the future lifetime loss and express these as a present value. This amount is the total economic value for a youth with that profile.

## 3.2 Value by Youth Characteristics

Opportunity youth status varies by gender and race; the economic implications of being an opportunity youth also vary with these characteristics. Clearly, female and male youth differ significantly in both their behaviors and the economic consequences of those behaviors. Females have more family responsibilities, as well as higher rates of college enrollment, and they are much less likely to commit crimes. Differences are also found by racial groups and these differences may reflect differences in family circumstances, school quality, or labor market options. These youth differences in turn will influence opportunities in adulthood.

**Table 5.** The Economic Consequences of Opportunity Youth By Youth Characteristics

| | Fiscal Consequences | |
| --- | --- | --- |
| | For each year of Opportunity Youth | Total lifetime effect per Opportunity Youth |
| Male | **$18,400** | **$247,940** |
| White/other | $14,450 | $233,460 |
| Black | $27,300 | $300,910 |
| Hispanic | $15,300 | $210,910 |
| Female | **$9,040** | **$222,290** |
| White/other | $6,560 | $184,810 |
| Black | $13,100 | $275,990 |
| Hispanic | $8,910 | $230,500 |
| **Weakly attached** | **$10,890** | **$201,530** |
| *Aggregate* | *$13,890* | *$235,680* |

*Notes:* Opportunity Youth is 6.74 million individuals. 2011 dollars. Lifetime effects reflect five years of youth burden from age 20 and the adult losses after age 24 (all discounted to age 20, d=3.5%). Aggregate from Table 4.

Table 5 illustrates the differences in fiscal consequences for the taxpayer across youth groups (the social consequences are all much larger in magnitude but of similar proportions). The results must be interpreted cautiously because there are many variables in the model and the main drivers are within-group differences in opportunity youth status. That is, the results for Hispanic female opportunity youth, for example, are driven by the youth and adult profiles for other Hispanic females (not by the general youth and adult profiles).

During youth, male opportunity youth impose a fiscal burden which is more than double that of female opportunity youth ($18,400 versus $9,040). This reflects the greater involvement in criminal activity by male youth and the higher rates of college-going by female youth. When all the lifetime effects are accounted for, the difference between male and female opportunity youth is modest ($247,940 versus $222,290). The figures converge because the labor market and health care losses are actually larger for female opportunity youth. In the short run, male opportunity youth impose larger burdens, but looking over the long run the fiscal consequences of opportunity youth are similar for males and females. Table 5 also shows differences across racial groups by gender during youth. Again, the differences converge when we adopt a lifetime perspective. The differences are in the timing and the domains of loss.

An important characteristic of opportunity youth is whether the youth has had any attachment to the labor market or postsecondary education. Those with some attachment we refer to as 'weakly attached'; these youth, which we estimate as 3.3 million persons, may be more readily re-engaged in the labor market or education system. In contrast, chronic opportunity youth may face many more challenges to participation in the workforce. Table 5 shows that the fiscal consequences for weakly attached youth are lower than the average across all opportunity youth ($10,890 versus $13,890).[20] Compared to chronic opportunity youth, they are less likely to be institutionalized and more likely to have earned some income. However, the differences are not very large: most opportunity youth – even those who work – receive very low wages and most are unemployed. Again, for a 20-year old opportunity youth, the lifetime losses are similar whether that youth is designated as weakly attached or chronic ($201,530 versus $235,680). Low labor market participation rates across all opportunity youth over long periods of adulthood compress differences across subgroups of youth. Although weakly attached opportunity youth may be more readily re-engaged into the labor market, the needs of chronic opportunity youth may merit more attention.

There are differences within subgroups of opportunity youth. However, these differences are primarily in the timing of the losses and the domain (e.g. health, crime, or income) rather than their magnitude. Male opportunity youth and chronic opportunity youth generate losses early on. But over the longer horizon – as labor market participation rates and health status

effects drive the calculations – these subgroup differences are attenuated. Each subgroup of opportunity youth represents a substantial potential for investment even as the supports and programs these groups require will differ.

## 3.3 Value by Level of Government

The fiscal loss from opportunity youth is not spread evenly across levels of government. All levels of government experience substantial losses, but the extent of these losses varies. Here we divide the losses between the federal and state/local government levels. Generally, the federal government disproportionately loses income tax revenue and state/local governments disproportionately pay for criminal activity, education, and welfare; medical expenditures for opportunity youth are spread approximately evenly across the levels of government.

First, we calculate the economic consequences for the federal government. This amount is composed of the forgone federal tax revenues (primarily income tax) and the federal expenditures on crime, health and welfare programs. As shown in the first column of Table 6, the immediate annual losses are $4,840 per opportunity youth. These are (relatively) low because the annual earnings of all youth are so low and because the federal government does not incur a heavy burden in paying for the juvenile criminal justice system. However, over the longer horizon of adulthood, the income disparities become more emphatic and so the lost income tax revenue becomes more salient. Thus, looked at from the perspective of an opportunity youth at age 20, the lump sum loss to the federal government is valued at $138,290. Looking across the entire cohort of opportunity youth, the annual fiscal impact on the federal government is therefore $32 billion. Given the size of the total lifetime effect per opportunity youth, the fiscal impact over the longer term is substantially above this. Expressed as a lump sum, the lost potential is valued at $927 billion.

**Table 6.** The Economic Consequences by Level of Government across Opportunity Youth

| | Fiscal Consequences | |
| --- | --- | --- |
| | For each year of Opportunity Youth | Total lifetime effect per Opportunity Youth |
| Federal government | $4,840 | $138,290 |
| State/local government | | |
|    Average across all states | $9,600 | $91,470 |
|    Upper bound | $14,450 | $129,650 |
|    Lower bound | $7,230 | $76.440 |

*Notes:* Opportunity Youth is 6.74 million individuals. 2011 dollars. Lifetime effects reflect five years of youth burden from age 20 and the adult losses after age 24 (all discounted to age 20, d=3.5%).

One way to derive the state/local government loss is to calculate the remainder of the total fiscal burden (shown in Table 4 above) after accounting for the implications for the federal government. However, here we calculate these losses differently so as to incorporate several additional elements. Some of these new elements push the estimates up, others push them down. First, our prior estimates of losses did not include property taxes and consumption taxes; in the aggregate, these considerations were not influential, but with a focus directly on the state/local government their omission does matter. Second, to be more precise, state/local government losses must reflect their costs of levying taxes; this cost (the marginal excess tax burden) varies with the level of government. In this case, the marginal excess tax burden is lower for state/local government expenditures than for federal government expenditures.[21] Finally, states vary in their tax impositions, the extent to which they match federal funding for Medicaid, and their spending on criminal justice (as well as their price levels).[22] There is no unique or single state/local value for the economic loss associated with opportunity youth. We report a range of estimates to reflect this state-level variation.[23]

The bottom panel of Table 6 shows the average state/local government loss per opportunity youth. The average across all states shows that the fiscal effect per year of opportunity youth for state governments is $9,600. The lifetime total is $91,470. Across a single year cohort of 6.7 million opportunity youth, the annual state/local government loss is $61 billion, with a full lifetime loss of almost ten times that amount. The ranges in Table 6 show how the consequences vary across states. For some states, the effects are greater: at the upper bound – where labor market options for youth are weak, welfare receipt and crime are high – the annual loss is 50% greater ($14,450). For states where opportunity youth have more options, the annual fiscal effect is estimated at 25% less than the average (at $7,230). Looking across the lifetime profiles, the average state fiscal loss is $91,470, with a range from $76,440 to $129,650. The total present value loss is therefore $613 billion across 6.7 million youth.

Notably, the immediate state fiscal impact is almost exactly double the federal fiscal impact – states face a much greater immediate burden when opportunity youth rates are high. Yet, when looked at over the longer term to account for youth and adult effects, the federal losses are much larger than the state/local losses ($138,290 versus $91,470). Both levels of government incur significant losses, but the timing and source of those losses is different.

### 3.4 Value for Selected Cities and Areas

Local communities face a particular challenge. They incur substantial social costs when the incidence of opportunity youth is high and these costs are likely to persist – as shown above, opportunity youth typically inherit the economic conditions of past generations. Moreover, opportunity youth are relatively immobile.  Studies consistently find migration rates are higher for those with more attractive labor market opportunities. Lacking job offers or specialist skills,

opportunity youth are very likely to remain in their local communities; incarcerated youth return to their home community on release. An area with high proportions of opportunity youth cannot simply hope that these youth will then be attracted to other communities. A community with high proportions of opportunity youth will have to support those youth through adulthood (see also Table 3 above).[24] At the same time, local communities lack a sufficient tax base from which to make investments to support these youth. As shown above, the fiscal advantages from having a more productive workforce accrue primarily to the federal government in income tax revenues. Finally, local communities with high rates of opportunity youth face many 'intangibles' – depressed local property prices; poor investment climate; neighborhood insecurity and blight – which should be added on top of the estimates calculated here.

To illustrate the range of economic values for communities, we select eleven localities for more detailed investigation.[25] We calculate the opportunity youth rates for these localities using the ACS-PUMS data (see Section 2.3 above). The ACS most likely underestimates the rate of opportunity youth and so we apply a broader definition which includes high school dropouts. The opportunity youth rates and youth populations for the eleven localities are reported in Appendix Table 3. Rates range from 16.5% in Seattle, WA, to 38.9% in Washington, DC.

For local communities, both the fiscal and the social consequences of opportunity youth are important. We adapt our national estimates for these selected areas by using city and state-specific information where available for each of the domains in Appendix 2. These are adaptations of the national numbers; because of data limitations they are only approximations to a precise per-community estimate. To calculate the labor market and welfare consequences of opportunity youth, we use the income and public assistance data from the ACS-PUMS. From this individual-level dataset on over 12 million persons nationally, there is information on annual income and on amounts of public assistance. This yields key information on these losses during youth.[26] To extrapolate forward over the full lifetime (and to adjust for local wage levels) we also use the income of persons aged 25-44 and adjust the national average lifetime income stream accordingly. This information is given in Appendix Table 4. For tax effects, we apply the state-specific income and consumption tax rates.[27] For crime effects, we weight the crime costs based on the indices of violent and property crime rates for these eleven localities. These crime indices are given in Appendix Table 5. Finally, we apply state-specific weights for opportunity youth's reliance on health care.[28]

One key factor is how to incorporate the federal consequences of opportunity youth. Looked at very narrowly, these communities might only care about how their economies are affected. Losses for the federal government might not factor into the calculus. However, almost all federal dollars pass through the Treasury and are then spent within the state in which they are

collected. Some states receive more federal money than they contribute in federal tax payments, but in the aggregate the contributions and payments must balance so these losses are real. Applying the rates calculated above, two-thirds of the fiscal consequences are incurred at the state/local level.

Table 7 shows the opportunity youth losses for selected communities from a fiscal perspective. Table 8 shows the results from a social perspective. These communities vary in diverse ways: rates of opportunity youth; population sizes; local labor market conditions; and access to education. As such, there are many explanations for why they might have relatively high or low economic losses, beyond having high rates of opportunity youth. For example, the wages of opportunity youth in Washington DC are comparable to those of other youth in the city; the economic loss for Washington DC is driven by the high violent and property crime rates (see Appendices 4 and 5).

These eleven communities reflect some of the variation across the nation. In some communities the economic consequences of opportunity youth are below the national average (e.g. Asheville, NC) and others are significantly above the national average (Jacksonville, FL, and Washington, DC). Even small communities (e.g. Flagstaff, AZ) may face a substantial local loss from having high rates of opportunity youth. For mid-sized communities (e.g. Toledo, OH), the

**Table 7.** The Fiscal Consequences for Selected Communities across Opportunity Youth

| | Fiscal Consequences | | |
| --- | --- | --- | --- |
| | For each year of Opportunity Youth | Total Annual Immediate Burden per cohort (millions) | Total lifetime effect per Opportunity Youth |
| Flagstaff, AZ | $14,000 | $15.6 | $193,760 |
| Toledo, OH | $17,120 | $51.8 | $221,130 |
| Boynton Beach, FL | $13,520 | $28.5 | $248,110 |
| Orlando, FL | $18,680 | $142.7 | $265,700 |
| Jacksonville, FL | $15,680 | $93.8 | $256,150 |
| Seattle, WA | $11,730 | $153.2 | $243,680 |
| Richmond, VA | $15,340 | $157.4 | $229,250 |
| Asheville, NC | $11,790 | $25.0 | $187,850 |
| Memphis, TN | $19,520 | $537.7 | $236,870 |
| Nashville, TN | $14,470 | $218.5 | $226,540 |
| Washington, DC | $17,320 | $632.2 | $284,520 |
| *Aggregate* | *$13,890* | — | *$235,680* |

*Notes:* 2011 dollars. Total annual immediate burden is column (1) times the local youth population. Lifetime effects reflect five years of youth burden from age 20 and the adult losses after age 24 (all discounted to age 20, d=3.5%). Cohort sizes taken from Appendix 3.

**Table 8.** The Social Consequences for Selected Communities across Opportunity Youth

| | Fiscal Consequences | | |
| --- | --- | --- | --- |
| | For each year of Opportunity Youth | Total Annual Immediate Burden per cohort (millions) | Total lifetime effect per Opportunity Youth |
| Flagstaff, AZ | $35,780 | $39.9 | $548,950 |
| Toledo, OH | $43,440 | $131.5 | $625,160 |
| Boynton Beach, FL | $32,730 | $69.0 | $704,770 |
| Orlando, FL | $46,320 | $353.8 | $746,330 |
| Jacksonville, FL | $42,710 | $255.4 | $746,180 |
| Seattle, WA | $22,940 | $299.6 | $676,160 |
| Richmond, VA | $40,860 | $419.3 | $662,960 |
| Asheville, NC | $25,850 | $54.9 | $514,240 |
| Memphis, TN | $52,810 | $1,454.6 | $681,410 |
| Nashville, TN | $32,500 | $490.7 | $626,630 |
| Washington, DC | $37,720 | $1,376.3 | $790,760 |
| *Aggregate* | *$37,450* | | *$704,020* |

*Notes:* 2011 dollars. Total annual immediate burden is column (1) times the local youth population. Lifetime effects reflect five years of youth burden from age 20 and the adult losses after age 24 (all discounted to age 20, d=3.5%). Cohort sizes taken from Appendix 3.

fiscal consequences are in the hundreds of millions. For a large city, such as Washington, DC, the annual fiscal consequences are over $0.6 billion and the social consequences are estimated at $1.4 billion.

Finally, as illustrated by the subgroup analyses, there are important differences in the timing of the consequences (during youth or adulthood) and which economic domains are important. Therefore, a single national approach to addressing the opportunity youth challenge is unlikely to be optimal. State-specific policies, as well as support from agencies within each local community, are necessary to address the particular needs of opportunity youth.

# 4. Policies for Investing in Opportunity Youth

## 4.1 Moving Policies for Opportunity Youth Forward

Here we consider what public policies might be needed to realize the potential of opportunity youth. Our analysis in Section 3 highlights three elements. First, and at its most basic, the sizes and types of policies should be related to the characteristics of the youth and the economic returns from successfully re-engaging them. Therefore, an initial necessary step is to compare these returns with existing levels of public investment in youth. The subsequent step is to identify policies that might be successful in re-engaging youth and estimate the costs of these policies.  Second, policy solutions should encompass an array of reforms and interventions: the challenges facing opportunity youth are many and cannot be solved with a single policy in one domain.  Finally, the responsibility for investing in opportunity youth should not rest with one agency or branch of government or on the government alone. The lost potential spreads through many different groups in society and addressing it will require a multi-sector approach. These other sectors include philanthropic agencies as well as cultural and religious organizations and private companies. All sectors face some of the consequences of failing to prepare youth for a productive future and all can play some role in enhancing social, institutional and organizational circumstances for youth.

Although there are variations across youth characteristics, we do not emphasize targeted policies that concentrate investments solely on subgroups of youth. In most cases, the economic implications are similar, but differently weighted either between the labor market and government supports or across time. There may be a trade-off in that those youth facing the most adversity – chronic opportunity youth – are likely to be the hardest to help. In contrast, youth with some work experience or college education may be the most responsive to active policies. Policymakers should balance the economic returns from investments in subgroups with equity across all youth.

Similarly, we do not argue for precise sharing of the funds for investments between the federal and state governments or a prescriptive role for other non-governmental agencies. Our results above show that in the immediate youth years the federal loss is one-third of the total and the state loss is two-thirds. However, adopting the lifetime perspective the federal loss is 60% of the total and the state's share of the loss is 40%. It is therefore challenging to precisely calibrate a federal-state matching funds rate for investments in opportunity youth (leaving aside differences in borrowing costs by level of government). Some 'matching' may be a useful or necessary way to make sufficient investments in programs for opportunity youth. For other sectors, we hope that our economic analysis prompts a greater focus on how the current policy context fails to adequately alleviate both immediate and long run adversities for youth and how these other sectors may play a greater role.

## 4.2 Current Spending and Investment for Youth

Here we count up government resources committed to youth. (We focus on government because it experiences much of the burden and because other sectors are more diverse in how they seek to influence youth). Critically, we distinguish between what government spends and what it invests. These are not the same thing. Investments help provide opportunities for youth to be productive; in contrast, a large proportion of spending is to address the personal, social and economic consequences that are actually caused by a lack of opportunity. Moreover, not all investments are equal: it is important to distinguish between programs that youth are eligible for and those that are directly targeted to youth. General eligibility programs are likely to be far less effective than targeted spending in addressing the needs of youth.

We recognize that all levels of government invest in school and college education for all youth and also provide health services for younger youth.[29] However, these investments are ipso facto not effective in helping opportunity youth become fully engaged. Moreover, given that these investments are often funded from local tax bases and require some private payments, not all youth will benefit from them equally. Our main focus is on investments that are directed at disadvantaged youth and intended to help these youth overcome barriers to participating in the labor market or enrolling in school or college.

**Table 9.** Total Federal Investment in Youth

|  | Total for all youth ages 16-24 ($ millions) |
|---|---|
| Department of Labor | $2,928 |
| Department of Education | $375 |
| Department of Health and Human Services | $295 |
| Department of Justice | $251 |
| Total | $3,850 |

*Source:* GAO (2008). Notes: 2011 dollars based on 2006 appropriations. Federal spending does not include: U.S. Department of Education spending on K-12 education and college grant/loan programs; or DHHS spending on preventive health care and TANF.

We begin with federal investments, recognizing that the annual direct federal loss per opportunity youth is $4,840, with a full lifetime loss that is at least 20 times as large (Section 3). Federal investments in opportunity youth come primarily from four departments: Education; Labor; Health and Human Services; and Justice.[30]  The amounts are summarized in Table 9.

Programs from the Department of Labor on employment and training are an important investment in the future for youth. General federal spending on employment and training is $12.2 billion annually. However, only a few of the Department's programs are specifically targeted to youth. These programs are: Job Corps ($1.7 billion); National Guard Youth Challenge

($152 million); WIA Youth Activities ($924 million); and YouthBuild ($102 million). Also, only one program targeted at offenders is directed in part at youth: the Department of Labor's Reintegration of Ex-Offenders program. Total expenditure on this program was $108 million in 2010. A dedicated program, Responsible Reintegration for Young Offenders, was terminated in 2007.  In total, spending on these five programs is less than $3 billion annually. (Funding for these programs was boosted as part of the 2009 American Recovery and Reinvestment Act, but this increase was only temporary). Per opportunity youth, therefore, total annual spending is less than $500. Moreover, only 400,000 youth actually receive these Department of Labor services annually.[31]

Other federal departments also make significant investments in youth. The U.S. Department of Education funds programs that invest in opportunity youth (again, discounting funds for direct education in schools and loan and grant support for colleges).  These training programs include: Adult Education Basic Grants to States; Workplace and Community Transition Training for Incarcerated Youth; Education for Homeless Children and Youth; TRIO programs; and Title I-D programs.  In 2011 dollars, spending on these programs was $375 million in 2006. The Department of Health and Human Services funds programs for very disadvantaged youth, including the Chafee Foster Care Independence Program, Runaway and Homeless Youth Program. Total spending on these was $295 million in 2006. (We count these as investments even as they are often rehabilitative – helping homeless children – rather than preventative – supporting children before they become homeless). Finally, funding for the Office of Juvenile Justice and Delinquency Prevention Programs is $251 million in 2012; this is less than $20 per juvenile and less than 1 percent of the total Department of Justice budget for 2012 (at $28.2 billion).[32] Under a more expansive definition of investment to include offender re-entry programs, the amount might be estimated at perhaps as high as $50 per opportunity youth.

At the federal level, Table 9 shows that less than $4 billion is invested in youth who are struggling in making the transition to adulthood. Even if all these programs were perfectly targeted to opportunity youth, they would represent an investment of less than $600 per year per youth.[33] These investments look even less impressive when put in the context of government spending on, for example, incarceration, substance abuse treatments, and rehabilitative health care treatments.

If we consider spending per behavior, the patterns and conclusions are similar: there is a vast discrepancy between the amount invested and the costs of failing to invest; prevention is subordinate to rehabilitation; and programs operate at very small scales. Looking at teenage pregnancy prevention, the Office of Adolescent Health (OAH) within the U.S. Department of Health and Human Services identifies 31 effective programs.  Leaving aside the fact that most

of these programs are delivered in school settings and so do not target a high-risk group (dropouts), total funding is low. In 2010, the OAH allocated $75 million to these programs; this is approximately $10 per youth (or $100 per teen pregnancy). As a point of comparison, taxpayer losses in terms of social services and forgone tax revenues from teenage pregnancy amount to almost $8 billion annually.[34] A similar pattern applies to substance abuse.  Only tiny proportions of funding are allocated to prevention of substance abuse:  across all levels of government it is estimated than less than 2% of total spending is on investments that might help youth avoid such abuse (CASA, 2009).

Federal spending also varies significantly across states. Spending on five major youth-support programs including TANF is $1,300 per youth in New York state; in Texas it is $200 (Mares and Jordan, 2012, Table 3). This variation in spending cannot be fully explained by demographic differences. It suggests that some states are better able to access federal support to help opportunity youth.

For state/local spending, there is no central collection of data on allocations by age group and, as with federal spending, many agencies are involved. As at the federal level, we focus on investments, not simply spending (and do not include general education and health spending available for all youth). At best we can only approximately estimate these state/local investments. However, using two (conservative) methods we conclude that state/local investment is far from what is needed. Under the first method, investments are assumed to be proportionate to federal investments, adjusted for differences in patterns of spending by level of government.[35] Under the second method, we calculate national spending from the expenditures across three populous states – California, Texas, and New York – using state budget documents and Comprehensive Annual Financial Reports.[36]  Conservatively, state and local agencies invest approximately $750 per opportunity youth per annum to ameliorate the challenges these youth face.  For the over 6.7 million youth this amounts to approximately $5 billion. This amount stands in contrast to the $61 billion states and localities lose by failing to make sufficient investments.

Overall, the federal and state governments invest at most $9 billion annually for 6.7 million opportunity youth, or $1,350 per youth. Even this is an overly generous estimate: it assumes that all these investments can be perfectly targeted to the youth and that they are in fact investments (rather than simply expenditures to redress prior lack of investments). We can compare these amounts to the immediate annual burden of $4,840 for the federal government and $9,600 for state/local governments. On a generous accounting, governments are spending about one-tenth of what is being lost.

## 4.3 Policy Proposals

Here we outline a set of potential policies that would be promising investments in the future for opportunity youth. Again, we emphasize that a multi-sector approach is the most desirable – it should not simply be left to government at any level. Indeed, other sectors may make investments that are parallel to the government programs described below. Generally, these policy proposals reflect several key principles.

First, as noted above, policy investments should be funded in consideration of how much is lost by not making these investments. Fundamentally, if the taxpayer is losing $13,890 per year per opportunity youth; it is not likely that this loss will be adequately offset or avoided by spending only $1,350 on programs to help youth. In this respect, most reforms are under-funded; and they are also very small-scale. For example, the promising programs listed by Bloom et al. (2010) typically serve only a few hundred youth at a time. Indeed, at all levels of government the investments in opportunity youth appear suboptimal. Reforms at each level should therefore be considered. Another corollary is that investments should be made as early as possible – investments in a 16-year old may avoid up to nine years of lost opportunity; when all the costs are taken into account, investments before opportunity youth become involved in the criminal justice system are much more efficient than training programs for ex-offenders.

Second, opportunity youth face a range of challenges: youth with significant health conditions or disabilities face many challenges to successful labor market participation; and many opportunity youth have experienced a combination of poor schooling, family disadvantage, and community deprivation that has weakened their economic potential. A single intervention cannot address all these challenges and programs will need to be targeted to particular groups of opportunity youth. Often, current programs are not integrated. For example, a review of services for at-risk youth in Texas listed six different agencies where services might be provided and noted a lack of communication and information sharing between these agencies, as well as unclear responsibilities.[37]

Third, labor market conditions matter and these are not outside the control of governments. Even within the current context of high youth unemployment, there is significant variation across countries: the U.S. youth unemployment rate is close to the OECD average, but it is approximately double that of Germany, Japan, Korea and Norway (Bell and Blanchflower, 2011, Table 1). National labor market policies – and state economic policies – do matter.

Finally, these policies should include new resources and new incentives. Youth respond to incentives just as other groups do. This may require both the molding of incentives for work, training, and education to be more promising and accessible and for perceptions of such opportunities to be viewed as profitable in terms of youth stature and future income and opportunities. Youth make decisions that reflect their circumstances and their options; both

can be shaped so that youth have more – and clearer – opportunities to build secure economic futures for themselves.

Therefore, we make a case for a set of policies for opportunity youth that focus on three areas: job growth – to provide youth with opportunities for economic independence; effective high school and community college programs – to allow youth to invest in their future; and social supports – for both prevention and rehabilitation, and to help with behavioral and health-related challenges. These policies should be funded both at the federal and state/local levels. We provide suggestions of specific programs within each area, although we recognize that not all programs are effective. However, the lack of effectiveness of some programs is almost certainly a function of a need for design improvement and the relatively small amounts that are being invested.

**Job growth programs.** Job growth programs typically focus on hiring workers and giving subsidies for firms that hire workers (e.g. Manufacturing Extension Partnerships and Empowerment Zones). Alternatively, they are direct, in the form of customized job training programs. Most states already make these investments for their entire workforce, with spending over $600 million in 2006. However, the evidence on the effectiveness of these programs – particularly the subsidies and tax breaks – is not strong. Moreover, any program would have to be targeted directly at opportunity youth, many of whom have no experience and would be competing with other youth who have more schooling or higher education. This suggests that customized job training – rather than hiring subsidies – would be the most likely to help opportunity youth gain employment. The evidence on the effectiveness of job training programs is mixed, although most programs are instrumentally directed toward getting a GED or a job without providing any personal supports to improve youth's social skills.[38]

Some programs have had success, however. The federal Job Corps program has been found to increase educational attainment, reduce crime, and increase employment prospects for disadvantaged youth.[39] An intensive Job Corps program costs approximately $25,900 per participant. Given the many advantages of Job Corps, the medium term benefits to society are estimated at almost double the costs ($46,750). Another example is Year Up, a six-month technical skills program which also includes an internship and the opportunity to earn college credits. Participants in Year Up reported significantly higher earnings and hours worked after one year. Gains in employment and earnings were also found for training participants in the Sectoral Employment Impact Study, although trainees were mostly over age 24. The U.S. Department of Labor Youth Opportunities programs may also be effective, but the research evidence across all active labor market policies finds disadvantaged youth gain the least.[40] Some of this is likely to be due to design deficiencies where social skills and informational needs for trainees are not adequately addressed. Again, however, the modesty of the programs should be contrasted with

the size of the pay-off where they are effective. Not only does Job Corps pass a cost-benefit test, but Holzer (2012, Table 3) calculates the benefit–cost ratio from investments in training programs using the effects from the Sectoral Employment Impact Study. Even with rapid fade-out of effects and graduation rates of only one-half, these training programs would yield earnings benefits that exceed the costs.

Another possibility is for existing programs to re-direct funding toward employment and training programs. Two large-scale programs that may be candidates are Temporary Assistance for Needy Families (TANF) and appropriations to the Department of Health and Human Services (DHHS). Currently, only 8% of TANF funding and 10% of DHHS appropriations are used for employment and training activities (GAO, 2012). Given their size, even relatively small re-allocations might make a difference: for example, if TANF employment and training programs were increased to 16% of total funding, this would represent an additional $1.3 billion that could be targeted to improve the prospects of opportunity youth.

One concern is that reducing the numbers of opportunity youth would have broader implications for the labor market: these newly engaged youth would displace other youth in jobs or push down wages. However, this effect will be very small. In fact, the U.S. economy exhibits 'skill-biased technological change': as the workforce becomes more skilled, firms switch to technologies that are more complex and so absorb changes in youth skills. Future projections also emphasize the need for upgraded skills across the workforce. In addition, these youth will be entering the labor market at staggered intervals after school, after some college, and after completing their higher education credentials. Thus, adding more skilled youth to the workforce would be very unlikely to push down wages except in the very short run.[41] Instead, the labor market will adapt to absorb the greater skill levels of workers.

**High school and community college educational access programs.** As noted above, opportunity youth have very low education levels and these youth never catch up as adults. Greater investments in high school programs and basic skills education in community colleges are therefore promising areas for reform. These reforms will need to address the substantive skills deficiencies of opportunity youth. Increases in the rate of GED credentialing, i.e. providing employability signals to firms, is therefore unlikely to be sufficient.

Raising the skills of high school students will require additional investments in programs that are effective. There is growing evidence on the effectiveness of school-based interventions and reforms. One reform with strong evidence is higher pay for school teachers: this will raise the quality of the applicant pool for teaching jobs and reduce the attrition rate of more productive teachers. In turn, this will increase students' knowledge and skills. A second reform with strong evidence of long-run benefits is class size reduction. Another reform – also with a lot of supporting evidence – is expansion of pre-school and early education programs. Although

higher pay for teachers, class size reductions, and expanded early education would be a significant resource commitment, they would benefit all students and precede any delinquent behaviors.[42] Otherwise, educational interventions would have to be targeted to at-risk youth and would require resources to remediate educational adversities. Targeting of interventions is typically imperfect and the resources necessary for successful remediation are typically much more than for preventative programs. Nevertheless, a number of interventions do have evidence of effectiveness. These include: Achievement for Latinos through Academic Success; Twelve Together; Check and Connect; Talent Search (for those on the margin of college); and Talent Development.[43] Expenditure on these programs is typically below $15,000 per student; some are small-scale, but federal programs such as Talent Search are national in scope. These interventions could be expanded to cover many more students.

Increasingly, community colleges are being relied on to provide both remediation for students who want to be college ready, as well as direct instruction in basic skills, adult basic education, and other non-credit programs to improve the skills of high school dropouts (and some high school graduates). Enhancing and improving these programs – by making them more comprehensive – is therefore critical. The strongest evidence that more supportive remedial programs can work comes from the Learning Communities program.[44] Remedial students took classes and orientation together, received enhanced counseling and tutoring, as well as vouchers for textbooks. Compared to a control group, the students in these communities were much more likely to stay in and complete college.

Other programs that improve access to education would merit rigorous evaluation to see if they should be scaled up. For example, the U.S. Department of Education Child Care Access Means Parents in School Program (CCAMPIS) helps provide child care programs for low-income students who are enrolled in higher education. By offering subsidized child care, CCAMPIS may allow more young parents to persist in college. However, the program is very small: in 2011, only 84 colleges received funding and on average only 70 parents received services at each campus. As shown in Table 1 above, we estimate there are 770,000 youth whose primary activity is as a family care-giver; CCAMPIS funding gives only 6,500 a direct, targeted incentive to persist in college. Similarly, programs to help ex-offenders re-start their education may also be promising. Youth who return to school after release are much less likely to re-offend (Blomberg et al., 2011). Very little is currently invested in this form of educational access.

**Social supports.** Opportunity youth face many challenges, beyond more successful participation in the labor market and greater access to education programs. Ideally, additional investments in social supports should focus on helping youth before they engage in deviant or unproductive behaviors. These are especially important for chronic opportunity youth who face significant challenges in achieving economic independence.

One area where economic gains may be substantial is in reform of the juvenile justice system with respect to juvenile residential placements and investments in crime prevention and recidivism. There are less than 100,000 juveniles in residential placement in the U.S. But more than two-thirds are charged with non-person offenses (e.g. drug use); and there is also plausible evidence that placement exacerbates rather than improves subsequent juvenile behavior and as such does not make communities safer. Each placement is extremely expensive: states spend almost $6 billion annually on residential placement; and the average cost of a year in a juvenile residential facility is $88,000. Yet, states vary substantially in how much they spend per offender in residential placements: in California, for example, each ward in the state's juvenile justice system costs approximately $200,000 annually (UPI, 2009; Hill, 2007). This variation suggests that efficiency gains are possible.  It also suggests that state policies matter: as most state governments pay for residential placement but do not fund alternatives (such as drug rehabilitation), many counties have no clear incentive to reduce placement.[45] A second reform would be to emphasize crime prevention and enhance rehabilitation programs. Not only is spending on these programs dwarfed by correctional spending, but the trend appears to be worsening. Federal government spending is increasingly focused on corrections, with recent years seeing reductions in funding for offender re-entry programs and juvenile justice (as per the Second Chance Act; see also JPI, 2011). Reinvesting in these programs – along with rigorous evaluation to establish which ones are most effective – would appear to be promising.

In terms of health care supports, the Affordable Health Care Act (ACA) may be influential: for youth, it will increase subsidized coverage of services that are particularly valuable. In its initial phase, the ACA increases by 2.5 million the number of youth with health insurance, raising the rate from 64% to 73%. The ACA also promotes a range of preventive services without patient cost-sharing; the specific services, which include screening and counseling (e.g. for HIV), are directly relevant for youth. Finally, expanded coverage will in large part come from expanded Medicaid eligibility for low-income young adults (English, 2012).  If prices of health care services do not rise sharply, and preventive services are accessed, the ACA may help opportunity youth.

The alternative to broad institutional reform is investment in specific social and behavioral programs that have been found to be effective.  Potentially, there are many interventions that have demonstrated effectiveness (using accepted research methods) and so may be candidates for additional support.  As noted above, this might include the 31 teenage pregnancy prevention programs reviewed by the Office of Adolescent Health.  Funding for these programs is far below the cost imposed on society for failing to fund them.  There are also 91 interventions for young adults to support mental health promotion and substance abuse treatment and these have been validated under the SAMSHA's National Registry of Evidence-based Programs and Practices.[46]  These interventions cover many outcomes and are delivered in various institutional

settings, although again we note that most are very modest (e.g. staff training, videos). Similarly, the federal Interagency Working Group on Youth Programs (IWGYP) identifies 65 interventions to support youth across a range of behavioral risk factors (e.g. bullying).[47] However, the cost of delivering any of these interventions is not well-established, even as they appear to be modestly funded.[48] Rigorous cost information is only available for a few interventions and cost estimates typically only count the payment to the developer of the program (not any necessary organizational change or youth commitments). Many interventions can be implemented intensively or weakly and the cost would vary accordingly. Based on the descriptions of the resources required for these interventions, it is unlikely that their costs will exceed what is being jeopardized.

One promising program is the National Guard Youth ChalleNGe, an intervention model that offers a comprehensive set of supports within a quasi-military structure. A recent evaluation has identified significant gains over three years to participants (Millenky et al., 2011). The benefits included both more education – GED, high school diplomas, and college credits – and improved labor market outcomes – employment and earnings. The evaluation meets federal evaluation standards (WWC, 2010). Expansion of the program may be possible: currently, it enrolls approximately 9,000 youth annually and operates in only 27 states (NGYCP, 2011). Financing for the program is shared, with the federal spending being met by a 25% match from state funds. Per student, the program is not expensive: the annual expenditure per graduate is $17,750.[49] This is only 50% more than a year of K-12 schooling (NCES, 2011) and the program includes a residential component. As well, a significant component of the program is volunteer service, which is valuable to local communities. Another advantage is that youth as young as 16 may participate. In a recent study, NGYC was found to have benefits for participants that were 2.7 times the costs of the program (Perez-Arce et al., 2012). Thus, the National Guard Youth ChalleNGe serves as an exemplar of an effective, and almost certainly a cost-effective, program that is targeted to opportunity youth and can be expanded to serve more youth.

## 4.4 Funding Mechanisms

Given the gap between economic potential and investments to realize that potential, it seems compelling that more should be invested in helping opportunity youth. It is also compelling that both federal and state governments should make these investments.[50] Ideally, these public investments should include a matching element such that both levels of government share the financing.

The amount of this investment – given political constraints and finance constraints – cannot be easily determined. The amount must be politically feasible but significant enough to make a difference for the 6.7 million youth.

Within the context of job growth grants, Holzer (2012) proposes a total additional grant spending of $2 billion for each of the next five years. As noted above, that amount would be attainable if both TANF and DHHS doubled their existing commitment to training programs.

For education, one option is to link investments in opportunity youth to changes in federal Pell grant funding. The Pell grant system of need-based grants to low-income college students made 9.4 million awards in 2011 and it was significantly expanded as part of the American Recovery and Reinvestment Act. Appropriations in 2011 were $41.7 billion, compared to $21.8 billion in 2010. Thus, it is possible to greatly expand funding for higher education. Although this expansion would need to be targeted towards those with the greatest financial need, this may be possible through the Federal Supplemental Educational Opportunity Grant (FSEOG) system. The FSEOG, which is for students with exceptional financial need, had federal appropriations of $736 million in 2011, i.e. only 3% of the size of Pell Grant appropriations. Expanding FSEOG so that the average award was equal to the average Pell Grant award would cost approximately $2.5 billion.[51] FSEOG grants might also expand eligibility to more basic skills courses for youth who did not complete high school. One concern with federal expansion of funding is that state support for higher education is declining (perhaps in the context of federal support). Thus, additional federal funding in this case should be subject to a (partial) matching requirement from the states.

Finally, social supports for adolescent health and youth behaviors should be funded to include more partnerships with states. The National Guard Youth ChalleNGe approach – with federal/state matching – is an important example. Expanding this program three-fold (to include more states or more students in operating states) would cost approximately $500 million. This program already includes a matching component, albeit one which is 'generous' to the states in requiring 1-to-3 matching rate. Similar scale expansions may be appropriate with respect to the effective programs identified by the Office of Adolescent Health and for juvenile justice through the Office of Juvenile Justice and Delinquency Prevention. With matching state support, investments through these agencies would cost $2 billion. At least in the case of the criminal justice system, the overall budget is such that this funding may be obtained through reallocation of existing funds rather than increased funding. Of course it is critical that these investments are made in efficient and effective programs and, where programs fail to demonstrate effectiveness, funding should be reallocated away.

Overall, our proposal is for additional spending of $7 billion per year: $2 billion on labor market programs; $2.5 billion on access to higher education for those with exceptional financial need; and $2.5 billion for social support programs that address behavioral and social needs, as well as preventing juvenile crime. Together these investments would help offset the lost economic potential during youth. More importantly, they would provide strong insurance against future losses as these youth enter adulthood. Again, we emphasize that funding for these policies

need be solely government. Support may be multi-sector, not least because the policies will certainly involve private agencies, such as private companies for training and private colleges for educational programs. As with the balance between the state/local and federal match, however, it is not possible to precisely calibrate the funding incidence.

Under this proposal total government spending would rise from $9 billion to $16 billion. This would bring investments in opportunity youth in line with subsidies for energy use and agricultural production, which were at the federal level $16 billion and $12 billion respectively.[52] As large as this $7 billion cost appears, it is only a fraction of the opportunity cost of continuing with current policies. These current policies yield a lost opportunity of $93 billion annually, with much greater losses over the longer term.

## 4.5 Return on Investment

These investments can be appraised using the Return on Investment framework. The estimates here are illustrative, based on the best available evidence and would require investments only in effective programs.

From programs such as Job Corps, Learning Communities, and National Guard Youth ChalleNGe, per participant costs can be estimated (generously) at $25,000 per participant. With total funding of $7 billion, this would allow 280,000 opportunity youth to participate in intensive, effective programs. If these programs were only effective for half of all participants, then the total fiscal gains would be $32 billion.[53] The benefits would therefore exceed the costs by a factor of 4.7 - each dollar invested yields a return of almost five dollars to the taxpayer over the lifetime. If the programs are less effective, then the return on investment would be lower. However, given the size of the benefits per opportunity youth, these programs would only have to be effective for 10% of the participants for them to break-even, i.e. for the $7 billion investment to yield $7 billion in averted losses. This break-even rate is conservative in that it assumes that for participants for whom the program is not effective, there are absolutely zero taxpayer benefits.

Depending on how the investments are structured and delivered, the return on investment may vary significantly. For example, the investment may be spread across more opportunity youth at a lower intensity. In this case, the benefits from investment might be weaker per participant - such as deferred crime or welfare reliance - or persist over fewer years. The critical evidence needed to make optimal investments must therefore include which programs work best and for which subgroups and how much they cost per participant. Although there is promising and plausible evidence on the first two attributes, more information is needed on how much these interventions cost and so how many opportunity youth can be served from a given funding stream. Given the magnitude of the benefits from reducing the opportunity youth rate, such programs would have to be very ineffective or very expensive before they failed a return on investment criterion.

# 5. Conclusions

The economic consequences of opportunity youth are enormous. To the taxpayer, each opportunity youth imposes a burden which is equivalent to $235,680 as a current lump sum. The full lifetime fiscal burden amounts to $1.6 trillion across the cohort of 6.7 million opportunity youth in 2011. From the social perspective, each opportunity youth imposes a lump sum burden of $704,020. The full lifetime burden amounts to $4.7 trillion across the cohort of opportunity youth in 2011. These numbers show how much is being squandered by failing to adequately invest in future generations.

For policymakers and for communities to take action to invest in opportunity youth, more detailed information is needed. We provide this detail in Section 3. We find that the economic value of opportunity youth is similar across status, gender and race. There are important differences in when and where the losses of opportunity youth are incurred. But the magnitude of the challenge is very similar. Similarly, we find that the burden of opportunity youth is split between state/local and federal agencies and that this burden is felt at different times. Finally, we show that local communities can face very high economic consequences even when the youth population is small.

To bring about policy change, it is necessary to look at how much investment is actually being made to help opportunity youth as well as the form of that investment. Our calculations illustrate the limited amount being invested, at both the federal and state level. It is instructive to compare the substantial economic losses against the relatively small amounts invested in programs to enhance the prospects of opportunity youth. Existing programs – even well-funded ones such as National Guard Youth ChalleNGe – spend only a fraction of what is being lost. Therefore, we emphasize three areas where reform is promising: targeted employment and training programs; expanded access to structured programs in college; and more comprehensive social supports. An additional annual $7 billion in these three areas would represent an important investment in the future for the nation's most disadvantaged youth.

These economic calculations show that – currently – the nation is not reaping its full potential from almost 7 million youth. This burden is felt in the short term, with high incarceration rates and low high school graduation rates, but it will be more strongly felt in the long term as these youth enter the labor market unable to find, and unprepared for, work. The transition to productive adulthood may not be easy for many youth, but recent cohorts face an extreme version of this challenge. The Great Recession officially began in 2007: there has now been almost half a decade where public investments have been declining and the labor market has been worsening. This is the new economic reality for recent youth cohorts and particularly for youth with few skills and low education. Failure to invest in these youth will compound the adversity of the Great Recession, making its repercussions felt for decades.

# NOTES

1. Recent examples include reports by the Heldrich Center and by the Pew Social Trends research group, see http://www.heldrich.rutgers.edu/sites/default/files/content/Left_Out_Forgotten_Work_Trends_June_2012.pdf and http://www.pewsocialtrends.org/files/2012/02/young-underemployed-and-optimistic.pdf]

2. If we take the social costs for each year over a lifetime and ask what would these amount to as a loss as measured by a long-term certification of deposit with a 3.5 percent interest rate, that is the lump sum value at age 20 of the costs.  We can compare these to the lump sum value of the investments by age 20 to avoid these costs to the taxpayer and society.

3. Youth patterns data is from http://www.bls.gov/news.release/hsgec.nr0.htm; http://bls.gov/cps/cpsaat03.pdf. College-going behavior data is from http://nces.ed.gov/datalab/tableslibrary/viewtable.aspx?tableid=7495 and http://nces.ed.gov/datalab/tableslibrary/viewtable.aspx?tableid=7512.

4. Myers and Farrell (2008); Fletcher (2012).

5. This federal measure is significantly below other estimates of the actual dropout rate.  Our focus is on the trend and not the absolute level.

6. A full review of progress in meeting Critical National Health Objectives is given by Jiang et al. (2011). Changes in obesity rates are given in Ogden et al. (2010).

7. Details on how PUMAs are created is at http://www.census.gov/geo/puma/puma_guide.txt.  Because PUMA groupings are by population size (100,000 persons), it is not possible to compare urban versus rural areas with any precision.

8. Opportunity youth rates in Alaska and Hawaii are close to the national average.

9. For examples, see Sum et al. (2009), Belfield and Levin (2007), and for a specific case study of at-risk youth, see Cohen and Piquero (2009).

10. On the scarring effects of early job displacement, see Bell and Blanchflower (2011), Swahn and Bossarte (2009), and Davis and von Wachter (2011). On the increases in productivity levels, see Moretti (2004) and Iranzo and Perri (2009).

11. On offending rates, see Sickmund et al. (2011).

12. On the fiscal consequences of poor health, see Cylus et al. (2000). On the short latency of youth health problems, see Walsemann et al. (2008) and Adler and Stewart (2010).

13. On the association between welfare reliance and education, see Grogger (2004). On support programs, see GAO (2008). On the patchwork of safety nets, see Currie (2006).

14. Educational attainment differences are in Belfield et al. (2012). The weak earnings gains from the GED are described by Heckman et al. (2011).

15. Charities and philanthropic agencies also commit resources to help youth.  No systematic data exists on total spending by these agencies, however.

16. On differences in private health expenditures, see Wong et al. (2005).  Private health valuations are typically expressed in Quality Adjusted Life Years (QALYs), i.e. years of full health. In comparison to dropouts, high school graduates are expected to have 1.5-2.4 more QALYs over their lifetime (Muennig et al., 2010; Schoeni et al. (2011). Conservatively, society values each QALY at approximately $100,000 (Cutler and Lleras-Muney, 2010).

17. These figures are from detailed occupational trends analysis by the Bureau of Labor Statistics (see Lockwood and Wolf, 2012; Elsby et al., 2011).

18. On rising prison costs, see Livsey et al. (2009) and on the rising costs of health care in prisons, see Hughes (2006).

19. On rising health care costs, see Glied (2003).

20. These estimates during each year of opportunity youth are different from in prior report. Here we have estimated more precisely the earnings and criminal activity across weakly attached opportunity youth.

21. The literature on marginal excess tax burdens shows that they depend on how the revenue is raised (through taxes on consumption goods or income) and at what level (federal, state or local).  For state and local governments, we use a figure of 22% and for the federal government we apply a figure of 28%; both METB estimates are conservative (Allgood and Snow, 1998).

22. State tax rates are from www.taxfoundation.org/taxdata/show/228.html.  Medicaid matching multipliers are taken from: www.statehealthfacts.org/comparetable.jsp?typ=2&ind=636&cat=4&sub=47. For state spending on corrections and public assistance, we use www.statehealthfacts.org/comparetable.jsp?ind=33&cat=1&sub=10.  For price levels, we use www.census.gov/hhes/www/income/data/statemedian/.

23. This variation is per youth and does not adjust for differences in rates of opportunity youth as per Figure 1.

24. On migration rates by education status see Ham et al. (2011); on migration rates by skill levels, see Cooke and Boyle (2011).

25. These communities were selected from a longer list of 39 communities. The criterion for selection was availability of data specific to these communities from the ACS-PUMS.

26. We are not able to identify the federal/state welfare expenditure shares for each state so we apply the national averages.

27. These rates are taken from http://www.taxfoundation.org/taxdata/show/228.html.

28. In effect, we are using that all opportunity youth commit the same proportions of the total crime in their community. If they reside in high crime neighborhoods, these youth therefore commit more crime.  For health care we are making the same assumption but at an even higher level of aggregation – the state. For all domains, however, we weight the amounts to account for local price levels.

29. Isaacs et al. (2011) tabulate all public expenditures on children, which includes youth up to age 18. Across all youth aged 16-18, the federal government spends approximately $3,200 annually on health, income security, education, nutrition, social services, housing and training.  State spending is $11,300 per child (up to 18) on education, health, and other services.

30. The 2011 *Catalog of Federal Domestic Assistance* includes only 12 programs in five departments with 'youth' in their title. Search performed June 22 2012, at https://www.cfda.gov/downloads/CFDA_2011.pdf.

31. These money values are from GAO (2011, Figure 1 and Appendix VII) and DOL (2012). The Department of the Interior also spends $11 million annually on its program of Conservation Activities by Youth Service Organizations.

32. Department of Education funding is from GAO (2008). Funding for the OJJDP is at www.ojjdp.gov. Department of Justice spending is from http://m.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/justice.pdf. Total government spending on crime is from Belfield et al. (2012, Appendix Table 2).

33. Including Temporary Assistance to Needy Families, which is primarily for child care, would increase this amount by perhaps $400.

34. Teenage pregnancy prevention programs are listed at http://www.hhs.gov/ash/oah/oah-initiatives/tpp/programs.html. Losses from teenage pregnancies are from Hoffman and Maynard (2008).

35. State/local spending on welfare, education, health care and protection is 1.07 times that of the federal government and so investments in youth are estimated at $440 per youth per annum. (This excludes expenditures on pensions, defense, transportation, general government, other spending and interest payments on the debt. These figures are net of federal transfers to states). Data are from the U.S. Census Government Division Brief October 2011 for expenditures in 2009 http://www2.census.gov/govs/estimate/09_summary_report.pdf. This method is conservative because some of the programs listed as federal expenditures are partially funded by states.

36. New York state funding for youth is through the Office of Children and Family Services. New York City's Department of Youth & Community Development spends approximately $200 per youth annually (net of federal transfers). Texas has calculated its spending on at-risk youth (a narrower category than opportunity youth) across the Department of Family and Protective Services, Adjutant General Department, and Texas Education Agency at $300 per youth annually. For California, youth spending is spread across many departments, e.g. mental health [http://www.dmh.ca.gov/Services_and_Programs/Children_and_Youth/default.asp] and juvenile justice [http://www.cdcr.ca.gov/juvenile_justice/index.html]. For CAFRs, we used data from 2010. For New York state, http://www.osc.state.ny.us/finance/finreports/cafr10.pdf. For Texas, http://www.window.state.tx.us/finances/pubs/cafr/10/ and for California, http://www.sco.ca.gov/Files-ARD/CAFR/cafr10web.pdf. The estimates for state/local spending across the three states are $500, $1200, and $900 per youth per annum.

37. Report at http://www.lbb.state.tx.us/PubSafety_CrimJustice/3_Reports/At_Risk_Youth_Services.pdf.

The six distinct entities where at-risk youth receive services are schools, health authorities, Child Protective Services, juvenile probation, private service providers, and community organizations.

38. On state spending on customized job training programs, see Duscha and Graves (2006). On the evidence of limited effectiveness, see Bartik (2010). On the narrow focus of most job training programs, see Bloom et al. (2010).

39. For a follow-up of earnings gains using tax data, see Schochet et al. (2008). Details of the benefit–cost study of Job Corps are given in McConnell and Glazerman (2001).

40. On the effectiveness of Year Up, see Roder and Elliott (2010). On the Sectoral Employment Impact Study, see Maguire et al. (2010). Finally, for a review of active labor market policies, see Card et al. (2009).

41. On skill-biased technological change, see Goldin and Katz (2008). On future projections, see Carnevale et al. (2010).

42. The evidence on teacher pay is substantial (see Ondrick et al., 2008; Krieg, 2006; and Hanushek, 2011); the evidence on class size reduction is rigorous (Finn et al., 2005); and the evidence on the benefits of pre-school is broad (Temple and Reynolds, 2007).

43. See respectively, Constantine et al. (2006); Sinclair et al. (2005); Dynarski et al. (1998); Gandara et al. (1998).

44. See Sommo et al. (2012).

45. To address this disincentive, some states (e.g. California) are shifting responsibility and funding to counties.

46. The interventions are listed at http://www.nrepp.samhsa.gov/Search.aspx.

47. http://www.findyouthinfo.gov/program-directory. In addition, the Center for Disease Control has identified 30 behavioral interventions for HIV/AIDS prevention.  These are given at: https://www.effectiveinterventions.org/en/Home.aspx.  Again, however, no cost information is reported.

48. This is based on an online review of the 71 interventions for youth that were evaluated using experimental methods.  Data retrieved, June 23 2012 from http://www.nrepp.samhsa.gov/SearchResultsNew.aspx?s=v&q=.

49. This cost estimate is from the program itself (NGYCP, 2011, p. 27) and it excludes philanthropic funds.

50. Tax breaks for companies are unlikely to be effective. Private firms are not equipped to provide the necessary skills training – or the extent of skills training – that opportunity youth need. As well, there are adverse incentives for them to do so, as well-trained workers will be poached away to other firms.  Also, philanthropic agencies do not have sufficient resources to meet need.

51. The average Pell Grant award in 2011 was $3,200 across 9.4 million recipients; the average FSEOG award was $720 across 1.3 million recipients.

52. Energy subsidies are listed at http://www.eia.gov/oiaf/servicerpt/subsidy2/pdf/execsum.pdf. Farm subsidies are listed at http://www.ers.usda.gov/briefing/farmincome/govtpaybyfarmtype.htm

53. This is 280,000 participants with 50% effectiveness and benefits per effective opportunity youth of $235,680.

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# APPENDICES

# Appendix 1: Sources for Table 2

| Measure | Source |
|---|---|
| Teen pregnancy rate (based on rate per 1000) | Kost K and Henshaw S, U.S. Teenage Pregnancies, Births and Abortions, 2008: National Trends by Age, Race and Ethnicity, 2012, www.guttmacher.org/pubs/USTPtrends08.pdf |
| Persons residing in juvenile detention and correctional facilities (ages 12-21) | Sickmund, Melissa, Sladky, T.J., and Kang, Wei. (2005) "Census of Juveniles in Residential Placement Databook." Online. Available: http://www.ojjdp.gov/ojstatbb/ezacjrp/ |
| Illicit drug use other than marijuana (ages 18-25) | Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies. State Estimates of Substance Use from the National Survey on Drug Use and Health accessed online at http://www.oas.samhsa.gov/ |
| Arrest rate (ages 15-25) | www2.fbi.gov/ucr/cius_06/persons_arrested/table_64-68.html; www2.fbi.gov/ucr/cius_04/persons_arrested/table_64-68.html; www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl65.xls |
| High school dropout rate | Chapman, C., Laird, J., Ifill, N., and KewalRamani, A. (2011). Trends in High School Dropout and Completion Rates in the United States: 1972–2009 (NCES 2012-006). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch. Table 8 |
| Unemployed as percentage of all persons (ages 16-24) | http://bls.gov/cps/cpsaat03.pdf ftp://ftp.bls.gov/pub/special.requests/lf/aa2006/pdf/cpsaat3.pdf ftp://ftp.bls.gov/pub/special.requests/lf/aa2003/pdf/cpsaat3.pdf |
| Unemployment rate / Labor force participation rate (years 2000, 2007, 2011) | Fernandes-Alcantara, A. L. 2012. Youth and the Labor Force: Background and Trends. Congressional Research Service, Monograph, http://www.fas.org/sgp/crs/misc/R42519.pdf. |
| Median earnings of high school dropouts (2009$) | http://nces.ed.gov/programs/coe/tables/table-er2-1.asp |
| Total tuition, room and board rates for full-time undergraduates (2009$) | http://nces.ed.gov/fastfacts/display.asp?id=76 |
| Persons in poverty (ages 18-24) | Population Reference Bureau, U.S. Census Bureau, Census 2000 Supplementary Survey, 2001 Supplementary Survey, 2002 through 2010 American Community Survey. http://datacenter.kidscount.org/data/acrossstates/Trend.aspx?order=a&loc=1&ind=51&dtm=338&tf=11%2c12%2c13%2c14%2c15%2c16%2c17%2c18%2c35%2c38%2c133 |

# Appendix 2: Formulae for Calculation of the Aggregate Social and Fiscal Losses

The social burden (S):

$$S = Y + H + C_F + C_V + W_S + E + m + Y_G$$

Lost gross earnings (Y)

Additional health expenditures (H)

Criminal Justice System expenditures and victim costs ($C_F + C_V$)

Welfare and social service payments – non-transfers ($W_S$)

Public and private cost of education (E)

Marginal Excess Tax Burden (m)

Lost productivity spillovers across the workforce ($Y_G$)

Taxpayer/fiscal burden (F):

$$F = T + H_F + C_F + W_F + W_S - E$$

Lost taxes (T)

Additional health care paid for by the taxpayer ($H_F$)

Expenditures for the criminal justice system and corrections ($C_F$)

Welfare and social service payments – all ($W_F + W_S$)

Savings in lower education spending ($E_F$)

All economic calculations are reported in 2011 dollars and in present values, i.e. they represent the value now of resources spanning into the future. All present values are calculated using a 3.5% discount rate. All figures are rounded to nearest $10.

# Appendix 3: Opportunity Youth Population Estimates for Selected Cities

**Opportunity Youth Populations**

| | Youth ages 16-24 | Opportunity Youth (%) | Opportunity Youth incl. dropouts (%) |
|---|---|---|---|
| Flagstaff, AZ | 5,330 | 16.9 | 20.9 |
| Toledo, OH | 9,990 | 26.8 | 30.3 |
| Boynton Beach, FL | 6,980 | 20.8 | 30.2 |
| Orlando, FL * | 31,560 | 18.8 | 24.2 |
| Jacksonville, FL | 24,210 | 19.8 | 24.7 |
| Seattle, WA | 79,150 | 13.3 | 16.5 |
| Richmond, VA | 39,473 | 21.8 | 26.0 |
| Asheville, NC | 9,480 | 17.9 | 22.4 |
| Memphis, TN | 79,150 | 28.1 | 34.8 |
| Nashville, TN | 73,650 | 15.9 | 20.5 |
| Washington, DC | 93,810 | 18.5 | 38.9 |

*Source:* ACS individual-level data (2006-2010). *Notes:* PUMS codes used to identify cities. Population weights PWGTP applied. Opportunity youth defined as those not in school or college, looking for work, and with annual income <$1,000. Opportunity youth including dropouts adds all high school dropouts aged over 18 to base opportunity youth count. * Central district PUMAs.

# Appendix 4: Opportunity Youth Economic Data for Selected Cities

## Opportunity Youth Incomes and Public Assistance

| | Annual Income | Annual income as % of local adult income aged 26-44 | Public Assistance |
|---|---|---|---|
| **Flagstaff, AZ:** | | | |
| Opportunity Youth | $5,790 | 21% | $79 |
| Other Youth | $7,340 | 27% | $6 |
| **Toledo, OH:** | | | |
| Opportunity Youth | $6,120 | 26% | $230 |
| Other Youth | $7,770 | 33% | $40 |
| **Boynton Beach, FL:** | | | |
| Opportunity Youth | $10,260 | 31% | $98 |
| Other Youth | $10,840 | 32% | $13 |
| **Orlando, FL:** | | | |
| Opportunity Youth | $9,280 | 28% | $83 |
| Other Youth | $10,150 | 31% | $4 |
| **Jacksonville, FL:** | | | |
| Opportunity Youth | $8,780 | 27% | $124 |
| Other Youth | $10,640 | 33% | $4 |
| **Seattle, WA:** | | | |
| Opportunity Youth | $15,100 | 33% | $300 |
| Other Youth | $10,780 | 23% | $18 |
| **Richmond, VA:** | | | |
| Opportunity Youth | $6,990 | 21% | $202 |
| Other Youth | $8,950 | 27% | $35 |
| **Asheville, NC:** | | | |
| Opportunity Youth | $8,990 | 33% | $25 |
| Other Youth | $7,720 | 28% | $8 |
| **Memphis, TN:** | | | |
| Opportunity Youth | $5,310 | 21% | $192 |
| Other Youth | $8,070 | 31% | $26 |

*(continued on next page)*

# Appendix 4: Opportunity Youth Economic Data for Selected Cities *(continued)*

**Opportunity Youth Incomes and Public Assistance**

| | Annual Income | Annual income as % of local adult income aged 26-44 | Public Assistance |
|---|---|---|---|
| Nashville, TN: | | | |
|     Opportunity Youth | $9,060 | 28% | $167 |
|     Other Youth | $8,990 | 28% | $13 |
| Washington, DC: | | | |
|     Opportunity Youth | $12,020 | 23% | $430 |
|     Other Youth | $10,650 | 20% | $20 |

*Source:* ACS individual-level data (2006-2010). *Notes:* PUMS codes used to identify cities. Population weights PWGTP applied. See Appendix Note 3 for definition of opportunity youth. Adult income is for persons aged 26-44. Income and public assistance estimates include persons with zero values. Money values are expressed in 2010 dollars. Incomes expressed to nearest $10.

# Appendix 5: Crime Data for Selected Cities

**Annual Violent Crime and Property Crime per Capita Thousands**

|  | Violent Crime | Property Crime |
|---|---|---|
| Flagstaff, AZ | 5 | 50 |
| Toledo, OH | 9 | 95 |
| Boynton Beach, FL | 8 | 45 |
| Orlando, FL * | 11 | 65 |
| Jacksonville, FL | 7 | 46 |
| Seattle, WA | 6 | 54 |
| Richmond, VA | 7 | 42 |
| Asheville, NC | 6 | 48 |
| Memphis, TN | 15 | 63 |
| Nashville, TN | 11 | 50 |
| Washington, DC | 12 | 45 |
| *National Rate* | *4* | *29* |

*Source:* FBI Uniform Crime Report 2010. Offenses known to law enforcement, retrieved June 16, 2012 at http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl08.xls/view.