

# Moving To Opportunity

A Cost-Benefit Analysis

Scioto Analysis | September 2025



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# **Executive Summary**

The neighborhood a person is born in has a significant impact on their life trajectory. According to data from the United States Census Bureau and the Centers for Disease Control and Prevention, children born in the communities of Avondale and Belvidere outside of Canton, Ohio can expect to grow up to have a median income of \$92,000 and an average lifespan of 82 years. By contrast, the neighborhoods five streets over, Meyers Lake and Lakeview Terrace, face much bleaker prospects: their kids can expect to make about 40% less and live seven fewer years than their neighbors just a ten-minute drive away.

These disparities in outcomes between neighborhood environments inspired the Moving To Opportunity experiment hosted by the Department of Housing and Urban Development in 1994. The program aimed to test whether moving low-income families into wealthier, lower-poverty neighborhoods would improve their life trajectories. Families in five major cities—Baltimore, Chicago, Los Angeles, New York, and Boston—were randomly assigned to treatment groups, with one experimental group receiving housing vouchers and counseling support to help them secure homes in neighborhoods with significantly lower poverty rates.

Inspired by this program, the Ohio State University partnered with local organizations and the Ohio Finance Agency to launch Move to PROSPER as a pilot program to explore the effects of housing mobility in Franklin County. The program expanded benefits to include services designed to bolster the effects of housing mobility, including wellness coaching and financial literacy programs throughout the three-year program.

Move to PROSPER spun off into its own organization in 2022 called Families Flourish. As of 2023, Families Flourish had scaled the program to support up to 100 families.

In this analysis, we estimate the net social benefits of expanding a housing mobility program, modeled after the Moving to Opportunity program and piloted in Ohio as Families Flourish, to 1,000 families in Ohio. Our analysis focuses specifically on children under the age of 13, the subgroup for whom prior research has shown the most significant long-term gains.

We find that expanding this modeled program to 1,000 families in Ohio produces social impacts ranging from quantitative effects like reduced crime among females and increased lifelong earnings, to qualitative impacts like network disruption. Overall, we estimate that the program will produce significant reductions in social spending on crime, ranging from \$12 million to \$14 million in avoided social costs. We also estimate that the program leads to an average increase in lifetime earnings of \$302,000 for each child under 13.

Assuming average results, the net present value of launching a Moving to Opportunity program in Ohio for 1000 families (and 1400 children under 13) is \$149 million. This implies a benefit-cost ratio of \$3.14 in social benefits generated by the program for every \$1 in social costs.



# Moving to Opportunity

The Housing and Urban Development Department launched the Moving to Opportunity program in 1994. Families were randomly selected from a pool of entrants and divided into three subgroups: an experimental group, a section 8 group, and a control group. The experimental group was offered a housing voucher equivalent to section 8 assistance, conditional upon relocating to neighborhoods with poverty rates below ten percent, along with relocation assistance and one-on-one counseling to support their transition. The section 8 group received a typical subsidized housing voucher with no requirements or support, while the control group remained in their original housing without intervention.

Spearheaded by Harvard Economist Raj Chetty, a follow-up study was conducted on the original Moving to Opportunity participants. Chetty and colleagues used public tax records to measure outcomes for participants compared to the control group, estimating the difference in variables like lifelong earnings, marriage rates, crime, and mental health. While overall outcomes were mixed, the program showed particularly promising results for children who moved before the age of eight. Most notably, Chetty's study showed that, when compared with the control group, pre-adolescents in the experimental group earned an average of \$3,500 more in early adulthood (24-28). Assuming this increase sustains throughout an average lifetime earnings cycle, Chetty's study projects a lifetime average earnings increase of \$300,000. The experiment also substantially reduced crime in female participants; girls under 13 committed roughly 33% fewer crimes than girls in the control group. Other notable effects like increased college enrollment and higher marriage rates strengthened the case for this residential mobility program and inspired the development of similar initiatives.

Move to PROSPER launched in 2018 in Franklin County, Ohio, as a local version of Moving to Opportunity. Drawing from Chetty's findings, the program was offered exclusively to ten single mothers with children under 13. Throughout the three-year program, families received rental support, relocation assistance, and personalized life coaches who assisted with neighborhood selection, lease paperwork, and initial transition support. The program also expanded services to include workshops on financial literacy, job readiness, and wellness. Participating families experienced reduced exposure to violence, greater household income, and improved mental health.

Families Flourish built on the pilot's successes, inviting 100 families to participate in an expanded model. Broadening access to additional services like mental health counseling and peer mentorship opportunities, the program reported high satisfaction and improvements over several domains: over half of participants experienced gains in income, mental and physical health, and academic performance, while satisfaction with coaching and housing exceeded 85% according to a 2024 report.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>Families Flourish, *Prosperity Report Summary 2024: An Executive Summary of the Ohio State University's Interim Program Evaluation of Families Flourish* (April 2024), PDF https://familiesflourish.org/wp-content/uploads/2024/04/FF-2024-Prosperity-Summary-Copyedited.pdf



# **Policy Options**

In 2018, the Ohio State University collaborated with community partners to launch the Move to PROSPER program in Ohio, assisting ten low-income single parent households in moving to low-poverty neighborhoods. The program was expanded in 2022 to support the relocation of 100 families.

Within this analysis, we compare two alternatives.

- Status Quo program. The current Families Flourish model continues to operate at the
  capacity of 100 families in Franklin County. The program maintains its core features rental assistance, life coaching, and relocation counseling. The eligible participants are
  single-parent low-income families with children under the age 18.
- Expansion to 1,000 families. This option scales a Families Flourish-style program to reach 1,000 low-income single parent households across multiple counties across Ohio. These 1,000 families would receive three years of rental support, relocation assistance services, and personal life coaching. This option chooses low-income single parent households with children under age 13.

# Standing

We estimate the benefits and costs of a Moving to Opportunity program on the population of Ohio. Using the existing Families Flourish program as a baseline, we estimate the costs and benefits of expanding the program's features - including rental assistance, mobility counseling, and one-on-one life coaching, to a total of 1,000 low-income single-parent households with children under age 14 in the state of Ohio.

# **Impacts**

To assess the value of implementing a statewide Families Flourish program, we estimate the social benefits and costs of the program. In addition to quantifying and monetizing outcomes, we also discuss other impacts qualitatively for a more comprehensive analysis of the program's potential value. Some quantitative impacts are included within broader qualitative categories, like reduced emergency room visits within improvements in health.



Benefits		Costs	
Quantitative Benefits	Qualitative Benefits	Quantitative Costs	Qualitative costs
Increased Lifelong Earnings	College Enrollment	Program Costs	
Reduced Crime	Marriage Rates		
Reduced Single Motherhood			Rent Pressure
Reduced Social Security Spending	Improvements in Health	Increased Unemployment Benefit Spending	
Reduced Emergency Room Visits			

Table 1: Impact categories

#### Reduced Crime

Crime among low-income communities is more common than in high-income communities. According to the Brookings Institution, "America's poorest families not only face higher risks of crime, but also face a higher likelihood that a member of their family will be incarcerated." These disparities in criminal activity imply higher public expenditures on incarceration and higher total societal costs of crime among disadvantaged communities.

A study conducted by researchers at the University of Miami and University of Colorado examined long-term outcomes from the Moving to Opportunity experiment. Researchers found that relocating to low-poverty neighborhoods led to significant reductions in crime among female children who moved before the age of 13. Girls in the experimental group displayed significantly fewer arrests for both property and violent crime arrests compared with the control group. Specifically, females demonstrated a 32% reduction in violent crime and a 33% reduction in violent crime over a 15-year post-experiment horizon.

We monetize this reduction in crime through two primary avenues: decreased government spending on incarceration and reduced social costs associated with violent and property crimes.

Moving to Opportunity's control group experienced 0.024 annual arrests per woman for violent crimes, equivalent to 2.4 arrests annually for every 100 women. Using Ohio's female-skewed

<sup>&</sup>lt;sup>2</sup>Ben Harris and Melissa S. Kearney, "The Unequal Burden of Crime and Incarceration on America's Poor," Brookings, April 28, 2014,

https://www.brookings.edu/articles/the-unequal-burden-of-crime-and-incarceration-on-americas-poor/



population and family makeup data from Families Flourish, we estimate that 710 girls under 13 participate in our modeled program.<sup>3</sup> Over a 15-year period, this translates to roughly 250 violent crime arrests without intervention.

Applying the 32% reduction in violent crime observed in the Moving to Opportunity experiment group, we estimate our modeled program will prevent 80 arrests. To estimate how many women avoid offense altogether, we assume a range of 1.6 to 2 arrests per offender, which is based on Bureau of Justice Statistics on female recidivism rates.<sup>4</sup> This means **between 40 and 50 women will avoid violent crime incarceration altogether.** 

Using figures from the FBI, we assume aggravated assault comprises 68% of arrests, robbery makes up 22%, and other violent crimes such as murder represent the remaining 9.5%<sup>5</sup>. Using data from the Bureau of Justice Statistics, we assume the average sentence length of an aggravated assault is 5.8 years with 47% served.<sup>6</sup> We estimate between 27 and 34 aggravated assaults will be avoided, with a reduction in incarceration spending between \$3 million and \$4 million, assuming a 365 day year and \$110 dollars a day in incarceration costs per the Ohio Department of Rehabilitation and Correction.<sup>7</sup> Applying this same methodology to robbery, and considering an average sentence of 9.4 years and 57% served, between \$2 million and \$2.5 million is saved via avoided incarcerations The remaining 9.5% uses the average prison sentence of all violent crimes: 11 years with 53% served. This produces a total monetary value from avoided incarcerations of \$900,000 to \$1 million.

For property crimes, women in the control group were arrested 0.016 times per year, or 1.6 times per 100 women. With our assumed 710 girls under 13 in the study, we expect 170 property crime arrests in the model. The 33% reduction results in 56 avoided property arrests. Using the same range of assumed arrests per offender we used in the robbery model, we estimate between 28 and 35 women will avoid property arrests due to expanding Families Flourish.

<sup>&</sup>lt;sup>3</sup>Healthy Northeast Ohio, "Demographic Data: Ohio" accessed August 21, 2025,

https://www.healthyneo.org/demographic data?id=38&section Id=935

<sup>&</sup>lt;sup>4</sup>Danielle Kaeble, "*Time Served in State Prison*," 2018, (Washington, DC: U.S. Department of Justice, Office of Justice Programs, 2018), https://bjs.ojp.gov/document/tssp18.pdf

<sup>&</sup>lt;sup>5</sup>Federal Bureau of Investigation, "Violent Crime in Crime in the United States," 2019 (Washington, DC: U.S. Department of Justice, 2020),

https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/topic-pages/violent-crime

<sup>&</sup>lt;sup>6</sup> Danielle Kaeble, "Time Served in State Prison," 2018, (Washington, DC: U.S. Department of Justice, Office of Justice Programs, 2018), https://bjs.ojp.gov/document/tssp18.pdf

<sup>&</sup>lt;sup>7</sup>Ohio Department of Rehabilitation and Correction, Fact Sheet, May 2023 (Columbus: Ohio Department of Rehabilitation and Correction, 2023).

https://drc.ohio.gov/wps/wcm/connect/gov/d8de8204-8800-4bb8-8f4d-151eac19bdf5/May+2023+Fact+Sheet+%281%29.pdf?MOD=AJPERES&CONVERT\_TO=url&CACHEID=ROOTWORKSPACE.Z18\_79GCH 8013HMOA06A2E16IV2082-d8de8204-8800-4bb8-8f4d-151eac19bdf5-ozFPPc2



Larceny comprises the majority of property crimes at 73%. The average sentence for larceny in the U.S. is 3.8 years with 42% served, meaning that each incarceration costs \$65,000. Avoiding 19 to 24 larceny incarcerations will save \$1.2 million to \$1.5 million. Burglary makes up 16% of property crimes. A 33% drop in property crimes means 4 to 5 fewer burglary incarcerations among women. Given the average burglary sentence is six years with 42% served, this reduction saves \$450,000 to \$550,000. Applying the 33% reduction to motor vehicle theft, which comprises 10% of property crimes, results in 2.7 to 3.4 reduced motor vehicle theft incarcerations. Typical prison sentences for such an offense last 3.8 years with 37% of the sentence served, totalling \$150,000 to \$200,000 in motor vehicle incarceration savings.

In total, our model projects savings between \$7.5 million and \$9.5 million from avoiding incarceration spending among females.

To fully estimate the benefits of this reduction in criminal activity, we also consider the value of reduced social costs associated with these crimes. A 2010 study from the National Institutes of Health monetized each category of crime for a comprehensive estimate of how each offense harms society. This study considers a range of impacts across individual and community levels. Victim costs are considered to be direct economic harm to the victimized individual, ranging from medical costs to lost productivity. Crime career costs are the opportunity costs incurred when an individual engages in illegal activities over pursuing lawful, productive employment or education. The final category are intangible costs, which are indirect losses like reduced quality of life and stress.

We monetize these reduced social costs similarly to how we calculated reduced incarceration costs. Using projected values for each category of crime, we subtract any costs associated with incarceration, including legal services, corrections programs, and others, and multiply these values by the number of reduced female offenders.

Beginning with the violent crime category, the total cost of a single aggravated assault is \$110,000. Subtracting the criminal justice system costs of \$8,600, the remaining \$98,000 reflects the broader cost to society. These figures are presented in 2008 dollars. We inflate them to current values, bringing the societal cost of one aggravated assault to \$150,000 in May 2025 dollars. Using our previous projection of 27 to 34 avoided aggravated assaults, this will reduce societal costs by \$3 million to \$3.7 million. After subtracting criminal justice costs and adjusting to 2025 dollars, robbery costs society \$43,000. Our model projects savings of \$400,000 to \$500,000 due to reductions in robberies. To calculate the remaining 9.5%, we'll take the mean of social costs for all violent offenses minus the mean of the criminal justice costs excluding the two main categories, arriving at a total of \$1.8 million. This figure is disproportionately high due to the massive societal costs of murder. In our sensitivity analysis, we analyze the likelihood of

"Daedalus 139, no. 3 (Summer 2010): 8-19, https://pmc.ncbi.nlm.nih.gov/articles/PMC2835847/

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<sup>&</sup>lt;sup>8</sup> Kathryn E. McCollister, Michael T. French, and Hai Fang, "The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation



such a case arising and factor it into our projected outcome. We project the total reduction of societal costs related to other violent crimes as \$6.8 million to \$8.5 million.

The post-criminal justice costs per larceny are \$5,000 according to the National Institutes of Health study, meaning that a reduction of 19 to 24 larceny offenses translates to \$100,000 to \$130,000 in reduced social costs. Burglary costs society \$9,800, totaling between \$40,000 and \$50,000. With motor vehicle theft costing society \$14,000 and our modeling projecting 2.7 to 3.4 offenses, we can expect to save \$40,000 to \$50,000 in social harm. **We estimate a reduction of \$10 million to \$11 million in social harm from crime.** 

We estimate reductions in social spending on incarceration and costs to society associated with these crimes from expansion of Families Flourish to lead to reductions in social costs ranging from \$18 million and \$19 million. This projection is higher than what is included in our final results due to the low likelihood of murder within our sample size of women, which we remove to make a more conservative estimate of the impact of crime.

## Increased Lifelong Earnings

One of the core hypotheses of the original Moving to Opportunity study was that relocating families to areas of lower crime and higher median income could improve children's long-term economic outcomes. Researchers theorized that exposure to these higher-opportunity environments could lead to increased earnings later in life.

Raj Chetty, a leading economist in the field of economic mobility, examined long-term outcomes from the Moving to Opportunity experiment in a comprehensive study published in 2016. Chetty and colleagues conducted follow-up interviews and consulted public tax records to compare the outcomes of the three groups, specifically focusing on the children involved in the study. What they found was that the program had a profound impact on lifelong earnings in younger children. Children who moved before the age of 13 experienced an immediate and sustained increase in earnings, irrespective of race or gender. This greater income, when compared with their peers in the control group, was estimated to total \$300,000 in lifelong earnings.

If we apply this benefit to our model, which expands the support of programs like Families Flourish and Moving to Opportunity to 1,000 families in Ohio with children under 13, we can estimate the impact of the program on future incomes for children. Assuming an average of 1.4 children per family, these children would experience a total earnings increase of \$420 million, which translates to a net present value of \$140 million.

<sup>&</sup>lt;sup>9</sup>Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University, National Bureau of Economic Research, March 2016,

https://opportunityinsights.org/wp-content/uploads/2018/03/mto\_paper.pdf



# College Enrollment

Higher education not only has a significant effect on a person's earning potential, it often fosters personal development, exposing individuals to new ideas, expanding their network, and refining critical and interpersonal skills. The Moving to Opportunity follow-up study found that children who moved prior to age 13 experienced a positive effect on their total college enrollment. Families in the experiment group saw their young children attend college at a rate **5.2** percentage points higher than the control group.

Alongside college enrollment, Chetty's study examined how Moving to Opportunity affected the quality of education, using an earnings-based index that linked college quality with average earnings at age 31. For young children in the experimental group, expected earnings were \$690 higher than their control group peers. Controlling for increased rates of college attendance, \$370 of this gain came solely from improvements in college quality.

Increased earnings from increased college enrollment and quality are already factored into lifetime earnings within our model. We do not monetize this impact to avoid double counting. In our model of 1,400 children, we expect 73 more children to attend college due to expansion of Families Flourish to 1,000 families.

### Marriage Rates

Moving to Opportunity also affected future marriage rates among younger children<sup>10</sup>. Those under 13 in the experiment group were married in early adulthood at rates 1.9 percentage points higher than the control group. Given the control's relatively low rate of marriage at 3.4%, this represents a **56% increase in the likelihood of marriage**. This increase was driven primarily by increased marriage rates among females, with little noticeable effect among males. The marriage effect also **decreased single motherhood by 10 percentage points**, a 26% reduction relative to females in the control group

In our model of 1,000 families, we assume 710 female children given Ohio family structures and a slightly skewed gender distribution<sup>11</sup>. Applying these effects, we estimate expanding Families Flourish will lead to **13 more marriages** among our female population and will result in **71 fewer single mothers**.

While the monetized value of an increase in marriages is already partially captured within increased lifetime earnings, we will examine how the reduction in single motherhood could

<sup>&</sup>lt;sup>10</sup>Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University, National Bureau of Economic Research, March 2016,

https://opportunityinsights.org/wp-content/uploads/2018/03/mto\_paper.pdf

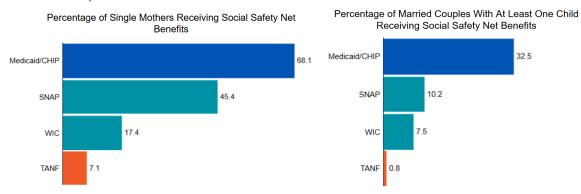
<sup>&</sup>lt;sup>11</sup>KFF, "Total CHIP Spending," State Health Facts,

https://www.kff.org/medicaid/state-indicator/total-chip-spending/?currentTimeframe=0&sortModel=%7B%2 2colld%22:%22Location%22,%22sort%22:%22asc%22%7D



translate into reduced social spending. We compare the rates at which single-mother households collect social benefits compared to married-couple households. Our analysis will focus on some of the most utilized social programs and their annual costs, including the Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, Women, Infants, and Children Nutrition Program, and Medicaid's Children's Health Insurance Program.

Using data from the United States Census Bureau, we find that, among single-mother households with at least one child, 68% receive CHIP benefits, 45% receive SNAP benefits, 17% receive WIC benefits, and 7% receive TANF benefits. Among married couple households with at least one child, 33% receive CHIP benefits, 10% receive SNAP benefits, 8% receive WIC benefits, and 1% receive TANF benefits.



**Figure 1:** Single mothers claim public benefits at higher rates than mothers in two-parent households<sup>12</sup>

Of the \$23 billion in annual spend on CHIP, approximately \$750 million, or 3.3% goes to Ohio residents. Applying this share to the 7.2 million yearly CHIP enrollees suggests 240,000 Ohio residents receive an average of \$3,150 a year in CHIP benefits. Based on this projected reduction in CHIP participation from reduced single-mother households, this translates into a \$78,000 reduction in CHIP spending per year.

https://www.kff.org/medicaid/state-indicator/total-chip-spending/?currentTimeframe=0&sortModel=%7B%2 2colld%22:%22Location%22,%22sort%22:%22asc%22%7D

<sup>&</sup>lt;sup>12</sup>Michael D. King and Zachary Scherer, "Marital Status and Children Affect Social Safety Net Participation," September 29, 2022,

https://www.census.gov/library/stories/2022/09/marital-status-and-children-affect-social-safety-net-participation.html

<sup>&</sup>lt;sup>13</sup>KFF, "Total CHIP Spending," State Health Facts,

<sup>&</sup>lt;sup>14</sup>Centers for Medicare & Medicaid Services (CMS), *Medicaid and CHIP Enrollment Data Highlights*, April 2025

https://www.medicaid.gov/medicaid/program-information/medicaid-and-chip-enrollment-data/report-highlights



A U.S. Department of Agriculture study reported that SNAP's average monthly benefit per person was \$160 in Ohio in 2022.<sup>15</sup> Adjusting for inflation, this results in an annual cost of \$2,200 per mother. Applying the 35 percentage point reduction in SNAP benefit recipients, 25 fewer women receive snap benefits, producing an annualized effect of **\$55,000**.

The Center on Budget and Policy Priorities estimates that WIC assistance costs the U.S. Government \$61 per month per participant, or \$730 annually<sup>16</sup>. We estimate six fewer women will receive WIC social assistance due to the expanded Families Flourish program, producing an annualized benefit of **\$4,700**.

The maximum monthly TANF payment for a family of three is \$600 in May 2025 dollars, according to the National Center for Children in Poverty. This means one person could receive an average of \$2,400 in TANF funds per year. The reduction from 8% to 1% of a group of 71 women is five women, resulting in a \$12,000 reduction in TANF spending due to the expanded Families Flourish program.

We estimate that the 26% reduction in single motherhood will result in a reduction of \$150,000 in social spending per year from these four welfare programs. We anticipate this effect will sustain for 7 years, resulting in a total net present value of reduced social spending of \$700,000.

### Reduced Social Security and Disability Spending

As a result of the increased labor force participation and earnings spurred by Moving to Opportunity, Chetty's study found individuals treated in the experimental group received \$130 dollars less per year in Social Security and disability benefits, in May 2025 dollars. This is an average annual effect observed in the experiment group between ages 24 and 28. While a small effect relative to the increase in lifetime earnings, it is consistent with the idea that individuals who earn more qualify for wage-linked benefits like Social security at lower rates.

<sup>&</sup>lt;sup>15</sup>U.S. Department of Agriculture, Food and Nutrition Service, *Supplemental Nutrition Assistance Program* (SNAP) State Activity Report: Ohio, July 2023,

https://fns-prod.azureedge.us/sites/default/files/resource-files/snap-state-factsheet-oh.pdf

<sup>&</sup>lt;sup>16</sup>Center on Budget and Policy Priorities (CBPP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), updated April 11, 2025,

https://www.cbpp.org/research/food-assistance/special-supplemental-nutrition-program-for-women-infants-and-children

<sup>&</sup>lt;sup>17</sup>National Center for Children in Poverty (NCCP), *A 50-State Comparison of TANF Amounts*, 2024, https://www.nccp.org/wp-content/uploads/2024/11/TANF-Benefit-Amounts-2024-FINAL.pdf

<sup>&</sup>lt;sup>18</sup>Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University, National Bureau of Economic Research, March 2016,

https://opportunityinsights.org/wp-content/uploads/2018/03/mto paper.pdf



In our model of 1,400 children, this represents a \$180,000 yearly decrease in social spending. Using a Marginal Excess Burden of Taxation of .185, this represents social savings of \$34.000.<sup>19</sup>

The marginal excess burden of taxation is used to calculate the distortionary economic effects of fiscal spending. The marginal excess burden of taxation is the extra economic loss or gain, beyond the tax itself, that society bears for every additional dollar spent or saved by the government. This change arises from the way taxes distort an individual's behavior, such as working less or buying fewer goods due to taxation.

#### Improvements in Health

The Department of Housing and Urban Development's analysis of the Moving to Opportunity showed that the program had positive effects on young children in the experimental group, "female youth in the experimental group experienced reductions not only in mild distress but also for serious disorders." This includes statistically significant reductions in Bipolar Disorder Syndrome, Major Depression, and other disorders associated with psychological distress. The Moving to Opportunity follow-up study notes sustained "modestly positive effects" on mental health 10-15 years after the original experiment. <sup>21</sup>

Young boys, in contrast, did not enjoy the same mental health benefits from the program. Housing and Urban Development research found "no or negative impacts for male youth of all ages in terms of behavior and mental health outcomes". These results likely stem from disruptive factors associated with moving, like social stress and isolation in their new school and neighborhood environments.

That said, Move to PROSPER/Families Flourish Prosperity Reports and participant feedback surveys reveal more positive mental and physical health outcomes for children of both genders. A 2023 report states that in their new homes, "children's respiratory health quickly improved, and parents and children experienced improved physical and mental health." The report also emphasizes that these respiratory improvements translated into **50 fewer emergency room** 

<sup>22</sup>Lisa Sanbonmatsu, Jens Ludwig, Lawrence F. Katz, Lisa A. Gennetian, Greg J. Duncan, Ronald C. Kessler, Emma Adam, Thomas W. McDade, and Stacy Tessler Lindau, *Moving to Opportunity for Fair Housing Demonstration Program: Final Impacts Evaluation*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, November 2011, https://www.huduser.gov/publications/pdf/mtofhd\_fullreport\_v2.pdf

<sup>&</sup>lt;sup>19</sup> Anthony E. Boardman et al., Cost-Benefit Analysis: Concepts and Practice (Cambridge University Press. 2018).

<sup>&</sup>lt;sup>20</sup>https://www.huduser.gov/publications/pdf/mtofhd\_fullreport\_v2.pdf#:~:text=outcomes,outcomes%20than %20the%20other%20families

<sup>&</sup>lt;sup>21</sup> https://www.aeaweb.org/articles?id=10.1257/aer.20150572

<sup>&</sup>lt;sup>23</sup> Families Flourish, *Prosperity Report Summary* 2023: An Executive Summary of the Ohio State University's Interim Program Evaluation of Families Flourish (April 2023), PDF https://familiesflourish.org/wp-content/uploads/2023/06/2023SummaryFinal.pdf#:~:text=and%20prosperity,improved%20physical%20and%20mental%20health



visits over 4 years and \$100,000 in patient care savings in May 2025 dollars.<sup>24</sup> Given that Move to PROSPER comprised 17 children in its pilot program, these savings translate into \$1,500 per child per year.<sup>25</sup> In our model of 1,400 children, this translates to \$2.1 million in reduced ER visits per year.

Children's mental and emotional well-being also benefited from Move to PROSPER/Families Flourish. An initial report showed that "80% of the mothers saw 'positive' mental health changes in their children." Families Flourish revealed positive changes in educational attainment, with 26 out of 38 respondents reporting their children adjusted positively to their new schools and 94% of mothers reporting an improvement in their children's grades since enrolling in Families Flourish. Anecdotally, multiple parents and children reported higher self-confidence after moving. One parent stated "[My child's] confidence has grown... I enrolled him in aftercare to spend more time at the school meeting new friends. He has a lot of friends". Another mother simply noted "[My child's] confidence has improved."

## **Program Costs**

Moving to Opportunity-style programs provide families with a range of services designed to support families transitioning into new communities and maximize the likelihood of long-term improvements in economic and social outcomes. In addition to a monthly housing voucher, Families Flourish provides its participating families with one-on-one life coaching, relocation assistance including neighborhood selection, housing search assistance, and administrative support, as well as comprehensive guidance in navigating schools, health, employment, and budgeting.<sup>29</sup>

According to Families Flourish's donation page, it costs approximately \$19,000 to support a family in the program for one year.<sup>30</sup> Because participants are required to remain in the program

24 Families Flourish, *Prosperity Report Summary 2023: An Executive Summary of the Ohio State* 

https://familiesflourish.org/wp-content/uploads/2024/10/Program-Brochure2024.10.04.pdf <sup>30</sup>Families Flourish, "*Donate*", https://familiesflourish.org/donate/

University's Interim Program Evaluation of Families Flourish (April 2023), PDF https://familiesflourish.org/wp-content/uploads/2023/06/2023SummaryFinal.pdf#:~:text=and%20prosperity ,improved%20physical%20and%20mental%20health

<sup>&</sup>lt;sup>25</sup>Families Flourish, *Prosperity Report Summary 2023: An Executive Summary of the Ohio State University's Interim Program Evaluation of Families Flourish* (April 2023), PDF https://familiesflourish.org/wp-content/uploads/2023/06/2023SummaryFinal.pdf#:~:text=and%20prosperity,improved%20physical%20and%20mental%20health

<sup>&</sup>lt;sup>26</sup>https://www.wosu.org/news/2020-04-17/pilot-program-sees-improving-health-and-wealth-outcomes-for-columbus-families

<sup>&</sup>lt;sup>27</sup>Families Flourish, *Prosperity Report Summary 2024: An Executive Summary of the Ohio State University's Interim Program Evaluation of Families Flourish* (April 2024), PDF https://familiesflourish.org/wp-content/uploads/2024/04/FF-2024-Prosperity-Summary-Copyedited.pdf <sup>28</sup> Families Flourish, *Prosperity Report Summary 2024: An Executive Summary of the Ohio State University's Interim Program Evaluation of Families Flourish* (April 2024), PDF https://familiesflourish.org/wp-content/uploads/2024/04/FF-2024-Prosperity-Summary-Copyedited.pdf <sup>29</sup>Families Flourish, *Program Brochure*,



for three years, the total cost per family is \$58,000. Scaling the program to serve 1,000 families with 1,400 children would bring the total cost to \$58 million.

We use a marginal excess burden of taxation of 0.185 to estimate the total social cost of financing the expansion at \$11 million.

#### Rent Pressure

Housing subsidies often raise concerns about increased demand pressure raising rents in a given area. With an expansion of the program, it is possible that a large number of the families would choose the same neighborhood or area, increasing rent costs. We sought to understand how rent pressure might materialize and how different proportions of our participating families moving to one neighborhood might affect rents in those neighborhoods.

Economics professors Michael D. Eriksen and Amanda Ross conducted a study on how housing vouchers influenced average rent prices nationwide. They tracked units and neighborhoods impacted by a federal allocation of housing vouchers in the early 2000s, which increased nationwide voucher supply by 18 percent. They found that this increase in housing vouchers had no economically meaningful or statistically significant impact nationwide effect on rents.

Economist Scott Susin examined whether housing vouchers raised rents on unsubsidized poor rentees in a similar 2002 study<sup>31</sup>. He analyzed 90 different metropolitan areas, focusing on the low-income population, and segmented metros based on high versus low prevalence of housing vouchers. He found that low-income individuals in metros with more vouchers experienced rents 16 percent higher than those in metros with lower housing voucher rates.

Given the conflicting evidence, it's difficult to say whether or not an influx of housing vouchers in Ohio as a result of this program would meaningfully increase rents for local communities. While evidence from Eriksen and Ross suggests that national increases in housing vouchers won't affect rent prices, Susin's more localised study suggests that areas with greater voucher concentration could experience raised rent prices. Given the low likelihood that a substantial number of the families in Families Flourish would relocate to the same neighborhood, we will not factor rent pressures into our model. We test how a scenario where housing vouchers creating rent pressure would affect our model in the sensitivity analysis section below

## Increased Unemployment Benefit Spending

Chetty and colleagues examined Form 1099-G tax records in their follow-up study, which report unemployment benefits received by individuals. They found that "the experimental

<sup>&</sup>lt;sup>31</sup>Scott Susin, "Rent Vouchers and the Price of Low-Income Housing," Journal of Public Economics 83, no. 1 (January 2002): 109–152,



voucher treatment also increases unemployment benefits by \$167 per year, possibly because higher labor force participation rates increase eligibility for unemployment benefits."<sup>32</sup> In other words, when people work more and earn more, they are more likely to qualify for unemployment insurance if they experience a job separation. As a result, the experimental group participants likely had greater eligibility and coverage and thus utilized these benefits at greater rates than the control group

In our expansion of the program to 1,000 families with an estimated 1,400 children, we estimate an increase of \$310,000 in unemployment benefits per year in May 2025 dollars. Using a Marginal Excess Burden of Taxation of .185, we estimate an additional \$60,000 in economic distortion would be created by expanding Families Flourish.

#### Results

We based our cost-benefit analysis of a statewide Moving to Opportunity program on a range of established research findings and government data. Our analysis includes estimates sourced from evaluations conducted by Raj Chetty, Lawrence Katz, and other researchers involved in analyses of the original Moving to Opportunity experiment<sup>33</sup>. We consulted data from the FBI, the Bureau of Justice Statistics, and the National Institute of Health to form valuations of outcomes like reduced crime.

Program costs were derived from Families Flourish's reported annual expenditures. All dollar amounts were converted to May 2025 values with the Bureau of Labor Statistics' CPI Inflation Calculator. We used a marginal excess burden of tax of 0.185 and a standard discount rate of 3%.

Overall, we estimate that implementing a Moving to Opportunity program would yield excess benefits of \$107,000 per child participant and a benefit-cost ratio of \$3.14 for every \$1 in program cost.

<sup>&</sup>lt;sup>32</sup>Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University, National Bureau of Economic Research, March 2016,

https://opportunityinsights.org/wp-content/uploads/2018/03/mto\_paper.pdf

<sup>&</sup>lt;sup>33</sup>Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, Harvard University, National Bureau of Economic Research, March 2016,

https://opportunityinsights.org/wp-content/uploads/2018/03/mto paper.pdf



Benefits			
Impact	Age Realized	Quantified Impact	Monetized Impact
Increased Lifelong Earnings	24-60	-	\$140 million
Reduced Crime	16-23	133 avoided arrests	\$9.5 million
College Enrollment	18-20	73 additional enrollments	-
Marriage Rates	24-30	13 additional marriages	-
Reduced Single Motherhood	24-30	71 fewer single mothers	\$700,000
Reduced Social Security and Disability Spending, Decrease in Taxation	24-34	-	\$1.2 million
MEBT of Reduced Social Security and Disability Spending	24-34	-	\$200,000
Improvements in Health	8-11	-	\$8 million
Program Costs, Benefit to Program Managers	8-10	-	\$56 million
Increased Unemployment Benefit Spending, Benefit to Recipients	24-34	-	\$1.8 million
Total Benefits	-	-	\$219 million
	Cos	sts	
Impact		Age Realized	Monetized Impact
Program Costs, Direct Costs to Taxpay	ers	8-10	\$56 million
MEBT of Program Costs		8-10	\$10.5 million
Increased Unemployment Benefit Spend Cost to Taxpayers	ding,	24-34	\$1.8 million
MEBT of Increased Unemployment Ber Spending	nefit 24-34		\$370,000
Reduced Social Security and Disabilit Spending, Reduction in Received Bene		24-34	\$1.2 million
Total Costs	-		\$70 million
Total			
Net Present Value		\$14	9 million
Benefit-Cost Ratio 3:1		3:1	

Figure 2: Total Quantified and Monetized Benefits and Costs, 3% Discount Rate



Figure 3 is a treemap of the monetized impacts, representing the proportion of benefits and costs, assuming average outcomes.

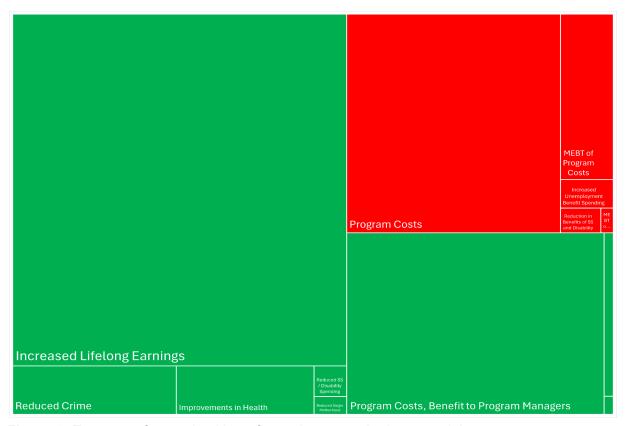


Figure 3: Treemap of monetized benefits and costs under base model

# Sensitivity Analysis

While our cost and benefit estimates are based on existing research, we use sensitivity analysis to explore how outcomes will vary under different assumptions. Partial sensitivity analysis is used to vary each component of the model and present how different scenarios impact the model. We conduct a Monte Carlo Simulation to generate projected outcomes based on randomized inputs across the entire model.

### Partial Sensitivity Analysis

In order to assess the range of potential outcomes from our modeled program, we conduct partial sensitivity analyses on main quantified impacts. This allows us to identify plausible upper and lower bounds, breakeven points, and which variables affect our outcomes the most. We use a discount rate of 1.5% to 24% and a marginal excess burden of taxation of 6% to 43% in our analyses.



#### Reduced Crime

A follow-up study of the original Moving to Opportunity study revealed that female participants who moved before the age of 13 experienced substantial declines in criminal arrests, with a 33% reduction in property crime and a 32% reduction in violent crime. Based on these figures, our model estimates crime-related savings of \$18 million and \$19 million.

If we alter the model to reflect a conservative 21% reduction in property crime and a 20% reduction in violent crime, we get a range of \$11 million to \$14 million in savings. Conversely, a more optimistic case where the program produces 41% and 40% reductions in property and violent crime respectively, we estimate a total spending reduction between \$23 million and \$28 million.

A notable portion of these results comes from avoiding social costs of other violent crimes, which initially range from \$6.8 million to \$8.5 million with our original reduction values. This is due to the high social cost of murder which can be upwards of \$2 million. With only 6.8 homicides per 100,000 people, it is unlikely that any participants in our model will commit homicide during the observation of our study.<sup>34</sup> Excluding homicide from the calculation, the adjusted total societal savings range from \$12 million to \$14 million, or an average net present value of \$9.5 million.

#### Increased Lifelong Earnings

Raj Chetty's seminal study on Moving to Opportunity found that children who moved before age 13 realized significantly higher earnings than their control group peers. Specifically, Chetty and colleagues found that children under 13 in the experiment group earned \$3,500 more per year during early adulthood than the control group, a 31% increase over baseline earnings. Assuming this increase is sustained over the typical U.S. life cycle of earnings and factoring in real wage growth, the total lifetime effect is \$300,000 in extra earnings. This translates to a net present value of \$101,000 in our model, assuming the earnings increase is sustained from age 24 to age 60.

We make a lower-end estimate by applying the \$3,500 increase to a scenario where earnings grow 3 times from early adulthood through retirement age. We assume raises roughly every 5 years ranging from 10% to 30%. This conservative estimate produces a total increase in earnings of \$240,000 or a net present value of \$83,000.

In order for the \$3,500 increase in earnings to accumulate to Chetty's predicted \$300,000 in lifetime gains, we assume earnings grow an average of 4.3% per year over 36 years. The total household cost of our program is \$19,200 per household over 3 years. With a household average of 1.4 children, the total program cost for one child is roughly \$40,000 in present-value

<sup>34</sup>Centers for Disease Control and Prevention, National Center for Health Statistics, "FastStats: Homicide," https://www.cdc.gov/nchs/fastats/homicide.htm



terms. We will calculate the annual depreciation rate required for the lifetime earnings gain to offset this per-child program cost. If this increase in earnings depreciated 1.5% each year over 36 years, the increase in earnings would still pay for the program cost with surplus left over.

#### College Enrollment

The Moving to Opportunity study found that the experimental voucher increased college enrollment by 5.2 percentage points, which translates to 73 additional college enrollees in our model. The treatment-on-the-treated estimate reflects the effect on those that actually used their housing voucher and moved neighborhoods. Conversely, the intent-to-treat estimate includes all experimental group participants, irrespective of whether or not they accepted the offer, which produced a 2.5 percentage point increase in college enrollment.

Using this rate, we calculate a conservative estimate of 35 additional college enrollees due to Families Flourish expansion.

Data on ages of college students states that 67% of students are aged 24 and younger.<sup>35</sup> The percentage increases in enrollment captured by Chetty only consider enrollment between the ages of 18-20. From these figures, we estimate that about 35% of enrollments are not captured by the study, as children in our modeled program could decide to pursue higher education later in life.

We calculate a higher-end estimate of 99 additional college enrollees due to the expanded Families Flourish program.

### Marriage Rates

The experimental voucher group experienced a 56% overall increase in marriages compared to the control group, predominantly driven by females. This resulted in 13 additional marriages within our model.

The Section 8 group, however, experienced a 2.8 percentage point increase in marriage, which translates to an 85% increase in marriages. Applying this increase to our model, we get an upper bound estimate of 20 additional marriages.

We translated the reduction in single motherhood of 26% into a reduction in welfare spending of \$150,000 per year. This figure was calculated by examining the rates at which SNAP, CHIP, WIC, and TANF welfare programs are utilized by single mothers versus married couples.

<sup>35</sup>Melanie Hanson, "*College Enrollment Statistics*," Education Data Initiative, last updated March 17, 2025 <a href="https://educationdata.org/college-enrollment-statistics">https://educationdata.org/college-enrollment-statistics</a>.



To derive low and high-end estimates, we'll reexamine the costs associated with each welfare program.

Government data reports \$22 billion in CHIP spending with 8.9 million child recipients for a nationwide average of \$2,500 per child, our low-end estimate.<sup>36</sup> Given our Ohio-specific estimate of \$3,200, we derive a range of \$2,500 to \$3,200 in CHIP spending per recipient.

While the inflation-adjusted average monthly SNAP benefit in Ohio is \$170, the nationwide average is slightly higher at \$190 per recipient.<sup>37</sup> Using the Ohio average as our low-end estimate and the nationwide cost as our high-end estimate, we estimate a range of \$2,100 to \$2,200 per person in SNAP spending.

The average cost borne by the government per WIC recipient is \$61 per month. Because states obtain infant formula through competitive bidding processes, the actual value of goods received by WIC enrollees is higher at \$81 per month. We use the fiscal cost to the government as the low-end estimate and the value received by enrollees as the high-end estimate for a range of \$730 to \$970.

We previously estimated the average TANF cost per person in Ohio at \$200 per month. For a low-end bound, we use the national median TANF payment of \$522 per family per month and convert it to a per-person equivalent. The average TANF family size is three, which gives \$170 per person per month. Because TANF is a family benefit, our high-end bound treats costs as non-divisible at the household level. That is, the \$600 per month cost per family is required to participate. This gives us an annual low-end of \$2,100 and a high-end of \$7,200.

Using these ranges in welfare costs, we estimate that the annual reduction in single-motherhood in our modeled program ranges between \$127,000 and \$170,000, an expected net present value of \$700,000 over 8 years.

### Reduced Social Security and Disability Spending

The increased income experienced by children in the experimental group resulted in a \$130 reduction in Social Security and Disability spending per person. Applying this result to our model and considering a Marginal Excess Burden of Taxation of .185, the total economic impact is \$1,200,000 over 10 years.

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<sup>&</sup>lt;sup>36</sup>Medicaid and CHIP Payment and Access Commission (MACPAC), "*Children's Health Insurance Program (CHIP*)," https://www.macpac.gov/topic/chip/

<sup>&</sup>lt;sup>37</sup>Jordan W. Jones, "Supplemental Nutrition Assistance Program (SNAP): Key Statistics and Research," U.S. Department of Agriculture, Economic Research Service, last updated July 17, 2024, https://www.ers.usda.gov/topics/food-nutrition-assistance/supplemental-nutrition-assistance-program-snap/key-statistics-and-research



We test different outcomes by changing the rate of Marginal Excess Burden of Taxation. The lowest recommended MEBT value is 6%, which produces a distortionary effect of \$78,000 and a total impact of \$1.3 million

Boardman's textbook on Cost-Benefit Analysis cites a high-end 43% marginal excess burden of taxation.<sup>38</sup> This would produce a distortion of \$500,000 and a total impact of \$1.7 million.

#### Improvements in Health

In its 4 years, the Move to PROSPER program prevented 50 emergency room visits when compared to children of similar demographic makeup, translating into \$1,500 in reduced healthcare costs per child per year. From this, we estimate a spending reduction of \$2 million per year within our model, or \$8 million over four years.

To produce a low-end estimate of reduced healthcare spending, we will estimate the amount of emergency room visits per year in our sample. A 2019 Centers for Disease Control and Prevention report claims that roughly 20% of children within 0-200% of the Federal Poverty Line visit the ER once or more per year.<sup>39</sup> Assuming the average visitations among this subgroup is 1.5, and using the estimate of \$1,500 in healthcare spending on asthma-associated emergency room visits that was used by Families Flourish, we estimate a low-end reduction in healthcare spending of \$2.5 million over four years<sup>40</sup>.

#### **Program Costs**

We model our costs of our program after Families Flourish to capture the range of benefits provided by the organization to participating families. Our program costs \$58,000 per family over 3 years, or roughly \$40,000 per child.

We will test different Marginal Excess Burdens of Taxation to produce different cost estimates.

Using a Marginal Excess Burden of Taxation of 6% results in distortionary costs of \$2,400 and a total cost of \$42,400.

The standard Marginal Excess Burden of Taxation of 18.5% produces \$7,500 in distortionary costs.

A high-end Marginal Excess Burden of Taxation of 43% produces \$17,200 in distortionary costs.

<sup>&</sup>lt;sup>38</sup> Anthony E. Boardman et al., Cost-Benefit Analysis: Concepts and Practice (Cambridge University Press. 2018).

<sup>&</sup>lt;sup>39</sup>Centers for Disease Control and Prevention, *Emergency department visits within the past 12 months* among children under age 18, by selected characteristics: United States, selected years 1997–2019, https://www.cdc.gov/nchs/data/hus/2020-2021/edch.pdf.

<sup>&</sup>lt;sup>40</sup>Tiffany Wang, Tanja Srebotnjak, Julia Brownell, Renee Y. Hsia, "Emergency Department Charges for Asthma-Related Outpatient Visits by Insurance Status", John Hopkins University press Volume 25, Number 1, February 2014, https://muse.jhu.edu/article/536594



#### Increased Unemployment Benefit Spending

Due to greater eligibility and coverage, the increased lifetime earnings in the experimental group resulted in roughly \$220 in unemployment benefit spending per person per year. In our model, we estimate that unemployment benefit spending will increase by \$1.8 million over 11 years.

We test different Marginal Excess Burdens of Taxation to produce different cost estimates. Marginal Excess Burdens of Taxation of 6%, 18.5%, and 43% produce \$108,000, \$330,000, and \$800,000 of distortionary impact respectively. This results in a total increased unemployment benefit effect of \$1.9 million to \$2.6 million.

#### Rent Pressure

While it is unlikely that the housing vouchers would create an increase in rents, we will test how different numbers of participating families choosing the same neighborhood would affect the rent prices as well as our program's overall value. Using Susin's 16% gap in rents between higher and lower-voucher markets as context, we assume a linear distribution of a 0.4% increase in average rent per 1% increase the voucher share of renter households<sup>41</sup>.

We've modeled such a situation with a 2,000 renter household area and an average monthly rent of \$1,300. We then examined varying numbers of new renters on local rent levels.

In an extreme scenario, 600 out of 1,000 families relocate to the same community. This would create a monthly total increase in rents of \$310,000 or \$160 per existing household per month. A moderate scenario considers 250 new renters in a community, which would push rents \$130,000 dollars, or \$65 per household. A more realistic scenario in which 100 of the 1000 families join the same community would increase their rents by \$52,000, or \$26 dollars per household.

Assuming these rent effects sustain for all three years of our program's duration, the extreme scenario would reduce our net present value from \$149 million to \$138 million, the moderate scenario would reduce our net present value from \$149 million to \$144 million, and the realistic scenario would reduce our net present value from \$149 million to \$147 million.

#### Discounting

We adjust all monetized impacts to May 2025 dollar figures. We use a standard 3% discount rate to determine net present value of future benefits and costs. We also test alternative discount rates to assess sensitivity, breakeven points, and how benefit-cost ratios vary under different scenarios.

<sup>41</sup> Scott Susin, "Rent Vouchers and the Price of Low-Income Housing," Journal of Public Economics 83, no. 1 (January 2002): 109–152,



To analyze a conservative future value of money, we test a 7% real discount rate. <sup>42</sup> At this discount rate, our per-child net present values are as follows: \$4,500 in reduced crime, \$28,500 in increased lifetime earnings, \$230 in reduced single motherhood, \$70 in marginal excess burden of taxation from Social Security spending, \$5,400 in reduced ER visits, \$38,000 in program costs, \$38,000 in utility gained from program costs, \$7,000 in marginal excess burden of taxation of program costs, and \$120 in marginal excess burden of taxation from increased unemployment benefits. At a 7% discount rate, our program produces a net present value of \$31,500 per child and a benefit of \$1.70 per every \$1 spent.

We also analyze a scenario where the future value of money is greater than expected. We use a discount rate of 1.5%, which results in per-child net present values of \$8,000 in reduced crime, \$170,000 in increased lifetime earnings, \$650 in reduced single motherhood, \$200 in MEBT from reduced Social Security spending, \$5,800 in reduced ER visits, \$7,500 in MEBT from program costs, and \$350 in MEBT from increased unemployment benefits. This results in a total program net present value of \$180,000 and \$5 in benefit for every \$1 spent.

A discount rate of 24% would result in our modeled program breaking even. At this rate, each child would gain \$1,000 in reduced crime, \$700 in increased lifetime earnings, \$4,500 in reduced ER visits, and a cost of \$6,000 in MEBT from program costs. A discount rate of 24% is well outside of the range of accepted discount rates.

#### Monte Carlo Simulation

We conducted a Monte Carlo Simulation to assess the different projected outcomes of our model. We randomized each variable between its low and high-end projections over 10,000 trials and captured the average, 5th percentile, and 95th percentile of each variable along with total costs, total benefits, and net present value. These values are presented in the table below as the social benefits and costs incurred per child from this program.

Impact	5th Percentile	Average	95th Percentile
Net Present Value	\$88,000	\$96,000	\$104,000

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<sup>&</sup>lt;sup>42</sup>U.S. Office of Management and Budget, Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, October 29, 1992,

https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/a94/a094.pdf



Total Costs	\$45,000	\$49,000	\$52,000
Total Benefits	\$133,000	\$145,000	\$156,000
Reduced Crime	\$6,000	\$6,700	\$7,400
Increased Lifelong Earnings	\$84,000	\$92,000	\$100,000
College Enrollment	38	67	96
Increased Marriage	13	16	20
Reduced Single Motherhood	\$410	\$480	\$540
Improvements in Health	\$460	\$3,000	\$5,400
Program Costs, Benefits to Program Managers	\$40,000	\$40,000	\$40,000
Increased Unemployment Benefits to Recipients	\$1,400	\$1,400	\$1,400
Reduced Social Security/Disability Spending Including MEBT	\$930	\$1,100	\$1,200
Reduced SS/ Disability spending, Reduced Benefits to Recipients	\$860	\$860	\$860
Program Costs Including MEBT	\$43,000	\$46,000	\$50,000
Increased Unemployment Benefits Including MEBT	\$1,500	\$1,700	\$2,000

Figure 4: Monte Carlo Simulation of Families Flourish model, Costs and Benefits Per Child