

Implementing a State Earned Income Tax Credit (EITC) in Pennsylvania: A Benefit-Cost Analysis

Report for the United Way of Pennsylvania

Executive Summary

The federal earned income tax credit, or EITC, is one of the most successful anti-poverty programs in the US, lifting 6 million people (including 3 million children) over the poverty threshold each year, reducing the depth of poverty for many others, and boosting the resources of near-poor households who struggle to make ends meet. The majority of states offer a state-level EITC to working households to supplement the federal credit, typically providing a set percentage of a household's federal benefit. Rigorous research shows that federal and state EITCs increase overall employment and earnings, particularly for single mothers, leading to better economic, social, and health outcomes for families. EITCs benefit state and local governments as well, because increased earnings yield greater tax revenue and reduced spending on public assistance.

Pennsylvania has had its own tax forgiveness program for decades, providing relief to millions of families each year, but the state remains without an EITC. Therefore, some families who struggle financially do not receive tax relief because their income level does not qualify for the current program. A coalition led by the United Way of Pennsylvania is advocating for a refundable state EITC of at least 10% and up to 25% of the federal credit, which can be phased in over time. The current state tax relief program would remain in place under this proposal and families would elect to claim the benefit that offers the greatest tax relief for their household.

This report offers an estimate for the new costs of the proposed refundable state EITC, beyond Pennsylvania's current expenditures for its existing tax forgiveness program, as well as estimates for the benefits to the state and to families. We estimate that with a 10% state EITC, the average annual benefit per household would be \$197, and Black and Hispanic families would receive a greater benefit than the state average. Approximately 10% of all households in Pennsylvania are likely to claim the state EITC and 14% would claim the current tax forgiveness benefit. Therefore, 1 in 4 Pennsylvania households would receive some form of tax relief. Our analysis demonstrates that the annual public benefits of the elective state EITC program would outweigh its costs, with an estimated ratio of approximately 7 to 1 with a 10% credit. The program would improve the quality of life for Pennsylvania's workers and families, while offering significant returns to the state government through increased economic activity, greater tax revenue, and reduced spending on public assistance and human services programs.

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I. Background and Purpose of Report

One of the most cost-effective antipoverty policies currently implemented in the United States is the earned income tax credit, or EITC, and the credit has been administered in various ways at the federal, state, and local levels.¹ First introduced in 1975, the federal EITC offers an annual lump-sum tax credit to families with low income to reduce or eliminate tax liability, depending on the total sum of taxes owed. The federal credit, and most state credits, can also be disbursed in the form of a refund to families with no income tax liability, with the goal of offsetting the burden of other taxes that families are subject to, such as payroll, sales, excise, and property taxes. The Tax Policy Center has called the EITC the “single most effective means tested federal antipoverty program for working-age households” in the US, and this claim is supported by rigorous research.²

Because EITCs are only available to workers with at least some earned income, and because the benefits increase with each additional dollar earned until the maximum credit is reached, the credit is designed to incentivize and reward employment for families with low income (see the benefit schedule in Figure A.1 in the Appendix). The EITC leads to new entrants into the workforce and greater work hours among those already employed because it increases the financial returns from each additional hour of work.³

The EITC’s design targets support toward families with children, because the credit amount increases with each dependent (through three children, above which the credit no longer increases with additional children) and the credit’s value is much smaller for working adults without dependents in the home. Approximately 97% of EITC benefits went to families with children in recent years.⁴ The federal EITC lifts up to 6 million people out of poverty each year, including 3 million children,⁵ and provides approximately \$62 billion per year in refundable tax credits (with an average amount of \$2,461 per family in the US, based on Internal Revenue Service [IRS] data from Tax Year 2019).⁶

As of October 1, 2021, a total of 28 statesⁱ and the District of Columbia have implemented their own state EITCs to supplement the federal credit and provide additional relief to working families (see Table A.1 in the Appendix for details by state). State EITCs vary in their generosity levels, eligibility requirements, and refundability, but most offer a refundable credit of between 10% and 40% of the federal credit, with the value of the credit depending on family size, marital status, and income.

Research has also shown that the presence of a state EITC can encourage greater take-up of the federal EITC among those who are eligible.⁷ Take-up rates among those eligible for the federal EITC range from 70% in Alaska to 82.7% in South Dakota in the most recently published IRS data for this metric (Tax Year 2018); Pennsylvania has the twelfth highest take-up rate, at 80.3%.⁸ In addition, research shows that states with their own EITCs gain more from the federal EITC through increased earnings from greater employment and increased tax revenue to the state.⁹

ⁱ Washington and Missouri have adopted state EITCs in legislation, but they will not be implemented until 2023 (for Tax Year 2022).

Tax Relief in Pennsylvania: Current Policy and the Rationale for an Elective State EITC Program

The Current Tax Relief Program Benefits Many Pennsylvanians

As of October 1, 2021, Pennsylvania is one of 22 states that do not currently offer a state EITC to boost the impact of the federal credit and provide additional tax relief to families.¹⁰ However, since 1974, the state has offered its own tax forgiveness program (hereafter referred to as the “SP,” for Special Provision) which eliminates a percentage of state personal income tax liability (from 10% to 100%) based on a family’s income level, marital status, and number of dependents (see Figure A.2 and Table A.2 in the Appendix).¹¹ According to the Pennsylvania Department of Revenue, the SP program has provided tax relief totaling “more than \$240 million to more than 1 million Pennsylvanians” in recent years.¹²

For certain workers and families, the SP program may offer greater tax relief than a state EITC; for example, the SP offers increased benefits to families with each additional dependent, through nine children, whereas the EITC amount remains the same after three children. In addition, the SP does not have age restrictions for those without dependents, whereas the federal EITC, and most state EITCs, offer benefits to workers without children if they are ages 25 to 64 only.ⁱⁱ

A Refundable State EITC Would Provide Greater Tax Relief to A Broader Group of Workers Who Struggle to Meet Their Households’ Needs

The introduction of a state EITC in Pennsylvania would offer significant advantages to some workers and families when compared to the current tax forgiveness policy. As a complementary program to the SP, a state EITC would ensure that more families in the state can access needed tax relief. For example, the SP program is not refundable, so families with the lowest tax liability levels do not receive benefits exceeding their liability, as they would with a refundable EITC. In addition, state EITCs modeled after the federal credit offer benefits to families with higher income levels than the SP program.

Therefore, tax relief offered by the EITC reaches families with a greater range of needs—not only the poorest, but also those who may struggle to afford the cost of living despite earning above the poverty level. For example, the SP relief phases out (offering no benefits) to a single parent with two children after the family reaches \$27,750 in taxable income, but the federal EITC (and a potential state EITC in Pennsylvania) would continue to offer benefits until the family reached approximately \$48,000 in taxable income (see Figures A.1 and A.2 in the Appendix).

The extension of eligibility higher up the income scale matters because many working families in Pennsylvania struggle to make ends meet even when their incomes do not fall below the federal poverty level (FPL) as it is currently defined. According to the United Way of Pennsylvania,

ⁱⁱ The American Rescue Plan Act of 2021 temporarily reduced the age minimum for the federal EITC to age 19 for one year.

approximately 27% of households in the state earn an annual income that is above the FPL, yet still below a basic survival budget for their household size and cost of living.¹³

These families are described as **Asset Limited, Income Constrained, Employed**, or “ALICE” families. For example, the FPL for a family of four is \$26,500 in 2021, but the United Way estimated that it costs almost \$70,000 for a family of four in Pennsylvania to afford their basic needs over the course of a year, including housing, food, child care for two children, health care, transportation, and taxes.^{14,15} Combining the 27% of Pennsylvania households that are considered “ALICE” with the 12% of households who live below the FPL results in a total of 39% of households in Pennsylvania who struggle to meet their daily needs.¹⁶ Pennsylvania’s minimum wage also remains at the federal level of \$7.25, whereas 30 states and DC offer a higher state minimum wage (22 of which set a wage floor of at least \$10.00 per hour).¹⁷

A State EITC Would Help Remedy Inequitable Tax Burdens in Pennsylvania

Pennsylvania’s flat state income tax, which stands at 3.07% of eligible income for all families regardless of income level, contributes to financial hardship in the state.¹⁸ Among states that have a personal income tax (41 states and DC), only Pennsylvania and Illinois apply a flat tax rate starting with the first dollar of earned income.¹⁹ The Institute on Taxation and Economic Policy ranks Pennsylvania’s tax system as the 7th most inequitable among all 50 states and DC in terms of how the burden of taxation disproportionately falls on families with lower income levels.²⁰

A state EITC represents an important step toward remedying this inequity, and furthermore, federal and state EITCs have been shown to produce positive economic and social ripple effects for families, society, and state and local governments.²¹ Rigorous research has shown that EITCs lead to greater labor force participation and earnings, particularly among single mothers, which translates into lower family and child poverty rates, reduced reliance on public assistance, greater tax revenue, and a host of social and health benefits that often accompany greater resources.²² These spillover effects include lower incidence of low birthweight, reduced need for special education, lower rates of infant mortality, higher educational attainment, lower rates of foster care entry, lower violent crime, lower childhood poverty rates, and more. These benefits and their associated cost avoidance estimates for Pennsylvania are explored in greater depth in Section III of this report. The benefits of a state EITC for marginalized communities, and specifically Black and Hispanic families, are discussed in Section IV.

The Proposed Elective State EITC Program

Given that Pennsylvania has an existing tax relief program, there are at least three ways a state EITC could be implemented. First, a state EITC could be adopted as a replacement for the SP, eliminating the existing program. Eliminating the SP program would disadvantage tax filers who were eligible for the SP but may not be eligible for the EITC, because eligibility requirements differ (see Table A.2 in the Appendix). Second, a state EITC could be implemented in addition to the SP, and families could claim either credit or both credits simultaneously, depending on eligibility (sometimes called a “stacked” EITC). This overlapping option would offer the greatest total tax relief to families, but would be the most costly for the state and may be politically infeasible.

A third proposal, and the one that is the focus of this analysis, is an elective state EITC program, in which tax filers are able to select either the SP benefit or the state EITC (but not both) depending on which they are eligible for and which provides them with the greatest benefit. The elective program would allow individuals to continue to receive the SP tax relief if they do not qualify for the EITC. Families who were previously ineligible for any state tax relief because their incomes exceeded the SP eligibility threshold may be able to claim the state EITC under this option. Families with very low tax liability may be able to claim a refund through the state EITC for the portion of the credit that exceeds their tax liability.

Because of the complexities of each program's benefit schedule, the optimal choice varies based on family size, marital status, and income levels. Therefore, combining the two programs to offer an elective state EITC program may reach more families while also increasing the total value of benefits available to them.

Dating back to the 2005-2006 Pennsylvania legislative session, bills have been filed to establish an elective state EITC because of the balance of advantages it would provide to families and the state.²³ The bills have never been passed, but momentum for a state EITC continues to build, especially as many Pennsylvania families face increased financial hardship because of the economic effects of the COVID-19 pandemic.²⁴

The United Way of Pennsylvania is currently leading a broad-based and growing EITC coalition to advocate for an elective, refundable state EITC program that may offer benefits of at least 10% and up to 25% of the federal credit. The remainder of this report focuses on estimates for the state costs and revenue benefits of a 10% and 25% refundable state EITC, as well as the social, health, and economic benefits likely to accrue to Pennsylvania families and the state at large given prior research on state EITC programs.

Our estimates show that implementing an elective, refundable state EITC program set at 10% of the federal credit will cost the state of Pennsylvania approximately \$80.5 million for the first year, including direct and administrative costs beyond what the state already spends on tax relief. The annual benefits amount to at least \$562 million. For a 25% credit, the expected costs are \$366 million and the likely benefits amount to at least \$1.2 billion.

II. Costs of Implementing a State EITC Program in Pennsylvania

Estimates Provided in Previous Research

Various organizations have conducted cost analyses of alternative versions of a Pennsylvania state EITC. Some of the analyses assume the EITC would replace the SP program, others assume the program would provide additional benefits on top of existing SP benefits (the “stacked” model), and still others have considered the elective program that is the subject of this report.

The most recent public IRS data show that 885,000 tax-filing households in Pennsylvania claimed the federal EITC in Tax Year 2019, costing the federal government a total of \$2 billion, and providing an average tax credit of \$2,289 per household.²⁵ A state credit providing a 10% supplement would therefore offer approximately \$229 on average per household, or \$202.6 million total in benefits, assuming that only, and all, of the 2019 federal EITC recipients would claim the new state credit. Using 2017 data and slightly different assumptions, the Center on Budget and Policy Priorities estimated that a state EITC would cost Pennsylvania \$211 million if set at 10% of the federal credit.²⁶ (Neither of these estimates accounts for the elective program, wherein some families who receive the federal EITC may opt for the SP for their state tax relief instead of the state EITC if the SP benefit is larger.)

An analysis conducted in August 2020 by the Pennsylvania Budget and Policy Center assumed that the state would implement the “stacked” state EITC and estimated the costs of a 20%, 25%, and 30% credit.²⁷ The Center estimated that the costs of the stacked program would be approximately \$397 million annually with a credit set at 20%, rising to \$595 million when set at 30% of the federal credit.

The most comprehensive cost analysis of a Pennsylvania state EITC was conducted in 2009 by the Joint State Government Commission of Pennsylvania, which used data from the state’s Department of Revenue to estimate the short-term and long-term impacts of all three possible state EITC programs: replacement, stacked, and elective.²⁸ The Commission estimated that the elective program would cost \$76.9 million in 2010 dollars with a 10% credit, rising to \$241.9 million at 20%, and finally \$425.2 million for a 30% state credit. To arrive at these figures, the Commission estimated the number of tax filers who would qualify for both programs but who would choose the EITC because the benefit would be larger, and then added to that the number of filers who would qualify for the state EITC but did not qualify for the SP previously (representing new costs to the state). The additional benefits to each household (beyond what the state was already spending on the SP program) were summed to arrive at the total new cost of the elective program, relative to the status quo.

The present analysis uses a similar methodology as the Joint State Government Commission to estimate the costs of the elective program, but uses more recent data and slightly different assumptions, enumerated in the following section.

Cost Estimate: Methodology

Data Set

To estimate the new costs of the elective state EITC program, beyond what Pennsylvania already spends for the current tax relief program (SP), we used data from the US Census Bureau's 2019 American Community Survey (ACS). Because of pandemic-related delays in data collection, final ACS datasets for 2020 were not yet available at the time of this report. ACS data are collected nationwide each year, sampling over 3.5 million households, whose responses are weighted to estimate the complete national and state populations in the US.²⁹ The data are often used to allocate public funding and understand the need for government services and programs across the country. The ACS collects a range of demographic and economic characteristics from each respondent, but we examined the following indicators because they impact a tax filer's eligibility for the EITC and SP and are necessary to determine the precise tax forgiveness benefit that each program may provide the filing individual or family:

- Marital status, age, number of household members who could be claimed as qualified dependents
- Income in the past 12 months, total and amount for each type of income:³⁰ 1) Wages, salary, commissions, bonuses, or tips from all jobs; 2) Self-employment income from own nonfarm businesses or farm businesses, including proprietorships; 3) Interest, dividends, net rental income, royalty income, or income from estates and trusts; 4) Social Security or Railroad Retirement income; 5) Supplemental Security Income (SSI); 6) Public assistance or welfare payments; 7) Retirement, survivor, or disability pensions; and 8) All other income (e.g., child support, alimony, veterans' payments, unemployment benefits, and other subtypes).

Importantly, Pennsylvania taxes income in categories 1, 2, and 3, but does not tax income in categories 4, 5, 6, or 7.³¹ Federal income tax liability includes categories 1, 2, 3, and 7. Some subtypes of income in category 8 may be taxable by the state and/or federal government, but the amount is reported to the ACS as a single total, without disaggregated subtypes. We therefore excluded category 8 from our calculation of each household's taxable income, because many of the subtypes are not taxable in Pennsylvania. To determine which tax-filing units may be potentially eligible for the EITC based on age and number of dependents (before considering income), we divided the respondents into 10 mutually exclusive household types, listed below in Table 1 (see Table A.2 in the Appendix for more detailed eligibility requirements for both the EITC and the SP tax relief program).ⁱⁱⁱ

ⁱⁱⁱ ACS respondents provide their citizenship status, but not work authorization status. Given that EITC eligibility requires recipients to be authorized to work in the US (with a valid Social Security number), we assumed that both citizen and noncitizen respondents to the ACS were authorized to work. This approach may slightly overestimate the number of respondents who are eligible to work, but it is likely that ACS survey respondents who report income have proper work authorization.

We estimated the share of households^{iv} who are eligible for the federal and state EITC based on their level of total taxable income reported in ACS, and calculated their average state EITC benefit with a refundable state EITC worth 10% of the federal credit. The estimates displayed in Table 1 do not yet account for the likelihood that some households may claim the SP instead, which is considered in Table 2.

Table 1: Household (Tax-Filing Unit) Types in Pennsylvania ACS Sample and EITC Eligibility

| | Household Type: Age, Filing Status, Dependents | % of ACS Sample Eligible for EITC When Income is Considered | Average State EITC Benefit (Among Eligible) With a 10% State EITC |
|----|-------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1 | Head of household (HOH) and/or spouse is age 65 or older; no dependents | 0% (ineligible based on demographics) | N/A |
| 2 | HOH and/or spouse is under age 25; no dependents | 0% (ineligible based on demographics) | N/A |
| 3 | Single adult (age 25 to 64), no dependents | 15% | \$29 |
| 4 | Single HOH (any age), 1 dependent | 56% | \$224 |
| 5 | Single HOH (any age), 2 dependents | 61% | \$362 |
| 6 | Single HOH (any age), 3 or more dependents | 69% | \$378 |
| 7 | Two adults filing jointly (ages 25 to 64), no dependents | 4% | \$32 |
| 8 | Two adults filing jointly (any age), 1 dependent | 14% | \$213 |
| 9 | Two adults filing jointly (any age), 2 dependents | 14% | \$309 |
| 10 | Two adults filing jointly (any age), 3 or more dependents | 27% | \$389 |
| | Statewide Average | 15% | \$206 |

^{iv} We use “households” to mean tax-filing units in this report, even though a colloquial household may contain multiple tax-filing units. For example, cohabiting, unmarried couples within the same household are considered to be two separate tax-filing units in our sample because each individual in the couple files a separate tax return.

Assumptions and Methodology

To calculate the total direct costs of the elective state EITC program (including tax revenue forgiven and refunds paid to households), we used the income data provided in the ACS and the benefit schedules shown in Figure A.2 in the Appendix to determine program eligibility and to calculate the following values for each tax-filing unit using the Stata statistical software program:

- Total Pennsylvania personal income tax liability (3.07% flat personal income tax applied to total taxable income)
- Total tax relief under the SP program (if eligible)
- Total state EITC amount (if eligible)

If a filing unit was determined to be eligible for the SP program but not the state EITC, then the unit posed no additional cost to the state of Pennsylvania with the introduction of a state EITC, relative to current expenditures on the SP program.

If a unit was determined to be eligible for the state EITC but not the SP, we assumed the filer would claim the state EITC, and the tax-filing unit’s state EITC amount represented a new cost to the state of Pennsylvania.

If a unit was determined to be eligible for both the SP and the state EITC, we assumed that the filer would claim the benefit offering a larger value. If the SP offered the greater benefit, we did not consider the SP amount to be a new cost to the state of Pennsylvania, because the filing unit may already claim the SP under current policy. However, if the state EITC offered a greater benefit, we calculated the difference between the state EITC benefit and the SP benefit. The difference represents the additional cost to the state of Pennsylvania over what the state may already spend on tax relief for that household through the SP program.

Finally, we summed the additional costs to the state for all households likely to claim state EITC benefits as described above, and this total represents the direct costs of the elective state EITC program. Based on IRS research, the administrative costs of the EITC are typically less than 1% of the benefits (direct costs), so we added an additional 1% to the direct costs to account for administration.³²

Cost Estimates: Findings

Cost Estimates for a 10% Refundable State EITC

We estimated that 1,022,299 households in our sample would claim benefits from the SP program but not the state EITC, with a total SP benefit value of \$216,727,388 (with an average SP benefit of \$212 per household). This total represents a cost that the state of Pennsylvania would incur even in the absence of a new state EITC program. We estimated that 715,652 households would claim the new state EITC either because the EITC benefit is greater than their SP benefit, or because they are ineligible for SP benefits. Their total EITC benefits amount to

\$141,063,096, with an average benefit of \$197^v per household. However, some of the 715,652 households would have previously received SP benefits prior to the introduction of the state EITC. We therefore subtract the SP benefits for households in which the EITC is greater than the SP to calculate new costs to the state as a result of the EITC, over what the state would have spent on those households’ SP benefits had the new EITC program not been implemented.^{vi} The new costs for those claiming the state EITC amount to \$79,751,686. This total represents benefits to Pennsylvania families in tax forgiveness and refunds. Adding 1% of the direct costs to account for administrative expenses results in a total cost to the state of \$80,549,203.

These costs assume that all eligible households claim the benefit, but data show that the EITC does not have a 100% take-up rate. The most recent IRS statistics show that approximately 80.3% of Pennsylvania households eligible for the federal EITC claim the benefit.³³ If we assume an 80.3% participation rate for the state EITC as well, then the total cost (including direct and administrative costs) is reduced to \$64,681,010. A more optimistic 90% participation rate would generate a total cost of \$72,494,283.

The expected total costs of an elective, refundable 10% state EITC range from \$64,681,010 to \$80,549,203 depending on the take-up rate among eligible families. The program would return almost \$80 million to over 715,000 working families in Pennsylvania, beyond current tax relief.

Table 2: Direct Costs of the Elective State EITC Program (10% Refundable State EITC)

| Benefit Claimed | Households | Mean Benefit | Cost to the State | <u>New Cost</u> of the Elective EITC |
|--------------------------------|------------------|--------------|-------------------|--------------------------------------|
| Will Claim Neither EITC nor SP | 5,375,631 | \$0 | \$0 | \$0 |
| Will Claim State EITC | 715,652 | \$197 | \$141,063,096 | \$79,751,686 |
| Will Claim SP | 1,022,299 | \$212 | \$216,727,388 | \$0 |
| Pennsylvania Total | 7,113,582 | | | \$79,751,686 |

Among the households expected to claim the state EITC, the average income is \$21,636, and for households likely to claim the SP benefit, the average income is \$17,412 (shown in Table 3). The likelihood of choosing one benefit over the other depends on multiple interacting factors, including income, number of dependents, marital status, and the phase-in and phase-out structures of each program. Therefore, the optimal choice varies for each family. The average household income for those who claim each of the programs suggests that those who claim the

^v Benefit values are rounded to whole numbers in the tables and text, but precise values for the benefits (including decimal values) were used to generate the totals.

^{vi} A total of 482,920 of the 715,652 households are not eligible for SP benefits, but would be eligible for a potential state EITC, and the 232,732 remaining households are expected to switch from SP to EITC because the EITC offers a larger benefit than the SP. The average difference between the EITC and SP value in our data set among those who ultimately claim the EITC was \$111 (more precisely, 111.4392), which was multiplied by 715,652 to arrive at \$79,751,686.

EITC have slightly higher incomes than those claiming the SP, though both groups have low incomes overall. An elective state EITC program will therefore provide tax relief to a greater number of households who face financial hardship, amplifying the impact of the existing tax forgiveness policy and reaching more families who are considered ALICE in addition to those below the poverty level.

Table 3: Household Characteristics (10% Refundable State EITC)

| Benefit Claimed | Households | Mean Income | Median Income |
|--------------------------------|------------------|-----------------|-----------------|
| Will Claim SP | 1,022,299 | \$17,412 | \$7,879 |
| Will Claim State EITC | 715,652 | \$21,636 | \$16,667 |
| Will Claim Neither EITC nor SP | 5,375,631 | \$69,821 | \$46,467 |
| Pennsylvania Total | 7,113,582 | \$57,442 | \$33,840 |

Cost Estimates for a 25% Refundable State EITC

The expected direct costs of a 25% EITC cannot be calculated by simply multiplying the costs of the 10% EITC by 2.5, because the greater EITC benefit value will likely result in more families switching from the SP to the EITC when eligible for both. Therefore, the proportion of families electing each benefit will change, not just the benefit value. Table 4 shows the direct costs of the 25% state EITC, which amount to \$362,582,613 before administrative costs are considered. This total represents almost \$363 million in tax forgiveness to working Pennsylvania families. Adding a 1% administrative cost produces an estimate of \$366,208,439.

Using the 80.3% and 100% take-up rates provides a range of \$294,065,377 to \$366,208,439 for the total new costs of a 25% state EITC. The 25% credit would provide close to \$363 million in tax credits to over 870,000 working Pennsylvania families beyond current tax relief.

Table 4: Direct Costs of the Elective State EITC Program (25% Refundable State EITC)

| Benefit Claimed | Households | Mean Benefit | Cost to the State | <u>New Cost</u> of the Elective EITC |
|--------------------------------|------------------|--------------|-------------------|--------------------------------------|
| Will Claim Neither EITC nor SP | 5,375,631 | \$0 | \$0 | \$0 |
| Will Claim State EITC | 873,923 | \$594 | \$519,065,517 | \$362,582,613 |
| Will Claim SP | 864,028 | \$140 | \$121,119,791 | \$0 |
| Pennsylvania Total | 7,113,582 | | | \$362,582,613 |

III. Benefits of the Proposed State EITC Program

Comparing the benefits of a state EITC to the program's budgetary cost offers a fuller picture of the net cost of implementing a state EITC in Pennsylvania. We offer estimates for two categories of benefits: the fiscal benefits and the human services cost avoidance for the state.

Fiscal benefits include greater tax revenue and reduced state public assistance spending. Studies overwhelmingly show that federal and state EITCs boost labor force participation and annual hours of work, particularly among women, and this leads to greater household earnings.³⁴ The increased earnings result in greater tax revenue for state and local governments,³⁵ as well as lower expenditures on public assistance programs, because households have greater earned income with which to access needed resources.

Pennsylvania may also avoid significant future costs in health and human services programs as a result of implementing a state EITC. EITCs have been shown in rigorous research to produce a host of positive outcomes for families and society in terms of better social, health, economic, and educational trajectories for both children and adults.^{vii,36} Better outcomes in these areas, such as increased high school graduation rates, better infant health, and lower rates of foster care entry, may save the state significant public funds.

EITC researchers Dr. Jacob Bastian and Dr. Maggie Jones recently calculated the EITC's marginal value of public funds (MVPF)^{viii} to be between \$3.18 and \$4.23 in the short run, indicating that each dollar spent on the EITC produces over \$3 in social value.³⁷ In the long run, their 2021 analysis actually "suggests an MVPF of infinity" (p. 4) because of the savings related to social and health spillover effects over the life course and even intergenerationally.

State Fiscal Impacts of Implementing an EITC in Pennsylvania

Estimates from Previous Research

A 2021 study titled "Do EITC expansions pay for themselves?" demonstrates that the benefits of federal and state EITCs may far exceed their costs.³⁸ The study, conducted by Drs. Bastian and Jones, examined the fiscal and economic impacts of an additional \$1,000 in the maximum possible federal and state EITC benefits available to families in the US given their characteristics such as family size, marital status, and state of residence. The \$1,000 increase in the maximum EITC benefit available, based on a policy change to increase generosity, is considered the additional "EITC exposure," which is a term used in subsequent sections of this analysis to distinguish the policy change from the change in actual EITC benefits that a family may receive once their income is taken into account. The change in exposure is typically used as the predictive variable in EITC impact studies instead of actual benefits received, given that benefits

^{vii} Prior to conducting the benefit-cost analysis, the Prenatal-to-3 Policy Impact Center conducted a comprehensive, systematic review of the evidence for the impact of state EITCs on early childhood outcomes, analyzing the effects found in strong, causal studies of federal and state EITCs. This evidence review can be found in our [Policy Clearinghouse](#). We use these results, as well as results from additional studies, as the basis for calculating the expected benefits in Pennsylvania.

^{viii} A policy's MVPF is the ratio of the benefits to the net government costs.

are a function of income levels, and income level is often independently correlated with the economic and social outcomes explored in EITC studies. To isolate the EITC's effect on such outcomes, separate from the effect of the family's original economic circumstances, an increase in EITC exposure (the policy change) is often used rather than a change in the precise benefits that individual families receive.

The Bastian and Jones study, which used a more sophisticated data set and larger sample than many EITC analyses, ran separate models to isolate the effects of state and federal credits. Results showed that a \$1,000 increase in the maximum state EITC credit available to households led to the following impacts among the study's sample of 1.2 million women ages 19 to 64: a 0.9 percentage point increase in the employment rate, an additional \$1,345 in earnings per household, an additional \$216 in federal and state taxes paid (\$60 of the \$216 represented state taxes), and a reduction of \$234 in public assistance^{ix} received per household (\$98 of the \$234 were state savings).

According to the authors, the results of their study suggest that most expenditures for federal and state EITCs are recouped in the form of greater average tax revenues and reduced public assistance spending per household.³⁹ In addition, the authors assert that once the positive spillover effects from health and social benefits are accounted for (explored further in Section III of this report), the EITC's net cost "appears to be zero or even negative," (p. 18) meaning that the EITC may pay for itself while producing significant benefits for families and society.

Other studies find similar or even greater increases in earnings as a result of more generous EITC policies, depending on whether their samples examine the federal credit as well, and whether their samples only examine unmarried women, or women with low education levels, who are often eligible for greater EITC benefits than married women and those with higher educational attainment. A sample of effects for both employment and earnings is presented below:

Employment

- With each \$1,000 increase in maximum EITC benefits (state and federal), unmarried mothers were between 5 and 9 percentage points more likely to work, depending on the children's ages (Michelmore & Pilkauskas, 2021)⁴⁰
- A 10% state EITC boosted unmarried mothers' employment by 2.1 percentage points (Neumark & Wascher, 2011)⁴¹
- With an additional \$1,000 in maximum EITC benefits, unmarried mothers' weekly work hours increased between 1.6 and 3.0 hours⁴² (Bastian & Lochner, 2021 and Michelmore & Pilkauskas, 2021)

^{ix} Programs included Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), public housing programs, unemployment and disability insurance, Supplemental Security Income (SSI), and worker's compensation benefits.

Earnings

- A \$1,000 increase in maximum possible EITC benefits (state and federal) led to a \$2,000 increase in mothers’ annual pre-tax earnings, with a greater effect (\$2,372) for single mothers (Bastian & Lochner, 2021)⁴³
- A \$1,000 increase in maximum possible EITC benefits (state and federal) led to a \$2,400 increase in annual pre-tax earnings for families with children under age 3 (Micheltmore & Pilkauskas, 2020)⁴⁴
- A 10% state EITC led to a 2.2% increase in earnings among single mothers (Neumark & Wascher, 2011)⁴⁵

Estimates for Pennsylvania: Tax Revenue and Reduced Public Assistance Spending

We use the earnings effects offered in Bastian & Jones (2021) to analyze impacts for Pennsylvania because the study includes a separate analysis for the state EITC, rather than including federal benefits, and the study offers the most recent estimates available.

To estimate the fiscal impacts for Pennsylvania using the effects described in the literature, we first calculate how a 10% and 25% state EITC would change the maximum EITC benefits for various households. The state EITC would increase the maximum EITC exposure by a different amount for families with different numbers of dependents. The maximum credits are the same regardless of whether the tax return is for a single filer/head of household or a married couple filing jointly, but the credit phases out at higher income thresholds for couples filing jointly (see Figure A.1 in the Appendix for details). The maximum federal EITC amount for a family with three or more children is \$6,728. Adding a 10% state credit would therefore offer a \$672.80 increase in maximum possible EITC benefits for such a family (rounded to \$673). Table 5 shows the approximate increase in exposure for each household type using the Tax Year 2021 EITC benefit schedule.

Table 5: Increase in Maximum EITC Exposure with a 10% and 25% Refundable State EITC

| Family Structure | Maximum Federal Credit | Maximum State Credit (10%) | Maximum State Credit (25%) |
|----------------------------------------------------------------------|------------------------|----------------------------|----------------------------|
| 3 or More Dependents (Single Head of Household or Filing Jointly) | \$6,728 | \$673 | \$1,682 |
| 2 Dependents (Single Head of Household or Filing Jointly) | \$5,980 | \$598 | \$1,495 |
| 1 Dependent (Single Head of Household or Filing Jointly) | \$3,618 | \$362 | \$905 |
| No Dependents (Single Head of Household or Filing Jointly) | \$543 | \$54 | \$136 |

Using 2019 Census data for Pennsylvania from the American Community Survey, we apply the above maximum benefits to calculate a weighted average of the increase in maximum state EITC benefits for families with children,^x resulting in an average increase of \$507.71 in maximum state EITC benefits available to families given a 10% credit (or \$1,269.29 with a 25% credit). Most EITC research uses a standard \$1,000 increase in maximum benefits (exposure) to examine the credit's impact, so we adjust the effect sizes from the research to correspond to the \$507.71 average increase in the case of a 10% state credit or \$1,269.29 with a 25% credit.^{xi} We use this adjustment method for benefits that are described in the research using a \$1,000, \$100, or other unit increase. As shown previously in Tables 2 and 4, the actual state EITC benefits received by families likely to claim the credit in Pennsylvania amount to approximately \$197 on average per household for a 10% state EITC, or \$594 with a 25% credit, because not every family receives the maximum credit—some families' incomes put them on the phase-in or phase-out portions of the EITC benefit schedule (shown in Figure A.2 in the Appendix).

Increased State Tax Revenue

Estimate for Personal Income Taxes

To estimate the potential increase in Pennsylvania state income tax revenue as a result of a 10% state EITC, we adjust the average earnings effect of \$1,345 per woman ages 19 to 64 found in Bastian & Jones (2021) as described above, resulting in a \$682.87 earnings increase. Then, we apply the 3.07% Pennsylvania personal income tax rate to the earnings increase of \$682.87 to result in an increase of \$20.96 in state personal income taxes per individual. Finally, we multiply this figure by the number of women ages 19 to 64 in Pennsylvania (3,817,354),⁴⁶ which reflects the sampling strategy in Bastian & Jones for their national analysis.^{xii} The resulting increase in tax revenue is approximately \$80,011,740. Estimates for a 25% state EITC are shown in Table 6.

- **As a result of increased employment and earnings associated with the implementation of a 10% state EITC, Pennsylvania may see an annual benefit of over \$80 million in additional personal income tax revenue (or \$200 million with a 25% credit).**

Estimate for Sales, Payroll, and Unemployment Insurance Taxes

Bastian & Jones (2021) also estimated that for each additional \$1,000 in maximum state EITC benefits, federal and state governments would see increased revenue in the form of sales, payroll, and unemployment insurance (UI) taxes. Out of an estimated \$216 per person in increased sales, payroll, and UI taxes, \$60 was estimated to be state taxes, and \$156

^x We only include families with dependents in this calculation because they are much more likely to be eligible for the EITC, and the very small benefit for workers with no children would skew the average.

^{xi} For example, if a study notes that a \$1,000 increase in maximum EITC benefits would produce a 30% increase in a given positive outcome, then a \$507.71 increase may produce approximately half of that effect, or a 15% increase in our desired outcome.

^{xii} The Bastian & Jones sample includes women ages 19 to 64 who are not dependents, whereas our sample includes women ages 19 to 64, regardless of dependency status, because of data limitations. We expect that a small number of women among the 3.8 million, particularly within the ages of 19 to 24, may be claimed as dependents due to status as full-time students, a disability, or other circumstances.

represented federal taxes. Adjusting the \$60 effect to correspond to the \$507.71 increase in exposure (rather than the standard \$1,000 increase), we estimate that a 10% state EITC would result in a \$30.46 per-person increase in sales, payroll, and UI taxes that accrue to the state. Multiplying the \$30.46 by the sample of women ages 19 to 64 in Pennsylvania yields approximately \$116,276,603 in additional state revenue from these taxes.

- **Pennsylvania may reap an annual benefit of approximately \$116 million in state sales, payroll, and UI taxes as a result of a 10% state EITC program (or \$291 million with a 25% credit).**

Decreased State Public Assistance Spending

Research demonstrates that state and federal EITCs are associated with lower public assistance spending on programs including Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), public housing programs, unemployment and disability insurance, Supplemental Security Income (SSI), and worker’s compensation benefits.⁴⁷ Bastian & Jones (2021) identified a decrease of \$234 in public assistance spending per person with each \$1,000 increase in maximum state EITC benefits, comprised of \$98 in reduced state spending on the programs listed above, and \$136 in reduced federal spending. Adjusting the \$98 to correspond to the \$507.71 increase in state EITC exposure, we calculate a reduction of \$49.75 per person in public assistance spending as a result of a 10% Pennsylvania state EITC. Multiplying the \$49.75 by the same sample as above yields a reduction of \$189,913,362 in public assistance spending on the listed programs.

- **Pennsylvania may see a reduction of approximately \$190 million in public assistance spending with the implementation of a 10% state EITC (or \$475 million with a 25% credit).**

As shown in Table 6, summing the fiscal benefits for a 10% state EITC results in an estimated **\$386 million per year** in state revenue gained through additional taxes and reduced spending. With a 25% EITC, the fiscal benefits amount to approximately **\$966 million**.

Table 6: Fiscal Benefits Per Year with a 10% and 25% Refundable State EITC

| Benefit Category | Benefits with a 10% EITC | Benefits with a 25% EITC |
|--------------------------------------------------------|--------------------------|--------------------------|
| Increased State Tax Revenue (Personal Income Tax) | \$80,011,740 | \$200,067,523 |
| Increased State Tax Revenue (Sales, Payroll, UI Taxes) | \$116,276,603 | \$290,729,681 |
| Reduced Public Assistance Spending | \$189,913,362 | \$474,840,664 |
| Total Fiscal Benefits | \$386,201,705 | \$965,637,868 |

Health and Human Services Impacts and Cost Avoidance as a Result of a State EITC

Below, we present estimates for how a refundable state EITC may improve a range of health and social outcomes for individuals and families in Pennsylvania, including the following selected indicators:

- Child poverty
- Low birthweight incidence and hospital costs
- Need for special education
- Infant mortality
- Foster care entry
- Educational attainment
- Child health coverage
- Crime and public safety
- Adult suicide prevention

Where possible, we monetize the indicators based on cost avoidance figures in policy research and publicly available data specific to Pennsylvania. Based on the assumptions and estimates detailed below, Pennsylvania may avoid approximately \$176 million in health and human services costs per year after implementing a 10% refundable state EITC program, using a low-end estimate, or approximately \$214 million with a 25% credit. The high-end estimate, including private benefits that may be realized over the longer term, reaches \$1.8 billion with a 10% credit or \$2.8 billion with a 25% credit. See the Summary of Benefits, Tables 15 through 17, for details.

Importantly, the cost estimate in Section II represents the additional or marginal cost of a state EITC beyond what Pennsylvania already spends on the SP tax relief program. The benefits of a state EITC offered in this report do not account for the benefits that the SP program may already produce, because there is insufficient research on the social, economic, and health effects of the SP program whereas there is a rich literature on the social spillover impacts of the EITC.

Child Poverty

Research shows that through increasing household resources, state and federal EITC benefits work together to reduce the share of children living below the federal poverty level (FPL).⁴⁸ Effects have been found to be particularly large for families with the youngest children, under age 3, with one study finding that a \$1,000 increase in combined federal and state EITC exposure reduced the poverty rate by 5 percentage points for infants and toddlers, and reduced extreme poverty (below 50% of FPL) by 9 percentage points.⁴⁹

Although state EITCs have a smaller impact on poverty than the federal credit because they provide lower benefits, state EITCs have been shown to independently contribute to mitigating child poverty. One study found that states with refundable EITCs had child poverty rates that were 40% lower than in states without their own EITCs between 1994 and 2003.⁵⁰ More recent research has also found significant, though more modest, effects, showing that state EITCs reduce

child poverty rates (using the Supplemental Poverty Measure^{xiii} or SPM) by between 0.7 percentage points and 1.2 percentage points overall, depending on the study and the generosity of the state credit.⁵¹ Two studies have simulated impacts for Pennsylvania in particular:

- A 2017 study by the University of New Hampshire’s Carsey School of Public Policy estimated that a 10%, 20%, or 30% refundable state EITC may reduce Pennsylvania’s child poverty rate (SPM) by 0.1, 0.4, and 0.8 percentage points, respectively.⁵²
- A 2020 study by leading child poverty scholars estimated that if Pennsylvania were to implement a 43% refundable state EITC,^{xiv} the state may see a 0.67 percentage point reduction in the child poverty rate (SPM).⁵³ If all states adopted a credit of this generosity level, the national child poverty rate was predicted to drop by 1.2 percentage points overall.

US Census data from the 2019 American Community Survey show that 14.8% of Pennsylvania children (or approximately 389,922 children out of 2,634,613 total children, using 2019 Census Population Estimates) lived below the federal poverty level using the Supplemental Poverty Measure,⁵⁴ whereas 16.3% (or approximately 429,442 children) lived in poverty using the Official Poverty Measure.⁵⁵ Applying the most conservative effect shown above for a 10% state EITC, which suggested a 0.1 percentage point reduction in the poverty rate, we estimate 2,635 fewer children in poverty in the state, whereas the 0.4 percentage point effect for a 20% credit suggests 10,538 fewer children, and the 0.8 percentage point effect for a 30% credit suggests 21,077 fewer children in poverty.

The state EITC would bolster the significant impacts of existing federal programs, including the federal EITC and child tax credit, which together lift over 220,000 people (children and adults) out of poverty in Pennsylvania each year.⁵⁶ Research also shows that increasing maximum EITC benefits by \$1,000 leads to a 3 percentage point increase in the share of children whose families earn above 130% of the FPL, and a 1.5 percentage point increase in the share with earnings above 230% of poverty (considered near-poor).⁵⁷

- **A 10% state EITC may lift over 2,635 Pennsylvania children out of poverty and increase household resources for children in near-poor households. A 20% state EITC may lift 10,538 children above the federal poverty level, or 21,077 children with a 30% credit.**

In addition to the significant human toll, child poverty is costly to states and the federal government. The economic cost of child poverty in the US was estimated at \$1.03 trillion in 2021, based on poverty’s impact on crime, health, reduced future earnings, homelessness, and other social ills.⁵⁸ The Pennsylvania Budget and Policy Center has estimated that child poverty costs the state over \$17.5 billion annually, and a state EITC could therefore mitigate these

^{xiii} The Supplemental Poverty Measure (SPM) differs from the Official Poverty Measure because it accounts for tax credits (such as the EITC) and public assistance received. According to the [US Census Bureau](https://www.census.gov/povdata/spm/), the Official Poverty Measure counts “gross before-tax cash income” whereas the SPM counts the “sum of cash income, plus noncash benefits that resource units can use to meet their [food, clothing, shelter, and utilities] needs, minus taxes (or plus tax credits), minus work expenses, medical expenses, and child support paid to another household.”

^{xiv} The study simulated a 43% credit for all states because that was the most generous rate available in the study’s data set, which spanned from 2010-2012.

costs.⁵⁹ Through increasing household resources, lifting adults and children over the federal poverty threshold, and reducing the depth of poverty, the state EITC has numerous measurable impacts in the areas of health, education, and social welfare. These impacts are discussed below, and we offer cost avoidance estimates for each impact.

Low Birthweight and Its Impacts on Special Education and Infant Mortality

One of the most consistent findings in the EITC research is that the credit is linked to better birth outcomes, and in particular, reduced incidence of low birthweight (less than 2,500 grams).⁶⁰ The primary theory of change offered in the research is that women may be able to access better health care, including prenatal care, and may have better nutrition and lower prenatal smoking rates as a result of the additional income from the credit itself and the pre-tax earnings boosts associated with the EITC.⁶¹ This may, in turn, translate to healthier pregnancies and fetal growth, increasing birthweight. Research on state EITCs' impacts on women's health supports this theory, with multiple studies finding that increases in the value of refundable state EITCs lead to significantly fewer reports of poor mental and physical health relative to women in states without an EITC or less generous credits.⁶² Studies have also shown that more generous EITCs allow families to better afford necessary medical care.⁶³

The overall low birthweight rate in Pennsylvania in 2019 was approximately 8.4%, but rates varied by race and ethnicity, with 6.9% of White non-Hispanic infants born low birthweight, 9.0% of Hispanic infants, 14.3% of Black, non-Hispanic infants, and 9.3% of infants with other races and ethnicities.⁶⁴ Research demonstrates that the positive impacts of state EITCs on reducing the incidence of low birthweight are stronger for non-Hispanic Black mothers than for non-Hispanic White mothers (effects are similar for Hispanic and non-Hispanic women overall).⁶⁵ Therefore, a state EITC will not only improve infant health in general, but may narrow disparities in infant health across race and ethnicity for some groups.

The magnitude of the effect of EITCs on birthweight varies across studies depending on the sample, data set, and methodology, but multiple studies suggest that a refundable state EITC worth 10% of the federal credit may result in approximately 1.9 fewer low birthweight births overall per 100 live births in a state.⁶⁶ The effect rises to 3.1 fewer low birthweight births with a 25% credit, or 4.7 fewer low birthweight births with a 40% credit, according to one analysis.⁶⁷

Notably, when samples are limited to mothers with less than a high school education, the impacts of a 10% credit are even greater, producing a reduction of 3.0 low birthweight births per 100 live births, up from 1.9. When we apply the more conservative effect size of 1.9 fewer low birthweight births per 100 live births to the baseline of 134,247 births in Pennsylvania in 2019,⁶⁸ we find that a 10% refundable EITC may lead to 2,551 fewer instances of low birthweight in the state over the course of a year.

Hospital Costs Avoided

Research suggests that hospital stays for newborns with low birthweight or prematurity cost approximately \$14,500 more than stays for newborns without these complications,⁶⁹ and data show that 35% of births in Pennsylvania are covered by Medicaid (public funding).⁷⁰ Of the Medicaid dollars, 52% come from Pennsylvania's state share, with the rest from federal funds.

Using these figures, we calculate that Pennsylvania could save \$6,732,089 in state Medicaid spending over the course of a year because of the reduction in low birthweight linked to a 10% state EITC. A more generous 25% state EITC could save \$10,983,518 over the course of a year.

Table 7: State Medicaid Cost Avoidance Per Year From Reduced Low Birthweight Incidence

| State EITC Level | Low Birthweight Births Prevented | Hospital Cost Avoidance |
|---------------------|----------------------------------|-------------------------|
| 10% Refundable EITC | 2,551 | \$6,732,089 |
| 25% Refundable EITC | 4,162 | \$10,983,518 |

- **With a 10% state EITC, Pennsylvania may avoid over \$6.7 million in state Medicaid spending per year through a reduction in low birthweight incidence (or almost \$11 million with a 25% credit).**

Special Education Costs Avoided

Infants born low birthweight are more likely to face health complications later in life, and research shows that such infants are at increased risk for developmental delays.⁷¹ Therefore, preventing instances of low birthweight through a state EITC may have positive impacts beyond a child’s first year. For example, states may save money on Early Intervention services (Individuals with Disabilities Education Act, IDEA Part C) for children birth to age 3, as well as spending on special education in public schools through age 21.

Multiple studies have found that children born low birthweight are 50% more likely to receive special education in a given month compared with children born with healthy weight,^{72,73} and research shows that approximately 16% of children born low birthweight have special education needs when they reach school age (this rises to approximately 30% for infants with extremely low birthweight, or less than 1,000 grams).⁷⁴ Applying the 50% differential, this means that infants with healthy birthweight have a 10.7% chance of needing special education services when they reach school age compared to the 16% likelihood for children born low birthweight (150% of 10.7% = 16%).

The 2021-2022 Pennsylvania special education budget was \$1,236,815,000,⁷⁵ and data from 2020 suggest that approximately 340,000 students ages 3 to 21 receive special education in the state each year.⁷⁶ A back-of-the-envelope calculation indicates that special education therefore costs close to \$3,638 per pupil. Applying the baseline rates shown above, if 2,551 children were born with healthy birthweight instead of low birthweight given a 10% refundable EITC, then 273 of those children may need special education instead of 408 children (applying the 10.7% likelihood instead of the 16% likelihood). This represents a reduction of 135 students needing special education per year, saving \$491,130. With a 25% refundable EITC leading to 4,162 fewer low birthweight births, the state may see 221 fewer students requiring special education per year, leading to yearly cost savings of \$803,998.

Table 8: Special Education Cost Avoidance From Reduced Low Birthweight Incidence

| State EITC Level | LBW Births Prevented | Fewer Students Needing Special Education | Costs Avoided |
|---------------------|----------------------|------------------------------------------|---------------|
| 10% Refundable EITC | 2,551 | 135 fewer students | \$491,130 |
| 25% Refundable EITC | 4,162 | 221 fewer students | \$803,998 |

- **Pennsylvania may save \$491,130 in a given school year with 135 fewer students needing special education as a result of the birthweight impacts of a 10% state EITC (or \$803,998 with a 25% credit).**

Reduced Likelihood of Infant Mortality

Infants born low birthweight are also more likely to suffer from infant mortality (IM), or death in the first year of life, than those born with healthy birthweight. According to the Centers for Disease Control and Prevention, Pennsylvania has an infant mortality rate of 5.8 per 1,000 live births overall.⁷⁷ Research suggests that infants born weighing less than 2,500 grams are more likely to experience IM than their counterparts with healthy birthweight, and infants born weighing less than 1,500 grams (very low birthweight or VLBW) are even more likely to experience IM. The IM rate for healthy weight infants is estimated at 2.0 per 1,000 births, whereas the rate for low birthweight infants is 13.2 per 1,000, and the rate for very low birthweight infants is 208.9 per 1,000 live births.⁷⁸

A 10% state EITC was estimated to result in 2,551 fewer low birthweight births (leading to 2,551 healthy weight births instead), but this number comprises a mix of infants who may have been born low birthweight and infants who may have been born very low birthweight in the absence of the state EITC. Approximately 8.4% of infants are born low birthweight in Pennsylvania, and this includes the 1.4% of live births in the state that are very low birthweight (with the remaining 7% low birthweight, but not very low).⁷⁹ Comparing the 7% to the 1.4% indicates that low birthweight is 5 times more common than very low birthweight.^{xv}

Using these probabilities, we estimate that among the 2,551 instances of low birthweight prevented by the 10% state EITC, there were 2,126 prevented instances of low birthweight, and 425 prevented instances of very low birthweight. Using the standard value of a statistical life (VSL) in the United States of approximately \$10 million,^{xvi,80} the monetized benefits are presented in Table 9:

^{xv} The 1.4% of births that are very low birthweight (<1,500 grams) may include some infants who are extremely low birthweight (<1,000 grams), which may pose an even greater risk of infant mortality.

^{xvi} The value for infants may be much greater, as some literature suggests that the VSL may decrease with age; the reasoning is that fewer potential life years are lost as an individual’s age increases. Other literature suggests that VSL may rise with age based on productivity until a peak is reached during middle age, after which it declines.

Table 9: Benefits from Reductions in Infant Mortality

| State EITC Level | LBW and VLBW Prevented | Benefit for Reducing LBW | Benefit for Reducing VLBW | Total Benefit |
|----------------------------|--------------------------------------|--------------------------------------------|----------------------------------------------|------------------------|
| 10% Refundable EITC | 2,551: 2,126 LBW and 425 VLBW | 24 fewer instances of IM: \$240 million | 88 fewer instances of IM: \$880 million | \$1,120,000,000 |
| 25% Refundable EITC | 4,162: 3,468 LBW and 694 VLBW | 39 fewer instances of IM: \$390 million | 144 fewer instances of IM: \$1.44 billion | \$1,830,000,000 |

- **Pennsylvania may see a \$1.1 billion benefit from a reduction in infant mortality as a result of a 10% state EITC, or \$1.8 billion with a 25% credit.**

Foster Care

State EITCs have also been shown in multiple studies to have positive impacts on the child welfare system. The credit has been causally linked to reduced rates of child maltreatment and reduced foster care entry.⁸¹ Through increasing the resources available to families, the EITC may reduce parental stress,⁸² leading to more nurturing interactions with children, and the increased income may also help parents better provide for their children’s basic needs, reducing the likelihood of neglect reports.⁸³ Analyses of higher minimum wage policies have found similar results, further corroborating the link between greater household resources and safe family environments.⁸⁴

Studies show that after controlling for other factors, states with EITCs have foster care entry rates that are between 7.4% and 11% lower than in states without EITCs, depending on refundability and generosity level.⁸⁵ For dependent children between ages 16 and 20, the effect may be even greater—a 17% lower foster care entry rate in states with EITCs.⁸⁶

A recent study found that implementing a refundable state EITC^{xvii} may lead to 50 fewer children entering foster care each year per 100,000 children in the state.⁸⁷ Given Pennsylvania’s total child population of 2,634,613,⁸⁸ this effect may translate into 1,317 fewer children entering the foster care system with a new state EITC. The National Council for Adoption has estimated that a year of foster care costs a state, on average, \$28,982 per child, so Pennsylvania may save \$38,169,294 in foster care costs as a result of implementing a refundable EITC.⁸⁹

Table 10: Cost Avoidance from Reductions in Foster Care Entry

| State EITC Level | Foster Care Entries Prevented | Costs Avoided |
|------------------------|-------------------------------|---------------------|
| Refundable EITC | 1,317 | \$38,169,294 |

^{xvii} This study did not specify a precise credit level for this effect, noting only that the credit must be refundable.

In state fiscal year 2018, Pennsylvania state and local expenditures on foster care (excluding federal contributions) amounted to approximately \$625,952,420, representing spending on both family foster care and congregate care settings such as group homes.⁹⁰ The \$38 million in estimated savings from the EITC’s impact represents a 6% decrease in spending on foster care overall in the state each year. In addition, data show that 10,095 children in Pennsylvania entered foster care in 2018,⁹¹ either for the first time or as a re-entry; therefore, the 1,317 fewer entries represent a 13% decrease in entries from the baseline.

- **Pennsylvania may see 1,317 fewer children entering foster care each year and may save \$38 million in foster care spending per year after implementing a refundable EITC.**

Educational Attainment

Both federal and state EITC benefits have been shown to have significant impacts on children’s educational attainment, boosting the likelihood that students graduate high school or receive a General Educational Development certificate (GED), and increasing their chances of graduating from college as well.⁹² Additional family resources may positively support children’s development and facilitate parents’ ability to access educational materials and opportunities for their children.

Pennsylvania’s 2020 high school graduation rate was 87.4%, representing 118,941 graduating seniors among a cohort of 136,155 students.⁹³ Research suggests that an additional \$1,000 in EITC exposure (maximum benefits available) when children are between 13 and 18 years old increases their chances of graduating from high school by 1.2 percentage points.⁹⁴ Given that a state EITC worth 10% of the federal credit would offer Pennsylvania households with children an average increase of \$507.71 in EITC exposure, we adjust the effect size down to an effect of 0.6 percentage points. Applying this effect to Pennsylvania would increase the high school graduation rate to 88% with a 10% credit, graduating 875 additional students. A 25% state EITC may result in 2,101 additional graduates.

Rigorous research demonstrates that the net benefit to the public of each high school graduate is between \$127,000 and \$313,000, depending on the study.^{95,96} These estimates from the literature consider the impacts of education on greater productivity, higher earnings and taxes paid, lower public assistance receipt, lower crime involvement, and other social benefits.^{xviii}

Multiplying the 875 additional graduates in Pennsylvania per year by the \$127,000 expected benefit results in a total benefit of \$111,125,000 over the graduates’ lifetimes. Running the calculations using a 25% state EITC, which increases the maximum possible EITC benefits by

^{xviii} Including separate cost avoidance estimates for educational attainment *and* estimates for crime reduction may risk double-counting some of the benefits of a state EITC, given that the monetized public benefits of educational attainment often incorporate crime reduction already. In our final estimate for human services cost avoidance, we therefore offer low-end and high-end estimates to account for this overlap in benefits, with the former including crime reduction but not educational attainment.

\$1,269.29 for the average family with children, instead results in 2,101 additional graduates (88.9% graduation rate) and monetized benefits totaling \$266,827,000.

Table 11: Benefits from Greater High School Graduation Rates

| State EITC Level | Additional Graduates | Public Benefit |
|---------------------|----------------------|----------------|
| 10% Refundable EITC | 875 | \$111,125,000 |
| 25% Refundable EITC | 2,101 | \$266,827,000 |

- **Pennsylvania may see over \$111 million in benefits from increased high school graduation rates each year as a result of a 10% state EITC (or \$267 million with a 25% credit).**

Child Health Coverage and Outcomes

Research has also shown that increased EITC exposure may lead to higher health insurance rates among children, either because of increased employment among parents (and accompanied increases in employer-sponsored coverage) or because parents are better able to afford private coverage given increased income.⁹⁷ Some studies have found that increases in private health insurance coverage outweigh any losses in public insurance eligibility that may come as a result of higher income from the EITC.⁹⁸ For example, a 2020 analysis found that each additional \$100 in EITC exposure during childhood led to a 0.2 percentage point decrease in the likelihood of being uninsured.⁹⁹ Pennsylvania’s 10% state EITC may therefore lead to a 1 percentage point decrease in the share of children in the state without health insurance.

As of 2020, Pennsylvania’s rate of uninsured children was 4.6%, or 128,000 children,¹⁰⁰ and a 1 percentage point reduction would indicate a new rate of 3.6%, or 100,174 children without health insurance. This change represents 27,826 newly covered children after the introduction of a state EITC. A 2021 study by the Kaiser Family Foundation reported that uncompensated care (health costs incurred by the government) for nonelderly individuals without health insurance amounts to \$796 per person.¹⁰¹ An earlier study (2013) put the figure at \$1,257.¹⁰² Using the more conservative figure, we estimate that Pennsylvania could save a total of \$22,149,496 in health care costs for children who may be newly insured with the introduction of a 10% state EITC.

Table 12: Benefits from Gains in Children’s Health Coverage

| State EITC Level | Children Newly Covered | Uncompensated Care Costs Avoided |
|---------------------|------------------------|----------------------------------|
| 10% Refundable EITC | 27,826 | \$22,149,496 |
| 25% Refundable EITC | 69,565 | \$55,373,740 |

- **Pennsylvania may avoid over \$22 million in uncompensated public health care spending each year with a 10% state EITC (or \$55 million with a 25% credit).**

Research also shows that greater state and federal EITC exposure during childhood may lead to positive long-term outcomes, including better overall health status and lower rates of obesity as an adult. In particular, one study found that an additional \$100 in EITC exposure through age 18 led to a 2.6% increase in adults reporting “very good or excellent health” and a 4.1% reduction in

obesity between ages 22 and 27, with positive but more modest effects through age 51.¹⁰³ Research shows that obesity costs over \$19,000 in lifetime medical expenditures relative to healthy weight individuals.¹⁰⁴ Given the costs that poor health poses to individuals and society, investing in a state EITC may save significant public costs if the credit improves children’s health coverage and outcomes over the life course.

Crime/Public Safety

A recent study shows that introducing a refundable state EITC worth at least 10% of the federal credit reduces violent crime by 11.3%, with an average effect of 40 fewer violent crimes per year per 100,000 people in a state.^{105,xix} The impact is attributed to the EITC’s association with greater employment, reduced poverty, and lower stress among individuals with low income.¹⁰⁶

The violent crime rate in Pennsylvania in 2020 was approximately 390 incidents per 100,000 people (corresponding to a total of 49,793 violent crimes reported, including rape, robbery, assault, and homicide).¹⁰⁷ Applying the estimate for the EITC’s impact, the state may see 350 incidents per 100,000 people instead of 390. In addition to the human toll, violent crime costs the state and society significant funds in terms of court and criminal justice resources, as well as victims’ services and health resources.¹⁰⁸ Research puts the total per-crime cost to the state, the victim, and society^{xx} at \$8,982,907 per homicide, \$240,776 per instance of rape or sexual assault, \$107,020 per other assault, and \$42,310 per robbery. When only criminal justice costs are considered, the costs are \$392,352 per homicide, \$26,479 per instance of rape, \$8,641 per assault, and \$13,827 per robbery.¹⁰⁹

Given the proportion of different types of violent crime in recent data for Pennsylvania,¹¹⁰ we estimate that among the 40 fewer incidents of violent crime per 100,000 people, there would be approximately 1 prevented homicide, 4 prevented rapes, 9 prevented robberies, and 26 prevented assaults. These estimates are per 100,000 people, and given that Pennsylvania’s population is estimated to be 12,801,989 using Census data, we estimate that a refundable state EITC worth at least 10% of the federal credit could prevent approximately 128 homicides per year, 512 instances of rape, 1,152 robberies, and 3,329 assaults.

Table 13: Criminal Justice Cost Avoidance Per Year with a Refundable EITC

| Crime Prevented | Number Prevented | Costs Avoided Per Unit | Total Costs Avoided |
|-----------------|------------------|------------------------|----------------------|
| Homicide | 128 | \$392,352 | \$50,221,056 |
| Rape | 512 | \$26,479 | \$13,557,248 |
| Robbery | 1,152 | \$13,827 | \$15,928,704 |
| Assault | 3,329 | \$8,641 | \$28,765,889 |
| Total | 5,121 | - | \$108,472,897 |

^{xix} The study did not find a statistically significant effect of increasing the credit rate once the EITC was implemented. Therefore, similar to the foster care calculation, only one estimate is presented, rather than a 10% and 25% credit estimate.

^{xx} This includes tangible and intangible costs, including costs associated with victims’ medical and mental health services, loss in productivity associated with criminal offenses, and monetized pain and suffering.

- **Pennsylvania may avoid over \$108 million in criminal justice spending because of 5,121 fewer violent crimes per year with a 10% refundable state EITC.**

Adult Suicide Prevention

Recent research has demonstrated that economic policies, including higher state minimum wages and earned income tax credits, may reduce “deaths of despair” (such as drug overdoses and suicides) among adults, through improving their economic prospects and increasing optimism about the future.¹¹¹ Two rigorous studies show that introducing a refundable state EITC worth at least 10% of the federal credit may reduce completed adult suicides by approximately 3.1% from the baseline rate.¹¹² One of the studies estimated that increasing EITC generosity by 10 percentage points, once the EITC is already enacted (for example, increasing the value from 10% to 20% of the federal credit), can produce an additional 3.9% reduction in suicides.¹¹³

According to the Centers for Disease Control and Prevention, the 2019 Pennsylvania suicide rate was 14.1 fatalities per 100,000 adults.¹¹⁴ Applying the 3.1% decrease would result in 13.7 suicides per 100,000 adults, representing 0.4 fewer instances of suicide per 100,000 adults. There are 10,167,376 adults in Pennsylvania based on 2019 Census Population Estimates,¹¹⁵ so we estimate that the 10% refundable EITC may prevent approximately 41 suicides statewide in a given year. If we apply the standard value of a statistical life (\$10 million) as was done in the infant mortality calculation, this results in a benefit of \$410 million as a result of the lives saved. Applying the additional 3.9% reduction with each 10 percentage point increase in credit generosity increases the number of suicides prevented.

Table 14: Benefits from Suicide Prevention

| State EITC Level | Suicides Prevented Per Year | Benefit |
|---------------------|-----------------------------|---------------|
| 10% Refundable EITC | 41 | \$410 million |
| 25% Refundable EITC | 44 | \$440 million |

- **With a new state EITC, Pennsylvania may prevent 41 or more suicides per year among adults, providing a societal benefit of over \$410 million based on the value of a statistical life.**

Summary of Human Services Cost Avoidance

Many of the above social and health impacts are correlated with one another, and the dollar estimates for cost avoidance or public benefits may overlap in certain cases. For example, many studies of the public benefits of additional high school graduates already include the lower likelihood for high school graduates to become involved in the criminal justice system and to receive public assistance benefits. Therefore, summing the cost avoidance figures for education and criminal justice costs may double count and inflate the benefits of a state EITC. In addition, some of the indicators above (such as the value of a statistical life) represent a more private, long-term benefit to individuals and the state, rather than costs that Pennsylvania state agencies may avoid in a given one-year public budgeting period.

Therefore, we offer a low-end estimate and high-end estimate for human services cost avoidance in Tables 15 and 16. The low-end estimate excludes the following indicators: infant mortality, adult suicide prevention, and high school graduation. This exclusion does not imply that these benefits are less important or less likely to be realized after the implementation of a state EITC. Rather, they represent more long-term benefits, outside of the scope of one year, or their benefits are likely already captured in other indicators. We include these benefits in the high-end estimate.

Table 15: Summary of Human Services Cost Avoidance, Low-End Estimate

| Benefit | Cost Avoidance (10% EITC) | Cost Avoidance (25% EITC) |
|--------------------------------|---------------------------|---------------------------|
| Low Birthweight Hospital Costs | \$6,732,089 | \$10,983,518 |
| Special Education | \$491,130 | \$803,998 |
| Foster Care Entry | \$38,169,294 | \$38,169,294 |
| Crime/Public Safety | \$108,472,897 | \$108,472,897 |
| Child Health Coverage | \$22,149,496 | \$55,373,740 |
| Total Cost Avoidance | \$176,014,906 | \$213,803,447 |

Table 16: Summary of Human Services Cost Avoidance, High-End Estimate with Private Benefits

| Benefit | Public Cost Avoidance and Private Benefits (10% EITC) | Public Cost Avoidance and Private Benefits (25% EITC) |
|--------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Low Birthweight Hospital Costs | \$6,732,089 | \$10,983,518 |
| Special Education | \$491,130 | \$803,998 |
| Foster Care Entry | \$38,169,294 | \$38,169,294 |
| Crime/Public Safety | \$108,472,897 | \$108,472,897 |
| Child Health Coverage | \$22,149,496 | \$55,373,740 |
| Infant Mortality | \$1,120,000,000 | \$1,830,000,000 |
| Educational Attainment | \$111,125,000 | \$266,827,000 |
| Adult Suicide Prevention | \$410,000,000 | \$440,000,000 |
| Total Benefits | \$1,817,139,906 | \$2,750,630,447 |

Summary of Benefits: Fiscal Impacts and Human Services Cost Avoidance

Summing the fiscal impacts (increased tax revenue and reduced public assistance spending) shown in Table 6 (\$386,201,705) with the low-end human services cost avoidance estimate shown in Table 15 (\$176,014,906) results in a total monetized benefit of \$562,216,611 to the state of Pennsylvania for a 10% state EITC (or \$1,179,441,315 with a 25% credit).

Table 17: Summary of Benefits

| Benefits | 10% State EITC | 25% State EITC |
|-------------------------------|----------------------|------------------------|
| Fiscal Benefits | \$386,201,705 | \$965,637,868 |
| Human Services Cost Avoidance | \$176,014,906 | \$213,803,447 |
| Total Benefit | \$562,216,611 | \$1,179,441,315 |

Given Pennsylvania’s 2021-2022 enacted state budget of \$38.5 billion,¹¹⁶ the benefits of a 10% state EITC amount to approximately 1.5% of the state budget. Subtracting the total new costs of the elective program at the 10% rate (estimated at \$80,549,203 including both direct and administrative costs) from the low-end estimate results in a net benefit of \$481,667,408.

The ratio of total benefits to costs with a 10% state EITC is approximately 7 to 1 (\$562 million over \$80.5 million). For a 25% EITC, the ratio is approximately 3 to 1 (\$1.2 billion over \$366 million). The ratio is somewhat more modest for the 25% credit because some of the social benefits of an EITC (e.g., reductions in foster care and crime) have been linked to the introduction of a refundable credit in general, or a credit that is at least 10%, rather than linked to a precise percentage level. In addition, with a 25% credit, more families would be likely to claim the state EITC instead of the SP when they qualify for both, given the higher EITC value, which would increase direct costs to the state. However, the direct costs to the state represent direct monetary benefits to families in the form of tax credits and refunds, equivalent to \$79 million and \$363 million more in the pockets of lower-income working families in Pennsylvania (for a 10% and 25% state EITC, respectively).

IV. Benefits for Marginalized Communities: Race and Ethnicity Groups

Benefits by Race and Ethnicity

The benefits of a state EITC may be particularly significant for communities in Pennsylvania who are disproportionately impacted by low income, high tax burdens, and high cost of living relative to household resources. The 2019 ACS data show that households headed by Black and Hispanic individuals^{xxi} have lower average incomes than White, non-Hispanic households, and the average state EITC benefit (among those expected to claim the EITC in the elective program) is therefore larger among families of color. With a 10% state EITC, the benefit is approximately \$200 per household for Black, non-Hispanic families, \$251 for Hispanic families, \$181 for White families, and \$223 for families reporting other race and ethnicity categories.^{xxii}

Among all families in Pennsylvania, 24% of Black families would be eligible for the state EITC, 32% of Hispanic families, 12% of White families, and 19% of families reporting other races and ethnicities would be eligible. Given that some eligible families may choose to receive the SP benefit in cases where it is larger, the expected rates of EITC take-up differ from the rates of eligibility. We estimate that with a 10% state EITC, 8% of White families would claim the EITC (representing 434,697 households), 17% of Black families (134,325 households), 22% of Hispanic families (101,662 households), and 13% of families reporting other race and ethnicity categories (44,968 households) would claim the credit. With a 25% state EITC, the share of each group that claims the EITC increases (shown in Table 19), because more families with dual eligibility (SP and

^{xxi} Because of data limitations, we are able to examine the race and ethnicity of the head of household for each tax-filing unit in our sample, but not the race and ethnicity of every family member or every dependent in the household.

^{xxii} Because of sample size limitations, not all reported race and ethnicity categories are able to be analyzed separately, so some respondents are grouped into the “other” category.

EITC) are likely to switch from the SP to the state EITC because the state EITC value will be larger than their SP benefit.

Table 18: EITC and SP Take-Up by Race and Ethnicity (10% Refundable State EITC)

| Benefit Claimed | White | Black | Hispanic | Other | PA Total |
|--------------------|-------|-------|----------|-------|----------|
| Will Claim EITC | 8% | 17% | 22% | 13% | 10% |
| Will Claim SP | 15% | 13% | 15% | 14% | 14% |
| Will Claim Neither | 78% | 71% | 63% | 73% | 76% |
| Pennsylvania Total | 100% | 100% | 100% | 100% | 100% |

Table 19: EITC and SP Take-Up by Race and Ethnicity (25% Refundable State EITC)

| Benefit Claimed | White | Black | Hispanic | Other | PA Total |
|--------------------|-------|-------|----------|-------|----------|
| Will Claim EITC | 10% | 20% | 28% | 16% | 12% |
| Will Claim SP | 13% | 9% | 9% | 11% | 12% |
| Will Claim Neither | 77% | 71% | 63% | 73% | 76% |
| Pennsylvania Total | 100% | 100% | 100% | 100% | 100% |

Table 20: Average State EITC Benefit Amounts Claimed by Race and Ethnicity

| Benefit Amount | White | Black | Hispanic | Other | PA Average |
|----------------|-------|-------|----------|-------|------------|
| 10% State EITC | \$181 | \$200 | \$251 | \$223 | \$197 |
| 25% State EITC | \$545 | \$600 | \$753 | \$662 | \$594 |

Many of the social and economic impacts of the EITC have been found to be significantly greater for Black and Hispanic families than White, non-Hispanic families, including effects on low birthweight, poverty, high school graduation, and mothers’ mental health.¹¹⁷ A state EITC program that complements the SP tax relief may contribute to greater equity in the state across racial and ethnic groups.

V. Local Impact: Pennsylvania Regional Benefits

Financial hardship is not uniform throughout the state of Pennsylvania; some regions of the state have higher costs of living and higher concentrations of poverty than others, and families may benefit more from a state EITC in particular areas. For example, Philadelphia County has a 23% poverty rate, whereas nearby Chester County has a 7% poverty rate and Butler County, further west, has a 9% poverty rate.¹¹⁸ To conduct a regional analysis, we grouped Pennsylvania’s 67 counties into 9 regions as shown in Table 21, based on recommendations from the United Way of Pennsylvania.

Table 21: Pennsylvania Regions and Corresponding Counties

| Region | Counties |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Central | Cameron, Centre, Clearfield, Clinton, Elk, Juniata, Lycoming, McKean, Mifflin, Montour, Northumberland, Potter, Snyder, Union |
| Lehigh Valley | Carbon, Lehigh, Northampton |
| Northeast | Columbia, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, Susquehanna, Wayne |
| Northern Tier | Bradford, Sullivan, Tioga, Wyoming |
| Northwest | Clarion, Crawford, Erie, Forest, Jefferson, Mercer, Venango, Warren |
| South Central | Adams, Berks, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry, York |
| Southeast | Bucks, Chester, Delaware, Montgomery, Philadelphia |
| Southern Alleghenies | Bedford, Blair, Cambria, Fulton, Huntingdon, Somerset |
| Southwest | Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington, Westmoreland |

For each region, we estimated the percentage of all households in the region that are eligible for the EITC, the percentage of all households likely to claim the state EITC, and the average benefit, for both a 10% and 25% credit. For example, Table 22 shows that approximately 14% of all households in the Central region are eligible for the state EITC based on their household characteristics and income level. When the state credit is set at 10% of the federal benefit, approximately 9% of all households in the region are likely to claim the state EITC, and when the state credit value is set at 25% of the federal benefit, approximately 11% of households in the Central region are likely to claim the state EITC. Some households eligible for the state EITC may claim the SP instead if the SP benefit is larger.

As shown, the percentage of households likely to claim the state EITC increases in each region when the benefit value increases from 10% to 25%, because more households are likely to switch from the SP to the state EITC (when eligible for both) given the greater value of the state EITC.

Table 22: Regional EITC Take-Up and Benefits (10% and 25% Credits)

| Region | 10% State EITC | | | 25% State EITC | |
|-----------------------|---------------------------|-----------------------|--------------|-----------------------|--------------|
| | % Eligible for State EITC | % Claiming State EITC | Mean Benefit | % Claiming State EITC | Mean Benefit |
| Central | 14% | 9% | \$189 | 11% | \$581 |
| Lehigh Valley | 16% | 11% | \$209 | 14% | \$636 |
| Northeast | 16% | 11% | \$196 | 13% | \$609 |
| Northern Tier | 17% | 11% | \$177 | 15% | \$581 |
| Northwest | 16% | 11% | \$192 | 13% | \$574 |
| South Central | 15% | 10% | \$195 | 13% | \$592 |
| Southeast | 16% | 11% | \$202 | 14% | \$598 |
| Southern Alleghenies | 14% | 9% | \$192 | 11% | \$576 |
| Southwest | 12% | 8% | \$192 | 9% | \$578 |
| State of Pennsylvania | 15% | 10% | \$197 | 12% | \$594 |

VI. Conclusion

The United Way of Pennsylvania is leading a coalition of organizations to advocate for greater tax relief for workers and their families through an elective, refundable state EITC program. As one of just two states with a flat income tax, Pennsylvania has one of the most inequitable tax systems in the US.¹¹⁹ For example, the top 1% of earners in the state pay approximately 6% of their income in state and local taxes, whereas the lowest 20% of earners pay almost 14% of their income in state and local taxes.¹²⁰ Although Pennsylvania has had a tax forgiveness program in place since 1974, which delivers relief to millions of families each year, a refundable state EITC would provide greater benefits to more families who struggle to make ends meet. The proposed elective program would allow families to continue to claim the current tax relief benefit or opt to receive the state EITC, depending on which offers a greater benefit to their household.

Our analysis suggests that an elective program offering a refundable state EITC at 10% of the federal credit would cost the state approximately \$80 million per year over what Pennsylvania already spends on tax forgiveness. Over 715,000 households are likely to claim a 10% state EITC, receiving an average benefit of \$197 per household. When the social and economic benefits to the state are considered, the elective program’s benefits would outweigh its costs by 7 to 1. A 25% refundable state EITC would offer even greater benefits to families, providing an average state EITC benefit of \$594 per household, and a total direct benefit of \$363 million to over 870,000 working families in Pennsylvania.

VII. Appendix

Table A.1: State EITCs in the US

| State | State EITC Value as a % of the Federal EITC (For Tax Year 2021) |
|----------------------|-----------------------------------------------------------------|
| Alabama | No EITC |
| Alaska | No EITC, No Income Tax |
| Arizona | No EITC |
| Arkansas | No EITC |
| California | 85%+, Refundable |
| Colorado | 10%, Refundable |
| Connecticut | 30.5%, Refundable |
| Delaware | 20%, Nonrefundable |
| District of Columbia | 40% (100% for workers without children*), Refundable |
| Florida | No EITC, No Income Tax |
| Georgia | No EITC |
| Hawaii | 20%, Nonrefundable |
| Idaho | No EITC |
| Illinois | 18%, Refundable |
| Indiana | 9%, Refundable |
| Iowa | 15%, Refundable |
| Kansas | 17%, Refundable |
| Kentucky | No EITC |
| Louisiana | 5%, Refundable |
| Maine | 12% (25% for workers without children), Refundable |
| Maryland | 45% (100% for workers without children), Refundable |
| Massachusetts | 30%, Refundable |
| Michigan | 6%, Refundable |
| Minnesota | 39%+, Refundable |
| Mississippi | No EITC |
| Missouri | Nonrefundable EITC of 10% starting in 2023 for Tax Year 2022 |
| Montana | 3%, Refundable |
| Nebraska | 10%, Refundable |
| Nevada | No EITC, No Income Tax |
| New Hampshire | No EITC, No Income Tax |

Table A.1: State EITCs in the US (continued)

| State | State EITC Value as a % of the Federal EITC (For Tax Year 2021) |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| New Jersey | 40%, Refundable |
| New Mexico | 20%, Refundable |
| New York | 30%, Refundable |
| North Carolina | No EITC |
| North Dakota | No EITC |
| Ohio | 30%, Nonrefundable |
| Oklahoma | 5%, Nonrefundable |
| Oregon | 12% for families with dependents under age 3, 9% for all other filers; Refundable |
| <i>Pennsylvania</i> | <i>No EITC</i> |
| Rhode Island | 15%, Refundable |
| South Carolina | 83.3%, Nonrefundable |
| South Dakota | No EITC, No Income Tax |
| Tennessee | No EITC, No Income Tax |
| Texas | No EITC, No Income Tax |
| Utah | No EITC |
| Vermont | 36%, Refundable |
| Virginia | 20%, Nonrefundable |
| Washington | EITC to be implemented in 2023 for Tax Year 2022, and maximum credit will range from \$300 to \$1,200; No Income Tax |
| West Virginia | No EITC |
| Wisconsin | 4% for 1 child, 11% for 2 children, 34% for 3 or more children, Refundable |
| Wyoming | No EITC, No Income Tax |
| Count of Refundable State EITCs in Effect - Tax Year 2021 | 23 (and 6 Nonrefundable) |

Notes: Data as of October 1, 2021. State income tax statutes, analyzed by Prenatal-to-3 Policy Impact Center staff.

*California's stated maximum is 85%, but the typical percentage amount varies considerably based on income and household structure, given California's unique phase-out calculations. Minnesota's EITC is based on a percentage of income instead of a percentage of the federal EITC. This percentage is estimated, on average, to be 39%.

*Although a higher percentage of the federal credit is offered to workers with no children in some states, the credit amount always remains much smaller for such workers than for workers with children because the federal credit value is smaller in absolute terms than the credit for workers with dependents. For example, 100% of \$543 is still much smaller than 40% of \$3,618.

Table A.2: EITC and Pennsylvania Current Tax Relief (SP Program) Eligibility Compared

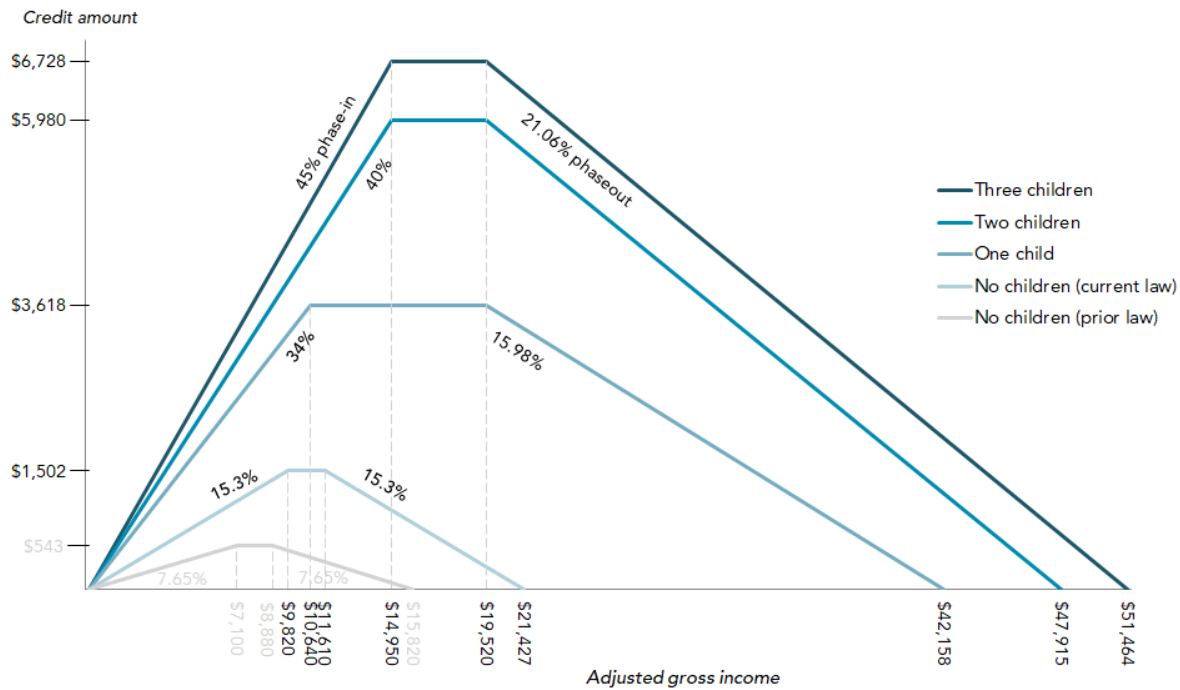
| Federal EITC (and Proposed PA State EITC) | Pennsylvania Current Tax Relief Program (SP) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Filer must be authorized to work in the US (whether as a citizen or noncitizen) and have a valid Social Security Number; must not be a dependent claimed by another filer • Every member of the tax-filing household must also have a valid SSN (Individual Taxpayer Identification Number, or ITIN, is not accepted) • Filer must be between ages 25 and 64 if filer has no qualifying dependents • If the filer has qualifying dependents, then there are no age restrictions • Filer must have investment income lower than \$3,650 regardless of overall income level • Filer must have at least \$1.00 of earned income • Filer cannot claim the credit if filing status is “married, filing separately” • Must have taxable income in the ranges shown in Figure A.1 | <ul style="list-style-type: none"> • Filer must be authorized to work in the US, must not be a dependent claimed by another filer • No age restrictions • Married filers can claim separately • Technically may file with an ITIN, but this does not occur often in practice, per the PA Department of Revenue • Must have taxable income below the thresholds shown in Figure A.2 |

Sources: Internal Revenue Service. (2021). *Who qualifies for the earned income tax credit (EITC)*. <https://www.irs.gov/credits-deductions/individuals/earned-income-tax-credit/who-qualifies-for-the-earned-income-tax-credit-eitc>; Pennsylvania Dept. of Revenue. (2021). *Special tax provisions for poverty – overview*. <https://www.revenue.pa.gov/FormsandPublications/PAPersonalIncomeTaxGuide/Pages/Tax-Forgiveness.aspx>

Figure A.1: Federal EITC Benefit Structure and Thresholds

The federal EITC benefit structure shown in the graphic below is for single or head-of-household tax returns. The specific thresholds for single and married filers are shown in the table. The same phase-in and phase-out rates (percentages) apply for both types of households. State EITCs typically offer a percentage of the federal amount received.

Earned Income Tax Credit
2021



Source: Urban-Brookings Tax Policy Center (2021); Internal Revenue Procedure 2020-45, Internal Revenue Service; and H.R. 1319, "American Rescue Plan Act of 2021," 117th Cong. (2021.)

Notes: Assumes all income comes from earnings. Amounts are for taxpayers filing a single or head-of-household tax return. For married couples filing a joint tax return, the credit begins to phase out at income \$5,940 higher than shown, or \$5,950 if the couple has children.

Source: Tax Policy Center, Urban Institute & Brookings Institution. (2021). *What is the earned income tax credit?* <https://www.taxpolicycenter.org/briefing-book/what-earned-income-tax-credit>

| Filing Status | | No Children | One Child | Two Children | Three or More Children |
|-----------------------------|------------------------------------|-------------|-----------|--------------|------------------------|
| Single or Head of Household | Income at Max Credit | \$7,100 | \$10,640 | \$14,950 | \$14,950 |
| | Maximum Credit | \$543 | \$3,618 | \$5,980 | \$6,728 |
| | Phaseout Begins | \$8,880 | \$19,520 | \$19,520 | \$19,520 |
| | Phaseout Ends (Credit Equals Zero) | \$15,980 | \$42,158 | \$47,915 | \$51,464 |
| Married Filing Jointly | Income at Max Credit | \$7,100 | \$10,640 | \$14,950 | \$14,950 |
| | Maximum Credit | \$543 | \$3,618 | \$5,980 | \$6,728 |
| | Phaseout Begins | \$14,820 | \$25,470 | \$25,470 | \$25,470 |
| | Phaseout Ends (Credit Equals Zero) | \$21,920 | \$48,108 | \$53,865 | \$57,414 |

Source: El-Sibaie, A. (2020). 2021 *Tax brackets*. Tax Foundation. <https://taxfoundation.org/2021-tax-brackets/>

Figure A.2: Pennsylvania Current Tax Forgiveness Program (SP) – Eligibility Chart

ELIGIBILITY INCOME TABLES

ELIGIBILITY INCOME TABLE 1. Unmarried, Separated and Deceased Claimants

If your Eligibility Income from PA Schedule SP, Line 11, does not exceed:

| YOU ⇒ | \$6,500 | \$6,750 | \$7,000 | \$7,250 | \$7,500 | \$7,750 | \$8,000 | \$8,250 | \$8,500 | \$8,750 |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ▼ DEPENDENT CHILDREN | | | | | | | | | | |
| 1 | \$16,000 | \$16,250 | \$16,500 | \$16,750 | \$17,000 | \$17,250 | \$17,500 | \$17,750 | \$18,000 | \$18,250 |
| 2 | \$25,500 | \$25,750 | \$26,000 | \$26,250 | \$26,500 | \$26,750 | \$27,000 | \$27,250 | \$27,500 | \$27,750 |
| 3 | \$35,000 | \$35,250 | \$35,500 | \$35,750 | \$36,000 | \$36,250 | \$36,500 | \$36,750 | \$37,000 | \$37,250 |
| 4 | \$44,500 | \$44,750 | \$45,000 | \$45,250 | \$45,500 | \$45,750 | \$46,000 | \$46,250 | \$46,500 | \$46,750 |
| 5 | \$54,000 | \$54,250 | \$54,500 | \$54,750 | \$55,000 | \$55,250 | \$55,500 | \$55,750 | \$56,000 | \$56,250 |
| 6 | \$63,500 | \$63,750 | \$64,000 | \$64,250 | \$64,500 | \$64,750 | \$65,000 | \$65,250 | \$65,500 | \$65,750 |
| 7 | \$73,000 | \$73,250 | \$73,500 | \$73,750 | \$74,000 | \$74,250 | \$74,500 | \$74,750 | \$75,000 | \$75,250 |
| 8 | \$82,500 | \$82,750 | \$83,000 | \$83,250 | \$83,500 | \$83,750 | \$84,000 | \$84,250 | \$84,500 | \$84,750 |
| 9 | \$92,000 | \$92,250 | \$92,500 | \$92,750 | \$93,000 | \$93,250 | \$93,500 | \$93,750 | \$94,000 | \$94,250 |

Then your Percentage of Tax Forgiveness and the Decimal Equivalent is:

| 100% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.0 | .90 | .80 | .70 | .60 | .50 | .40 | .30 | .20 | .10 |

NOTE: If claiming more than nine dependent children, review the PA Personal Income Tax Guide on the department's website.

ELIGIBILITY INCOME TABLE 2. Married Claimants, even if filing separately

If your Eligibility Income from PA Schedule SP, Line 11, does not exceed:

| YOU & ⇒ SPOUSE | \$13,000 | \$13,250 | \$13,500 | \$13,750 | \$14,000 | \$14,250 | \$14,500 | \$14,750 | \$15,000 | \$15,250 |
|-----------------------------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|
| ▼ DEPENDENT CHILDREN | | | | | | | | | | |
| 1 | \$22,500 | \$22,750 | \$23,000 | \$23,250 | \$23,500 | \$23,750 | \$24,000 | \$24,250 | \$24,500 | \$24,750 |
| 2 | \$32,000 | \$32,250 | \$32,500 | \$32,750 | \$33,000 | \$33,250 | \$33,500 | \$33,750 | \$34,000 | \$34,250 |
| 3 | \$41,500 | \$41,750 | \$42,000 | \$42,250 | \$42,500 | \$42,750 | \$43,000 | \$43,250 | \$43,500 | \$43,750 |
| 4 | \$51,000 | \$51,250 | \$51,500 | \$51,750 | \$52,000 | \$52,250 | \$52,500 | \$52,750 | \$53,000 | \$53,250 |
| 5 | \$60,500 | \$60,750 | \$61,000 | \$61,250 | \$61,500 | \$61,750 | \$62,000 | \$62,250 | \$62,500 | \$62,750 |
| 6 | \$70,000 | \$70,250 | \$70,500 | \$70,750 | \$71,000 | \$71,250 | \$71,500 | \$71,750 | \$72,000 | \$72,250 |
| 7 | \$79,500 | \$79,750 | \$80,000 | \$80,250 | \$80,500 | \$80,750 | \$81,000 | \$81,250 | \$81,500 | \$81,750 |
| 8 | \$89,000 | \$89,250 | \$89,500 | \$89,750 | \$90,000 | \$90,250 | \$90,500 | \$90,750 | \$91,000 | \$91,250 |
| 9 | \$98,500 | \$98,750 | \$99,000 | \$99,250 | \$99,500 | \$99,750 | \$100,000 | \$100,250 | \$100,500 | \$100,750 |

Then your Percentage of Tax Forgiveness and the Decimal Equivalent is:

| 100% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.0 | .90 | .80 | .70 | .60 | .50 | .40 | .30 | .20 | .10 |

NOTE: Tables include a \$9,500 allowance for each dependent.

www.revenue.state.pa.us

Source: Pennsylvania Department of Revenue. Tax forgiveness for PA personal income tax. <https://www.revenue.pa.gov/FormsandPublications/FormsforIndividuals/PIT/Documents/rev-631.pdf>

Figure A.3: Elective State EITC Program – Eligibility, Take-Up, and Benefits (10% Refundable State EITC)

| Eligibility for Both Programs | | | | | | | |
|---------------------------------|------------|--------------|---------|---------------------|--------|-------|--------|
| | Households | Federal EITC | | PA State EITC (10%) | | SP | |
| | | Mean | Median | Mean | Median | Mean | Median |
| Ineligible for both EITC and SP | 3,964,719 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Eligible for both EITC and SP | 582,155 | \$2,687 | \$2,755 | \$269 | \$275 | \$355 | \$248 |
| Eligible for EITC, not SP | 482,920 | \$1,309 | \$749 | \$131 | \$75 | \$0 | \$0 |
| Eligible for SP, not EITC | 2,083,788 | \$0 | \$0 | \$0 | \$0 | \$34 | \$0 |
| State of PA | 7,113,582 | \$309 | \$0 | \$31 | \$0 | \$39 | \$0 |
| EITC Eligibility | | | | | | | |
| | Households | Federal EITC | | PA State EITC (10%) | | SP | |
| | | Mean | Median | Mean | Median | Mean | Median |
| EITC Eligible | 1,065,075 | \$2,062 | \$1,457 | \$206 | \$146 | \$194 | \$34 |
| EITC Ineligible | 6,048,507 | \$0 | \$0 | \$0 | \$0 | \$12 | \$0 |
| State of PA | 7,113,582 | \$309 | \$0 | \$31 | \$0 | \$39 | \$0 |
| SP Eligibility | | | | | | | |
| | Households | Federal EITC | | PA State EITC (10%) | | SP | |
| | | Mean | Median | Mean | Median | Mean | Median |
| SP Eligible | 2,665,943 | \$587 | \$0 | \$59 | \$0 | \$104 | \$0 |
| SP Ineligible | 4,447,639 | \$142 | \$0 | \$14 | \$0 | \$0 | \$0 |
| State of PA | 7,113,582 | \$309 | \$0 | \$31 | \$0 | \$39 | \$0 |
| Likely Claimants and Benefits | | | | | | | |
| | Households | Federal EITC | | PA State EITC (10%) | | SP | |
| | | Mean | Median | Mean | Median | Mean | Median |
| Will Claim EITC | 715,652 | \$1,971 | \$1,581 | \$197 | \$158 | \$86 | \$0 |
| Will Claim SP | 1,022,299 | \$768 | \$0 | \$77 | \$0 | \$212 | \$109 |
| Will Claim Neither | 5,375,631 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| State of PA | 7,113,582 | \$309 | \$0 | \$31 | \$0 | \$39 | \$0 |

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