



# Implementing a Refundable State Earned Income Tax Credit in South Carolina

## A Benefit-Cost Analysis

March 2023

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ANALYSIS CREATED FOR THE INSTITUTE FOR CHILD SUCCESS (ICS)

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### Executive Summary

The federal earned income tax credit (EITC) is an anti-poverty program that incentivizes employment in the U.S. Only available to workers with earned income, the federal EITC provides an annual lump-sum tax credit to families with low incomes to reduce or eliminate tax liability. Most states offer a state-level EITC to supplement the federal credit, typically providing a set percentage of a household's federal benefit. Research suggests that federal and state EITCs increase employment and earnings and improve families' economic, social, and health outcomes. State EITCs can also increase tax revenue and reduce public assistance spending for federal and local governments.<sup>1,2</sup>

Eligible tax filers in South Carolina can currently claim a nonrefundable state EITC, with a credit worth 125% of the federal credit beginning in tax year 2023.<sup>1</sup> The Institute for Child Success is interested in understanding the costs and benefits of a refundable state EITC of at least 10% and up to 25% of the federal credit, which would reach more families in South Carolina than the current nonrefundable EITC. The nonrefundable EITC would remain in place under this proposal and families would elect to claim the benefit that offers the greatest value for their household.

**The analysis presented in this report estimates the additional costs and benefits to South Carolina of implementing a 10% or 25% refundable EITC beyond the state’s 125% nonrefundable EITC (effective in tax year 2023).** We estimate that with a 10% state EITC, the average annual benefit per household would be \$265, and Black and Hispanic families would receive a greater benefit than the state average. About 5% of all households in South Carolina are likely to claim the 10% refundable EITC and 12% would claim the 125% nonrefundable EITC. Therefore, about 1 in 6 households in South Carolina would receive some level of EITC benefit. Our analysis demonstrates that the annual public benefits of the elective refundable state EITC program would outweigh its costs, with an estimated ratio of about 10 to 1 with a 10% credit. The program could provide an improvement in the quality of life for workers and families in South Carolina, and a concomitant return to the state government through increased economic activity, greater tax revenue, and reduced spending on public assistance and human services programs.

- **A refundable state EITC at 10% of the federal credit would cost South Carolina approximately \$16 million above the cost of the 125% nonrefundable EITC, effective tax year 2023. A refundable EITC at 25% would cost approximately \$101 million.**
- **Implementing a refundable state EITC at 10% of the federal credit could provide South Carolina approximately \$172 million in fiscal and human services benefits. A refundable EITC at 25% could provide approximately \$427 million in benefits.**
- **Our analysis shows a 10 to 1 benefit-to-cost ratio of implementing a refundable state EITC at 10% of the federal credit and a 4 to 1 benefit to cost ratio of implementing a refundable EITC at 25%.**

## Background and Purpose

The purpose of the analysis is to better understand the costs and benefits associated with an expansion of the state earned income tax credit (EITC) in the context of South Carolina. The content and methodology used in our analysis is informed by a previous Prenatal-to-3 Policy Impact Center report, *Implementing a State Earned Income Tax Credit in Pennsylvania: A Benefit-Cost Analysis*, authored by Cynthia Osborne, Ph.D., Nawal Traish, MPAff, LMSW, and Jeanette Cunningham Rottas, M.A.<sup>3</sup>

## Current Tax Context in South Carolina

Passed in 2017, H. 3516 allowed eligible tax filers in South Carolina to claim a nonrefundable EITC worth 20.83% of the federal credit beginning tax year 2018.<sup>4,5</sup> The percentage of the nonrefundable credit has increased each tax year, in equal installments, 20.83%, until reaching 125% of the federal credit in tax year 2023.<sup>4</sup> During the 2022 legislative session, there was not any legislation proposed directly related to expanding the state EITC. Legislators did propose a bill (S.B. 341), however, to allow a pregnant person to claim a fetus as a dependent for any federal and state child-related tax credits, including the state EITC. The bill did not pass.<sup>1</sup> Beginning in tax year 2023, filers will be able to claim a nonrefundable EITC worth 125% of the federal credit. As of October 1, 2022, 27 states have adopted and implemented refundable state EITCs to supplement the federal credit. The levels of refundable state credits range from 3 percent of the federal credit in Montana to a maximum of 70 percent in DC.<sup>1,2,i</sup>

## Proposal Under Evaluation

In our analysis estimating the added costs and benefits to South Carolina of both a 10% and 25% refundable EITC, we present:

- 1. Costs of the Refundable EITC Proposals in South Carolina**
  - 1.1. Methodology
  - 1.2. Findings
- 2. Benefits of the Refundable EITC Proposals in South Carolina**
  - 2.1. Refundable EITC Proposal Impacts – Fiscal
  - 2.2. Refundable EITC Proposal Impacts – Health and Human Services Spending
- 3. Summary**

## 1. Costs of the Refundable EITC Proposals in South Carolina

We provide a description of the data used for our analysis and our methodology for determining EITC eligibility and calculating costs. Our estimates denote that the additional cost to South Carolina of implementing a refundable EITC at 10% or 25% of the federal level is approximately \$16 million or \$101 million, respectively.

### 1.1 Methodology

#### Data Set

To estimate the new costs of the elective refundable state EITC program, beyond what South Carolina already spends for the nonrefundable EITC (increasing to 125% in tax year

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<sup>i</sup> Some states do not structure EITC programs as a percent of the federal credit.<sup>1</sup>

2023), we used data from the U.S. Census Bureau's 2021 American Community Survey (ACS). 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.<sup>6</sup> 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 are necessary to determine the precise benefit that each EITC level 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: 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).<sup>7</sup>

Both South Carolina and the federal government tax income in 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. 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 (see Table 1).

We estimated the share of households who are eligible for the federal and state EITC based on their level of total taxable income reported in the 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 125% nonrefundable EITC instead (see Table 2 for estimates of how many households claim each credit).

Table 1: Household (Tax-Filing Unit) Types in South Carolina 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%	\$0
2	HOH and/or spouse is under age 25; no dependents	0%	\$0
3	Single adult (age 25 to 64), no dependents	15%	\$29
4	Single HOH (any age), 1 dependent	64%	\$228
5	Single HOH (any age), 2 dependents	66%	\$366
6	Single HOH (any age), 3 or more dependents	72%	\$409
7	Two adults filing jointly (ages 25 to 64), no dependents	5%	\$42
8	Two adults filing jointly (any age), 1 dependent	18%	\$217
9	Two adults filing jointly (any age), 2 dependents	19%	\$376
10	Two adults filing jointly (any age), 3 or more dependents	29%	\$349
<b>Statewide Average</b>		17%	\$226

## Assumptions and Methodology

### Determining EITC Eligibility

We applied the EITC eligibility requirements as published by the IRS to determine if an individual or family in the ACS sample is eligible for the EITC. The IRS requires the filer and their spouse, if filing a joint return, to have a social security number valid for employment. We cannot identify individuals with a social security number in the ACS data and used the presence of an individual’s earned income as a proxy for their ability to work. To be eligible

for the EITC, individuals must also be a U.S. citizen or resident alien for the entire year, or be a nonresident alien married to a U.S. citizen or resident alien.<sup>8</sup>

The ACS data only capture whether someone is a U.S. citizen and do not include information about resident or nonresident alien status. We therefore did not limit the EITC eligible population to only those who are U.S. citizens, because we could incorrectly exclude resident aliens or nonresident aliens married to a citizen or resident alien from the eligible population. This decision may overestimate the EITC eligible population and the costs of the refundable EITC.

South Carolina further requires a tax filer to be a full-year resident of South Carolina to be eligible for the EITC.<sup>9</sup> The ACS data do not capture state residency, so we assumed that anyone living in South Carolina in the ACS data is a full-year resident.

The IRS details eligibility criteria regarding foreign earned income, investment income, and employment income. First, tax filers with foreign earned income are not eligible for the EITC. The ACS data do not capture foreign earned income, so we do not use this criterion in our definition of EITC eligibility.

Second, filers are not eligible for the EITC if they have investment income greater than or equal to \$10,000. We therefore exclude those with category 3 income (defined above) greater than or equal to \$10,000 from the EITC-eligible population. Finally, filers must have income from employment or self-employment. We include anyone whose category 1 and category 2 income totals sum to a positive dollar amount in the EITC-eligible population.

Individuals filing taxes as “married filing separately” are not eligible for the EITC. Because we cannot identify an individual’s tax filing status in the ACS data, we assume all individuals who are married file their taxes jointly. Tax filers claimed as the qualifying child of another person are ineligible for the EITC. The ACS data do not capture whether someone is claimed as the qualifying child of another tax filer, so we assumed that the householder identified in the ACS is not claimed as the dependent of someone else. We constructed tax filing units based on each individual’s reported relationship to the ACS householder.

Tax filers with qualified dependents are eligible for the EITC, regardless of age, whereas tax filers without children must be between 25 and 64 years old to be eligible. Qualified dependents must be 18 years old or younger or be between 19 and 23 years old and enrolled in school. Dependents are identified based on their ACS-identified relationship to the householder (e.g., son, daughter, etc.).

Although the ACS data identify whether couples are married spouses or unmarried partners, South Carolina requires a couple to be legally married to file as married filing

jointly.<sup>10</sup> Therefore, we treated cohabiting partners as two separate tax filing units when determining eligibility and we assigned children in the household as the dependent of the partner with a higher income (in the case that both partners have the same income, we assigned children as the dependent of the ACS-identified head of household).

### *Calculating Costs*

To calculate the total direct costs of the elective state EITC program, we used the income data provided in the ACS and the tax benefit schedules to determine program eligibility for each tax filing unit. Using that information, we calculated the following values for each tax-filing unit:<sup>ii</sup>

- Total South Carolina personal income tax liability,
- Total benefit from the 10% and 25% refundable EITC, and
- Total benefit from the 125% nonrefundable EITC (determined by comparing EITC amount to tax liability).

We defined South Carolina tax liability using the following tax brackets:

- Bracket 1 (\$0 to \$3,199): 0% times household income,
- Bracket 2 (\$3,200 to \$16,039): 3% times household income minus \$96, and
- Bracket 3 (\$16,040 and greater): 6.5% times household income minus \$658.<sup>11</sup>

We determined a tax filer's federal EITC benefit based on their eligibility criteria, household income, and the benefits schedules shown in Table A.1 in the Appendix. A filer's benefit from the 10% or 25% refundable state EITC was defined as 10% or 25% of the federal EITC, because the filer will receive the full value of the benefit in reduced tax liability, or reduced tax liability and the portion of the credit beyond the value of their tax liability.

To calculate a filer's benefit from the 125% nonrefundable state EITC, we compared their state tax liability using the tax brackets above to 125% of the federal EITC. If their state tax liability was less than or equal to 125% of the federal EITC, we assigned their state EITC benefit as the amount of their state tax liability, because the filer does not receive a credit beyond the value of their tax liability. If their state tax liability was greater than 125% of the federal EITC, we assigned their nonrefundable EITC benefit as 125% of the federal EITC, because the filer sees the whole EITC benefit in reduced tax liability.

For tax filing units eligible for the EITC, we assumed that the filer would claim the benefit (nonrefundable or refundable state EITC) that offered a larger value. If the filer would

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<sup>ii</sup> Estimates were calculated using the statistical software program, Stata.



benefit equally from the two options, we assumed they would claim the current nonrefundable state EITC. If the 125% nonrefundable EITC offered the greater benefit, we did not consider the credit amount to be a new cost to the state of South Carolina, because the filing unit can already claim the 125% EITC under current policy.

However, if the 10% or 25% refundable state EITC offered a greater benefit, we calculated the difference between the refundable EITC benefit and the nonrefundable EITC benefit. The difference represents the additional cost to the state of South Carolina over what the state may already spend on tax relief for that household under the 125% nonrefundable state EITC.

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.<sup>12</sup>

The cost estimates of a refundable EITC represent the additional or marginal cost of a state EITC beyond what South Carolina already spends on the nonrefundable state EITC, whereas the benefit estimates of a refundable state EITC offered in this analysis do not, in all cases, account for the possible benefits that the existing state EITC may already produce. Where our estimates are likely overstated, we are careful to exclude possible benefits from the total benefits calculation.

## 1.2 Findings

### Cost Estimates for a 10% Refundable EITC

We estimate that 328,556 households in South Carolina will claim the 125% nonrefundable EITC with a total benefit value of \$281,882,123– the amount that South Carolina will spend even in the absence of a refundable EITC.

We expect that approximately 148,549 households would claim a refundable 10% EITC, costing South Carolina \$39,360,197. These 148,549 households consist of 47,879 households who previously, under the 125% nonrefundable EITC, received \$0 because they had no tax liability and 100,670 households who received a positive credit but would receive a larger credit from the 10% refundable EITC. See Table A.4 in the Appendix for a more detailed breakdown of the number of households selecting each credit.

Because all 148,549 of those households are eligible for the 125% EITC as well, we estimate the new cost of a 10% refundable EITC by subtracting the benefit they would receive from a 125% nonrefundable EITC from the benefit they would receive from a 10% refundable

EITC. This average additional cost of \$109 per household yields a new cost of a refundable 10% EITC at \$16,124,073. Adding 1% of the direct costs to account for administrative expenses and assuming 100% take up results in a total cost to the state of \$16,285,314.<sup>iii</sup>

Actual costs of a 10% refundable EITC will likely be lower than this estimate, given the most recent IRS statistics show that about 77.7% of South Carolina households eligible for the federal EITC claim the benefit, lower than the 100% take-up rate assumed.<sup>13</sup>

**The costs of an elective 10% refundable state EITC are approximately \$16 million above the cost of a 125% nonrefundable EITC, providing benefits to over 148,000 working families in total (approximately 48,000 of which previously received \$0 under the nonrefundable EITC).**

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

Benefit Claimed	Households	Mean Benefit	Cost to the State	<u>New Cost of the 10% EITC</u>
<b>Will Claim Refundable 10% EITC</b>	148,549	\$265	\$39,360,197	\$16,124,073
<b>Will Claim 125% EITC</b>	328,556	\$858	\$281,882,123	\$0
<b>Will Claim Neither 10% Nor 125% EITC</b>	2,297,270	\$0	\$0	\$0
<b>South Carolina Total</b>	2,774,375			\$16,124,073

Among the households expected to claim the 10% refundable EITC, the average income is \$7,678, and for households likely to claim the 125% nonrefundable EITC, the average income is \$26,279 (shown in Table 3). The average household income for those who claim the 125% EITC is higher than the average household income for those who claim the 10% EITC, suggesting that the 10% EITC will provide tax relief to a greater number of households who face financial hardship.

<sup>iii</sup> Values are rounded to whole numbers in the text. Sharp numbers were used for the calculations.

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

Benefit Claimed	Households	Mean Income	Median Income
<b>Will Claim Refundable 10% EITC</b>	148,549	\$7,678	\$6,592
<b>Will Claim 125% EITC</b>	328,556	\$26,279	\$25,748
<b>Will Claim Neither 125% Nor 10% EITC</b>	2,297,270	\$60,838	\$38,107
<b>South Carolina Total</b>	2,774,375	\$53,899	\$31,310

### Cost Estimates for a 25% Refundable EITC

We estimate that increasing the refundable EITC from 10% to 25% would increase the number of households choosing the refundable EITC over the 125% nonrefundable EITC. For the households who would choose the 25% refundable EITC over the 125% nonrefundable EITC, the 25% refundable EITC costs about \$429 per household above the value of the 125% nonrefundable EITC for these families, totaling to \$100,877,777 in direct costs to the state. Adding a 1% administrative cost produces an estimate of \$101,886,555.

Of the 234,910 households we expect to claim the 25% nonrefundable EITC, 47,879 previously received \$0 under the 125% nonrefundable EITC because they had no tax liability, and 187,031 previously received a positive credit but would receive a larger credit under the 25% refundable EITC. See Table A.5 in the Appendix for a more detailed breakdown of the number of households selecting each credit.

**An elective 25% refundable state EITC may provide tax credits to approximately 235,000 working South Carolina families (including approximately 48,000 who previously received \$0 under the nonrefundable EITC), representing about \$102 million in new costs to the state beyond the existing 125% nonrefundable EITC.**

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

Benefit Claimed	Households	Mean Benefit	Cost to the State	New Cost of the 25% EITC
<b>Will Claim Refundable 25% EITC</b>	234,910	\$735	\$172,630,097	\$100,877,777
<b>Will Claim 125% EITC</b>	242,195	\$964	\$233,365,975	\$0
<b>Will Claim Neither 25% Nor 125% EITC</b>	2,297,270	\$0	\$0	\$0
<b>South Carolina Total</b>	2,774,375			\$100,877,777

## 2. Benefits of the Refundable EITC Proposals in South Carolina

We provide estimates for two categories of benefits: fiscal and health and human services spending. Where available, we present the possible savings for South Carolina associated with implementing a refundable EITC. We base our estimates on statistically significant effects of state EITCs found in strong, causal research.<sup>2,iv</sup> Based on the methodology and estimates presented, South Carolina may reduce health and human services spending by \$12 million per year after implementing a refundable 10% state EITC, or about \$28 million after implementing a refundable 25% credit. The high-end estimate, including private benefits that may be realized over the longer term, reaches \$1.1 billion with a 10% credit or nearly \$1.7 billion with a 25% refundable credit (see Tables 15 through 17 for details).

### 2.1 Refundable EITC Proposal Impacts – Fiscal

#### Estimates for South Carolina: Tax Revenue and Public Assistance Spending

We rely on earnings effects found in Bastian & Jones (2021) because the study includes the most recent estimates available with a separate analysis for the state EITC, rather than combining state and federal benefits.<sup>14,v</sup> The study 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 U.S. 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,”

<sup>iv</sup> For more information on how rigorous studies were identified and estimates founds see the Prenatal-to-3 Policy Impact Center’s State Earned Income Tax Credit Evidence Review at <https://pn3policy.org/policy-clearinghouse/2022-state-earned-income-tax-credit/>.<sup>2</sup>

<sup>v</sup> Estimates from Bastian & Jones used in this analysis can be found in Supplementary material Appendix A of their 2021 publication.<sup>14</sup>

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 considered.<sup>14</sup>

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%)
<b>3 or More Dependents (Single Head of Household or Filing Jointly)</b>	\$6,935	\$693.50	\$1,733.75
<b>2 Dependents (Single Head of Household or Filing Jointly)</b>	\$6,164	\$616.40	\$1,541.00
<b>1 Dependent (Single Head of Household or Filing Jointly)</b>	\$3,733	\$373.30	\$933.25
<b>No Dependents (Single Head of Household or Filing Jointly)</b>	\$560	\$56	\$140

Source: Internal Revenue Service (IRS).<sup>15</sup>

**Impact of the Proposals on Personal Income Taxes**

To estimate the potential increase in South Carolina state income tax revenue as a result of a refundable 10% state EITC, we adjust the average earnings effect of \$1,345 per woman ages 19 to 64 found in Bastian & Jones (2021).<sup>14</sup> We take the average increase in maximum EITC benefits divided by \$1,000 and multiply by the average earnings effects, resulting in an average annual earnings increase of \$695. We estimate the increase in tax revenue based on South Carolina’s second tax bracket (3%).<sup>9</sup> Although South Carolina has three tax brackets, we use the middle tax rate for our estimate because nearly half of the EITC-eligible population falls into that bracket. Using the higher tax rate of 6.5% would overestimate the increase in revenue. At a rate of 3% and using the number of women ages 19 to 64 in South Carolina (1,554,704), we estimate that state personal income tax could increase by \$20.85 per individual and tax revenue by \$32,411,273 (see Table 6).<sup>16</sup>

**Impact of the Proposals on Sales, Payroll, and Unemployment Insurance Taxes**

To estimate the potential increase in South Carolina’s state sales, payroll, and unemployment insurance tax revenue as a result of a refundable 10% state EITC, we rely on the estimate in Bastian & Jones (2021) that for each additional \$1,000 in maximum state EITC benefits, the revenue would increase by \$216 per person (representing state and

federal at \$60 and \$156 respectively).<sup>14,vi</sup> Adjusting the \$60 effect to correspond to the \$516.66 increase in exposure (rather than the standard \$1,000 increase) and relying on the number of women ages 19 to 64 in South Carolina, we estimate sales, payroll, and unemployment insurance tax could increase by \$31.00 per individual and tax revenue by \$48,195,202 (see Table 6).<sup>16</sup>

*Impact of the Proposals on Public Assistance Spending*

To estimate the potential decrease in South Carolina’s public assistance spending as a result of a refundable 10% state EITC, we rely on the estimate in Bastian & Jones (2021) that for each additional \$1,000 in maximum state EITC benefits, public assistance spending would decrease by \$234 per household (representing reduced state and federal spending at \$98 and \$136 respectively).<sup>14,iv</sup> Adjusting the \$98 effect to correspond to the \$516.66 increase in exposure and relying on the number of women ages 19 to 64 in South Carolina, we estimate public assistance spending could decrease by \$78,718,830, or \$50.63 per individual (see Table 6).<sup>16</sup>

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

Benefit Category	10% EITC	25% EITC
<b>Increased State Tax Revenue (Personal Income Tax)</b>	\$32,411,273	\$81,028,811
<b>Increased State Tax Revenue (Sales, Payroll, Unemployment Insurance Tax)</b>	\$48,195,202	\$120,488,938
<b>Reduced Public Assistance Spending</b>	\$78,718,830	\$196,798,599
<b>Total Fiscal Benefits</b>	<b>\$159,325,306</b>	<b>\$398,316,348</b>

<sup>vi</sup> The split between state and federal was provided by the authors of the publication.<sup>14</sup>

## 2.2 Refundable EITC Proposal Impacts – Health and Human Services Spending

We provide estimates for potential impacts of a refundable state EITC on a range of economic, social, and health outcomes, listed below.

- **Child poverty**
- **Low birthweight and hospital costs**
- **Special education**
- **Infant mortality**
- **Foster care**
- **Educational attainment**
- **Child health insurance coverage and outcomes**
- **Crime and public safety**
- **Adult suicide**

### *Child Poverty*

U.S. Census data from the 2019 American Community Survey show that 14.8% of South Carolina children (or about 165,330 children out of 1,117,092 total children, using 2021 Census Population Estimates) lived below the federal poverty level using the Supplemental Poverty Measure (SPM).<sup>17</sup> Data from the 2021 CPS ASEC survey show that 21.0% (or about 234,589 children) lived in poverty using the Official Poverty Measure.<sup>18</sup> Research from Gagnon et al. (2017) estimated that a 10%, 20%, or 30% refundable state EITC may reduce South Carolina's SPM rate by 0.7, 1.0, or 1.4 percentage points, respectively.<sup>19</sup> We find that a 10%, 20%, or 30% refundable state EITC may reduce the number of children living in poverty (SPM) by 7,820, 11,171, or 15,639 children, respectively.

### *Low Birthweight and Hospital Costs*

One of the most consistent findings in the EITC literature is that a refundable credit is associated with improved birth outcomes, specifically reduced incidence of low birthweight (< 2,500 grams).<sup>2</sup> In 2021, the low birthweight rate in South Carolina was 10.0%, but rates differed by race and ethnicity, with a rate of 7.4% for White non-Hispanic infants, 7.6% for Hispanic infants, 16.1% for Black non-Hispanic infants, and 9.8% for infants of other races and ethnicities.<sup>20</sup>

The effect of EITCs on birthweight varies across studies. Analysis in Wagenaar, et al. (2019) found that a 10% or 25% refundable state EITC may result in about 1.9 or 3.1 fewer low birthweight births per 100 live births in a state, respectively.<sup>21</sup> Applying the effect sizes of 1.9 and 3.1 to the baseline of 57,185 births in South Carolina in 2021, implementing a 10% or 25% refundable state EITC may result in 1,087 or 1,773 fewer instances of low birthweight per year, respectively.<sup>20,21</sup>

Research from Russell et al. (2007) suggests that hospital stays for newborns with low birthweight or prematurity complications cost about \$14,500 more than stays for newborns without.<sup>22</sup> Data show that 46.9% of births in South Carolina are covered by Medicaid (public funding) and for fiscal year 2023, the Federal Medical Assistance Percentage (FMAP) rate in South Carolina is 70.58%, meaning the state share is 29.42%.<sup>20,23,24,25</sup> Relying on these data, we estimate that with a refundable 10% state EITC, South Carolina could reduce state Medicaid spending by \$2,173,798 per year from reduced hospital costs (see Table 7).

Table 7: Reduced Spending on State Medicaid Per Year from Reduced Low Birthweight Incidence

State EITC Level	Low Birthweight Births Prevented	Reduced Hospital Costs
<b>10% Refundable EITC</b>	1,087	\$2,173,798
<b>25% Refundable EITC</b>	1,773	\$3,546,724

*Special Education*

Infants born low birthweight are at increased risk of developmental delays and health complications later in life. Research from Chen et al. (2020) shows that children born low birthweight are 50% more likely to receive special education in a given month compared with children born with healthy weight.<sup>26</sup> A study from Bettge et al. (2014) found that approximately 16% of infants born low birthweight have special education needs when they reach school age.<sup>27</sup> This indicates that 10.7% of infants with a healthy birthweight will need special education services when they reach school age ( $(\frac{16}{1.5}) = 10.67$ ).

The fiscal year 2020 South Carolina special education budget shows that special education costs \$5,191 per student.<sup>28</sup> Applying the estimate that a 10% refundable EITC could reduce the number of children born low birthweight by 1,087, 116 of these children may need a special education rather than 174. The possible reduction of 58 students per year needing special education represents a savings of \$301,078 per year.

Table 8: Reduced Spending on Special Education from Reduced Low Birthweight Incidence

State EITC Level	Low Birthweight Births Prevented	Fewer Students Needing Special Education	Costs Avoided
<b>10% Refundable EITC</b>	1,087	58	\$301,078
<b>25% Refundable EITC</b>	1,773	94	\$487,954



**Infant Mortality**

In 2020, the infant mortality (IM) rate in South Carolina was 6.64 per 1,000 live births.<sup>29</sup> The mortality rate was 2.35 per 1,000 births for infants at healthy weights, 45.84 for low birthweight infants, and 215.85 for very low birthweight infants (< 1,500 grams).<sup>29</sup> In 2021, the low birthweight rate in South Carolina was 10.0%, with 1.8% of infants born very low birthweight (VLBW) and the remaining 8.2% born low birthweight (LBW).<sup>20</sup> Low birthweight is 4.6 times more common than very low birthweight. Applying the estimate that a 10% refundable EITC could reduce the number of children born low birthweight by 1,087, we find that there could be about 880 prevented low birthweight births and about 196 prevented very low birthweight births. Using the standard value of a statistical life (VSL) in the US, about \$10 million, the potential financial benefits are presented in Table 9.<sup>30</sup>

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
<b>10% Refundable EITC</b>	1,076: 880 LBW and 196 VLBW	38 fewer instances of IM: \$380 million	42 fewer instances of IM: \$420 million	\$800,000,000
<b>25% Refundable EITC</b>	1,755: 1,436 LBW and 319 VLBW	62 fewer instances of IM: \$620 million	68 fewer instances of IM: \$680 million	\$1,300,000,000

**Foster Care**

A study from Rostad et al. (2020) found that implementing a refundable state EITC may lead to 50 fewer children entering foster care each year per 100,000 children in the state.<sup>31</sup> Given the 2021 child population of South Carolina, 1,117,092, this effect could mean a decrease of up to 559 children entering the foster care system with the implementation of a refundable EITC.<sup>16</sup> The National Council for Adoption estimated that in 2017 foster care cost a state, on average, \$28,982 per child.<sup>31</sup> By implementing a refundable EITC, South Carolina could save up to \$16,200,938 in foster care costs. Because there are limitations in

the research, the possible decrease in foster care entries and savings are overestimates and therefore excluded from the total benefits calculation (see Table 10).<sup>vii</sup>

Table 10: Cost Avoidance from Reductions in Foster Care Entry

State EITC Level	Foster Care Entries Prevented	Costs Avoided
<b>Refundable EITC</b>	559 <sup>ii</sup>	\$16,200,938 <sup>ii</sup>

**Educational Attainment**

South Carolina’s 2022 high school graduation rate was 83.84%, representing 49,072 graduates among a total of 58,534 potential graduates.<sup>32</sup> Research from Bastian & Micheltore (2018) 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.<sup>33</sup> Given that a state EITC worth 10% of the federal credit would offer South Carolina households with children an average increase of \$516.66 in EITC exposure, we adjust the effect size down to an effect of 0.62 percentage points. Applying this effect to South Carolina could increase the high school graduation rate to 84.46% with a 10% credit, resulting in 363 additional graduating students. A study from Levin et al. (2007) estimates the net benefit (increased human capital and productivity) to the public of each high school graduate is around \$127,000.<sup>34</sup> By multiplying the possible 363 additional graduates in South Carolina per year by the \$127,000 expected benefit, we find a benefit of \$46,089,077 over the graduates’ lifetimes (see Table 11).

Table 11: Benefits from Increases in High School Graduation Rates

State EITC Level	Additional Graduates	Public Benefits
<b>10% Refundable EITC</b>	363	\$46,089,077
<b>25% Refundable EITC</b>	907	\$115,223,584

**Child Health Insurance Coverage and Outcomes**

Increased EITC exposure may lead to higher health insurance rates among children (increased employment among parents and accompanied increases in employer-sponsored coverage, or increased purchasing power for private health coverage). The analysis from Braga et al. (2020) found that each additional \$100 in EITC exposure during childhood led to a 0.2 percentage point decrease in the likelihood of being uninsured.<sup>35</sup>

<sup>vii</sup> The analysis in Rostad et al. (2020) compares states with a refundable EITC and states without a state-level EITC.<sup>31</sup> Because South Carolina currently has a nonrefundable state EITC, the estimated decrease in foster care entries is an overestimate. Because the overestimate is potentially high, we exclude the possible savings from the total benefits calculation.

A 10% state EITC in South Carolina could lead to a 1.03 percentage point decrease in the share of children in the state without health insurance. In 2021, 5.3% of children in South Carolina were uninsured (or 63,000 children).<sup>36</sup> A 1.03 percentage point decrease would decrease the rate of uninsured children to 4.27% (or 50,717 children).

A 2021 study by the KFF (Kaiser Family Foundation) reported that uncompensated care (health costs incurred by the government) for nonelderly individuals without health insurance amounts to \$796 per person.<sup>37</sup> We estimate that with a 10% state EITC, South Carolina could save a total of \$9,777,157 in health care costs for children through increased insured rates (see Table 12).

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

State EITC Level	Children Newly Covered	Uncompensated Care Costs Avoided
<b>10% Refundable EITC</b>	12,283	\$9,777,157
<b>25% Refundable EITC</b>	30,707	\$24,443,081

### *Crime and Public Safety*

A study from Lenhart (2021) found 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.<sup>38</sup> In 2021, the violent crime rate in South Carolina was about 526 per 100,000 people (corresponding to a total of 27,300 violent crimes reported, including murder, sexual battery, robbery, and aggravated assault).<sup>39</sup> Applying the estimate for the impact of a 10% state EITC impact, the rate may decline to 486 per 100,000 people. Research from McCollister et al. (2010) found the total per-crime cost to the state, the victim, and society is about \$8,982,907 per homicide, \$240,776 per instance of rape or sexual assault, \$107,020 per other assault, and \$42,310 per robbery.<sup>40</sup> 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.<sup>40</sup> We rely on 2021 rates of violent crime in South Carolina and the 2021 U.S. Census population data to estimate the potential reduction in murder, sexual battery, robbery, and aggravated assault.<sup>39,viii</sup> Because there are limitations in the research, the possible decrease in crime is likely overestimated and therefore excluded from the low-end benefits estimation (see Table 13).<sup>vi,ix</sup>

<sup>viii</sup> South Carolina State Law Enforcement Division reports 2021 numbers of murder, sexual battery, robbery, and aggravated assault.<sup>37</sup> The literature reports estimations for homicide, rape, robbery, and assault.<sup>38</sup> Because the definitions of each are slightly different, calculations should be interpreted with caution.

<sup>ix</sup> The result in Lenhart (2021) was not statistically significant for implementation of the EITC.<sup>36</sup>

Table 13: Criminal Justice Cost Avoidance Per Year with a 10% Refundable EITC

Crime Prevented	Number Prevented	Costs Avoided
<b>Murder</b>	52	\$20,402,304
<b>Sexual Battery</b>	208	\$5,507,632
<b>Robbery</b>	208	\$2,876,016
<b>Aggravated Assault</b>	1,661	\$14,352,701
<b>Total</b>	2,128	\$43,138,653

### Adult Suicide

Research from Lenhart (2021) and Dow et al. (2020) find that a 10% state EITC credit may reduce adult suicides by about 3.1% from the baseline rate and increasing EITC generosity by 10 percentage points (for example, increasing the value from 10% to 20%), can produce an additional 3.9% reduction in suicides.<sup>38,41</sup> The 2020 suicide rate in South Carolina was 16.3 per 100,000 adults.<sup>42</sup> Applying the 3.1% decrease results in 15.8 suicides per 100,000 adults, representing 0.5 fewer instances of suicide. Using the 2021 adult population in South Carolina, 4,073,613, we estimate a 10% refundable EITC could prevent about 20 suicides per year.<sup>16</sup> Applying the standard value of a statistical life (\$10 million), the possible benefit is \$200 million (see Table 14).<sup>30</sup>

Table 14: Benefits from Suicide Prevention

State EITC Level	Suicide Prevented Per Year	Benefit
<b>10% Refundable EITC</b>	20	\$200,000,000
<b>25% Refundable EITC</b>	21	\$210,000,000

### Summary of Human Services Cost Avoidance

Many of the social and health impacts considered in the analysis 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 South Carolina state agencies may avoid in a given one-year public budgeting period.

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: foster care,

crime/public safety, 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 refundable 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. Excepting foster care, we include these benefits in the high-end estimate.

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

Benefit	Cost Avoidance (10% refundable EITC)	Cost Avoidance (25% refundable EITC)
<b>Low Birthweight Hospital Costs</b>	\$2,173,798	\$3,546,724
<b>Special Education</b>	\$301,078	\$487,954
<b>Child Health Insurance Coverage and Outcomes</b>	\$9,777,157	\$24,443,081
<b>Total Cost Avoidance</b>	<b>\$12,252,033</b>	<b>\$28,477,759</b>

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

Benefit	Cost Avoidance (10% refundable EITC)	Cost Avoidance (25% refundable EITC)
<b>Low Birthweight Hospital Costs</b>	\$2,173,798	\$3,546,724
<b>Special Education</b>	\$301,078	\$487,954
<b>Crime/Public Safety</b>	\$43,138,653	\$43,138,653
<b>Child Health Coverage</b>	\$9,777,157	\$24,443,081
<b>Infant Mortality</b>	\$800,000,000	\$1,300,000,000
<b>Educational Attainment</b>	\$46,089,077	\$115,223,584
<b>Adult Suicide Prevention</b>	\$200,000,000	\$210,000,000
<b>Total Benefits</b>	<b>\$1,101,479,763</b>	<b>\$1,696,839,996</b>

### Summary of Benefits: Fiscal and Human Services Spending

Summing the fiscal benefits (increased tax revenue and reduced public assistance spending) shown in Table 6 (\$159,325,306) with the low-end human services cost avoidance estimate shown in Table 15 (\$12,252,033) results in a total monetized benefit of \$171,577,339 to the state of South Carolina for a 10% refundable state EITC (or \$426,794,107 with a 25% refundable credit).

**A refundable 10% state EITC could provide a fiscal benefit of \$159,325,306 and human services costs avoided of \$12,252,033 with a total benefit to South Carolina of \$171,577,339.**

Table 17: Summary of Benefits

Benefit	Cost Avoidance (10% refundable EITC)	Cost Avoidance (25% refundable EITC)
<b>Fiscal Benefits</b>	\$159,325,306	\$398,316,348
<b>Human Services Cost Avoidance</b>	\$12,252,033	\$28,477,759
<b>Total Benefit</b>	<b>\$171,577,339</b>	<b>\$426,794,107</b>

Given South Carolina's 2022-2023 enacted state budget of nearly \$34.7 billion, the benefits of a 10% state EITC amount to about 0.5% of the budget.<sup>43</sup> Subtracting the total new costs of the elective program at the 10% rate (estimated at \$16,285,314 including both direct and administrative costs) from the low-end estimate results in a net benefit of \$155,292,025. The ratio of total benefits to costs with a 10% state EITC is about 10 to 1 (\$172 million in benefits over \$16 million in additional costs). For a 25% EITC, the ratio is about 4 to 1 (\$427 million over \$101 million). The ratio is more modest for the 25% credit because some of the social benefits of an EITC (e.g., reductions in 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 eligible families would be likely to claim the 25% refundable EITC rather than the 125% nonrefundable EITC, 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 \$16 million and \$101 million more given to working families with lower incomes in South Carolina (for a 10% and 25% EITC, respectively).

### Benefits for Marginalized Communities: Race and Ethnicity Groups

The benefits of a refundable state EITC may be particularly significant for communities in South Carolina who are disproportionately impacted by low income, high tax burdens, and high cost of living relative to household resources. The 2021 ACS data show that households headed by Black and Hispanic individuals have lower average incomes than households headed by White, non-Hispanic individuals, and the average refundable state EITC benefit (among those expected claim the refundable EITC in the elective program) is therefore larger among families of headed by Black and Hispanic individuals than those headed by White, non-Hispanic individuals. With a 10% EITC, the benefit is about \$292 per

household for Black, non-Hispanic families, \$321 for Hispanic families, \$234 for White families, and \$221 for families reporting other race and ethnicity categories.<sup>x</sup>

Among all families in South Carolina, 24% of Black families would be eligible for the state EITC, 34% of Hispanic families, 13% of White families, and 23% of families reporting other races and ethnicities would be eligible. We estimate that with a 10% refundable state EITC, 4% of White families would claim the EITC (representing 63,713 households), 8% of Black families (59,668 households), 10% of Hispanic (14,477 households), and 8% of families reporting other race and ethnicity categories (10,691 households) would claim the credit. With a 25% refundable state EITC, the share of each group that claims the refundable EITC increases (see Table 19).

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

Benefit Claimed	White	Black	Hispanic	Other	SC Total
<b>Will Claim 10% EITC</b>	4%	8%	10%	8%	5%
<b>Will Claim 125% EITC</b>	9%	15%	24%	15%	12%
<b>Will Claim Neither</b>	87%	76%	66%	77%	83%
<b>South Carolina Total</b>	100%	100%	100%	100%	100%

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

Benefit Claimed	White	Black	Hispanic	Other	SC Total
<b>Will Claim 25% EITC</b>	6%	13%	17%	12%	8%
<b>Will Claim 125% EITC</b>	7%	11%	17%	11%	9%
<b>Will Claim Neither</b>	87%	76%	66%	77%	83%
<b>South Carolina Total</b>	100%	100%	100%	100%	100%

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

Benefit Amount	White	Black	Hispanic	Other	SC Average
<b>10% State EITC</b>	\$234	\$292	\$321	\$221	\$265
<b>25% State EITC</b>	\$662	\$770	\$934	\$690	\$735

<sup>x</sup> 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.

### 3. Summary

The analysis considered a 10% and 25% refundable state EITC, in addition to the current nonrefundable EITC (increasing to 125% in tax year 2023). We found:

- **A refundable state EITC at 10% of the federal credit would cost South Carolina about \$16 million above the cost of the 125% nonrefundable EITC, effective tax year 2023. A refundable EITC at 25% would cost about \$101 million.**
- **Implementing a refundable state EITC at 10% of the federal credit could provide South Carolina about \$172 million in fiscal and human services benefits. A refundable EITC at 25% could provide about \$427 million in benefits.**
- **Our analysis shows a 10 to 1 benefit to cost ratio of implementing a refundable state EITC at 10% of the federal credit and a 4 to 1 benefit to cost ratio of implementing a refundable EITC at 25%.**



## Appendix

Table A.1: Federal EITC Benefit Structure and Thresholds

Filing Status		No Children	One Child	Two Children	Three or More Children
<b>Single or Head of Household</b>	Income at Max Credit	\$7,320	\$10,980	\$15,410	\$15,410
	Maximum Credit	\$560	\$3,733	\$6,164	\$6,935
	Phaseout Begins	\$9,160	\$20,130	\$20,130	\$20,130
	Phaseout Ends (Credit Equals Zero)	\$16,480	\$43,492	\$49,399	\$53,057
<b>Married Filing Jointly</b>	Income at Max Credit	\$7,320	\$10,980	\$15,410	\$15,410
	Maximum Credit	\$560	\$3,733	\$6,614	\$6,935
	Phaseout Begins	\$15,920	\$26,260	\$26,260	\$26,260
	Phaseout Ends (Credit Equals Zero)	\$22,610	\$49,622	\$55,529	\$59,187

Source: Internal Revenue Service (IRS).<sup>15</sup>

Table A.2: Elective State EITC Program – Eligibility, Take-Up, and Benefits (10% Refundable State EITC)

EITC Eligibility							
	Households	Federal EITC		SC State EITC (10%)		SC State EITC (125%)	
		Mean	Median	Mean	Median	Mean	Median
<b>EITC ineligible</b>	2,297,270	\$0	\$0	\$0	\$0	\$0	\$0
<b>EITC eligible</b>	477,105	\$2,264	\$1,825	\$226	\$183	\$640	\$367
<b>State of SC</b>	2,774,375	\$389	\$0	\$39	\$0	\$110	\$0

Table A.3: Elective State EITC Program – Likely Claimants and Benefits (10% Refundable State EITC)

Likely Claimants and Benefits							
	Households	Federal EITC		SC State EITC (10%)		SC State EITC (125%)	
		Mean	Median	Mean	Median	Mean	Median
<b>Will Claim 10% EITC</b>	148,549	\$2,650	\$2,472	\$265	\$247	\$156	\$102
<b>Will Claim 125% EITC</b>	328,556	\$2,090	\$1,652	\$209	\$165	\$858	\$815
<b>Will Claim Neither</b>	2,297,270	\$0	\$0	\$0	\$0	\$0	\$0
<b>State of SC</b>	2,774,375	\$389	\$0	\$39	\$0	\$110	\$0

Table A.4: Households choosing between 10% refundable and 125% nonrefundable EITC

Benefit Claimed	Receive \$0 under 125% EITC	Receive >\$0 under 125% EITC	EITC ineligible	South Carolina Total
<b>Will Claim Refundable 10% EITC</b>	47,879	100,670	0	148,549
<b>Will Claim 125% EITC</b>	0	328,556	0	328,556
<b>Will Claim Neither 10% Nor 125% EITC</b>	0	0	2,297,270	2,297,270

Table A.5: Households choosing between 25% refundable and 125% nonrefundable EITC

Benefit Claimed	Receive \$0 under 125% EITC	Receive >\$0 under 125% EITC	EITC ineligible	South Carolina Total
<b>Will Claim Refundable 25% EITC</b>	47,879	187,031	0	234,910
<b>Will Claim 125% EITC</b>	0	242,195	0	242,195
<b>Will Claim Neither 25% Nor 125% EITC</b>	0	0	2,297,270	2,297,270

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