URBAN INSTITUTE

Expanding the EITC for Workers without Resident Children

Elaine Maag, Kevin Werner, and Laura Wheaton

May 2019

The federal earned income tax credit (EITC) is a refundable tax credit that provides substantial benefits to low-income working families with children at home but little to those without resident children. But families without resident children also struggle, including noncustodial parents, who are often considered "childless" for tax purposes. We model a plan that would increase the maximum childless EITC to almost half the size of the maximum EITC for one-child families and that would begin to phase the childless EITC out at the same income level used for families with children. This would improve parity between people with and without children at home, filling a gap in existing credit benefits. It could also improve noncustodial parents' economic well-being and increase their capacity to support their children.

The federal EITC delivered about $66 billion in benefits to 27 million families in the 2016 tax year (the latest year for which data are available). Workers with children at home received 97 percent of the aggregate benefits. Childless workers receive few benefits from the credit because the maximum credit they can qualify for is relatively small and their credit phases out at much lower income levels than the credit for workers with children. On average, childless workers in 2016 received less than $300 from the EITC, compared with $2,400 for workers with one child at home, $3,800 for workers with two children at home, and $4,100 for workers with at least three children at home.[1] In some cases, "childless" workers have children, but their children live primarily with another parent or are too old to be considered qualifying children for tax purposes.

We model an EITC policy expansion that would deliver an additional $23.7 billion in annual benefits to childless workers by

- tripling the maximum EITC for childless workers from about $500 to about $1,500;
- expanding the universe of eligible workers by allowing childless workers with incomes of about $28,000 ($34,000 if married) to receive at least a partial credit, well above the current phaseout of $15,000 ($21,000 if married); and
- reducing the minimum eligibility age for the childless EITC from 25 to 21.[2]

Beyond the federal credit, 24 states and the District of Columbia have a state-level EITC for workers without resident children. In 22 of these states, the state EITC is a fixed percentage of the federal EITC. If these states maintained existing connections between state and federal EITCs, state credits would increase by $1.4 billion, bringing the total additional benefits under the policy change to $25 billion per year.

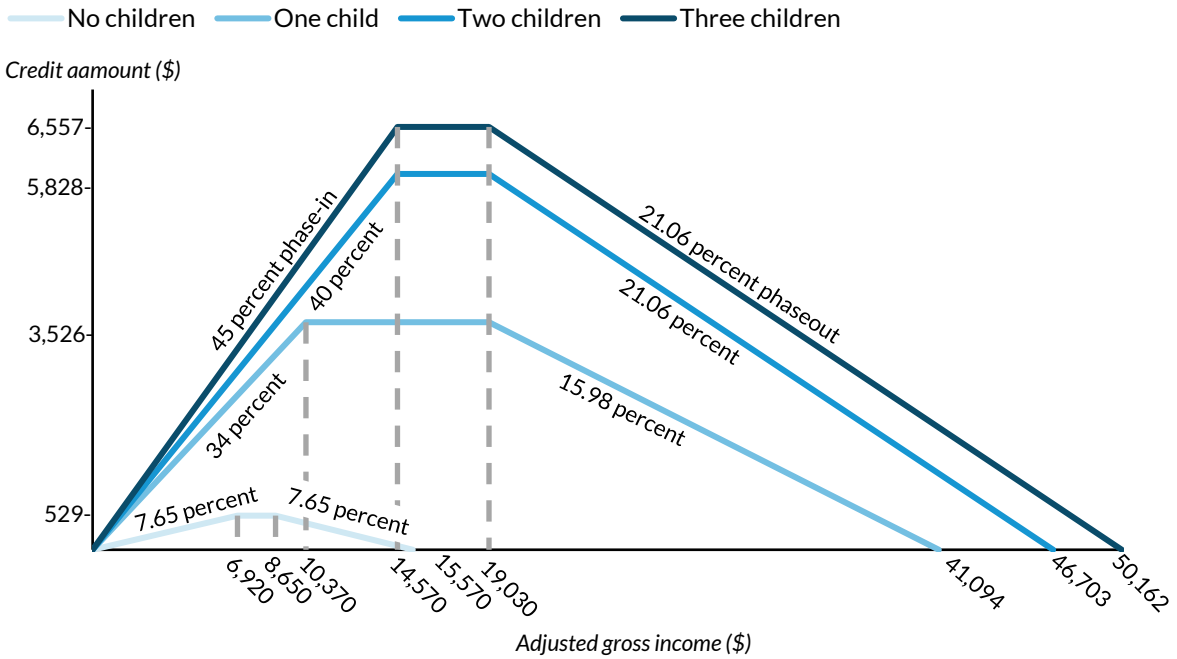
Description of the Earned Income Tax Credit

The EITC rises from the first dollar of earnings until the credit reaches its maximum. Both the rate of increase and the maximum credit amount depend on the number of children in the family. The rate at which the credit phases in ranges from a low of 7.65 cents per dollar of earnings for childless adults to a high of 45 cents per dollar of earnings for families with three or more children. After reaching the maximum credit based on family size, the EITC does not change until earnings hit a certain point ($8,650 for childless adults and $19,030 for families with children for tax year 2019).[3] The credit then falls at a rate that varies from 7.65 cents per dollar for childless adults to 21.06 cents per dollar for families with two or more children, until the credit falls to zero (figure 1). The EITC is phased out based on earnings or adjusted gross income, whichever is larger. Credit amounts are adjusted annually for inflation.

The EITC is a refundable credit. If a person qualifies for a credit that exceeds taxes owed, the excess is received as a tax refund. Consequently, even very low–income families can benefit from the credit.

FIGURE 1

Earned Income Tax Credit, 2019



URBAN **INSTITUTE**

Sources: Authors' calculations. Internal Revenue Procedure 2018-57, Internal Revenue Service.
Notes: Assumes all income comes from earnings. Amounts are for taxpayers filing for a single or head-of-household tax return. For married couples filing a joint tax return, the credit begins to phase out at income $5,790 higher than shown.

State Earned Income Tax Credit

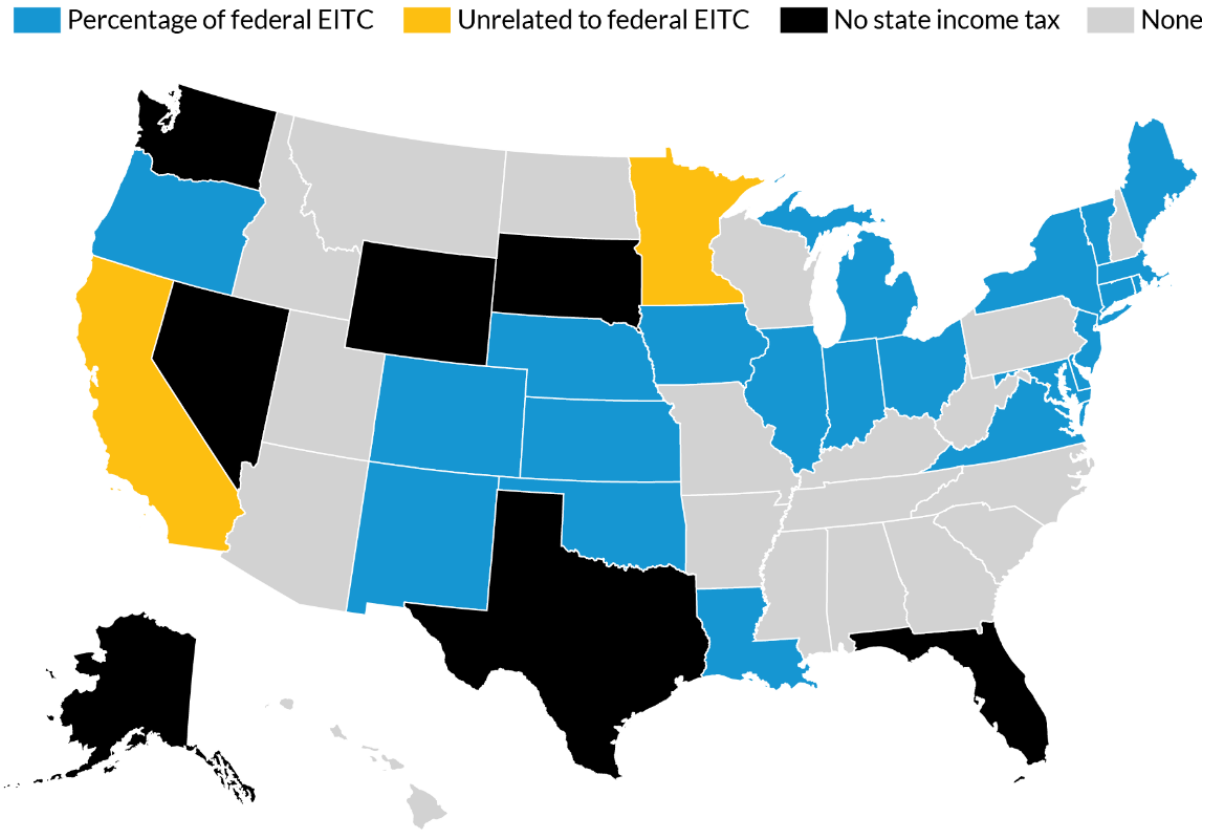
As noted, 22 states have a childless EITC that is determined as a percentage of the federal EITC (figure 2). In Colorado, for instance, each family can receive a state EITC worth 10 percent of his or her federal EITC. Assuming states continue to conform state credits with the federal credit, expansions in the federal EITC would automatically expand the state EITC.

Three states and the District of Columbia have a state-level EITC for workers, but it either excludes childless workers (Wisconsin) or is not calculated as a share of the federal EITC (California, the District of Columbia, and Minnesota). In the latter states, the amount of state EITC a filer receives is not affected by changes in the federal EITC.

Where state EITCs are calculated as a share of the federal EITC, states always have the option to decouple their credit from the federal credit. Some states have shown a propensity to do this, as with the recent federal changes to the child tax credit and personal exemption. Other states have opted to largely conform with federal changes (Auxier and Maag 2018).

FIGURE 2

Childless Earned Income Tax Credit Type by State, 2016



URBAN **INSTITUTE**

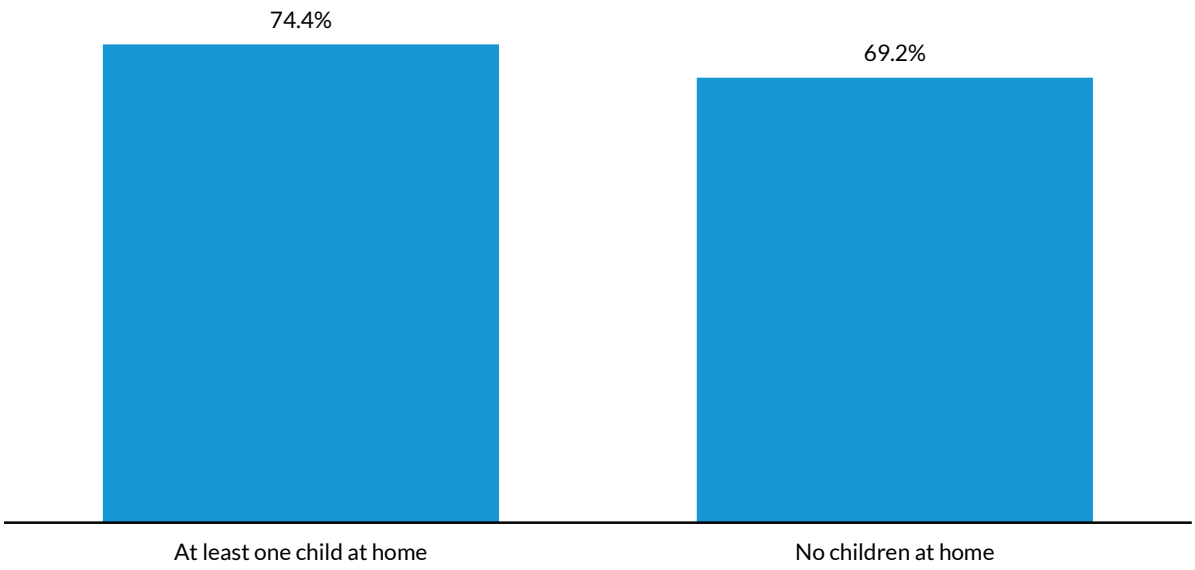
Sources: Bakija (2019) and 2016 state income tax forms and instructions.

Effect of the Earned Income Tax Credit on Employment

Proponents of an expanded childless EITC suggest that increasing the EITC for childless workers (including noncustodial parents) could have several benefits akin to those experienced by workers with children. Increasing the EITC for childless workers increases the benefits of work and could increase employment rates for families without resident children, who are less likely to be employed than workers with children at home. Employment rates for families without children under age 18 at home are over 5 percentage points lower than those for families with children under age 18 at home (figure 3).

FIGURE 3

Employment Rates for People Ages 21 to 64 by Presence of Children in the Home, 2016



URBAN **INSTITUTE**

Source: Authors' calculations from 2017 Current Population Survey March Supplement.
Note: We define a person as employed if he or she reported any hours worked in the reference week before the survey.

Research has found that the EITC increases work, particularly among single-parent families, and modestly reduces work among married women with children (Eissa and Hoynes 2004; Eissa and Liebman 1996; Meyer and Rosenbaum 2001). One study suggests that ignoring the labor supply effect of the EITC could lead researchers to underestimate the credit's effectiveness in reducing poverty by as much as 50 percent (Hoynes and Patel 2017).

Though most research into the employment effects of the EITC has focused on families with resident children, some evidence shows that the EITC also increases employment among childless workers. Nichols, Sorensen, and Lippold (2012) found that a New York EITC policy targeted at noncustodial parents who pay child support increased employment among those with low child support orders (who likely have low incomes). The recent New York City Paycheck Plus demonstration found that an expanded credit for childless workers modestly increased employment rates (Miller et al. 2018).

Evidence suggests that higher employment rates are associated with other societal benefits, such as reduced crime and increased marriage rates (Mustard 2010). In addition, noncustodial parents are more likely to pay child support when they have higher earnings (Sorensen 2013). A New York EITC expansion for noncustodial parents who pay child support in full increased the share paying child support in full by 1 percentage point and increased the share of those with low child support orders (who likely have low incomes) who pay their child support in full by 2 percentage points (Nichols, Sorensen, and Lippold 2012). Payment of child support also increased under the New York City Paycheck Plus demonstration (Miller et al. 2018).

Policy Expansion

Both Republicans and Democrats have supported expanding the childless EITC but have yet to act in significant ways. Proposals by both President Obama and Speaker Ryan would have doubled the phase-in rate of the childless credit to 15.3 percent, so that the EITC would fully offset both the employer and employee shares of payroll taxes while phasing in the credit (Executive Office of the President and US Department of Treasury 2014).[4] The Obama and Ryan plans also proposed extending the income range over which childless EITC benefits are received to better align with that for families with children, though neither plan extended the income range by as much as the plan discussed in this brief. The policy expansion modeled here would synchronize the beginning of the phase-out range for childless workers with that for families with children.

The Obama and Ryan proposals also would have decreased the minimum age for the childless EITC to 21. Families with resident children do not face age restrictions for the EITC, but current eligibility rules require that childless workers be between ages 25 and 64.[5] Reducing the minimum age for the EITC is partially motivated by the increasing shares of adults ages 21 to 24 who neither work nor attend school. Extending the EITC to these young adults could encourage them to choose formal over informal work (Executive Office of the President and US Department of Treasury 2014), boosting current wages and long-term earning potential (Marr et al. 2016).

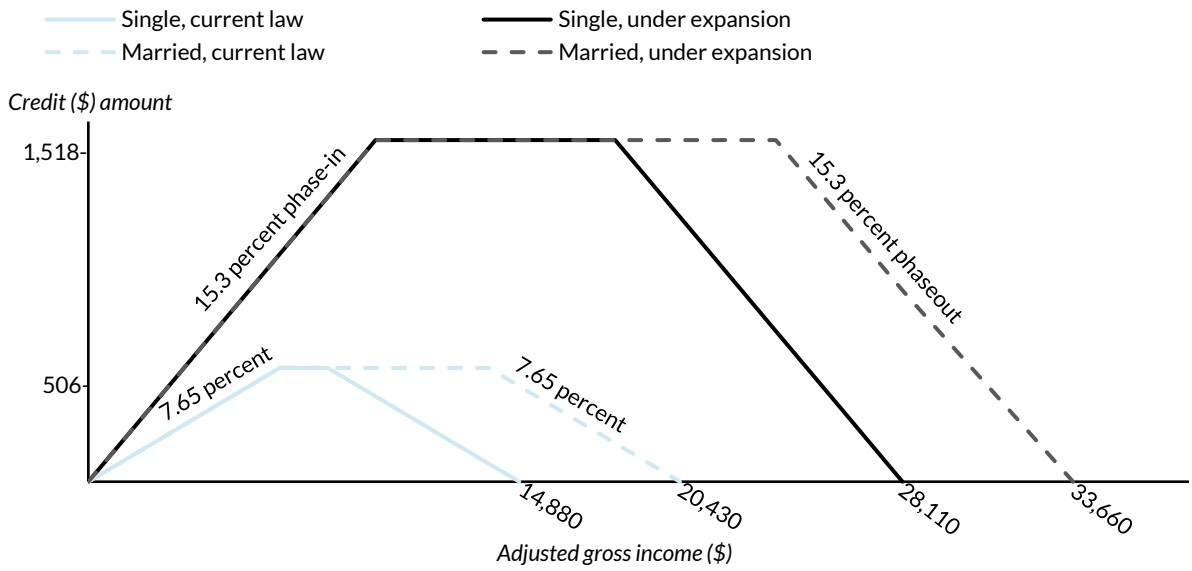
We model a policy expansion that would double the phase-in rate for the childless credit, extend the phase-in range of the credit to equal that for workers with one child, and align the beginning of the credit's phaseout with that for workers with children. We model the policy as if it had been in effect in 2016, the most recent year for which data were available. The policy would

- triple the maximum EITC for childless workers from about $500 to about $1,500;
- expand the universe of eligible workers by allowing childless workers with incomes of about $28,000 ($34,000 if married) to receive at least a partial credit, well above current levels of roughly $15,000 ($21,000 if married); and
- reduce the minimum eligibility age for the childless EITC from 25 to 21 (figure 4).

Taken together, the expansion would both increase the maximum value of the credit for childless workers and better align the income range over which benefits can be received with that of workers with children.

FIGURE 4

Earned Income Tax Credit for Single and Married Childless Workers, 2016



URBAN INSTITUTE

Sources: Authors' calculations and "EITC Parameters," Urban-Brookings Tax Policy Center, July 24, 2018, https://www.taxpolicycenter.org/statistics/eitc-parameters.
Notes: Assumes all income comes from earnings. Amounts are for taxpayers filing for a single or head-of-household tax return.

Methods

We model the policy expansion using the Urban Institute's Analysis of Transfers, Taxes, and Income Security (ATTIS) microsimulation model, using data from the 2016 American Community Survey (ACS).[6] The estimates reflect income, taxes, and EITC benefits for the 2016 tax year, calculated according to the federal and state tax policies in effect in 2016. Though the Tax Cut and Jobs Act of 2017 made major changes to the federal income tax code, the only change to the federal EITC affected how the credit would grow in future years. That change does not affect this analysis. We discuss the results as affecting after-tax income in 2016, though the refund would typically be received in 2017, when taxes are filed.[7]

Our estimates reflect the number of individuals and married couples who qualify for the childless EITC, first under the 2016 rules and then under the policy expansion. Not everyone who is eligible for the EITC participates (Scholz 1994),[8] so our estimates represent an upper-bound number of affected workers. The estimates reflect the immediate effects of the policy expansion without factoring in changes to employment that the policy might induce.

We provide estimates at the national and state levels and provide additional state detail in accompanying fact sheets. The analysis includes the direct effects of increasing the childless EITC at the federal level, as well as the indirect effects in states that link their state credit to the federal credit. States can, of course, change state-level rules at any time, including decoupling from federal rules.

National Results

We estimate that the policy expansion would increase the number of individuals and married couples qualifying for the childless EITC from around 8 million to over 24 million. After-tax income for filers receiving the EITC after the expansion (some of whom already benefit from the EITC) would increase, on average, by about $1,000. In total, workers would qualify for an additional $23.7 billion in EITC benefits.

Benefits from the expansion would flow exclusively to workers without qualifying children at home, the group that now receives little benefit from the EITC. The total amount of federal EITC available to childless workers would increase tenfold, from just over $2.4 billion to over $26 billion.

In tables 1 and 2, we analyze two groups of workers: those that already qualify for some benefit from the childless EITC and all workers who would benefit from the policy expansion. Among workers who qualified for the childless EITC before the expansion, the policy change would increase after-tax income by around $900, just under the average increase for all beneficiaries (table 1).

TABLE 1

Effects of the Childless Earned Income Tax Credit Expansion, by Demographic Characteristics

	Number Eligible for Childless EITC		Change in Average After-Tax Income	
	Before expansion (thousands)	After expansion (thousands)	For those eligible for the childless EITC before expansion ($)	For everyone eligible for the childless EITC after expansion ($)
Total	**8,186**	**24,943**	**885**	**1,005**
Marital status				
Male, unmarried or spouse not present	3,606	11,848	877	1,008
Female, unmarried or spouse not present	3,468	10,725	873	1,014
Married couple	1,112	2,371	943	$949
Age				
21–24	13	6,294	1,051	1,146
25–34	3,192	7,653	910	986
35–44	1,338	3,093	879	952
45–54	1,604	3,647	867	932
55+	2,038	4,255	861	933
Race and ethnicity				
Non-Hispanic white	4,630	14,323	865	992
Non-Hispanic black	1,479	4,202	882	1,008
Hispanic	1,385	4,486	943	1,044
Non-Hispanic Asian	125	288	986	1,033
Other, non-Hispanic	566	1,643	884	1,000
Filer or spouse has nonresident children	**786**	**2,015**	**827**	**957**
Pretax income				

	Number Eligible for Childless EITC		Change in Average After-Tax Income	
	Before expansion (thousands)	After expansion (thousands)	For those eligible for the childless EITC before expansion ($)	For everyone eligible for the childless EITC after expansion ($)
$0 – < $5,000	1,605	2,337	192	264
$5,000 – < $10,000	2,523	3,810	639	803
$10,000 – < $15,000	3,317	4,684	1,299	1,385
$15,000 – < $20,000	580	4,686	1,314	1,537
$20,000 – < $25,000	161	5,358	1,545	1,085
$25,000 – < $30,000	0	3,386	0	495
$30,000+	0	683	0	323

Source: Urban Institute's Analysis of Transfers, Taxes, and Income Security model, using data from the 2016 American Community Survey.
Note: Married couples are classified by the characteristics of the higher-earning spouse.

Marital status. Though the policy expansion would dramatically expand the income range over which EITC benefits for childless workers would be paid, only a small share of beneficiaries would be married couples. In part, this is because married couples often have incomes higher than the top of the phase-out range under the proposed policy expansion. The proposed credit phases out for married couples at higher incomes (about $5,550 above that for single individuals in 2016), but that is not enough to include as many married couples as single people in the expanded income range.

Age range. Workers between ages 21 and 24 would receive the largest average benefit increase because they are currently ineligible for the childless EITC unless they are married to someone between ages 25 and 64. Extending the age range of the childless EITC brings the policy closer to the EITC for parents with resident children, who do not face an age restriction.

Race and ethnicity. Differing outcomes by race and ethnicity arise from differences in the age, marital status, and earnings composition of the different groups. We estimate that Hispanic and non-Hispanic Asian workers would have the highest average increase in credits under the policy expansion, but more white workers would benefit than any other race or ethnic group.

Noncustodial parents. Noncustodial parents are a subset of "childless" workers that may be of particular interest to policymakers. Though considered childless for tax purposes, these workers have children living elsewhere, typically with another parent or guardian. We estimate that the policy change would increase the number of noncustodial parents qualifying for the childless EITC from the current 780,000 to about 2 million. Noncustodial parents would receive an average increase in benefits of $957.

Some of the additional EITC benefits paid to noncustodial parents would be intercepted by the Internal Revenue Service and state income tax systems as payment for past-due child support (Wheaton and Sorensen 2010). The increased EITC might also cause some noncustodial parents to increase child support payments and informal support to their children.

Income. As with the EITC for workers with children, the largest benefits from the policy expansion would go to those with incomes in the middle range of eligibility. That is because those with the lowest incomes tend to have incomes in the phase-in range of the credit, receiving less than the maximum benefit, and those at the higher income ranges tend to have their benefits phased out. Workers in the lower earning ranges are also more likely to qualify for at least some EITC under current rules.

TABLE 2

Effects of the Childless Earned Income Tax Credit Expansion, by Education Level, Veteran Status, Industry, and Occupation

	Number Eligible for the Childless EITC		Change in Average After-Tax Income	
	Currently (thousands)	After expansion (thousands)	For those currently eligible for the childless EITC ($)	For everyone eligible for the childless EITC after expansion ($)
Education				
Less than a high school degree	1,231	2,815	865	994
High school degree or equivalent	2,835	8,520	899	1,015
Some college or associate's degree	2,641	8,988	881	1,005
Bachelor's degree or more	1,478	4,620	881	995
Filer or spouse is a veteran	**508**	**1,181**	**832**	**908**
Industry				
Retail trade	1,408	4,377	911	1,047
Accommodation and food services	1,125	3,444	904	1,065
Health care	1,021	3,186	911	1,014
Other services	649	1,564	863	984
Administrative services	647	1,630	819	970
Construction	553	1,554	851	952
Education services	513	1,640	905	996
Manufacturing	507	1,930	895	981
Transportation	356	1,102	915	1,001
Professional services	286	886	828	959
Arts and entertainment	276	807	853	995
Government	151	562	860	926
Wholesale trade	146	482	913	992
Real estate	146	411	842	972
Forestry and agriculture	130	342	842	977
Information	118	377	851	948
Finance	118	519	923	964
Other industries	36	131	851	929
Occupation				
Office and administrative	1,021	3,637	901	995
Sales	1,006	3,032	893	1,041
Food preparation and related services	989	2,955	913	1,070
Transportation and material moving	775	2,260	874	1,002
Building and grounds cleaning and maintenance	757	1,677	846	984
Personal care	660	1,604	880	1,010
Production	483	1,663	880	984
Construction and extraction	481	1,357	844	952

	Number Eligible for the Childless EITC		Change in Average After-Tax Income	
	Currently (thousands)	After expansion (thousands)	For those currently eligible for the childless EITC ($)	For everyone eligible for the childless EITC after expansion ($)
Education, training, and library	327	1,071	892	1,028
Management	280	901	897	959
Health care support	258	887	961	1,040
Arts, design, entertainment, sports, and media	188	511	797	932
Health care practitioners, technical	185	672	904	984
Installation, maintenance, repair	185	659	888	962
Business and financial operations	139	453	867	960
Protective service	117	446	910	1,001
Other occupations	334	1,158	868	975

Source: Urban Institute's Analysis of Transfers, Taxes, and Income Security model, using data from the 2016 American Community Survey.
Note: Married couples are classified by the characteristics of the higher-earning spouse.

Education level. The policy expansion would benefit workers at all education levels. Under current EITC rules applicable to childless taxpayers, workers with a high school degree or equivalent, such as a general education development certificate, make up the largest number of eligible workers. The policy expansion would increase the number of eligible workers in this group from 2.8 million to 8.5 million and would increase the average benefit by $1,015 (table 2). Workers with some college or an associate's degree would experience the largest increase in eligibility, from 2.6 million eligible workers under current rules to 9.0 million eligible workers under the policy expansion. These workers would experience an average benefit increase of $1,005.

Veteran status. The number of military veterans eligible for the childless EITC would more than double under the proposed policy expansion, rising from 508,000 to 1.2 million. Average benefits for this group would increase by $908.

Industry and occupation. Workers in many industries and occupations would benefit from an expanded childless EITC. The retail trade industry would have the most workers benefitting from the policy expansion: 4.4 million of these workers would be eligible for the EITC after expansion, and on average, their after-tax incomes would increase by $1,047. Millions of workers in accommodations and food services, health care, administrative and other services, construction, and manufacturing would also benefit from the policy expansion.

Approximately 3.6 million workers in office and administrative jobs would have higher after-tax incomes because of the policy expansion. Just over 3 million sales workers would benefit, as would nearly 3 million food service workers. Recipients in all three of these occupations would see average benefits increase by around $1,000.

State-Level Results

Expanding the childless EITC would provide benefits to people in all states and increase the state EITC in states that base their EITC on the federal credit. We show the number of workers who would benefit from the policy expansion and the additional EITC that would be distributed. Because the policy expansion increases benefits for people who already receive the EITC, the number of people eligible for an increase includes both people already receiving some benefit and people who do not currently receive benefits. The credit increase is the additional income delivered by the policy expansion (table 3).

In states that link their state EITC to the federal EITC, we estimate the number of people who would be eligible for additional state-level EITC benefits (again, both people who already receive a benefit and those newly eligible for a benefit) and the increase in state-level benefits.[9] State-level credits would increase by about $1 billion. State credits do not change in states without a childless EITC linked to the federal EITC.

TABLE 3

Effect of Policy Expansion on Federal and State EITCs, by State

	Federal Childless EITC		State Childless EITC	
State	Number who would benefit from expansion (thousands)	Increase (millions of $)	Number who would benefit from expansion (thousands)	Increase (millions of $)
Total	**24,943**	**23,731**	**8,840**	**1,356**
Alabama	399	384	*	*
Alaska	56	50	*	*
Arizona	541	514	*	*
Arkansas	234	225	*	*
California	2,973	2,847	**	**
Colorado	443	415	443	42
Connecticut	227	214	227	59
Delaware	70	65	46	7
District of Columbia	51	44	**	**
Florida	1,896	1,846	*	*
Georgia	797	760	*	*
Hawaii	99	91	*	*
Idaho	145	139	*	*
Illinois	943	884	943	88
Indiana	533	501	533	45
Iowa	228	220	228	33
Kansas	207	192	207	33
Kentucky	359	335	*	*
Louisiana	394	379	394	13
Maine	120	110	120	6
Maryland	374	348	374	112
Massachusetts	425	401	425	92
Michigan	851	825	851	49
Minnesota	399	372	**	**
Mississippi	249	245	*	*
Missouri	488	458	*	*
Montana	102	97	*	*

State	Federal Childless EITC		State Childless EITC	
	Number who would benefit from expansion (thousands)	Increase (millions of $)	Number who would benefit from expansion (thousands)	Increase (millions of $)
Nebraska	136	123	136	12
Nevada	247	226	*	*
New Hampshire	97	89	*	*
New Jersey	526	498	526	174
New Mexico	172	164	172	16
New York	1,461	1,394	1,455	384
North Carolina	811	781	*	*
North Dakota	60	53	*	*
Ohio	940	882	669	52
Oklahoma	306	293	227	11
Oregon	365	336	365	27
Pennsylvania	971	912	*	*
Rhode Island	75	72	75	9
South Carolina	445	424	*	*
South Dakota	63	60	*	*
Tennessee	557	536	*	*
Texas	2,095	2,040	*	*
Utah	215	208	*	*
Vermont	43	42	43	14
Virginia	598	562	384	77
Washington	509	460	*	*
West Virginia	157	146	*	*
Wisconsin	449	424	*	*
Wyoming	45	42	*	*

Source: Urban Institute's Analysis of Transfers, Taxes, and Income Security model, using data from the 2016 American Community Survey.
Notes: * No state EITC. ** No changes to state childless EITC because it is not linked to the federal EITC.

Conclusion

The federal EITC provides substantial assistance to workers with children. Workers without children at home, often called childless for tax purposes, currently can receive a small credit totaling just 3 percent of all federal EITC benefits.

Both Democrat and Republican leaders have supported expanding the childless EITC, but the credit has changed very little in recent years. Increasing the credit for childless workers could improve parity between workers with and without children at home. More importantly, increasing the childless EITC substantially could increase employment rates among this traditionally disadvantaged group, which might in turn reduce crime, increase marriage rates, and increase child support payments.

We analyze a policy that would roughly triple the EITC for childless workers, increasing its benefit to about half that of the credit for workers with one child. The policy would offset both the employer and employee shares of payroll taxes for many low-income, childless workers. Moreover, the policy would expand the income range over which benefits are available so that the childless credit would be

phased in over the same income range as that for workers with one child and would begin to phase out at the same point as the EITC for workers with children. Together, these changes would provide a much more substantial benefit over an income range similar to that already applied to workers with children.

We estimate that if all eligible people claimed the credit, the federal policy expansion would boost the incomes of over 24 million individuals and married couples, providing an average increase in benefits of about $1,000. Absent changes at the state level, childless workers in 22 states would receive an additional boost from a state-level EITC calculated as a share of the federal credit. We estimate state-level credits would boost benefits for the proposal by an additional $1.4 billion, bringing the total revenue cost of the policy expansion to about $25 billion per year.

Most beneficiaries of the policy expansion would be single, not married. Many of the workers that would benefit are in traditionally lower-paid industries and occupations. The policy expansion would provide an important income support for low-income childless workers who currently receive little or no EITC benefits.

Modeling Notes

We generated the estimates presented here using the Urban Institute's Analysis of Transfers, Taxes, and Income Security (ATTIS) model, using data from the 2016 ACS. The ACS, conducted by the US Census Bureau, provides ongoing information on the characteristics and economic circumstances of US households. The sample is large enough—over 1 million households in 2016—that it can be used to make reliable state-specific estimates. We compensate for certain limitations of the ACS as described below:

- A single year of ACS income is not an exact calendar-year amount, because respondents are surveyed throughout the year and answer questions about income in the last 12 months. We use an adjustment factor from the US Census Bureau to modify income amounts to 2016 dollars and treat reported income as if it were for the 2016 calendar year.
- The ACS does not include detailed information on household interrelationships in complex multifamily households. We use the version of the ACS provided by the Integrated Public Use Microdata Series project at the University of Minnesota to compensate for this lack of information.[10] Integrated Public Use Microdata Series researchers impute information on relationships not captured in the survey.
- To receive the EITC, the tax unit head, spouse, and qualifying children must have Social Security numbers. Unauthorized immigrants and people temporarily in the United States (such as those on a student or work visa) are ineligible for Social Security numbers and are therefore ineligible for the EITC. The ACS has information on whether respondents are citizens but does not provide additional details on legal status. We use a method developed by Passel and Clark (1998) and Passel and Cohn (2016) to impute legal status to noncitizens. ATTIS then excludes unauthorized immigrants and people temporarily in the United States from EITC eligibility.

To show the effects of potential policy changes, ATTIS starts from a baseline that reflects the data and legal framework in the survey year (2016). For this analysis, we model payroll taxes, federal income taxes, and state income taxes under the rules in effect in 2016. We also impute noncustodial parent status to the ACS to estimate the extent to which people eligible for the childless EITC have children living elsewhere. We describe the methods for simulating taxes and imputing noncustodial parent status below.

Payroll Taxes

ATTIS simulates the employer and employee taxes used to finance Social Security and Medicare, the US Railroad Retirement Board, the Civil Service Retirement System, and unemployment compensation. Specifically, ATTIS simulates the old age and survivor, disability, and health insurance portions of the Social Security tax. It also simulates tiers I and II railroad retirement taxes, Civil Service Retirement System taxes, and unemployment insurance taxes. Taxes are paid by both employers and employees, except for unemployment insurance taxes, which are only paid by employers.

We subtract the worker share of payroll taxes from income when computing after-tax income in this analysis. We also use the payroll tax model's estimate of self-employment taxes to simulate the federal income tax self-employment tax deduction.

Federal Income Taxes and the Earned Income Tax Credit

ATTIS simulates federal income taxes following the procedures of the 1040 form as closely as possible. People in a household but outside a given tax-filing unit may be counted as dependents of the unit, and one tax-filing unit may be claimed as the dependent of another tax-filing unit within the same household. ATTIS classifies tax-filing units as single, married filing jointly, or head-of-household returns.

ATTIS captures the key aspects of the individual tax rules affecting low- and middle-income taxpayers. We use data from the Internal Revenue Service Statistics of Income public use file to impute amounts of certain itemized deductions, including the mortgage interest deduction, the real estate tax deduction, and the charitable deduction. Taxes are estimated for all tax units, regardless of income level, but the model and underlying data lack the detail needed to fully represent the taxes of upper-income taxpayers. ATTIS calculates taxes and the EITC for all tax units in the ACS, regardless of whether they file a tax return.

Tax units must meet certain requirements to receive the EITC:

1. The taxpayer, spouse, and qualifying children must have valid Social Security numbers.
2. The tax unit must not file as married filing separately.
3. The taxpayer and any qualifying children must be US citizens or meet the Internal Revenue Service green card test or substantial presence test for the calendar year.
4. The tax unit must not file forms 2555 or 2555-EZ (pertaining to foreign earned income).

5. The tax unit must have investment income less than a given amount ($3,400 in 2016).
6. The tax unit must have earned income less than a certain amount.
7. The tax unit must have adjusted gross income less than a certain amount.
8. The taxpayer cannot be an EITC-qualifying child for another tax unit.
9. Additional rules pertain depending on whether the tax unit has qualifying children.

ATTIS assumes 1 and 3 are true for all people who are not modeled to be undocumented immigrants or legal temporary residents (e.g., students, diplomats, guest workers). The model assumes 2 and 4 are true for all tax units. The model then simulates the remaining requirements as closely as possible given the data available on the ACS.

Tax units with qualifying children are eligible for a more generous EITC. A qualifying child must

1. be the taxpayer's son, daughter, stepchild, foster child, brother, sister, stepbrother, stepsister, half brother, half sister, or a descendant of any of them;
2. be under age 19, under age 24 and a full-time student (for at least five months of the year) at the end of the tax year, or any age and permanently and totally disabled; and
3. have lived with the taxpayer in the United States for more than half the year.

ATTIS models the test for relationship, age, student status, and disabled child. The model assumes that all people in the household at the time of the ACS survey were present in the household for the entire prior year.

ATTIS assigns a qualifying child to his or her parent, if present in the household, unless the parent is the qualifying child of the household reference person. If the household reference person claims the child's parent as a qualifying child, then the household reference person also claims the child as a qualifying child.

For units without qualifying children to be eligible for the EITC in the baseline, the taxpayer must be between ages 25 and 64 and not be a dependent or EITC-qualifying child of another unit. The model captures these requirements. The policy expansion modeled here modifies the age requirement to allow people between ages 21 and 64 to claim the childless EITC.

State Income Taxes

ATTIS captures detailed state income tax rules, including those related to filing status, taxable income, deductions, exemptions, tax rates, tax brackets, and tax credits. Jon Bakija, a professor of economics at Williams College, compiled the rules used in the state tax model (Bakija 2019). States vary in the extent to which they base income taxes on amounts calculated in federal income tax returns. ATTIS uses input from the federal income tax simulation as appropriate when computing income taxes in each state.

State income taxes are included in the analysis to capture the secondary effects of changes in the federal EITC on states that calculate the EITC as a percentage of the federal EITC. The estimates assume that states would not change their policies in response to an expansion in the childless EITC. State income taxes are also subtracted from income when calculating after-tax income.

Noncustodial Parent Status

The ACS does not ask whether a person is a "noncustodial parent" (i.e., a parent with a child under age 19 who lives elsewhere). We impute noncustodial parent status to the ACS based on the approach developed by Wheaton and Sorensen (2010). We first use logistic regression models to impute the likelihood that a man or woman in the ACS is a noncustodial parent. We then adjust the results of the imputation to match independently derived targets for the number of noncustodial parents by state, age, race and ethnicity, current marital status, and presence of children within the household. We describe the logit models and targets below.

NONCUSTODIAL PARENT LOGIT MODELS

We developed imputations using data from the 2001 panel of the Survey of Income and Program Participation. We identify noncustodial parents in the Survey of Income and Program Participation based on methods developed by Sorensen (1997) and use logistic regression models to impute the likelihood that a man or woman is a noncustodial parent. The imputations are estimated for men ages 15 to 65 and women ages 15 to 60, the age ranges most likely to include noncustodial parents. We exclude widows, widowers, and people who are married with spouse absent (but not separated) because of difficulties identifying noncustodial parent status among these groups in the Survey of Income and Program Participation.

The explanatory variables in the logistic regression model for men include dummy variables for race/ethnicity, marital status, age, educational attainment, receipt of Temporary Assistance for Needy Families, receipt of the Supplemental Nutrition Assistance Program, and poverty level. The imputation also includes three dummy variables that control for receipt of child support and presence of children under age 18: (1) whether a man receives child support, (2) whether a man without child support has children in the household under age 18, and (3) whether a man without child support has children in the household who are ages 18 or older (and none who are under age 18).

The explanatory variables for women are the same as those for men but exclude Temporary Assistance for Needy Families receipt. Rather than a single dummy variable indicating whether the woman receives child support, two dummy variables are used: (1) whether a woman receiving child support has children in the household under age 18 and (2) whether a woman receiving child support does not have children in the household under age 18.

The imputations as applied to the ACS use reported Supplemental Nutrition Assistance Program status. The ATTIS model imputes Temporary Assistance for Needy Families and child support receipt based on broader questions about public assistance income and other income reported in the ACS.

ATTIS uses the appropriate logit model to estimate the likelihood that a man or woman is a noncustodial parent. The model then converts the imputed likelihood to a probability and compares it with a uniform random number. If the random number is less than or equal to the probability, ATTIS assigns the person as a noncustodial parent. We compare the resulting number of noncustodial parents with targets and add or subtract to bring the imputed results close to the estimated target.

NONCUSTODIAL PARENT TARGETS

We estimate national targets for the number of noncustodial parents based on information reported by custodial parents in the 2016 Current Population Survey Child Support Supplement. The targets vary by gender, race/ethnicity (white, black, Hispanic, other), and age (15–29, 30–39, 40–49, and 50+). Custodial parents are not asked about the demographic characteristics of the nonresident parent, so we make the simplifying assumptions that the nonresident parent is the same race and ethnicity as the custodial parent and that fathers are two years older than mothers.

The 2016 Current Population Survey Child Support Supplement data indicate that there are 12.6 million custodial parents with children under the age of 19.[11] We estimate that 1 million (8 percent) of the nonresident parents associated with these custodial parents are institutionalized, yielding a target of 11.6 million noninstitutionalized nonresident parents. The estimated number of institutionalized nonresident parents is obtained by multiplying the number of institutionalized men and women (according to the Census Bureau's population estimates for April 2016)[12] by the percentage that are nonresident parents (according to the 2004 Survey of Inmates in State and Federal Correctional Facilities). The calculations are performed by gender, age, and race/ethnicity.

We also estimate national targets for whether a noncustodial parent is single, cohabiting, or married and whether the noncustodial parent's biological or adoptive children are present (e.g., from a current marriage or subsequent relationship), and if not, whether the noncustodial parent lives with stepchildren or a partner's children. Estimates for noncustodial fathers ages 15 to 49 are obtained from the 2015 to 2017 National Survey of Family Growth. The National Survey of Family Growth does not provide the needed data for noncustodial fathers ages 50 and above or for noncustodial mothers, so we rely on data from the 2017 Current Population Survey Annual Social and Economic Supplement for this information.[13] For each data source, we calculate the distribution of noncustodial parents by the presence of a spouse, partner, and children and apply the distribution to the national estimated target number of noncustodial parents for the corresponding age range and sex.

We estimate state targets for the number of noncustodial parents by assuming the distribution of noncustodial fathers by state matches the distribution of custodial mothers, and the distribution of noncustodial mothers by state matches the distribution of custodial fathers. To increase the state sample size for the estimate, we combine five years of Current Population Survey Child Support Supplement data (the 2008, 2010, 2012, 2014, and 2016 surveys) and calculate the average number of custodial mothers and custodial fathers in each state across those years. We divide each state's average by the national average for the five years of data to estimate the share of noncustodial fathers and mothers in each state. We then multiply these shares by the national estimate for the number of noncustodial fathers and noncustodial mothers to derive state estimates for 2016.

Notes

[1] "Table 2.5 Returns with Earned Income Credit," Internal Revenue Service, December 3, 2018, https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-returns-publication-1304-complete-report.

[2] Students are not denied eligibility for the current EITC, and we model them as eligible for the childless EITC expansion. A sensitivity test performed for the analysis found that denying the childless EITC to full-time students under age 25 would reduce the estimated number of workers benefiting from the expansion by 1 percent.

[3] These amounts are $5,790 higher for married couples.

[4] Dylan Matthews, "Paul Ryan's Poverty Plan," *Vox*, October 8, 2015, https://www.vox.com/2014/7/24/18080430/paul-ryan-poverty.

[5] The Obama proposal would also have extended eligibility through age 66.

[6] For additional information on the ATTIS model, please see the modeling notes.

[7] We count the EITC as affecting income in 2016 because we lack data on the income and demographic characteristics of people in 2017, when most EITC refunds would be received. To the extent that the credit offsets taxes owed, it can be received in the form of reduced withholding throughout the year. This approach is often used in studies that calculate taxes and credits using income reported in annual survey data. For example, the Census Bureau's Supplemental Poverty Measure calculates taxes and credits based on the income reported in the year covered by the survey and treats the taxes and credits as paid and received in that year (Fox 2018). To the extent that family income and demographic characteristics (e.g., number and presence of children) remain the same from year to year, then the timing of receipt should have little effect on the estimates.

[8] "About EITC," Internal Revenue Service, March 11, 2019, https://www.eitc.irs.gov/eitc-central/about-eitc/about-eitc.

[9] Four states (Delaware, Ohio, Oklahoma, and Virginia) have state EITCs that are not fully refundable. In these states, a tax unit can have an increase in federal EITC but not state EITC if their state tax liability was already zero. Thus, the numbers in the third column of table 3 exclude tax units that did not see an increase in state EITC.

[10] Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, et al., "IPUMS USA: Version 9.0 [dataset]," accessed May 24, 2019, https://usa.ipums.org/usa/.

[11] Though the Current Population Survey Child Support Supplement identifies custodial parent status for those with children under age 21, we narrow the estimate to custodial parents with at least one child under age 19.

[12] To obtain the estimate of the institutionalized population, we subtract the Census Bureau's estimate of the civilian noninstitutionalized population in April 2016 from the Census Bureau's estimate of the civilian population in April 2016.

[13] The Current Population Survey Annual Social and Economic Supplement data underreport noncustodial parent status, so we rely on the National Survey of Family Growth data for men ages 15 to 49. Men in this age range comprise 70 percent of the estimated number of noninstitutionalized noncustodial parents.

References

Auxier, Richard, and Elaine Maag. 2018. "Addressing the Family-Sized Hole Federal Tax Reform Left for States." Washington, DC: Urban Institute.

Bakija, Jon. 2019. "Documentation for a Comprehensive Historical US Federal and State Income Tax Calculator Program." Williamstown, MA: Williams College.

Eissa, Nada, and Hilary Hoynes. 2004. "Taxes and the Labor Market Participation of Married Couples: The Earned Income Tax Credit." *Journal of Public Economics* 88: 1931–58.

Eissa, Nada, and Jeffrey Liebman. 1996. "Labor Supply Response to the Earned Income Tax Credit." *Quarterly Journal of Economics* 111 (2): 605–37.

Executive Office of the President and US Department of Treasury. 2014. "The President's Proposal to Expand the Earned Income Tax Credit." Washington, DC: Executive Office of the President.

Fox, Liana. 2018. "The Supplemental Poverty Measure: 2017." Suitland, MD: United States Census Bureau.

Hoynes, Hilary W., and Ankur J. Patel. 2017. "Effective Policy for Reducing Poverty and Inequality? The Earned Income Tax Credit and the Distribution of Income." *Journal of Human Resources* 53 (4): 859–90.

Marr, Chuck, Chye-Ching Huang, Cecile Murray, and Arloc Sherman. 2016. *Strengthening the Childless EITC for Workers Would Promote Work and Reduce Poverty: Improvement Targeted at Lone Group Taxed into Poverty*. Washington, DC: Center on Budget and Policy Priorities.

Meyer, Bruce, and Dan Rosenbaum. 2001. "Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers." *Quarterly Journal of Economics* 116 (3): 1061–114.

Miller, Cynthia, Lawrence F. Katz, Gilda Azurdia, Adam Isen, Caroline Schultz, and Kali Aloisi. 2018. *Boosting the Earned Income Tax Credit for Singles: Final Impact Findings from the Paycheck Plus Demonstration in New York City*. New York: MDRC.

Mustard, David. 2010. "How Do Labor Markets Affect Crime? New Evidence on an Old Puzzle." IZA Discussion Paper 4856. Bonn, Germany: IZA Institute of Labor Economics.

Nichols, Austin, Elaine Sorensen, and Kye Lippold. 2012. *The New York Noncustodial Parent EITC: Its Impact on Child Support Payments and Employment*. Washington, DC: Urban Institute.

Passel, Jeffrey, and Rebecca Clark. 1998. *Immigrants in New York: Their Legal Status, Incomes, and Taxes*. Washington, DC: Urban Institute.

Passel, Jeffrey, and D'Vera Cohn. 2016. *Overall Number of US Unauthorized Immigrants Holds Steady Since 2009: Decline in Share from Mexico Mostly Offset by Growth from Asia, Central America, and Sub-Saharan Africa*. Washington, DC: Pew Research Center.

Scholz, John Karl. 1994. "The Earned Income Tax Credit: Participation, Compliance, and Antipoverty Effectiveness." *National Tax Journal* 47 (1): 63–87.

Sorensen, Elaine. 2013. "Tax Credits and Job-Oriented Programs Help Fathers Find Work and Pay Child Support." Washington, DC: Urban Institute.

———. 1997. "A National Profile of Nonresident Fathers and Their Ability to Pay Child Support." *Journal of Marriage and Family* 59 (4): 785–97.

Wheaton, Laura, and Elaine Sorensen. 2010. "Extending the EITC to Noncustodial Parents: Potential Impacts and Design Considerations." *Journal of Policy Analysis and Management* 29 (4): 749–68.

About the Authors

Elaine Maag is a principal research associate in the Urban-Brookings Tax Policy Center at the Urban Institute, where she studies income support programs for low-income families and children. Before joining Urban, Maag worked at the Internal Revenue Service and Government Accountability Office. Maag is a member of the National Poverty Research Center – US Collaborative of Poverty Centers network of researchers. She codirected the creation of the Net Income Change Calculator, a tool that allows users to understand the trade-offs between tax and transfer benefits and changes in earnings or marital status.

Kevin Werner is a research analyst in the Income and Benefits Policy Center at the Urban Institute. He helps run the TRIM3 model, a microsimulation model that simulates major government tax and transfer programs and allows researchers to see the effects of various policy changes. He also works on the Urban Institute's ATTIS model. He has dual degrees in economics and political science from American University and a master's degree in applied economics from Georgetown University.

Laura Wheaton is a senior fellow in the Income and Benefits Policy Center specializing in analyzing government safety net programs, poverty estimation, and the microsimulation modeling of tax and transfer programs. Wheaton codirects the TRIM3 microsimulation model project and co-led the development of the Urban Institute's ATTIS model. Her recent projects include analyses of the antipoverty effects of nutrition assistance programs, the effects of SNAP asset limits, and SNAP churn.

Acknowledgments

This brief was funded by the Heising-Simons Foundation and the Robert Wood Johnson Foundation as part of their support for Urban's From Safety Net to Solid Ground initiative. We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at urban.org/fundingprinciples.

The authors thank Gregory Acs, Mark Mazur, and Elaine Waxman for thoughtful comments on earlier drafts; Sybil Mendonca and Silke Taylor for programming assistance; and Kelly Dwyer for assistance with compiling state income tax information.

500 L'Enfant Plaza SW
Washington, DC 20024

www.urban.org

ABOUT THE URBAN INSTITUTE

The nonprofit Urban Institute is a leading research organization dedicated to developing evidence-based insights that improve people's lives and strengthen communities. For 50 years, Urban has been the trusted source for rigorous analysis of complex social and economic issues; strategic advice to policymakers, philanthropists, and practitioners; and new, promising ideas that expand opportunities for all. Our work inspires effective decisions that advance fairness and enhance the well-being of people and places.